

From: Dawn Turner, [REDACTED]  
Subject: Public comment to BESS Environmental Impact Report  
To: [BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)  
Cc: Sarah.MacGregor@coastal.ca.gov, council@morrobayca.gov,  
PlanningCommision@morrobayca.gov

Dawn Turner  
[REDACTED]  
Cayucos, CA 93430

Dear Ms. Fowler,

As a longtime resident of San Luis Obispo County and a concerned citizen, I am strongly opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR. Please deny this project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. I am very concerned especially in light of the current fire at the Gateway BESS facility in Otay Mesa, California. This is our greatest nightmare. That facility is not in a populated area. Just imagine the havoc this would cause if it were to happen in Morro Bay. Morro Bay High School would be closed temporarily, Highway 1 would be impacted, the local residents would be disrupted, not even to mention the impact on our fragile ecosystem and harbor.

The EIR addresses a fire limited to a 24-hour period. What about fires of longer duration? It does not adequately address control of the fires, when they do occur. It fails to address the contaminants that will pollute our creeks and ocean. It completely lacks an adequate plan of evacuation for the residents and visitors in the city of Morro Bay. It does not address the wildlife, including the endangered, thriving population of sea otters, nor the approximately 250 species of birds living in the Morro Bay National Bird Estuary.

The scope of the proposed 24.5-acre site identified by Vistra at this location is just not acceptable. Placing the largest battery storage site in the world in a populated, ecologically fragile area cannot be allowed to happen. This site has extremely limited access to roads, with highways 1 and 41 being the only way in and out. The local population of about 10,770 expands regularly with the over 800,00 annual visitors. This site is in a Tsunami zone. A year ago, most of the roads surrounding the town, as well as within the city were flooded, resulting in many people being trapped wherever they happened to be. Placing the proposed BESS, with its known fire dangers at a site that people and wildlife would be trapped is unacceptable. Please protect the gem that is so amazing as the area of Morro Bay. Our residents deserve more than a total disregard for our safety.

Alternate locations for this BESS facility must be explored. It needs to be located away from a populated town. Choose a more appropriate site. Morro Bay is not it.

Thank you,

Dawn Turner

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Cc: Sarah.MacGregor@coastal.ca.gov, council@morrobayca.gov,  
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Alternate locations for this BESS facility must be explored. It needs to be located away from a populated town. Choose a more appropriate site. Morro Bay is not it.

Thank you,

John Turner

## BESS EIR

Jody Jones <[REDACTED]>

Tue 5/28/2024 11:12 AM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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As full-time residents of SLO County and Los Osos, as tax payers, voters and outdoor enthusiasts, we SUPPORT the BESS Project and hope to see it come to fruition. Thank you.

Jody and Gordy Jones

[REDACTED]

Los Osos

[REDACTED]

Sent from [Mail](#) for Windows

## Fw: Failure Notice

Teresa Amberg <[REDACTED]>

Tue 5/28/2024 11:13 AM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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[Sent from AT&T Yahoo Mail on Android](#)

----- Forwarded Message -----

**From:** "MAILER-DAEMON@yahoo.com" <MAILER-DAEMON@yahoo.com>

**To:** "[REDACTED]"

**Sent:** Tue, May 28, 2024 at 9:36 AM

**Subject:** Failure Notice

Sorry, we were unable to deliver your message to the following address.

<[BESScomments@morrobay.ca.gov](mailto:BESScomments@morrobay.ca.gov)>:

No mx record found for domain=morrobay.ca.gov

----- Forwarded message -----

As a frequent visitor to Morro Bay and resident of nearby Los Osos, I am opposed to the proposed BESS project in Morro Bay. I ask that you not certify EIR and deny the project. I have concerns for the residents, businesses, community and environment based on the Gateway BESS facility in Otay Mesa.

Our vision for the Central Coast and the vision of our visitors is threatened by this project. I understand an alternative site is available and I urge you to consider that possibility.

Sincerely

Teresa Amberg

[Sent from AT&T Yahoo Mail on Android](#)

RECEIVED  
City of Morro Bay

MAY 28 2024

Administration

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California, 93442

Re: Public comment to draft EIR for battery storage proposal  
May 20, 2024

Dear Ms. Fowler,

I am a resident of Morro Bay and I am vehemently opposed to the BESS project proposed for Morro Bay.

I purchased a home in the Morro Heights neighborhood over 20 years ago because of the beauty and natural landscapes that define this small coastal town. As a veterinarian, I am dedicated to protecting animals and the environment. Without maintaining a safe harbor for the sensitive wildlife (otters, sea lions, herons), local residents and the tourists that visit Morro Bay, the economy of this town and its' unique identity will be severely damaged.

The EIR for the BESS facility in Morro Bay failed to adequately inform MB residents of the impacts of this project on their town. Let's make it clear that the BESS plant is not a coastal-dependent industry. The location of this project, adjacent to the bay that sustains nature and the Morro Bay economy, is unsafe for both tourists and the native wildlife. How does a tourist area and flood zone make sense for battery storage?

The city must recirculate the EIR because it did not identify and address the thermal runaway battery fires as a potential impact nor did it address the risk of having the project site in a flood and tsunami zone. Saltwater exposure to lithium-ion batteries makes them combustible. If the BESS project is flooded, the potential for

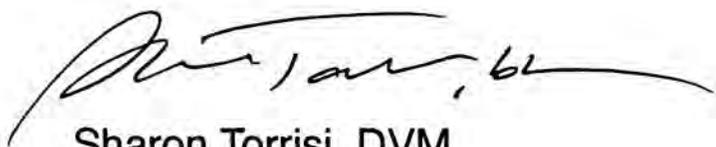
explosive fires creating plumes of smoke and toxic gases will be great. Endangered and sensitive species will be gravely affected and the way of life in Morro Bay as we know it will be over.

The city improperly deferred the fire safety analysis to a consultant, DNV Energy USA, inc. who was hired by the fire department. The analysis has not yet been performed and therefore the draft EIR needs to be rewritten and recirculated after ALL of the impact and mitigation analysis is done.

By the way, the city voted against building the new water reclamation plant along the coast because of the risk of flooding and it being in a tsunami zone. Makes one wonder.

Take care of the residents, protect the tourist economy and the native species that make Morro Bay a unique and beloved coastal town.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon Torrison". The signature is fluid and cursive, with a long horizontal stroke at the end.

Sharon Torrison, DVM  
Morro Bay

CC:

The Morro Bay City Council and Mayor Wixom  
The Morro Bay Planning Commission  
Sarah MacGregor, Coastal Planner, California Coastal  
Commission

## Comments On EIR for Bess Plant

Dr Margaret Carman <[REDACTED]>

Tue 5/28/2024 12:01 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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I am a Resident of Morro Bay and represent many of our Morro Bay residents and surrounding communities. Many people verbalize their opposition but do not feel comfortable writing or competent to speak in public; thus, I sincerely mean I represent many concerned citizens in my medical practice and whom I know socially.

We are opposed to the BESS project proposed in Morro Bay in its current proposed location and request you do not certify the EIR and deny the project.

I totally agree with the many arguments against this project and the EIR that have already been submitted in other letters.

I will not repeat them.

I will focus on one of my many concerns. In a meeting with Vista and in the EIR we were told they will have tanks of water on the property to "put out" a fire. As we know these battery fires must be "COOLED OUT" and not "put out" thus requiring many more gallons of water. Battery sites across the country have burned for multiple days up to eleven days. How many gallons of water do they have on site? Where does all this water come from? Will they be taking water from Morro Bay residents who need it to SURVIVE? ... TO live or put out their own house for?

When asked where said water might go Vista stated they would have "drainage" installed to catch this toxic water used to "COOL OUT" a battery fire. My question is How many days are they planning for the fire to last and thus the necessity for larger drainage capacity. Or will the spillover of toxic water go into our PRECIOUS ESTUARY??? We cannot afford to ruin our estuary, the ocean or our marine mammals and sea life.

There are too many parts of this EIR with exaggerated claims of safety and Not being of significance.

We cannot afford to RISK our beautiful community. Please do not approve this EIR or the BESS project in this location.

Sincerity

Dr Margaret C Carman

## Vistra's EIR Comments

GARRY JOHNSON <[REDACTED]>

Tue 5/28/2024 12:31 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Johnson garry <johnsongarry499@gmail.com>

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MY QUESTIONS FOR THE EIR VISTRA BATTERY PROJECT

SUBMITTED BY GARRY JOHNSON ([REDACTED])

MORRO BAY RESIDENT

- \* HOW LONG WILL IT TAKE TO COMPLETE THE PROJECT?
- \* DURING CONSTRUCTION HOW MANY DAYS A WEEK AND WHAT HOURS WILL YOU WORK?
- \* OUR COMMUNITY IS CONCERNED ABOUT THE ENVIRONMENTAL IMPACT DURING CONSTRUCTION AND OPERATION WILL THE AIR, NOISE, TRUCK TRAFFIC, AND OTHER FACTORS BE MONITORED DAILY?
- \* WHERE WILL THE BATTERY RECYCLING FACILITY BE LOCATED?
- \* HAS THERE BEEN AN ENVIRONMENTAL IMPACT STUDY ABOUT WHAT IMPACT IT WILL HAVE ON THE LOCAL COMMUNITY AND HIGH SCHOOL?
- \* AFTER CONSTRUCTION OF THE FACILITY, WILL THE COMPANY REPAIR THE DAMAGE TO THE ROADS CAUSED BY THEIR HEAVY TRUCKS ?
- \* WILL THE COMPANY PAY FOR THE EXTRA COST OF HIRING TRAINED POLICE AND FIRE PERSONNEL?

Garry johnson

## Deny BESS, Protect Our Community

Alexandra Riggle <[REDACTED]>

Tue 5/28/2024 12:45 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

Dear Ms. Fowler,

My husband and I are residents of Morro Bay and are OPPOSED to the BESS project proposed for Morro Bay. We ask you to not certify the Environmental Impact Report (EIR) and to deny the project.

This kind of industrial project will forever transform our beautiful coastal community and presents unacceptable risks for residents, visitors, and wildlife. This is simply not the right location for this kind of development.

Please do the right thing and protect our community.

Sincerely,

Alexandra Riggle & Steven MacGregor  
Morro Bay, CA

## FW: Public comment to BESS Environmental Impact Report

Dana Swanson <dswanson@morrobayca.gov>

Tue 5/28/2024 12:54 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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**From:** Debbi Stevens <[REDACTED]>  
**Sent:** Tuesday, May 28, 2024 12:26 PM  
**To:** BESScomments@morrobay.ca.gov  
**Subject:** Public comment to BESS Environmental Impact Report

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Dear Ms. Fowler,

I am a resident in Morro Bay. I own investment property in Morro Bay that allows me not to be homeless. In other words it is my income. I love the looks of the stacks, I feel they give the town uniqueness. I also live off grid just outside town. I am very aware of the dangers of all batteries, especially lithium, since I have been living with batteries for 20 plus years now. My batteries are charged with solar panels. I do not understand the need to have batteries to charge our area without them being used as storage batteries from renewable energy. Might as well use the electricity needed to recharge them and put it directly into the homes. The problem I have with this project is the fact that you are planning to be able to recharge these batteries with windmills out in the ocean. If those batteries need to be charged, It will be ridiculous not to have some renewable energy to charge them and so I do not believe this company's intentions are totally honest. I believe that the company is planning to have the windmills out in the ocean that will charge these batteries. This will totally impact the **migratory birds** that fly thousands of miles each year. Unless you can guarantee that the windmills will be turned off during entrance and exit times.....probably 50% of the year,...this project should not be allowed. Nor will it be profitable for this company..

My other concern is with the **fire issue**, like they dealt with down south. Just to be stored in our tourist town is senseless. Lossing lthat income for so many of us would be criminal. They are aware of the dangers and so are we. Please do not allow this company to settle on our beautiful coast. They are not being totally honest about their intentions for the entire project. This is just phase one that they hope to pass.

Thank you for your attention to this. No on the battery storage and no on windmills.

Sincerely Debbi Stevens .

## Comment on Proposed BESS

Rose Marie Battaglia <[REDACTED]>

Tue 5/28/2024 1:10 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Sarah.MacGregor@coastal.ca.gov <Sarah.MacGregor@coastal.ca.gov>; Planning Commission <planningcommission@morrobayca.gov>; Council <Council@morrobayca.gov>

📎 1 attachments (21 KB)

battery storage objection.pdf;

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**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

Rose Marie Battaglia

[REDACTED]  
Morro Bay, CA 93442

May 28, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Dear Ms. Fowler and Members of the Morro Bay City Council,

I am writing to express my strong opposition to the proposed lithium battery storage facility in Morro Bay, California. While I understand the need for renewable energy solutions, the specific plan for this facility raises several significant concerns related to its size, potential dangers, and the exploration of alternative sites that might be more suitable.

Size of the Facility

The proposed lithium battery storage facility is disproportionately large for our community. The scale of this project, which aims to store vast amounts of energy, will undoubtedly impact the local landscape and infrastructure. The physical footprint of the facility, including the necessary safety buffers and access roads, will occupy a considerable area, which could otherwise be used for community purposes or preserved as open space. Such a massive structure in our relatively small and picturesque town is likely to alter the character and charm of Morro Bay, negatively affecting both residents and visitors.

### Potential Dangers

Lithium battery storage facilities carry inherent risks, including the potential for fires and explosions. The highly reactive nature of lithium, especially in large quantities, can pose significant safety hazards. Instances of lithium battery fires have been well-documented, and the potential for such an event in Morro Bay raises serious concerns about the safety of our community. The toxic fumes released during a battery fire could have severe health implications for residents, and the environmental impact of such an incident could be catastrophic. With a Northwest prevailing wind, everyone from Highway 41 and south will be exposed to these toxic fumes. Additionally, the facility's proximity to residential areas and natural habitats increases the risk of widespread damage in the event of an accident. Putting the storage facility so close to schools, residents, recreational areas and businesses will negatively impact the City that makes it nonsensical to approve.

### Exploration of Alternate Sites

It is crucial to explore alternative sites for this facility that may present fewer risks to populated areas. There are locations within the region that could accommodate a lithium battery storage facility without posing the same level of threat to citizens, visitors and the environment. Industrial zones, areas with lower population density, or locations

further from critical natural resources could offer safer alternatives. A thorough examination of these potential sites should be conducted to ensure that the chosen location minimizes risks and maximizes benefits.

In conclusion, while I support the advancement of renewable energy technologies, I firmly believe that the proposed lithium battery storage facility in Morro Bay is not the right fit for our community. The size of the facility, combined with the significant dangers it poses, necessitates a reconsideration of this plan. I urge the Morro Bay City Council to reject this proposal and to work with stakeholders to identify and evaluate alternative sites that would be more appropriate for such a facility.

Thank you for considering my concerns. I encourage and trust that you will make a decision that prioritizes the safety and well-being of our community.

Sincerely,

Rose Marie Battaglia

*CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission*

Rose Marie Battaglia

[REDACTED]  
Morro Bay, CA 93442

[REDACTED]  
May 28, 2024

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Sincerely,

Rose Marie Battaglia

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

# A Hidden Climate Danger Threatens Coastal Communities

More than 132,000 sites in the US, many of them in low-income neighborhoods, are susceptible to rising groundwater that could release toxic chemicals.

The former site of Montrose Chemical Corp., where DDT was produced decades ago, in Torrance, California.

*Photographer: Allen J. Schaben/Los Angeles Times/Getty Images*

By [Todd Woody](#)

September 28, 2023 at 4:30 AM PDT

A little-known climate threat lurks under our feet: rising groundwater that could release toxic chemicals from more than 132,000 contaminated sites in coastal areas of the US. In a [first of its kind study](#), researchers estimated the number of polluted industrial sites and mapped them to areas likely to experience groundwater inundation due to [rising seas](#).

"A lot of people don't realize that the ocean actually extends under the land in coastal areas, so as the ocean rises, it pushes up the groundwater toward the surface," said Kristina Hill, an associate professor at the University of California at Berkeley and the lead author of the paper, which was published last week in the journal *Earth's Future*.

Factories, fuel stations, military bases and other industrial facilities have left surrounding soil contaminated with carcinogenic chemicals and heavy metals. Some became [Superfund sites](#) whose cleanup is overseen by the federal government. Far more are managed by individual states.

When groundwater rises toward the surface, whether from sea level rise or increasingly intense climate-driven storms, those contaminants can leach into it and spread to other waterways, potentially poisoning people and wildlife. Benzene, trichloroethylene (TCE) and other cancer-causing chemicals known as volatile organic compounds can vaporize and enter homes, schools and businesses through sewer pipes or cracks in building foundations.

In 2020, administrators [temporarily shuttered a high school](#) in Oakland, California, after TCE was discovered in groundwater beneath the building. They feared it would vaporize and contaminate the air inside.

Hill and her colleagues identified 326 Superfund sites vulnerable to groundwater rise in coastal areas. In the San Francisco Bay Area, they found more than 5,000 state-managed toxic sites near the coast and extrapolated that there may be more than 132,000 such sites nationwide. They used elevation as a proxy for groundwater, determining that contaminated sites located below 10 meters

(33 feet) are at risk from flooding. California, New York and New Hampshire are most vulnerable due to the size of Superfund sites and coastal areas in those states, according to the researchers.

Analyzing demographic data, the researchers found that contaminated areas subject to groundwater rise are disproportionately located near communities of low-income residents and people of color.

"I think these communities deserve to be at the front of the line to have those soils fully remediated," said Hill, who studies sea level rise and other climate impacts on urban hydrology.

Jacob Carter is a research director at the Union of Concerned Scientists who has analyzed potential impacts of sea level rise on toxic sites and formerly worked on climate-related Superfund issues at the US Environmental Protection Agency.

"I think this is a very significant study," said Carter, who was not involved in the research. "If you look at toxic remediation plans, they generally don't mention sea level rise and other climate change issues and they're typically not planning for these things."

Climate-related groundwater rise can scramble the calculus on cleaning up toxic sites. Rehabilitating these locations can drag on for years, if not decades, and the high cost of removing soil has resulted in it being left in place at many sites, covered by an impermeable clay or concrete cap meant to contain the contamination.

Now, though, the threat is from below. "Capping seemed like a great strategy back in the '80s as it was like putting an umbrella over the chemicals, protecting them from water and from movement," said Hill. "But now the water is coming up from below so the umbrella doesn't work."

One challenge, according to Hill, is that most states have not mapped coastal groundwater. One state that has is California. In 2022, for instance, regulators ordered the owner of a Bay Area Superfund site slated to be redeveloped as a housing project to assess whether it should change its toxic cleanup plan, given the potential for sea level-related groundwater rise.

"I don't think too many policymakers are likely aware of the impact of rising groundwater or other climate change impacts on toxic sites or maybe even if these sites exist in their area," said Carter. "These are some of the most dangerous chemicals known to mankind and we should be doing everything we can in our power to prevent their release."

“Every absurdity has a champion  
to defend it.”

Oliver Goldsmith

**CALIFORNIA COASTAL COMMISSION**

CENTRAL COAST DISTRICT  
725 FRONT STREET, SUITE 300  
SANTA CRUZ, CA 95060  
PHONE: (831) 427-4863  
WEB: WWW.COASTAL.CA.GOV

**May 28, 2024**

Kim Fowler, Planning Manager  
City of Morro Bay Community Development Department  
955 Shasta Avenue  
Morro Bay, California 93442

**Subject: Morro Bay Battery Energy Storage System Draft Environmental Impact Report**

Dear Ms. Fowler,

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report (DEIR) for the Morro Bay Power Company LLC's proposed Battery Energy Storage System ("BESS") in the City of Morro Bay. We recognize that a project of this sort invariably raises questions and issues regarding potential impacts to coastal resources, and we appreciate the role of the CEQA process for developing supporting information and in identifying and resolving those questions and issues at the earliest time possible so as to facilitate the Coastal Commission's review of the project. Along those lines, we would note that this letter is not intended to call into question the DEIR's consistency with CEQA, but rather to help identify information needs so as to resolve potential coastal resource impacts that will need to be addressed under the LCP and Coastal Act. With that in mind, we offer the following comments with regard to the DEIR.

At a broad level, we recommend the Master Plan take a more global and holistic view of the entire Vistra power plant site and think through what types of uses make sense in this coastal locale, including how Coastal Act and LCP-priority land uses such as visitor-serving uses, public parks/recreation, and open space be provided, and how a battery storage facility of some scope may impact/interrelate with such uses. The Master Plan should also undertake a classic constraints analysis that looks at the site's sensitive habitats, flood risks, and other concerns and then identify places off limits to development and the footprint of where such development can be safely located. And while the detailed specifics of all potential land uses need not be identified at this stage (e.g., the precise square footage of visitor-serving uses or the number of affordable housing units), it would appear that the Master Plan can and should identify these basic site constraints and the developable envelope, and the potential for various types of uses within that footprint.

**Jurisdiction and Permitting**

The EIR notes that proposed development on the Vistra power plant site will require a CDP from the City of Morro Bay. Please note, too, that the incorporation of the Master Plan and associated land use and zoning designation changes for the BESS facility

## **Morro Bay BESS EIR**

portion of the project site requires certification as an LCP amendment by the Coastal Commission and thus will be reviewed under the Coastal Act. Furthermore, please note that it appears the proposed multi-use path located parallel to the Embarcadero is within the Coastal Commission's retained permitting jurisdiction and will require a CDP from the Commission. Additionally, please identify in the FEIR all CDPs previously issued by the City, or any future CDPs that the City expects to review, for any development at the Vistra power plant site, including any authorizations for the removal of the fuel oil storage tanks.

### **Project Description**

The DEIR project description speaks to the Master Plan being completed in two phases where the proposed development evaluated in this DEIR would not preclude future development at the rest of the Vistra power plant site. Commission staff understands that the specific uses at the rest of the site, including the stacks and existing power plant building, are unknown at this time as there is no project proposal; however, the Master Plan project description raises questions for us as to whether it is meeting the requirements of the LUP policy which requires the Master Plan (LUP Policy LU-5.4). The purpose of the Master Plan is to envision the reuse of the entirety of the site in a broad planning scope, including consideration of site constraints and what range of uses can be accommodated here. A critical piece is to also understand how other uses (residential, visitor-serving, parks/open space) can be accommodated, including in conjunction with a battery storage facility or not. In other words, the Master Plan should not presume a battery storage facility must be cited here, but rather fully explore how/whether it and various other potential uses meet applicable Coastal Act and LCP requirements for appropriate siting and design. The EIR should evaluate what uses would be permitted at the stacks and existing power plant building based on hazards (flooding and sea-level rise), required buffers from the BESS facility, and other site characteristics, and should also evaluate what soil/groundwater remediation measures would be needed to accommodate those uses. Broadly, the Master Plan is intended to create a vision for the entirety of the site including by analyzing the best uses of the site in line with the City's community character and existing development. And while specific details for potential projects at the site are not necessary at this time, the EIR at a minimum should determine what uses are permissible for the entire site. Furthermore, the project description for the Master Plan should evaluate the future uses of the BESS site after the 40-year lifespan of the facility and should evaluate how this portion of the parcel can be integrated into the other uses at the rest of the Vistra power plant site.

Additionally, LUP Policy LU-5.5 requires the preparation of a master plan for the nearby former wastewater treatment plant located on Atascadero Road. Considering the master plan requirement for the proposed project, the City should consider evaluating the WWTP master plan in conjunction with the proposed project. Such an evaluation should focus on increased bicycle and pedestrian circulation between the two sites and should evaluate other public access and recreation connections for the sites.

## **Morro Bay BESS EIR**

### **Land Use**

As explained above, the scope of the Master Plan should be expanded and should envision reuse for the entirety of the Vistra power plant site, not just the proposed BESS facility site. Please identify the current uses of the building identified in Figure 2-3 as a “Cooling Water Intake Screenhouse”. The Master Plan should evaluate potential reuse or removal of this building, with priority on removal given the prime location of the building along the waterfront and the Embarcadero. Demolition or reuse of the building must be consistent with the waterfront and public access policies in the Morro Bay LCP.

Furthermore, the Master Plan should evaluate the existing uses identified in Figure 2-3 as “Harbor Department Boat House Facility” and “Pacific Wildlife Care Rehabilitation Center”. As previously stated, the Master Plan should encompass the entire Vistra power plant site and should envision repurpose or removal of vacant buildings. Thus, the FEIR should identify the current uses of these buildings and should evaluate the potential for relocation of these uses and restoration of these sites.

### **Biological and Ecological Impacts**

The Commission’s staff ecologist, Dr. Rachel Pausch, has reviewed relevant portions of the DEIR and provides the following comments: Mitigation Measure BIO-1(i) calls for a botanical survey for silver dune lupine scrub and the mixed dune habitats onsite, and to avoid impacts “to the maximum extent feasible.” Any areas of this scrub, or other rare or special status species, will likely be considered Environmentally Sensitive Habitat Areas (ESHA) and thus have very limited allowable uses (e.g., habitat restoration, low impact public recreation, etc.). Areas with these species within the project footprint are not identified on Figure 4.3-2 as ESHA. However, given the species composition and proximity to a coastal dune system, it is highly likely that there will be ESHA present within the project site. The presence of Blochman’s leafy daisy (*Erigeron blochmaniae*; CA Rare Plant Ranking 1.B2) within the former tank area suggests that site may be well-suited as a permanent restoration area. Elsewhere on the property, areas of ice plant that demonstrate the substrate, aeolian processes, and dune vegetation consistent with a coastal dune environment may also qualify as ESHA. Additionally, the surrounding riparian areas, heron rookeries, and monarch overwintering sites will require appropriate buffers from development and construction disturbance. In short, the EIR should evaluate habitat types and explain why or why not such habitats rise to the level of ESHA under the Coastal Act and LCP.

### **Recreation/ Public Access**

As previously stated, the scope of the Master Plan needs to be expanded to evaluate planning for the entire Vistra power plant site. Specifically, per the LUP, the Master Plan must create a better connection between the two sides of the Embarcadero and create a pedestrian-friendly atmosphere along the Embarcadero frontage. Please analyze circulation options for the site including for both vehicles and pedestrians/bicycles. Such analysis should focus on better connections through the entire Vistra power plant site from Quintana Road to the Embarcadero.

## **Morro Bay BESS EIR**

Please be aware that through the CDP application process, the project will be analyzed under the recreation and coastal public access policies of the Morro Bay LCP. The public access and recreation policies of the LCP generally require that public access to the coast be “maximized”. Please keep these policies in mind when writing the final EIR. The proposed project will need to incorporate some sort of public access component to meet the requirements of the policies in the LCP. The final EIR should consider public access and recreation options at the demolition site for the existing power plant building and stacks.

### **Coastal Hazards and Sea Level Rise**

Per the LCP, the project site is located entirely in the tsunami hazard zone and the site is located within the 100- and 500-year flood hazard zones. The EIR states that the existing earthen berms that surround the former tank farm area would remain intact to provide protection from sea-level rise and tsunami risk. Additionally, the BESS facility would be built on 3-foot-thick concrete platforms placed on pilings sunk into the underlying substrate. Both the berms and the raised platforms would qualify as a shoreline armoring device under Coastal Act Section 30235 where shoreline armoring is only permitted when required to protect a coastal-dependent use or to protect existing structures. Additionally, the Coastal Act requires a four-part test to be met to allow for shoreline armoring: (1) there is an existing structure, (2) that existing structure is in danger from erosion, (3) shoreline-altering armoring is required to protect the existing endangered structure; and (4) the required armoring is designed to eliminate or mitigate shoreline sand supply impacts, and avoid and mitigate other coastal resource impacts (e.g., on public access, public views, etc.). We note, too, that the existing berms were built primarily to contain potential spills from the former power plant’s fuel oil tanks, and it is not clear that these earthen berms would provide the needed level of structural integrity to protect the BESS facility from the site hazards.

Thus, given the above policies, the proposed BESS facility would not qualify for reliance on shoreline armoring since the proposed facility is neither an existing structure nor coastal-dependent use under the Coastal Act. Thus, the proposed project should not rely on the berms or raised concrete platforms when evaluating the flooding and sea level rise hazards for the site. Therefore, the FEIR should analyze the flood hazard and sea level rise risks under an extreme risk aversion scenario (H++) to the BESS facility without the reliance on shoreline armoring.

Additionally, the DEIR identifies the potential for impacts from seismic ground shaking as an effect found not to be significant. However, the FEIR should evaluate the level of potential seismic hazards the facility and its support pilings would be expected to withstand.

### **Tribal Cultural Resources**

Please be aware that the project will need to be evaluated under the Commission’s Tribal Consultation Policy (TCP) adopted August 8, 2018, the Commission has committed to early and effective communication with the Tribes and Tribal National of California. We encourage you to ensure that all affiliated tribes have the opportunity to

## Morro Bay BESS EIR

provide meaningful input on the Project's potential effects to Tribal Cultural Resources and possible avoidance and/or mitigation measures to avoid or minimize any significant impacts to tribal cultural resources.

### Alternatives

The DEIR evaluates several onsite alternatives for the proposed BESS facility; however, we understand that it is feasible to locate these types of facilities at any number of locations along the electrical transmission grid system. We recommend the FEIR include a more robust alternatives analysis that fully considers possible offsite alternatives that may be feasible, particularly those that may not have the same coastal resource issues and hazards as the currently proposed site.

### Closing

Thank you for your consideration of these comments. We look forward to reviewing the FEIR when it is available, and we are available for questions should the City of Morro Bay need clarification on these comments.

Sincerely,

DocuSigned by:

*Sarah Macgregor*

539DCTA16B33780  
Sarah MacGregor

Coastal Planner

California Coastal Commission

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, California 93442

Email: [BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Re: Public comment to draft EIR for battery storage proposal

Dear Ms. Fowler,

The establishment of a lithium battery facility on the Embarcadero of Morro Bay is a terrible choice in terms of both public policy and public safety. As full-time residents of Morro Bay we feel this proposal flies in the face of any reasonable vision of a livable, prosperous, and healthy future for our community.

A battery facility is not a coastal-dependent industry, in fact, it is unsafe and contrary to the Coastal Act priorities. The project location is tourist dependent, in a flood zone, and adjacent to marine protected areas. It is a highly inappropriate site selection for battery storage.

The EIR does not identify and address extremely critical issues such as thermal runaway battery fires and does not address the risk created from having the project site in a flood and tsunami zone.

Lithium batteries are known for their potential to catch fire or explode if damaged or improperly managed and saltwater exposure to lithium-ion batteries makes them combustible. A fire at such a facility could spread to nearby natural areas, leading to extensive environmental damage, and posing a risk to wildlife.

Morro Bay is home to diverse marine life and a fire so close to the waterfront could release toxic fumes and ash, potentially contaminating the water and harming fish, shellfish, and other marine life. The area is also a critical habitat for numerous bird species. Smoke and fire could disrupt nesting areas and food sources, posing significant threats to local bird populations, including endangered species. Fire from the facility could easily spread to nearby vegetation and wildland areas. The coastal scrub and grasslands around Morro Bay are vulnerable to wildfires, which could be exacerbated by coastal winds, making containment more difficult.

Homes and businesses would be threatened by potential fires, necessitating large-scale evacuations and emergency responses. Large-scale lithium battery fires require special equipment, training, and materials to be extinguished safely which our local fire department may be lacking.

The waterfront location also poses logistical challenges for firefighting efforts, including limited access for firefighting vehicles and equipment. The presence of docks, boats, and other maritime infrastructure could further complicate response efforts. In the event of a major fire, evacuating residents and visitors could be challenging due to limited road access and potential congestion. The waterfront area has few evacuation routes, increasing the risk during emergencies. As a

popular tourist destination, a fire incident in Morro Bay could lead to mass panic and difficulty in managing the safe evacuation of crowds of people unfamiliar with our area.

Fires involving lithium batteries can release toxic smoke, including harmful chemicals like lithium, cobalt, and nickel compounds. This can significantly degrade air quality, affecting both human health and the environment. Efforts to extinguish the fire could result in runoff contaminated with toxic substances entering Morro Bay's waters. This would harm marine ecosystems and require extensive cleanup efforts to restore the health of the bay.

There are also specific unique risks to our community's air quality which include:

- **Chemical release:** Lithium battery fires release toxic fumes containing hazardous substances such as lithium, cobalt, nickel, and other harmful compounds. Inhaling these fumes can cause respiratory issues, skin irritation, and other health problems for residents and visitors.
- **Smoke dispersion:** Morro Bay's coastal winds can spread smoke over a wide area, affecting air quality not just locally but potentially in nearby communities as well. The dispersion of smoke can make it challenging to contain and mitigate the impact on air quality.

Additional concerns include routine emissions from manufacturing and recycling processes. The production and recycling of lithium batteries can emit volatile organic compounds (VOCs), particulate matter, and other pollutants. These emissions can degrade air quality, leading to long-term health risks such as asthma, cardiovascular diseases, and other respiratory conditions. There is a substantial impact on vulnerable populations. Children, the elderly, and individuals with pre-existing health conditions are particularly vulnerable to poor air quality. Prolonged exposure to pollutants can exacerbate health issues, leading to increased hospital visits and medical costs.

In addition to air quality dangers there are unique risks to water pollution:

- **Contaminant leakage:** Lithium batteries contain hazardous materials like lithium, cobalt, and manganese. Spills or leaks during manufacturing, storage, or transportation can result in these chemicals seeping into the soil and eventually contaminating groundwater and surface water bodies.
- **Stormwater runoff:** Rainwater can wash away contaminants from the facility into Morro Bay. This runoff can carry harmful substances directly into the bay, permanently affecting water quality and marine life.

As residents, we are responsible for Morro Bay's stewardship and future. We believe a lithium battery facility in our very scenic, yet fragile coastal town is a recipe for disaster that could have long-term impacts on health, the environment, tourism, and overall livability.

Sincerely,

Jim and Susan Lowe

Morro Bay, CA

## BESS EIR

Shirl F <[REDACTED]>

Tue 5/28/2024 1:45 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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"No significant impact" seems to be a misnomer within this report. The BESS EIR does not find any significant impact on the area with the installation of the battery storage facility yet in an overheating situation the toxic off gassing and fire potential would most certainly have a significant, negative impact to both residents and tourists.

In the event of a fire, evacuating the vast number of people from the densely populated area would be a difficult task due to limited egress routes, thus placing residents and tourists at a life threatening risk.

The noise impact is also listed as not presenting any significant impact and yet we currently do not have industrial factors on site producing any sound. When the PG&E plant was decommissioned, the noise impact was significantly decreased, actually non-existent. Any noise would contribute significantly as compared to what we experience now. The fact that most residents within the area are located on hillsides or bluffs above the proposed site, it would seem impossible to mitigate the noise pollution from the the BESS and its cooling systems. The construction of noise walls or barriers would be insufficient to mitigate the sound as it would rise above thus adversely affecting the residents. A complete containment of all elements may not be practical nor may not reduce the sound enough to achieve the widely accepted 5 decibels above existing background levels. We are able to hear the sounds of the sea lions in the harbor, the red-tailed hawks flying overhead, and the beautiful sounds of the waves crashing upon the beach, especially throughout the night when background noise levels are extremely low. Those sounds, which represent a select few, are priceless and it would be unconscionable to mask them with more industrial noise even if it's deemed insignificant based upon projected decibel measurements. The specific issue here is projected measurements and most probably not observed throughout the night.

I'm not in favor of the BESS project as I feel that it wouldn't be the best use of that land, given its proximity to residential neighborhoods and beaches, especially if the focus is to return the area to its natural beauty and preserve it for future generations to enjoy. We have an opportunity to vastly change the landscape of that area and industrial use or over development should not be the consensus. In the event that this project were to move forward, I believe that buildings or significant enclosures for the battery storage including its cooling systems would be an absolute minimum requirement for both fire and noise containment, in addition to the mitigation of any light impacts that would be created by the facility. I would implore the city to require this containment for the safety of our residents and tourists, and for the enjoyment of all to indulge in the peace and quiet that we've come to enjoy from this area with the closure of the previous power plant. It has afforded us a better quality of life through the reduction of noise, pollution and emissions, and has returned an element of nature's audible treats for all to appreciate.

Shirley Fraser

Nearby resident of Morro Bay

## BESS PUBLIC COMMENT

jivin me <[REDACTED]>

Tue 5/28/2024 1:57 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

Ms. Fowler,

I will begin by saying that I grew up in Morro Bay and Cambria and have lived here for nearly 66 years. My father had two businesses in Morro Bay and two in Cambria and one in San Simeon. I have worked for others and had two businesses of my own. Like many old-time central coast residents, I have endured a lot and done without a lot to remain in my homeland because of love for the flora/fauna/land. I am writing you today as I am incredulous that such a project is being considered in the fragile and treasured area of the Morro Bay Embarcadero.

I assure you I am most supportive of renewable forms of energy and have lived in rustic cabins without electricity and hot water - in order to live my commitment to a healthy planet, but the proposed BESS - though a worthy endeavor - is not suited to the proposed location. We will all have to live or die with a decision that is not logical or conscientious....thus this proposal demands more than brokers or salespersons, we need leaders who are willing to play the long game and act as guardians for our lives and treasures, our future income.

- How can you consider a project that, to my understanding, is antithetical to the Plan Morro Bay and is in conflict with the California Coastal Act?

- The EIR was inadequate before the Otay Mesa event, but now since that disaster, it is totally unacceptable. And the recipients of this monstrosity - our community - need to be given a larger role in decision making.

I am asking that you don't approve the DEIR and that you muster intelligence and strength to reject the project once and for all.

Counting on you to display wisdom for the ages,  
jann reynolds  
Morro Bay, CA 93442

## **Public Comment on the DEIR for BESS Proposal on Power Plant Site May 28, 2024**

**The City of Morro Bay's General Plan is very specific in terms of development along the Embarcadero and this piece of property in particular. Here is a direct quote as well as Policies and Implementation Actions to support my claim. Page numbers are in parentheses at the end of each quote:**

“Because of their location near the coastline, the businesses and recreation areas are vulnerable to both development pressure and increasing flood risk due to sea level rise. The Land Use Map and policies work together to protect visitor-serving uses from encroachment of all kinds.” (3-29)

“POLICY LU-4.1: Waterfront Uses. Maintain and encourage the development of visitor-serving and coastal-dependent land uses along the waterfront, and give such uses priority over other types of development that are either not dependent on a waterfront location or not related to public use and enjoyment of the coast.” (3-35)

“POLICY LU-4.6: Development Priority. Using private lands suitable for visitor-serving commercial recreational facilities shall have priority over using such lands for private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.” (3-35)

“IMPLEMENTATION ACTION LU-7

As part of the Zoning Code update, maintain land use and zoning that protects visitor-serving and coastal dependent uses, including commercial fishing.” (3-36)

**The City anticipated interim uses while development plans may be underway. Even Interim uses must maintain current land use:**

“POLICY LU-4.4: Interim Uses in Coastal Zone. Permit interim uses in areas designated for coastal-dependent uses until the existing owners have an approved coastal-dependent development. Interim uses in the Measure D zone/Commercial/Recreational Fishing land use designation could only be those that are consistent with Measure D.” (3-35)

“IMPLEMENTATION ACTION LU-7

As part of the Zoning Code update, maintain land use and zoning that protects visitor-serving and coastal dependent uses, including commercial fishing. (3-36)

“IMPLEMENTATION ACTION LU-10

Modify zoning and development standards to allow interim uses in areas designated for coastal-dependent uses until the existing owners have an approved coastal-dependent development. The City considers this type of interim temporary use exempt from coastal development permits. Interim uses shall be limited to projects which a) have relocatable structures, b) are compatible with the character of surrounding areas, c) preserve established viewsheds, and d) are limited to the following uses:

- Visitor access, paths, lookout points

- Recreational vehicle parking
- Automobile parking
- Picnic areas
- Community gardens
- Campgrounds
- Restrooms and service facilities
- Playgrounds
- Temporary boat storage
- Temporary boat repair area
- Ancillary uses for the above
- Other uses serving visitors or commercial fishing which do not require permanent structures.” (3-36)

**The City's General Plan anticipates the development on the power plant site:**

“Future development of the Vistra power plant is anticipated to include a mix of visitor-serving commercial, open space, and public facility uses, and may include some potential for future housing. Future potential energy uses in Morro Bay will focus on renewable energy, which is in line with the state direction and the vision for Morro Bay.” (3-31)

**While renewable energy is mentioned in this statement, it is not power plant site specific. The Policy that accompanies this text does not mention energy at all:**

“POLICY LU-5.4: Vistra Site Master Plan. Create a master plan for the redevelopment of the former Vistra power plant site and surrounding area, which could include reuse of some of the existing buildings. The master plan will be the responsibility of the developer or property owner upon property development. Encourage extensive community participation in the master plan process. Ensure that the land use map identified in Figure LU-4 and development capacity established in Table LU-2 guide land planning for the site. Other objectives for the master plan include creating a better connection between the two sides of the Embarcadero at the Vistra site and creating a pedestrian-friendly atmosphere along the site’s Embarcadero street frontage. The master plan shall be incorporated into the LCP via an LUP amendment with Chapter 3 of the Coastal Act with the standard of review prior to any CDP processing for associated development.” (3-37)

**The DEIR acknowledges that Vistra does not meet current land use and zoning:**

“A comprehensive update to the Zoning Ordinance/Implementation Plan was adopted in November 2022, which changed the Project Site’s zoning from M-2/PD/I with a Planned Development overlay and Interim Use overlay designation to Visitor Serving Commercial.” (ES-2)

**The project proposal assumes locals and tourists would want to be close to a BESS:**

“The proposed Master Plan would not modify the existing land use or zoning designation on the remainder of the Power Plant Property, retaining the Visitor Serving Commercial designation and Mixed-Use Residential Overlay implemented through Plan Morro Bay, and the Visitor Serving Commercial zoning.” (ES-5)

**The proposed project addresses a broad State issue:**

"In doing so, the BESS would facilitate the efficient use of existing renewable energy sources and the development of new renewable energy facilities, thereby reducing fossil fuel consumption and related emissions." (ES-3)

**But overrides very real local constraints:**

"The BESS Facility would also include three substations with transformers, a transmission line connecting to the PG&E switchyard, water supply system improvements, and internal access roads."  
(ES-3)

**The number of Water Equivalency Units (WEU) required for this project has not been identified. The ordinance addressing WEUs was an initiative measure proposed and passed by the City's voters. Only 65 units are allocated to businesses per year.**

**Water is a perennially keen issue in the City of Morro Bay. The power plant site no longer has its own well, which was shut down in the early 2000s. The City has negotiated with the power plant owner to put injection wells for drinking water on the power plant property. The real possibility of contaminated water from an incident on the property would further damage the Morro Basin, the City's back up to the State Water Project when it shuts down in the Fall for cleaning. Considering the amount of water consumed in the Otay Mesa BESS incident, Morro Bay would be dry.**

**Besides an unmitigated water impact, the proposed project offers an unacceptable Visual for the tourist area directly across a 2-lane street to the west as well as tourist-oriented businesses adjacent to the south:**

**FENCING AND LANDSCAPING**

An approximately six-foot-high fence (topped with one-foot of three-strand barbed wire) would surround the area containing the buildings, PCSs, and substations, including the substation control house. Security cameras would be located at key locations. The 24-acre BESS Site would not be landscaped to reduce the risk of vegetation disrupting BESS Facility operation. Due to the existing berms surrounding the former tank farm area, lower elevations of the former tank farm pads where the buildings would be placed, and existing vegetation along the existing berms, no additional vegetative screening is proposed.

"Up to six Monterey cypress trees could be removed for access west of the proposed southernmost building and associated substation. Any removed trees would be replaced per the City's Major Vegetation Guidelines. The open areas surrounding the buildings would include access roads and paths. All other surfaces would be rock." (ES-3,ES-4)

**Yet the DEIR states one of its objectives for the proposed project is:**

" □ Improve aesthetics, sight lines, and view corridors along the Morro Bay waterfront and Embarcadero areas in relation to the Power Plant Property in a manner consistent with Plan Morro Bay policies on improving degraded viewsheds and preserving the visual character of Morro Bay (see Plan Morro Bay Policies C-9.6, C-9.7, C-9.8, and C-9.9)." (ES-6)

**These two statements contradict the Visual Resource impact.**

**As evidenced above, the following statement cannot be true regarding Land Use/Planning and Utilities/Service Systems:**

There is no substantial evidence that significant impacts would occur related to the following topics:

- Energy
- Land Use/Planning
- Mineral Resources
- Public Services
- Utilities/Service Systems (ES-9)

**Again, as evidenced above the following statements cannot be true:**

“There is no substantial evidence that significant impacts would occur related to the following issues:

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater (Geology and Soils)
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school (Hazards and Hazardous Materials) (ES-9)
- Violate any water quality standards or waste discharge requirements (Hydrology and Water Quality)
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin (Hydrology and Water Quality)
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (Hydrology and Water Quality).” (ES-10)

**In conclusion, a brief word regarding BESS:**

“‘With proper engineering, lithium-ion battery storage sites are safe and pose little risk of starting a fire,’ said Shirley Meng, a molecular engineering professor at the University of Chicago who is an expert on batteries and studies ethically sourced, recyclable materials for energy storage....She noted, however, that ‘when something bad happens, it’s a catastrophe.’

“‘And the threat of groundwater contamination if a wildfire spreads to a battery site is real because of the chemical compounds in the batteries,’ she said.”

[https://enewspaper.latimes.com/infinity/article\\_share.aspx?guid=8bdd0d86-99f1-4959-a9bc-d1ccfc81838a](https://enewspaper.latimes.com/infinity/article_share.aspx?guid=8bdd0d86-99f1-4959-a9bc-d1ccfc81838a)

**This Hazard is unmitigatable.**

**My finally comment is what is upper most in homeowners minds: House insurance is already difficult in California due to the plethora of wildfires the last few years. House insurance may become unattainable living in a town with BESS. The City of Morro Bay will lose population because insurance is unattainable. Therefore, Population/Housing rises to a level of significance not addressed by the DEIR:**

**“4.10.10 Population/Housing thresholds of Significance**

**“Pursuant to the CEQA Guidelines, Appendix G checklist, potentially significant impacts would occur if**

- 2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. “**

**Resopectfully Submitted,**

**Betty Winholtz**

**Morro Bay**

## Comment to the BESS EIR

Carolyn R Brinkman <[REDACTED]>

Tue 5/28/2024 2:09 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue Morro Bay, California 93442

[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Re: My public comment to Draft EIR for Battery Energy Storage System (BESS) proposed project in Morro Bay

Dear Ms. Fowler,

The City of Morro Bay should not accept the EIR for Vistra's proposed Battery Energy Storage System project.

**First, the issue of contaminants on the Vistra property is ongoing, not settled. Known and unknown contaminants on the Vistra property pose a particular environmental threat.** The prior City Council did not take up the issue of contamination on the Vistra property when the California Department of Toxic Substances Control (DTSC) sent the City a copy of its *Draft Statement of Basis* for comment. The draft listed five (5) contaminants of concern found in six areas of Vistra property. This draft DTSC assessment was based on studies done over the years by PG&E, former owner of the site. The City Council at that time accepted Staff's recommendation to just "read and file" the draft document. In response to the *Draft Statement of Basis*, Vistra then conducted its own studies, which found contaminants in only one of the six areas, Area 1 on maps of the Vistra property. The Department of Toxic Substances Control accepted Vistra's studies and assessment. The DTSC sent the City a final *Statement of Basis* that included the revision that cited contaminants of concern in only Area 1 of the six sites. This time, the City concurred with the revised *Statement of Basis*. It's important to note that the planned BESS includes Area 1 that is still contaminated. Again, my point here is that the issue of contaminants on the property is ongoing, not settled. Do we trust Vistra to protect the health of our residents, our tourists, the workers on the project, our wildlife?

**Second, Vistra has waved a red flag in its dealings with the City and its residents. It has expected the City to wave its project through the EIR process, despite the fact that the project is in flux.** Not only did Vistra include a second possible and much different version of the project in the

EIR than it first proposed, the company has stated that it is not certain of the technology it will be using in the BESS because that technology is rapidly changing. If the City accepts this EIR, it will be accepting a project that is still in draft form and the City will lose control of the project.

**Finally, a small city like Morro Bay does not have the resources to keep close watch on a project undertaken by a company the size and character of Vistra, a company that has not been the best partner to the City.** The long, drawn-out legal tangle with Vistra over the City's request to site injection and extraction wells on a small portion of Vistra's property should be a cautionary tale.

Vistra's offer to allow the wells on its property would have cost the City an exorbitant amount, far more than the assessed value of the property. The City got permission for the wells through a bargain that essentially gave a green light to the BESS project. The point here is that we can expect the same treatment from Vistra if we agree to the BESS project. Any project is beset by unknowns that change the outcome of that project. Do we want to face these unknowns with a company that has not been a good partner? Do we have the staff and financial resources to protect ourselves, our City, and our environment during the project?

The City of Morro Bay should not accept an EIR with these uncertainties. The City will lose control of the project.

Sincerely, Carolyn Brinkman

Resident of Morro Bay

## Morro Bay BESS (EIR Public Comment).

SentienceX <SentienceX@protonmail.com>

Tue 5/28/2024 2:09 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Daniel McCrain <dmccrain@morrobayca.gov>

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Subject: Morro Bay BESS (EIR Public Comment).

Date: 05.28.2024

From:

Veritas Quaesitor, Research Analyst.

Email: [SentienceX@protonmail.com](mailto:SentienceX@protonmail.com)

Phone: (805) 457-4711

To:

City of Morro Bay.

Attn: Cindy Jacinth, Planning Manager

955 Shasta Avenue Morro Bay, California 93442

Website: <https://morrobayca.gov/>

Email: [BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Cc:

Morro Bay Fire Department.

Attn: Dan McCrain, Fire Chief

715 Harbor St, Morro Bay, CA 93442

Website: <https://morrobayca.gov/68/Fire>

Email: [dmccrain@morrobayca.gov](mailto:dmccrain@morrobayca.gov)

To whom it may concern,

I hope this message finds you well.

My name is Veritas Quaesitor, and I am an independent research analyst at SentienceX. I am writing to share some recent findings from our research that I believe could be of significant value to you and your team.

This is our initial phase of research concerning the proposed Morro Bay BESS facility. You can access a brief analysis via the attachment below.

If there are any questions, please contact us.

Attachment: <https://chatgpt.com/share/6f743884-1844-4e8b-b1c2-e8eaeff7babb>

Best Regards,

Veritas Quaesitor, Research Analyst.

Email: [SentienceX@protonmail.com](mailto:SentienceX@protonmail.com)

Phone: (805) 457-4711

Sent with [Proton Mail](#) secure email.

## Copy of EIR Public Response Letter Template

Westerly Miller (via Google Docs) <[REDACTED]>

Tue 5/28/2024 2:24 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Council <Council@morrobayca.gov>; sarah.macgregor@coastal.ca.gov <sarah.macgregor@coastal.ca.gov>; Planning Commission <planningcommission@morrobayca.gov>

You don't often get email from [REDACTED] [Learn why this is important](#)

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## Westerly Miller attached a document



Westerly Miller ([REDACTED]) has attached the following document:

Copy of EIR Public Response Letter Template

*Snapshot of the item below:*

May 27, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reasons:

The sensitive habitat of the Morro Bay National Estuary. This sensitive habitat is home to over 250 species of land, sea and shore birds. Most of these very sensitive species have undergone a dramatic decrease in recent decades due to habitat loss and human disturbance. The health and welfare of this national treasure as a vital ecological resource cannot be overstated. Protecting this vital resource is paramount for the welfare of Morro Bay and the surrounding ecosystems.

Vistra has proposed the WORLD'S BIGGEST BATTERY STORAGE FACILITY on one of the world's largest and most diverse estuaries. As the world's

largest proposed Battery Energy Storage System, the BESS Project will do further irreparable damage to this critical, vital habitat both while under construction and in the likely event of a catastrophe similar to the current Otay Mesa Battery Facility. As of this writing, this lithium-ion battery storage facility has been burning for ten days, is still continuing to reignite, and is still discharging toxic gasses and fumes. An incident in Morro Bay, likely to happen similar to the one in Otay Mesa or the tragedy in the Moss Landing battery complex in September 2022 would decimate the area.

These concerns must be addressed when discussing the BESS in Morro Bay - I am demanding that each of the following agencies publicize their position relative to the above concerns. As agencies that were signatories in 2010 to their commitment to implement the Marine Life Protection Act, the California Coastal Commission should be acting in cooperation with the

California Ocean Council Secretary;

California Natural Resources Agency;

California Environmental Protection Agency;

California Department of Fish and Game;

California Department of Parks and Recreation;

State Water Resources Control Board;

NOAA Western Regional Collaboration Team United States National Oceanic and Atmospheric Administration;

Navy Region Southwest DoD Regional Environmental Coordinator;

Board of Trustees California Ocean Science Trust;

Resources Legacy Fund Foundation;

US Fish and Wildlife;

National Estuary Program;

US Coast Guard

to ensure that the use of land and water adheres to the environmentally friendly practices agreed upon by Morro Bay citizens in the Morro Bay General Plan. According to the Memorandum of Understanding (MOU) of the California Marine Life Protection Act these agencies are tasked with overseeing, and caring for and

preserving the state's extraordinary biological diversity, of which the Morro Bay and its environs are one of the most outstanding in the world.

Allowing Vistra and Offshore Wind to circumvent the permitting process without careful consideration and approval from each and every one of these democratically elected network of agencies is a criminal offense on the part of those who have allowed themselves to be paid off or bought off. Please ensure the law is followed to the letter on this critical issue. It is imperative that we get this right - the future of Morro Bay and our future generations depends on it.

Sincerely,

Westerly Miller

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners;  
Sarah MacGregor, Coastal Planner, California Coastal Commission

Google LLC, 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA  
You have received this email because westerlym1@gmail.com shared a  
document with you from Google Docs.



May 28, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

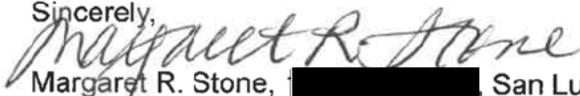
Dear Ms. Fowler,

I am a resident of the City of San Luis Obispo, CA, a sixth generation Californian, and a retired attorney, wife, mother, and grandmother of San Luis Obispo residents. I enjoy water sports at Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reasons.

1. Its fire hazards to the residents of the community and the Bay have not been considered or addressed. The existing resources for fire containment and extinguishment are not available in Morro Bay and no provision is made to create, fund, and maintain them.
2. Similarly, the toxic air contamination that would be caused when such a fire occurs and reignites have not been considered and addressed.
3. The transmission of the energy that would presumably be stored in the BESS to urban areas other than Morro Bay is nonexistent, and its creation, funding and maintenance has not been considered or addressed.
4. The EIR does not compare the existing alternate sites to that of the Morro Bay site.
5. If this proposed site is developed as a BESS, inevitably a disastrous fire and toxic chemicals will be released into the air. Those airborne chemicals will then be dispersed by the prevailing winds which are frequently out of the west and north. When lives are lost, injuries are sustained, and property damage results, the federal government and state of California's taxpayers will be the only responsible parties left standing. No attempt to quantify the devastation that would result has been made in the EIR.
6. The peace and beauty of the wildlife in the Estero Bay will be the first and lasting victim of this BESS if it is approved.

Thank you for your attention and professional courtesy.

Sincerely,



Margaret R. Stone, [REDACTED], San Luis Obispo, CA 93401

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

TERRI FRANK  
[REDACTED]  
MORRO BAY, CA 93442

May 28, 2024

Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, CA 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Re: My public comment to Draft EIR for Battery Storage System (BESS) proposed project in Morro Bay

Dear Ms. Fowler,

I have lived in this beautiful area for almost 16 years. For the past ten years, I have lived in Morro Bay and feel so lucky to be able to live here. As a resident, I am *strongly opposed* to having Vistra Corporation build a Lithium-ion Battery Energy Storage System (BESS) in Morro Bay. Simply put, a facility such as this has the potential of literally ruining our beautiful city, our health, our wildlife and sea life, our waterways and water sources, our soil, our tourism trade just to name a few. I am writing this letter to you in hopes of “changing the tide” of potentially having a dangerous BESS built here in my hometown of Morro Bay. I am attaching my reasons and concerns herewith.

Kim, thank you for your time and consideration.

Sincerely,

Terri Frank  
Morro Bay Resident

# The Case Against a Lithium-ion Battery Energy Storage System in Morro Bay

## Introduction

Morro Bay, California, is a unique ecosystem with rich biodiversity and a community that values its natural surroundings. However, the proposal to build a Lithium-ion Battery Energy Storage System (BESS) in this area raises several environmental and safety concerns. I am vehemently opposed to a BESS facility being built in our beautiful community and the potential impacts of such a system on the local environment, wildlife, and residents. In my commentary, I am focusing on endangered species, seismic activity, toxic emissions, and the potential health risks to the local population.

## Impact on Endangered Species and Birds

Morro Bay is home to a variety of endangered species with protected status in our area<sup>1</sup>. These species include Southern sea otters, the Morro Kangaroo Rat, Steelhead (Trout), Shoulderbank Snails, and Snowy Plovers<sup>2</sup>. Interestingly, Morro Bay is a significant habitat for birds, hosting about 30% of California's Western Snowy Plovers<sup>3</sup>.

The Southern sea otter, which happens to be one of the beloved mammals of tourists and locals alike, is known for its significant role in maintaining the health of kelp forests and marine ecosystems. These otters, once nearly hunted to extinction for their fur, have made a remarkable recovery but still face threats from pollution and habitat loss. According to the Marine Mammal Commission, the most recent findings indicate the population has continued to decline, with a most recent estimate of 2,962 otters in 2019<sup>11</sup>. The sea otters numbers are dwindling due to a host of different things, but one very important reason for their declining mortality rate is due to contaminants<sup>11</sup>.

Other local endangered species include the Morro Bay kangaroo rat due primarily to habitat destruction and fragmentation; steelhead, a type of rainbow trout that migrates to the ocean and is struggling to survive due to changes in water quality and flow; and the Morro shoulderband snail, found in the dunes of Morro Bay<sup>2</sup>.

The construction and operation of a BESS would, no doubt, disrupt these endangered species' sensitive habitats, potentially leading to a decline in these species' populations. The noise, light pollution, and human activity associated with the construction and maintenance of the facility could disturb wildlife, alter their behaviors, and degrade their habitats.

## Seismic Activity and Tsunami Risks

Morro Bay is located in an area prone to seismic activity<sup>4</sup>. Earthquakes can trigger tsunamis, which pose a significant risk to coastal communities. In fact, Morro Bay has experienced extreme tidal surges following large earthquakes in Japan<sup>5</sup>. A BESS, if damaged by an earthquake or tsunami, could result in catastrophic failures, leading to fires and potentially the release of toxic materials into the

environment. It is a well known fact that salt water and lithium batteries don't mix and can cause very hazardous and potentially lethal toxins into its environment.

## **Toxic Emissions and Fire Risks**

Lithium-ion batteries, the core component of a BESS, can release very hot, flammable, and toxic gases when they experience thermal runaway. In large storage systems, such as the one proposed to be built in Morro Bay, which would be the largest BESS in America, the failure of one lithium cell can cascade to include hundreds of individual cells. The resulting hot flammable gases can lead to an explosion or a very difficult-to-extinguish fire<sup>6</sup>. These fires can emit a range of over 100 extremely *toxic gases*<sup>7</sup>. These include carbon monoxide, hydrogen fluoride, and hydrogen chloride, which pose *significant health risks* to humans as well as any living being when inhaled in large quantities. Toxic gases, especially carbon monoxide, can cause serious harm to anyone who breathes it in for a short period of time<sup>8</sup>. These gases can result from thermal runaway, a condition where batteries overheat and chemically degrade, potentially leading to rapid fire growth and explosions. *The consequences of such fires for nearby residents include potential inhalation of toxic fumes, which can cause respiratory issues and other health problems.*

According to CensusReporter.org, Morro Bay is a retirement community where 54% of the population is comprised of senior citizens. The median age is 52.1 years of age<sup>10</sup>. As we all know, senior citizens more likely will be affected and their health jeopardized by these toxic gases.

Again, the effect of these dangerous chemicals will also endanger our wildlife and sea life. The impact of these toxic chemicals affecting these creatures by proximity to water sources which have been tainted with toxic substances will have widespread effects.

Contaminated runoff water from firefighting efforts can introduce hazardous materials into water supplies, affecting both marine ecosystems and the quality of drinking water. The soil can become contaminated through deposition of airborne pollutants and by infiltration of contaminated water, leading to potential long-term environmental damage and impacts on agriculture. It's crucial for emergency responders to have proper training and equipment to handle BESS fires safely, as standard operating procedures for such incidents are still being developed to address these emerging hazards. Ongoing research and development of safety guidelines are essential to mitigate the risks associated with BESS fires and to ensure the protection of public health and the environment.

## **Impact on Local Residents**

The potential health risks to local residents from a BESS are significant. Exposure to the toxic gases released during a battery fire can cause coughing, difficulty breathing, sore throat, and shortness of breath. Moreover, the risk of a large-scale fire or explosion at the facility poses a direct threat to the safety of nearby residents, tourists, schools, businesses as well as wildlife and sea life.

## **Conclusion**

While I believe a BESS can offer benefits such as energy security and resilience, it is crucial to consider the potential environmental and health impacts. In the case of Morro Bay, the risks to endangered species, the potential for increased seismic activity and tsunamis, the danger of toxic emissions, and the potential health risks to local residents as well as tourists make a compelling case against the construction of a BESS in this area. It is essential to seek alternative, less harmful means of energy storage that respect and preserve the community and unique ecosystem of Morro Bay.

---

### Source(s)

1. [Endangered Species of Morro Bay](#)
2. [Morro Dunes Ecological Reserve - California Department of Fish and Wildlife](#)
3. [Morro Bay Birding](#)
4. [Recent Earthquakes Near Morro Bay, California, United States](#)
5. [Governor Declares Local Emergency for Morro Bay Following Japan ... - KCET](#)
6. [Emerging Hazards of Battery Energy Storage System Fires](#)
7. [100 Toxic Gases from Li-ions—it's Not Just About Fires](#)
8. [Are lithium-ion battery fire fumes toxic? - GENIXGREEN](#)
9. <https://bing.com/search?q=endangered+species+and+birds+in+Morro+Bay%2c+California>
10. <https://censusreporter.org/profiles/16000US0649362-morro-bay-ca/>
11. [Southern Sea Otter - Marine Mammal Commission \(mmc.gov\)](#)

## Public comment to BESS Environmental Impact Report

teriza roza <[REDACTED]>

Tue 5/28/2024 2:51 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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Dear Ms. Fowler,

We are residents and visitors of Morro Bay and the surrounding communities, and we are opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are our public comments to the draft EIR submitted by the City and its consultants. We are very concerned and our fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California.

On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected. The evacuation order for some commercial businesses (Otay Mesa Gateway facility is not in a residential area) was for a larger area, and stated:

**"This evacuation order requires immediate movement out of the affected area due to an imminent threat to life. All persons in the impacted area should prepare to evacuate. Evacuation order means there is extreme danger in your area. You must leave now; do not wait. Contact your neighbors and share information."**

Cal Fire Capt. Brent Pascua stated that these thermal runaway events can last anywhere from seven days to a couple of weeks, but firefighters are planning for *two to four weeks*, and then they will "reevaluate."



If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. An evacuation order would likely encompass the entire city. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may have trouble evacuating. All of this would be due to the location of the project and could be avoided if the project were moved to a suitable location.

Otay Mesa raises some important questions. What will those toxic fumes do to a small community, visitors and the wildlife? How will we evacuate from Morro Rock and the Embarcadero and where will we go for several weeks? How much water does it take to douse a thermal runaway event 24/7 that lasts for several weeks? Where is that water going to come from? Where do school students in high school and elementary school go to learn for several weeks? Where does the contaminated water go after it is used for fire suppression? Where do 40 firefighters come from since we only have a fraction of that number here in Morro Bay? There are many, many more questions.

BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." Since 2014, Morro Bay has drawn many thousands of visitors and become a special place for tourists. The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses - This facility requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion

batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic “Morro Rock,” at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The “rock” and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters’ sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. All of the “external costs” of the BESS will be borne by the citizens of Morro Bay.

The DEIR must be rewritten and recirculated for our comments - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires, the single most important and dangerous impact. It discounts the threats to our wildlife and our community. It fails to

acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5 is a substantially different project with important differences in the impacts, if there is a change to that alternative, the applicant must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. The significant impacts from this project include fiscal impacts due to the loss of tourism. After having seen what is happening in Otay Mesa and the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,  
Teriza Chaney

## My Public Comment Re: Draft EIR for the BESS Project Proposed for Morro Bay CA

Miki Gillman <[REDACTED]>

Tue 5/28/2024 3:01 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Sarah.MacGregor@coastal.ca.gov <Sarah.MacGregor@coastal.ca.gov>; Council <Council@morrobayca.gov>;

PlanningCommission@morrobayca.gov <PlanningCommission@morrobayca.gov>

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**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, California 93442

[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Re: My Public Comment Re: Draft EIR for Battery Energy Storage System (BESS) proposed project in Morro Bay

Dear Ms. Fowler,

As a 45-year resident of San Luis Obispo County who frequents Morro Bay, enjoying the bird sanctuary and the multitude of wildlife that enjoy it with me, I am writing to express grave concerns about the BESS project proposed for Morro Bay. I am also therefore asking that you put public safety 1<sup>st</sup>: do not certify the draft EIR, as it is woefully inadequate.

The draft EIR is inadequate in identifying the potential impacts to our community and environment. My grave concerns are validated by what is happening now at the Gateway BESS facility in Otay Mesa, California.

On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay *it would be an unmitigated disaster due to the location of the project site.*

Such fires are not a rarity for lithium-ion batteries on that large a scale and they can keep re-igniting, resulting in fires capable of lasting for at least several weeks.

Additionally, such fires release significant toxicities, such as hydrogen cyanide.

It therefore appears to be reckless to place such a facility so close to a high school, a bird sanctuary, the home of the protected California sea otter, a thriving tourist business section (Morro Bay survives on tourism), numerous homes, and a thriving downtown business area.

Surely there are better places for such a facility. And surely any EIR must address the numerous safety issues and include strategies to mitigate them. The EIR must also include a viable evacuation plan, regardless of where the facility is located.

Please put public safety and the environment 1st: Please do not certify any EIR until it adequately addresses all elements, to the satisfaction of those most impacted (residents)..

Sincerely,  
Miki Gillman  
Atascadero



## Battery Storage

Robert Pierson <[REDACTED]>

Tue 5/28/2024 3:35 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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The proposed battery storage project on the Embarcadero is a dangerous eyesore and not worth the gamble.

Sincerely , Robert Pierson



*Yana Garcia*  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Meredith Williams, Ph.D.  
Director  
8800 Cal Center Drive  
Sacramento, California 95826-3200



*Gavin Newsom*  
Governor

### SENT VIA ELECTRONIC MAIL

May 28, 2024

Cindy Jancinth  
Planning Manager  
City of Morro Bay  
955 Shasta Avenue  
Morro Bay, CA 93442  
[cjacinth@morrobayca.gov](mailto:cjacinth@morrobayca.gov)

RE: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE MORRO BAY BATTERY ENERGY STORAGE SYSTEM PROJECT, DATED MARCH 11 2024, STATE CLEARINGHOUSE NUMBER [2022060083](#)

Dear Cindy Jancinth,

The Department of Toxic Substances Control (DTSC) received a Draft Environmental Impact Report (DEIR) for the Morro Bay Battery Energy Storage System Project. The proposed project encompasses approximately 43 acres of the 107-acre Morro Bay Power Plant property (Assessor's Parcel Number [APN] 066-331-046; 1290 Embarcadero Road) and includes three components: (1) construction and operation of a 600-MW Battery Energy Storage System Facility (BESS Facility), (2) demolition and removal of the existing Morro Bay Power Plant building and stacks, backfill and restoration of the site and (3) adoption of a Master Plan. The BESS Facility would be constructed on a 21-acre portion of the Project Site and would consist of three two-story buildings with a total building area of 91,000 sq ft. Infrastructure to support the BESS

Facility would include power conversion systems, substations, and tie-ins to the existing Pacific Gas and Electric substation adjacent to the Project site. The DEIR outlines the project location, existing site characteristics, current land uses, surrounding properties, and project details. Figure 2-5 in the DEIR depicts the [BESS facility location](#), showing that most of Area of Concern (AOC) 1 and 20.5 acres of the 24-acre BESS site are under a Land Use Covenant (LUC), recorded on July 21, 2022.

### **Morro Bay Power Plant Site Remediation Background**

The site has a history of power generation activities, including hazardous waste storage. Operations began in 1955 under Pacific Gas and Electric (PG&E). In 1998, PG&E transferred ownership to Duke Energy. LS Power purchased the Morro Bay Power Plant (MBPP) in 2006 and subsequently merged with Dynegy in 2007. The facility was renamed Dynegy Morro Bay, LLC, and later, in November 2020, to Morro Bay Power Company, LLC (MBPC). Power generation ceased in 2014, and the plant was shut down.

Under Health and Safety Code Section 25187, DTSC entered into a Corrective Action Consent Agreement (CACA) with PG&E in October 2006 (Docket HWCA: P1-06/07-001). PG&E (the original owner) conducted environmental investigations and remediation according to the CACA and the Resource Conservation and Recovery Act (RCRA) corrective action process at identified AOCs. Soil and groundwater quality data were used to assess human health and ecological risks. On April 26, 2021, DTSC determined that soil at AOCs 2 through 4 and 6 met the criteria for Corrective Action Complete. On October 24, 2022, DTSC also determined that groundwater at AOCs 1 through 6, soil at a portion of AOC 1, and soil at a portion of AOC 5 met the criteria for Corrective Action Complete without Controls. Additionally, soil at a portion of AOC 1 met the criteria for Corrective Action Complete with Controls, requiring a Land Use Covenant and Soil Management Plan. Further evaluation is needed for AOC 7 and part of AOC 5. PG&E retains environmental liability for AOCs 5 and 7 until further investigation is possible.

After reviewing the DEIR, DTSC has the following comments:

1. Land Use Covenant (LUC) on AOC 1:

In DEIR Chapter 2.4.1, "DTSC Land Use Restriction," it should be noted that the correct term is Land Use Covenant (LUC), not Limited Use Covenant. This correction applies to Figure 2-4 as well.

2. Soil Management Plan for the Former Tank Farm:

In the Article IV, Section 4.2 (a) of the LUC states, "No activities that will disturb the soil (e.g., excavation, grading, removal, trenching, filling, earth movement, mining, or drilling) shall be allowed at the Restricted Property without a Soil Management Plan pre-approved by the Department in writing." During BESS construction, measures must be taken to minimize exposure to contaminated soil and manage excavated soil per the [Soil Management Plan for the Former Tank Farm Area](#) (approved by DTSC on May 11, 2021). This includes dust control, stormwater pollution prevention, management and storage of excavated soil, soil characterization and profiling, on-site use, transportation, and disposal. A project-specific Health and Safety Plan (HASP) should be prepared, and construction workers must have appropriate training and qualifications (e.g., OSHA Hazardous Waste Operations and Emergency Response training, if necessary).

3. Current Status of AOCs:

Table 4.7-1 in the DEIR shows the current status of AOCs. While DTSC determined No Further Action for AOC 3 in 2021, the presence of Firehouse No. 1 on AOC 3 raises concerns about potential per- and polyfluoroalkyl substance (PFAS) release. DTSC is seeking historical records detailing the use of PFAS-containing foams or other PFAS-related agents at Firehouse No. 1, any existing PFAS data, and an evaluation of the potential risk of PFAS release into the environment. Further investigation and remediation measures may be necessary to address potential PFAS contamination in soil and groundwater within AOC 3 and its vicinity.

4. Potential Environmental Damage from Accidents:

Section 6.2.2 states, "Implementation of the proposed project would not involve uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would affect other areas." However, each building would house approximately 2,400 racks containing lithium-ion batteries, with a storage capacity of 200 MW each, for a total of 600 MW. These batteries contain potentially hazardous materials such as Lithium Cobalt Oxide (LiCoO<sub>2</sub>), electrolyte solutions, graphite, and heavy metals. An emergency plan must be prepared to manage and prevent hazardous material spills, generated and releases from accidents to the soil and groundwater, such as explosions and fires. The plan should include proper handling, storage, and disposal of damaged batteries to minimize environmental impact. Environmental investigations and assessments should be conducted to evaluate human and ecological risks based on various scenarios.

5. Environmental Liability:

The proposed project must not in any way introduce new contamination or spread or exacerbate existing contamination in soil and groundwater. Any party that causes or exacerbates the contamination could potentially be held liable for the contamination.

6. If buildings or other structures are to be demolished on any Project sites included in the proposed Project, surveys should be conducted for the presence of lead-based paints or products, mercury, asbestos containing materials, and polychlorinated biphenyl caulk. Removal, demolition, and disposal of any of the above-mentioned chemicals should be conducted in compliance with California environmental regulations and policies. In addition, sampling near current and/or former buildings should be conducted in accordance with [DTSC's Preliminary Endangerment Assessment \(PEA\) Guidance Manual](#).

Cindy Jancinth  
May 28, 2024  
Page 5

DTSC requests the city of Morro Bay to consider and respond to these comments in the Response to Comments (RTC) letter and make the necessary edits in the DEIR.

DTSC appreciates the opportunity to comment on the Morro Bay Battery Energy Storage System Project. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. Should you have any questions or comments regarding this matter, please contact Yang Dong, Project Manager at [yang.dong@dtsc.ca.gov](mailto:yang.dong@dtsc.ca.gov) or please respond to this letter or via [email](#) for additional guidance Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances..

Sincerely,



Tamara Purvis  
Associate Environmental Planner  
HWMP-Permitting Division – CEQA Unit  
Department of Toxic Substances Control  
[Tamara.Purvis@dtsc.ca.gov](mailto:Tamara.Purvis@dtsc.ca.gov)

Cindy Jancinth  
May 28, 2024  
Page 6

cc: (via email)

Governor's Office of Planning and  
Research State Clearinghouse  
[State.Clearinghouse@opr.ca.gov](mailto:State.Clearinghouse@opr.ca.gov)

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May 27, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

**RE: Comments - BESS Draft EIR**

Dear Ms. Fowler,

Thank you for the opportunity to comment on the Morro Bay Battery Energy Storage System Project (BESS) Draft Environmental Impact Report (dated March 2024).

I am a long-time Morro Bay resident and property owner. I am also a professional land use planner who has worked in the public, private, and nonprofit sectors for over 35 years. I read the BESS Draft Environmental Impact Report with great interest.

The BESS Draft Environmental Impact Report (DEIR) is inadequate and fails to provide a sufficient degree of analysis to provide decision makers with information which enables them to make a decision that intelligently takes account of environmental consequences, in the following areas:

**BESS Site Stormwater Runoff**

The DEIR fails to account the environmental effects of the BESS Project site storm water runoff into the Sea Otter Habitat in Morro Bay. The proposed BESS Project almost doubles the impermeable surface area of the existing Power Plant property. In *Figure 4.10-1 Conceptual Drainage Plan*, and in *Figure 1-2 Site Plan*, the storm drain system for the BESS Project area joins with the rest of the Power Plant property storm drain system, to flow under Embarcadero Road, where the Project site water runoff flows into Morro Bay, adjacent to the old Power Plant Water Intake Screenhouse Building. Where the BESS site water runoff flows into the Bay is precisely the habitat of the endangered southern Sea Otter habitat, and year-around Otter pupping nurseries. The BESS site water runoff will contain potential hazardous materials and pollutants, fuels and greases. This Impact is not addressed in the DEIR.

This stormwater runoff Impact becomes even more deadly to the Otters, in the case of a BESS thermal runaway battery fire, similar to the current fire at the BESS project in Otey-Mesa, California, and many other BESS fires worldwide.

Contaminated water from fire suppression will flow directly into the Sea Otter Habitat in the Bay.

### **BESS Thermal Runaway Battery Fire**

The DEIR fails to address any aspect of a thermal runaway battery fire as a potential environmental impact.

### **BESS Site Existing and Proposed Topography**

The DEIR fails to show the BESS Project site existing and proposed topography, and Project site cross-sections. This information is critical in the environmental analysis of potential flood risk and tsunami risk, in relation to the areas around the BESS site, Morro Creek and Power Plant site.

### **Emergency Evacuation Routes**

The DEIR lacks a good faith effort at full disclosure of the emergency evacuation of pedestrians, cyclists, and vehicles from Morro Rock, the Embarcadero, Harbor, Highway 1, and the town of Morro Bay, in the event of a BESS runaway fire.

### **Air Quality Impacts**

The BESS DEIR lacks analysis of potential air quality impacts on humans, and nearby flora and fauna, from a runaway battery plant fire.

### **Aesthetics and Visual Resources**

The DEIR post-development views of Project site are inadequate to inform the visual impacts of the BESS Project. Of the seven Key Viewpoints (KVPs) offered, only two Key Viewpoints show the Project from any elevation above the proposed Project. The two KVPs are barely even higher in elevation than the Project. The KVPs imply the town is a flat mid-western town. Morro Bay is a town of beautiful hills with beautiful viewsheds of Morro Rock, the beach, the Harbor, Bay, sandspit, and Pacific Ocean. The DEIR lacks the visual impacts of the Project from multiple Key Viewpoints from higher elevations around the town of Morro Bay.

### **Project Alternative Sites**

Evaluating Alternative Project site locations is not described in Section 5 Alternatives. In truth, isn't the Environmentally Superior Alternative actually a different Project site farther inland, safely away from sensitive environmental habitats, schools, homes, businesses, iconic world famous viewsheds, and popular tourist vacation areas?

The proposed BESS Project site is not a coastal-dependent industry. The battery Project is contrary to the California Coastal Act priorities. Morro Bay's damp salty air is a constant corrosive element of metals and wood. Alternative Project sites farther inland need to be offered as alternatives to the Morro Bay Power Plant site.

In summary, the Morro Bay Battery Energy Storage System Draft Environmental Impact Report is inadequate and fails to provide a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes into account the many environmental consequences of the important environmental issues listed above.

The BESS Draft Environmental Impact Report must address, and inform, on the above environmental issues, and should be rewritten and recirculated for another period of public comment, so that the public and decision makers can be properly informed and comment.

Again, thank you for this opportunity to submit my comments concerning the content of the Morro Bay BESS Project Draft EIR.

Sincerely,

Tina Metzger

Cc: Morro Bay City Council  
Morro Bay Planning Commission  
California Coast Commission

May 27, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

To Whom It May Concern,

I am a resident of Morro Bay, California. I have captained commercial charter and private vessels in Morro Bay and adjoining Estero Bay for years as a USCG licensed 100 ton Master. My children graduated from Morro Bay High School two years ago. I owned a successful tourist-driven retail shop on the waterfront for 13 years and recently sold the shop to a young couple to carry on the tradition of creating jobs and enhancing the area's economic vitality while providing a valued visitor serving experience. The shop sits a mere 2000 feet from the proposed BESS project.

I am strongly opposed to the BESS project proposed for Morro Bay for the following reasons:

- The project is located in a flood zone.
  - This risk has not been adequately addressed in the draft EIR. The draft EIR only considers single stacks of batteries catching fire. In the event of a major flood, all of the battery stacks would be subject to shorting and fire risk, creating a catastrophic and unmitigable event.
- The project is located in a Tsunami inundation zone.
  - This risk has not been adequately addressed in the draft EIR. The draft EIR suggests unrealistic containment of Tsunami related flooding. In the event of a major tsunami event, all of the battery stacks would be contaminated with salt water from the sea causing a catastrophic and unmitigable fire related event.
- The project is subject to the perils of sea level rise and coastal erosion.
  - The proposed project is a mere 1200 feet from the open waters of the Pacific Ocean sitting in an area without a meaningful rise in elevation above sea level.
  - It is sheer lunacy to propose a project this close to the Pacific Ocean due to the unmitigable perils of sea level rise and coastal erosion.
    - In fact, the city of Morro Bay was mandated by the California Coastal Commission to relocate its neighboring water treatment facility due to these very circumstances.
- The project is not consistent with the zoning of the proposed site.
  - The community spent years crafting a General Plan that was certified by the State of California and the California Coastal Commission; a significant portion of the General Plan is within a Local Coastal Zone requiring an LCP (Local Coastal Plan).
  - The zoning for the proposed project is Visitor Serving Commercial, not Industrial.

- The proposed project is within a Local Coastal Zone and is wholly unsuited for such a location.
  - The proposed project will limit access to coastal resources.
  - As noted, not only is the proposed project in conflict with existing zoning, it furthermore sits in a Local Coastal Zone, yet is not coastal dependent. Alternative sites were not adequately addressed in the draft EIR.
- The proposed project sits amid very high density areas with regard to transient populations.
  - The proposed project would be absurdly located in the midst of a coastal dependent, environmentally sensitive, visitor serving, commercial tourist area. There are literally thousands of people only feet from the proposed site every weekend.
    - The draft EIR does not adequately address emergency egress in the event of a catastrophic event.
  - The proposed project is located only 1700 feet from Morro Bay High School where over a thousand students and staff are located while school is in session.
    - Common sense dictates we do not want to place our children at risk of the potential dangers presented by such a large and errantly located BESS facility.

For these reasons, I submit that the draft EIR must be recirculated to adequately address the impacts of the proposed project. The current draft EIR has not properly identified all potential significant impacts and is thus deficient.

Respectfully submitted,  
*Jefferson Eckles*  
Capt Jeff Eckles

## Public comment to BESS Environmental Impact Report

Jan Hoistad <[REDACTED]>

Tue 5/28/2024 4:11 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, California 93442

[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Dear Ms Fowler,

My name is Jan Hoistad. I have been a homeowner and resident of Morro Bay since 2019. Prior to that, I rented during the winter months for four years, and before 2015, I made many short getaways to the Central Coast. In 2012, I chartered a boat and buried my parents' ashes off the coast of Morro Bay. My heart and life are here in Morro Bay.

I am distressed to see proposals for the industrialization of Morro Bay. This community has its history and identity in commercial fishing, tourism, and the beauty of our natural environment.

Our estuary and bay are home to many species of aquatic and avian life. The protection of the wildlife who live and migrate through our environment are entrusted to us.

I learn from our many well informed citizens, support opposition to the proposed BESS facility, and endorse the information cited below:

The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are our public comments to the draft EIR submitted by the City and its consultants. We are very concerned and our fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. An evacuation order would likely encompass the entire city. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may

have trouble evacuating. All of this would be due to the location of the project and could be avoided if the project were moved to a suitable location.

Otay Mesa raises some important questions. What will those toxic fumes do to a small community, visitors and the wildlife? How will we evacuate from Morro Rock and the Embarcadero and where will we go for several weeks? How much water does it take to douse a thermal runaway event 24/7 that lasts for several weeks? Where is that water going to come from? Where do school students in high school and elementary school go to learn for several weeks? Where does the contaminated water go after it is used for fire suppression? Where do 40 firefighters come from since we only have a fraction of that number here in Morro Bay? There are many, many more questions.

BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." Since 2014, Morro Bay has drawn many thousands of visitors and become a special place for tourists. The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses - This facility requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor

destination points for recreational uses. Morro Bay is unique for its iconic “Morro Rock,” at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The “rock” and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters’ sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact.

**We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.**

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. **All of the “external costs” of the BESS will be borne by the citizens of Morro Bay.**

The DEIR must be rewritten and recirculated for our comments - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires, the single most important and dangerous impact. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5 is a substantially different project with important differences in the impacts, if there is a change to that alternative, the applicant must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. **The significant impacts from this project include fiscal impacts due to the loss of tourism.** After having seen what is happening in Otay Mesa and

the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

I request that you not certify the EIR, and ask you to deny the project.

Sincerely,

Janice Hoistad

## Open comment period for Morro Bay's Draft EIR for Vistra's proposed BESS Project

Larry Landis <[REDACTED]>

Tue 5/28/2024 4:16 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>; Sarah Macgregor <Sarahmacgregor@coastal.ca.gov>; Council <Council@morrobayca.gov>; Planning Commission <planningcommission@morrobayca.gov>; Dana Swanson <dswanson@morrobayca.gov>

 1 attachments (115 KB)

BESS draft EIR comments.pdf;

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**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

I am a retired resident of Morro Bay and active in volunteer community organizations. My professional career experience involved pollution control and monitoring in air, water and soil for compliance with state and federal statutes and regulations, including CEQA and NEPA. The draft EIR fails to support a mitigated Negative Declaration and seems to avoid discussing known and obvious risks -- especially runaway thermal events.

It is my hope that you will not support this project and refer my attached comments back to the Lead Agency for improvement or denial.

Best regards,  
Larry Landis, MS Environmental Engineering, USC, 1987

May 21, 2024

City of Morro Bay  
Community Development Department  
955 Shasta Ave.  
Morro Bay, CA 93442

ATTN: Ms. Cindy Jacinth, Planning Manager

**RE: Morro Bay Battery Energy Storage Project (BESS)**

Dear Ms. Jacinth:

I have reviewed the Draft EIR for the BESS project and have found it to be profoundly inadequate for the following reasons. These comments are directed at the operational phase of the project.

- Risks due to fire and runaway thermal catastrophes are ignored or greatly understated.
- Potential financial and operational costs and their impact on boating safety and tourism due to possible catastrophes during 40 years of operation are not adequately described or mitigated.
- It is not clear if alternative sites have been considered, particularly sites outside of the city limits, available through eminent domain.
- The likelihood of one or more major earthquakes and resulting liquefaction during the 40-year project life should be given more weight. Also inundation by tsunamis.
- While there is a “decommissioning plan”, there is no “abandonment plan” and no requirement for a performance bond to guarantee abandonment.

It is no secret to FEMA and other emergency response agencies that lithium-ion batteries burn when overheated, punctured, corroded or otherwise stressed. The Otay Mesa fire is a recent example. Depending on the size or number of near-by batteries and other factors, the fires can be difficult to extinguish and burn for days. Further, the combustion products are extremely toxic and include hydrogen fluoride gas (HF), hydrogen chloride (HCl), hydrogen cyanide (HCN) and cobalt fumes. HF is particularly problematic because the gas can be absorbed through our skin and lungs and attack and permanently weaken bones. Cobalt is carcinogenic.

In developing wind roses for a hazard footprint, your consultant must include multi-day wind variability and fog events that would trap students, residents, shoppers, commercial and recreational boaters and essential workers, including the Harbor Master and U.S. Coast Guard. The risks posed in the event of fires include health, loss of economic value, tourism, boating safety on the high seas, and health risks to our pinnipeds, and birds, some of which are protected endangered species. Shelter-in-place does not realistically address these concerns. Because firefighting battery fires requires prodigious volumes of water, runoff into waterways and into the bay needs to be addressed. It cannot be good for the otters and other aquatic life, including shell fish. The source of the water for fighting fires and the impact on the city’s water supply is a related environmental impact.

It is not clear why the proposed location is desirable from the city's perspective, in view of the aforementioned health and economic risks that are manifest at the proposed location. Other candidate locations east of Highway One should be considered. In addition, as the Lead Agency, the city should describe the benefits of the project and compare them point by point to the risks. The proposed location would be liquified in the event of an earthquake and it is in a tsunami risk zone. The proposed mitigation is not adequate. At its proposed location, the project has the potential to turn a desirable coastal town and fishing and tourist destination into an East Palestine, Ohio, disaster area.

The proposed project does not necessarily include removal and remediation of the former PGandE building nor removal of the stacks. Also, decommissioning of the BESS facilities may not result in their removal. Even with proposed compensation, we would just be kicking the can down the road for another forty years if removal and cleanup are delayed. Mitigation should include a sizable performance bond with enforceable milestones to cleanup the existing pollution in the soil and groundwater. Also, the EIR should include the plan for abandonment of the existing and proposed facilities.

The listed concerns are not meant to be exhaustive. I'm sure you will be receiving other relevant suggestions. Thank you for your attention to these concerns.

Best regards,

Larry Landist†



Morro Bay, CA 93442

---

† I am a retired engineer with an MS in Environmental Engineering from USC and a Morro Bay resident.

Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
BESScomments@morrobayca.gov

May 27, 2024

RECEIVED  
City of Morro Bay

MAY 28 2024

Re: My public comment to Draft EIR for Battery Energy Storage System (BESS) Administration  
proposed project in Morro Bay

Dear Ms. Fowler,

I am a visitor of Morro Bay and the surrounding communities, and I am opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and ask you to deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are my public comments to the draft EIR submitted by the City and its consultants. I am very concerned and my fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California. On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

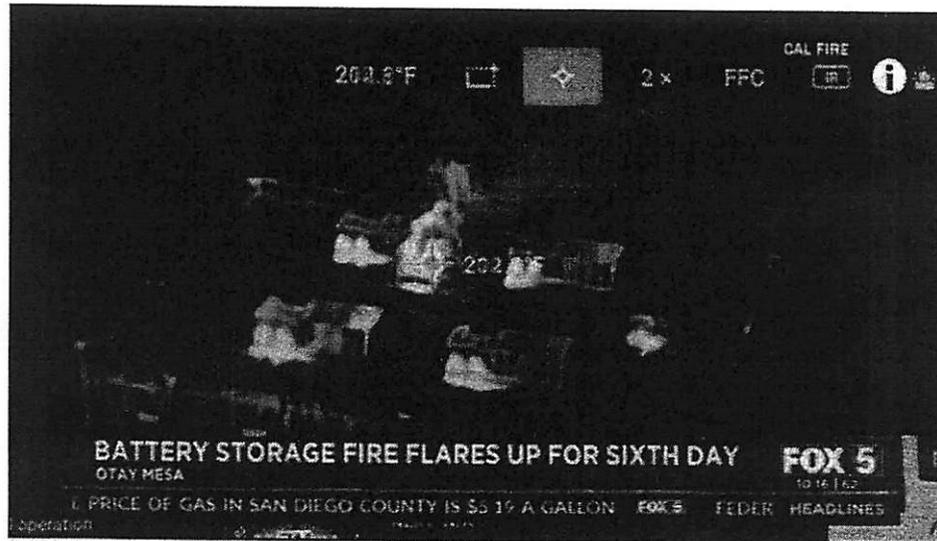
Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected.

---

# Otay Mesa battery facility fire could take weeks to put out entirely

Kasia Gregorczyk

20 hours ago



The evacuation order for some commercial businesses (Otay Mesa Gateway facility is not in a residential area) was for a larger area, and stated:

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Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the

noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

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BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic "Morro Rock," at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The "rock" and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

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under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters' sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. All of the "external costs" of the BESS will be borne by the citizens of Morro Bay.

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and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. The significant impacts from this project include fiscal impacts due to the loss of tourism. After having seen what is happening in Otay Mesa and the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,

A handwritten signature in black ink, appearing to read 'Caleb Hoffmann', written in a cursive style.

Caleb Hoffmann

Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
BESScomments@morrobayca.gov

MAY 27, 2024  
RECEIVED  
City of Morro Bay

MAY 28 2024

Administration

Re: My public comment to Draft EIR for Battery Energy Storage System (BESS)  
proposed project in Morro Bay

Dear Ms. Fowler,

I am a visitor of Morro Bay and the surrounding communities, and I am opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and ask you to deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are my public comments to the draft EIR submitted by the City and its consultants. I am very concerned and my fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California. On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

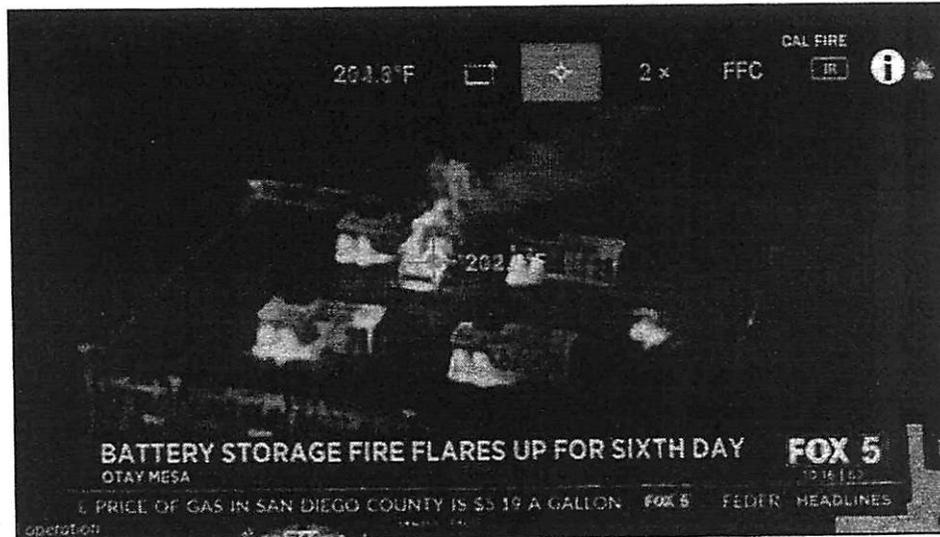
Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected.

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# Otay Mesa battery facility fire could take weeks to put out entirely

Kasia Gregorczyk

20 hours ago



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Sincerely,

A handwritten signature in black ink, appearing to read 'D. DeFelice', with a long horizontal flourish extending to the right.

Dominique DeFelice

## Battery Storage facility

Carol Ann Stephens <[REDACTED]>

Tue 5/28/2024 4:27 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

[You don't often get email from [REDACTED]. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification> ]

CAUTION: This is an external email. Please take care when clicking links or opening attachments.

I am writing to you to express my deep concern about the proposed Vista Battery Storage facility. Morro Bay is a beautiful community that attracts tourists and local outdoor enthusiasts. As an avid paddler and member of the Central Coast Dragon Boat Association and resident of Los Osos, I beg you not to build this here.

The beauty of our bay and all the birds and marine life that call it home depends on it not becoming an industrial harbor.

Please please please do the right thing for our Central Coast community and deny this project.

Thank you,

Carol Ann Stephens

[REDACTED]

Los Osos, Ca 93402

Sent from my iPhone

City of Morro Bay  
Attn: Senior Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
Email: BESScomments@morrobayca.gov

Cc: City Council and Mayor Wixom  
Planning Chair and Commissioners  
California Coastal Commission  
Dawn Addis, Assemblymember 30th district  
City of Morro Bay  
Attn: Senior Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
Email: BESScomments@morrobayca.gov

Cc: City Council and Mayor Wixom  
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California Coastal Commission  
Dawn Addis, Assemblymember 30th district  
Salud Carbajol, 24th District US Congress  
John Laird, State Senator, 17th district  
Board of Supervisors, San Luis Obispo County  
Federal Energy Regulatory Commission (FERC)  
California Air Resources Board (CARB)  
California Environmental Protection Agency (CalEPA)  
California Office of Environmental Health Hazards (OEHHA)  
US Environmental Protection Agency (US EPA)  
California Governor Gavin Newsom

Re: Public comment to Morro Bay's draft EIR for battery storage proposal

May 28, 2024

Dear Ms. Fowler,

Having lived in San Luis Obispo County for sixty-two years and as a previous resident of Morro Bay, I am deeply connected to our local coastal area and its unique environment. I currently reside in Los Osos and have a profound appreciation for the nautical heritage and waterfront life of Morro Bay, along with the exceptional ecosystem of its estuary. There is no other place on the West Coast that can rival the beauty and ecological significance of Morro Bay.

As a personal note, in 2001, my wife and I embarked on a six-year nautical journey, sailing from our home port of Morro Bay through the South Pacific to New Zealand and returned in 2007. Throughout our sailing travels over the years, from Hawaii to French Polynesia and from Tonga to New Zealand, we encountered individuals who admired Morro Bay as a world-renowned seaport that epitomizes tranquility, scenic beauty, and environmental health.

The Morro Bay estuary, nestled between Morro Rock and the sandspit, serves as a sanctuary for diverse wildlife, including numerous fish species, birds, and marine mammals. However, this delicate ecosystem is threatened by various factors, such as climate change, sea-level rise, habitat loss, industrialization, and pollution.

The industrialization of the beachfront with a battery energy storage system is fundamentally incompatible with the character and environmental significance of Morro Bay. It presents an unacceptable risk for the community to bear. In general, the entire project directly contradicts the principles of environmental justice. The US Environmental Protection Agency's mission statement on the topic of environmental justice states: "Environmental justice" means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people: are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices

<https://www.epa.gov/environmentaljustice>

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An immediate structural barrier highlighted by the environmental justice precept is that the entire Morro Bay BESS site selection process was based on Vistra Energy's hasty decision to utilize a decommissioned legacy property it already owns adjacent to a PG&E-owned electrical grid that it would prefer to sell energy to, all for convenient economic reasons. In other words, the people of Morro Bay and all nearby living organisms and ecosystems would be forced to endure the inheritance of a decommissioned power plant passed on from one utility to the next since 1955. The current owner, Vistra Energy, is attempting to perpetuate a "bricks-and-mortar" type of structural barrier that crosses into the very fabric of social and environmental structures in the vicinity.

One might engage in a lengthy debate about the precepts of environmental justice, which is different from my purpose here. It is time for specifics.

Specifically, the Draft EIR fails to address the grave risks associated with lithium-ion batteries. The most hazardous risk is the potential for a thermal runaway (TR) fire and the release of toxic fumes in the event of such an event. An ongoing incident at a similar energy storage facility in Otay Mesa, California, is a stark reminder of the potential dangers associated with such projects. Thermal runaway fires keep happening in the battery storage industry despite marketing claims. However, the extent of the draft EIR analysis on the BESS fire danger is that "we cannot be assured there will not be a fire," as stated on the last page. This is grossly inadequate.

The largest of these TR fires are tracked on a global database:

[https://storagewiki.epri.com/index.php/BESS\\_Failure\\_Incident\\_Database](https://storagewiki.epri.com/index.php/BESS_Failure_Incident_Database).

Here are some of the reported BESS thermal runaway events/fires in recent years:

- A BESS thermal runaway on May 15, 2024, in Otay Mesa, near San Diego, that was thought to be extinguished after 22 hours but reignited several times and continues as of May 28th, 2024;
- two Vistra BESS fire incidents at Moss Landing in 2021 and 2022;
- one Moss Landing PG&E BESS fire;
- a lithium-ion battery fire at the port of Oakland on May 12 of this year;
- a BESS fire in Germany, April 27, 2024;
- 900 tons of li-ion batteries burning in Viviez, France, February 18, 2024;

- a BESS fire in Surprise, AZ, with an explosion blowing the doors off the facility and causing permanent injuries to the trained HAZMAT team;
- a BESS fire in Flagstaff AZ;
- a 14-day BESS fire in Chandler, AZ;
- a fire at the "Big Bessie" facility in Australia in 2023,
- at least four BESS fires in NY leading to moratoriums and proposed legislation;
- a BESS fire in Valley Center, California, 2023;
- over 30 BESS fires in South Korea;
- a 2020 BESS fire in Liverpool, UK;
- The BESS fire database indicates there have been at least 87 BESS fires reported.

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Yesterday ( May 27th, 2024), the Otay Mesa conflagration listed in this database was still burning in Otay Mesa, California. It has burned for at least eleven days. This is a direct example of what could happen in Morro Bay if Vistra Energy builds a BESS plant here. The failure to identify the impacts and hazardous materials releases that will follow thermal runaway is a fatal flaw requiring recirculation of the draft EIR.

Sadly, we now have a near-local thermal runaway test case to analyze. News accounts are below:

<https://www.msn.com/en-us/news/us/energy-storage-facility-fire-in-otay-mesa-still-not-fully-contained/ar-BB1n5uWA>

<https://hoodline.com/2024/05/containment-progresses-in-11-day-otay-mesa-energy-storage-facility-fire-evacuations-lifted-road-closures-in-effect>

The Otay Mesa fire is a textbook thermal runaway case and is an example of what could happen in Morro Bay. If it were to happen here, an unmitigated disaster would occur because of the proximity of residential neighborhoods, a bustling downtown, a high school, a mobile home park, and recreational areas, along with a hypersensitive ecosystem that harbors numerous federally protected and endangered species positioned within tribally-designated lands.

Let's begin with the wind. Onshore wind flow in Morro Bay prevails from the Northwest about  $\frac{3}{4}$  of the time.

<https://www.surf-forecast.com/breaks/Morro-Bay/wind-stats>

Next, you will see two maps at the same topographical scale.

The first image (below) depicts the Morro Bay BESS plant at the epicenter subjected to a Northwesterly airflow. Most of the Embarcadero and nearby densely-populated neighborhoods are close and directly downwind.

## MORRO BAY BESS

The following image shows the Gateway Otay Mesa BESS location mapped under the same wind direction assumption. Note that this facility abuts open land to the east and an industrial park to the west. It is reasonably distant from densely inhabited structures, and the closest habitation centers are well downwind.

## GATEWAY OTAY MESA BESS

Here is a direct comparison of the two sites :

## OTAY MESA VS. MORRO BAY SITES

In fog-bound becalmed air surrounding Morro Bay—a frequent occurrence from May to October—any toxic gas emissions are likely to condense out of a lingering cloud as a poisonous mist that would be hazardous to all life forms.

Within the vicinity of the project site are homes, numerous restaurants and shops, residential areas, strolling tourists, bicyclists, surfers, paddleboarders, swimmers, endangered sea otter nurseries, endangered Peregrin Falcon nests, steelhead trout in Morro Creek, the endangered western snowy plover and other nesting birds, and many protected species.

As the fire reignites over many days or weeks, most of the city would be evacuated for an extended period. Wildlife would be killed, nests abandoned, and tourists would leave the area for months if not years. Firefighting assistance from neighboring jurisdictions may be unable to access the facility due to gridlock during an evacuation. Residents and visitors may be sickened or permanently harmed from exposure to toxic smoke. All of this would be due to the project's unacceptable location.

The Otay Mesa example raises some critical questions. What is the composition of these toxic gas emissions? What will those toxic fumes do to a small community, its visitors, and wildlife? What would happen to Peregrine Falcon nests atop Morro Rock that might be threatened? How would the sea otter rookery inside the estuary fare? Is the US Coast Guard prepared to clear the area of boaters, kayakers, and canoeists? Would the Morro Bay Harbor Patrol and Cal Fire have the skills to rescue swimmers and surfers in a veil of toxic smoke? How will we evacuate from Morro Rock and the Embarcadero, and where will we go for several weeks? What do we do if the nearby Morro Bay High School enters a shelter-in-place mandate for more than a few hours? How much water does it take for fire suppression for a thermal runaway event that lasts several weeks? Where is that water going to come from? Where does the contaminated water go after its use for fire suppression? If Otay Mesa needed 40 firefighters for 250 MW at one point, and we have a much larger 600 MW facility here, how many firefighters would we need for a worst-case scenario, and where would they come from? If the barricaded perimeter in Otay Mesa where fire personnel detected toxic corrosive gasses is 600 feet, what would the barricaded area in Morro Bay need to be for a facility almost three times the size? Would the Morro Bay Fire Department maintain adequate staffing to be on call for such an event 24/7?

If I had more time to research the answers to these questions, I would comment on them in this document. For now, I want to focus primarily on toxicity issues. I hold undergraduate degrees in chemistry and biological sciences and have completed graduate studies as a marine ecologist before obtaining a DDS degree. My career has been in dentistry and health care administration for many years. In short, I am intensely interested in protecting human health and well-being and ecological concerns.

Let's look at potential toxicity risks from LIB fires. Current studies on this topic abound, but arguably one of the most comprehensive, titled Toxic fluoride gas emissions from lithium-ion battery fires, <https://www.nature.com/articles/s41598-017-09784-z>, determined that "Lithium-ion battery fires generate intense heat and considerable amounts of gas and smoke. Although the emission of toxic gases can be a larger threat than heat, the knowledge of such emissions is limited. This paper presents quantitative measurements of heat release and fluoride gas emissions during battery fires for seven different types of commercial lithium-ion batteries. The results have been validated using two independent measurement techniques and show that large amounts of hydrogen fluoride (HF) may be generated, ranging between 20 and 200 mg/Wh of nominal battery energy capacity. In addition, 15–22 mg/Wh of another potentially toxic gas, phosphoryl fluoride (POF<sub>3</sub>), was measured in some of the fire tests. Gas emissions when using water mist as an extinguishing agent were also investigated. Fluoride gas emission can pose a serious toxic threat and the results are crucial findings for risk assessment and management, especially for large Li-ion battery packs."

The study also revealed that "An irreversible thermal event in a lithium-ion battery can be initiated in several ways: spontaneous internal or external short-circuit, overcharging, external heating or fire, mechanical abuse, etc. This may result in a thermal runaway caused by the exothermal reactions in the battery<sup>6,7,8,9,10</sup>, eventually resulting in a fire and/or explosion. The consequences of such an event in a large Li-ion battery pack can be severe due to the risk for failure propagation<sup>11,12,13</sup>. The electrolyte in a

lithium-ion battery is flammable and generally contains lithium hexafluorophosphate (LiPF<sub>6</sub>) or other Li-salts containing fluorine. In the event of overheating the electrolyte will evaporate and eventually be vented out from the battery cells. The gases may or may not be ignited immediately. In case the emitted gas is not immediately ignited the risk for a gas explosion at a later stage may be imminent. Li-ion batteries release a various number of toxic substances<sup>14,15,16</sup> as well as, e.g. CO (an asphyxiant gas) and CO<sub>2</sub> (induces anoxia) during heating and fire. At elevated temperature the fluorine content of the electrolyte and, to some extent, other parts of the battery such as the polyvinylidene fluoride (PVdF) binder in the electrodes, may form gases such as hydrogen fluoride HF, phosphorus pentafluoride (PF<sub>5</sub>) and phosphoryl fluoride (POF<sub>3</sub>). Compounds containing fluorine can also be present as e.g. flame retardants in electrolyte and/or separator<sup>17</sup>, in additives and in the electrode materials, e.g. fluorophosphates<sup>18,19</sup>, adding additional sources of fluorine.”

The study is summarized under its Conclusions sections as follows:

“Significant amounts of HF, ranging between 20 and 200 mg/Wh of nominal battery energy capacity, were detected from the burning Li-ion batteries. The measured HF levels, verified using two independent measurement methods, indicate that HF can pose a serious toxic threat, especially for large Li-ion batteries and in confined environments. The amounts of HF released from burning Li-ion batteries are presented as mg/Wh. If extrapolated for large battery packs the amounts would be 2–20 kg for a 100 kWh battery system, e.g. an electric vehicle and 20–200 kg for a 1000 kWh battery system, e.g. a small stationary energy storage. The immediate dangerous to life or health (IDLH) level for HF is 0.025 g/m<sup>3</sup> (30 ppm)<sup>22</sup> and the lethal 10 minutes HF toxicity value (AEGL-3) is 0.139 g/m<sup>3</sup> (170 ppm)<sup>23</sup>. (Note-typographical correction cited by Author is applied in this document). The release of hydrogen fluoride from a Li-ion battery fire can therefore be a severe risk and an even greater risk in confined or semi-confined spaces. This is the first paper to report measurements of POF<sub>3</sub>, 15–22 mg/Wh, from commercial Li-ion battery cells undergoing abuse. However, we could only detect POF<sub>3</sub> for one of the battery types and only at 0% SOC, showing the complexity of the parameters influencing the gas emission. No POF<sub>3</sub> could be detected in any of the other tests. Using water mist resulted in a temporarily increased production rate of HF but the application of water mist had no significant effect on the total amount of released HF. The research area of Li-ion battery toxic gas emissions needs considerable more attention. Results as those presented here are crucial to be able to conduct a risk assessment that takes toxic HF gas into account. The results also enable strategies to be investigated for counteractions and safety handling, in order to achieve a high safety level for Li-ion battery applications. Today we have a rapid technology and market introduction of large Li-ion batteries but the risks associated with gas emissions have this far not been possible to take into consideration due to the lack of data.”

Further studies have been performed since the above landmark study was published, many of which focus on electric vehicles. However, the research applies to large-scale projects like the Morro Bay BESS concept. A notable review titled, Review of gas emissions from lithium-ion battery thermal runaway failure — Considering toxic and flammable compounds, <https://www.sciencedirect.com/science/article/pii/S2352152X24008739>, lists a table of hazardous compounds summarized for 8-hour exposure limits and 15-minute exposure limits.

Table 2. Common LIB off-gas components, hazards and exposure limits.

Substance

Hazards

Exposure Limit, 8 h (mg/m<sup>3</sup>)<sup>b</sup>

Exposure Limit, 15 min (mg/m<sup>3</sup>)<sup>b</sup>

Carbon dioxide,

CO<sub>2</sub>

Cause headaches, dizziness, confusion, loss of consciousness, and asphyxiation at high concentrations

[52].

9150

27 400

Carbon monoxide, CO

Toxic if inhaled, may damage the unborn child, causes damage to organs through prolonged or

repeated exposure and is an extremely flammable gas.

23

117

Hydrogen, H

2

Extremely flammable.

See noted

Hydrocarbons

Flammable.

See noted

Hydrogen fluoride, HF

Fatal if swallowed, is fatal in contact with skin, is fatal if inhaled and causes severe skin burns and eye damage.

1.5

2.5

Hydrogen chloride, HCl

Severe skin burns and eye damage, is toxic if inhaled, may damage fertility or the unborn child, causes serious eye damage, may cause damage to organs through prolonged or repeated exposure, may be corrosive to metals, may cause respiratory irritation and contains gas under pressure and may explode if heated.

2

8

Hydrogen cyanide, HCN

Fatal if swallowed, is fatal in contact with skin, is fatal if inhaled, causes damage to organs through prolonged or repeated exposure, is very toxic to aquatic life (with long lasting effects) and is an extremely flammable liquid and vapour.

1

5

Nitrogen dioxide, NO

2

Fatal if inhaled, causes severe skin burns and eye damage; and may cause or intensify fire (oxidiser).

0.96

1.91

Sulphur dioxide, SO

2

Severe skin burns and eye damage and is toxic if inhaled.

1.3

2.7

Solvents

Highly flammable liquid and vapour [53]. Very irritating to eyes, skin and airways [44].

DEC 700, PC 8.5c

DEC 1000, PC 8.5c

a

Cited from the European Chemicals Agency [53], unless otherwise stated.

b

Cited from the HSE [47], unless otherwise stated.

c

Cited from the IFA [54] for the solvents DEC (Romania) and PC (Germany), other common electrolyte solvents (e.g. EC and DMC) are not listed.

d

Hydrocarbons, such as CH

4

, are described as acting as simple asphyxiants without other significant physiologic effects when they are present in high concentrations, hence are not given limit values as the significant factor is the availability of oxygen [55]. This is assumed for H

2

The health risk levels inherent in these cellular toxins are unacceptable. The concept of "safe" exposure

limits for some of these compounds—particularly hydrogen fluoride, hydrogen cyanide, hydrogen chloride, and nitrogen dioxide- are questionable, mainly when applied to vulnerable human populations similar to the aged demographics of Morro Bay inhabitants or the adolescents in the nearby high school. We have no idea of the potential for harm to sea otter populations or fast-metabolizing avian communities such as the peregrine falcon and many other species.

Let us focus on just one of these toxins, hydrogen fluoride, which, according to the first of two studies presented above, has a 10-minute toxicity of just 30 parts per million for the average human being. Most of us are not capable of grasping the scale of this. Visualize a million dollars, if you will, a stack of 1 million dollars in 100 dollar bills. It would be about 358 feet tall, longer than a football field. Then, scalpel-slice a hundred-dollar bill lengthwise in thirds like a sheet of tissue paper and compare it to the big stack above you. That's 30 parts per million; don't get a hitch in your neck while looking skyward. My point is that it doesn't take much to disrupt the sensitive biochemistry of a living cell, whether human, animal, plant, fungus, bacterial, archaeon, or other.

Let's discuss water and its role in provoking and combatting thermal runaway fires. Since large continuous streams of water over many days are necessary to combat these fires, what would the runoff consequences be for Estero Bay, the adjacent Morro Bay Estuary, and surrounding environments? A recent research paper has studied this in an article titled: Assessment of Run-Off Waters Resulting from Lithium-Ion Battery Fire-Fighting Operations, <https://doi.org/10.3390/batteries10040118>. The study concluded as follows:

"In the present work, the two battery modules were triggered in thermal runaway and subsequent degassing and fire. Water was applied to mock-up firefighting operations in order to analyze the composition of the extinguishing water. The tests presented in this paper highlight that waters used for firefighting on NMC Li-ion batteries are susceptible to containing many metals, including Ni, Mn, Co, Li, and Al. Those metals are mixed with other carbonaceous species (soots, tarballs). It is also important to note that particles present in the water can be nanometric or in the form of nanostructured clusters. In addition to the solid contaminants, liquid compounds can be present, especially organic carbonates coming from the electrolyte (EC and EMC in this case) and also gaseous species such as PAH. A comparison with PNEC values showed that this water could be potentially hazardous to the environment, depending on the actual situation encountered in the case of thermal runaway propagation with a Li-ion battery-based system.

These tests also make it possible to identify some trends concerning the reaction scenario. By comparing the two extinguishing operations on the prismatic cells, one can see that when the fire is developed, the water is much more concentrated in PAH and cathode metals (Ni, Mn, Co). On the other hand, the concentrations of elements coming from the liquid electrolyte (typically Li, P, F), more easily accessible, are present in equivalent quantities. Liquid organic carbonates are preferably found in the case of degassing without ignition. These low boiling point liquids are otherwise vaporized and found mainly in the gaseous phase. The comparison of the results between the prismatic cell module and the 18,650-cell module also confirms the importance of the cell and module geometry, influencing, in particular, the mechanical strength of the system and, therefore, the confinement of the inner materials.

As large Li-ion batteries are fast spreading (in so-called Battery Energy Storage Systems, BESS, for example), and only few data on the environmental impact of fires in those systems are available, it is crucial to develop consolidated knowledge in this field further. Several directions could be suggested for future tests like developing higher level (or full scale) testing to increase test representativity. Owing to field operational constraints in terms of emergency response following a fire, considering time between event initiation and water suppressant application as a parameter in future studies also seems important. Other investigations worth being performed are, for instance, a detailed assessment of air, water, and soil local impacts following Li-ion BESS significant incidents or in-depth environmental impact studies of key Li-ion substances like organic carbonate solvents (EC, EMC, etc.)."

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Most, if not all, of these contaminants, would pose a long-term risk to the adjacent environment, including Estero Bay, the estuary, protected wetlands, soils, and water supply in the event of a fire.

Water plays a significant role in starting lithium-ion battery fires. A battery manufacturer, for example, states that "Understanding the effects of water on lithium batteries is crucial for safety considerations. Water infiltration can lead to detrimental reactions, including heat generation, hydrogen gas release, and potential fire hazards. Recognizing the signs of battery malfunction and taking appropriate safety precautions, such as proper storage and protection from moisture, are essential for maintaining battery integrity and reducing the risk of incidents." <https://www.redway-tech.com/the-truth-about-lithium-batteries-and-water-what-you->

need-to-know/

Following a hurricane-induced flood inundation in Florida in 2022, a number of electric vehicles caught fire while submerged.

"As of Oct. 26, USA TODAY has been able to confirm 11 cases in which EVs caught fire in Florida after flooding from Ian, all believed to be due to the cars' battery packs shorting out after being submerged in saltwater or physical damage to the batteries during the flooding."

<https://www.usatoday.com/story/money/cars/2022/10/26/electric-vehicle-fires-florida-flooding-what-happened/10553207002/>

Considering the risks of inundation for Lithium-ion batteries, it is astounding to realize that the Morro Bay BESS plant proposal intends to place a massive quantity of these batteries in a well-known flood plain, within a declared tsunami zone, adjacent to a seaside water level that is certain to rise as global warming progresses. This is the same flood plain that the City of Morro Bay declared as unsafe for its aging sewage plant due to biological environmental hazards during inundations that have occurred over the years. That sewage plant was moved to high ground in a more remote area at a cost of approximately 126 million dollars. Using the same ethic, how can a water-vulnerable 600 MW BESS plant even be planned to be built within that flood plain not far from the old sewage plant site? This is a blatantly used double standard.

Fina

Finally, I am not convinced that the risk of tsunami inundation can be remedied. Tsunami surges are not infrequent in the Pacific Basin. Anyone who was in the Morro Bay area in January of 2022 will remember the tsunami event of January 15 of that year. Though no breaking shore wave occurred, a rapid tidal surge up to eight feet entered the bay, flooded shorelines, and pulled boats from their moorings. Portions of the Santa Cruz, California waterfront were destroyed. We were fortunate because the seismic source was in faraway Tonga, about six thousand miles away

#### TONGA TSUNAMI HITS THE CALIFORNIA COAST

[https://en.wikipedia.org/wiki/2022\\_Hunga\\_Tonga%E2%80%93Hunga\\_Ha%CA%BBapai\\_eruption\\_and\\_tsunami](https://en.wikipedia.org/wiki/2022_Hunga_Tonga%E2%80%93Hunga_Ha%CA%BBapai_eruption_and_tsunami)

<https://www.sanluisobispo.com/news/local/article257358447.html>

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I have lived long enough to recall the tragic tsunami of 1964, which caused the death of 131 people, devastated the ports of Alaska, Washington and Oregon, and wrecked a great portion of Crescent City, California.

[https://en.wikipedia.org/wiki/1964\\_Alaska\\_earthquake](https://en.wikipedia.org/wiki/1964_Alaska_earthquake)

<https://www.sfgate.com/news/article/Crescent-City-tsunami-1964-Alaska-earthquake-12517983.php>

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The industrialization of the beachfront with a battery energy storage system is fundamentally incompatible with the character and environmental significance of Morro Bay and it presents an unacceptable risk for the

community to bear. This DEIR for a project that is undecided about its different alternatives must be withdrawn and rewritten after the specific design of the project has been selected and plans are drafted and submitted. Developers should not be allowed to pursue multiple project designs at once and decide later which project to build. The failure to inform the public of the potential for exposure to toxic, corrosive fumes as a result of thermal runaway, is a massive fatal flaw in the DEIR. The proposed BESS site is hazardously placed within the declared tsunami zone. Building it here invites a large-scale disaster due to the physical forces of water on the move and the electrochemical ignition vulnerabilities of Lithium-ion batteries when submerged. Moreover, it is contrary to standard protocols to defer identifying impacts and mitigation measures until after the EIR process. If this project is approved, the town's character will be destroyed, and the residents, tourists, and wildlife will be harmed. The project site is in a densely populated residential and tourist area with schools nearby, and it is in a flood and tsunami zone. Any agency that would approve such a project without fully independent scientists analyzing its potential impacts in a worst-case scenario is recklessly endangering the health and safety of its residents, visitors, and ecosystems. The project proposed is contrary to the Coastal Act, contrary to Plan Morro Bay, contrary to the wishes of the residents of Morro Bay, and this DEIR does not meet the CEQA requirements of informing the public. There is no way to make a seaside battery storage project in Morro Bay safe. The project is a high-risk venture in a high-risk location based on a technology with a history of unpreventable and uncontrollable toxic, corrosive runaway fires. The citizens of this city are not willing to take such extreme risks, and this project should be built in a more suitable location. We citizens hope and believe that after recirculation and all of the potential impacts are identified, considered and reviewed, the city will not certify this EIR and will ultimately reject the project.

Sincerely,

Richard J. von Stein DDS

Los Osos, CA on May 28th, 2024

Gail Johnson & Paul Reyburn

  
Morro Bay, CA. 93443

May 28, 2024

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

Hand delivered to:

955 Shasta Avenue

Morro Bay, California 93442

Emailed to: [BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Re: Our Comments to Draft EIR for Battery Energy Storage System (BESS) proposed project in Morro Bay

Dear Ms. Fowler, Mayor Wixom, City Council Members, Morro Bay Planning Commissioners, California Coastal Commissioners and any other Person or Agency that may be in position to make determinations regarding our beautiful community:

We are addressing this letter to all of you, our City and State leaders. We understand that and hope that our comments may influence your decisions in the future regarding the BESS facility proposed for the Power Plant Property on our Embarcadero. Paul and I will be including opinions and thoughts that are not directly addressed in the Draft EIR, but should be considered nonetheless.

Paul and I are not experts in any technical field. We hope that biologists, botanists, physicists, chemists, engineers, geologists, seismologists, contractors, and others with expertise in these scientific subjects, will comment on the statistical deficiencies and errors in the DEIR. We are addressing you as citizens who have tried to consider the practical social impacts and economic costs of allowing BESS on our Embarcadero. The Draft EIR states that it is not responsible for assessing economic or social impacts. However, when our well-being is threatened by an overstressed Fire Department and Police Department, when our City staff is overwhelmed, when our fiscal stability is upset and our public services become vulnerable, when City projects can not be

completed and public safety is put in peril due to financial stress, there is *human impact*.

We are opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. *The draft EIR is so fundamentally flawed and basically “inadequate and conclusory in nature that meaningful public review and comment were precluded.”* CEQA §15088.5

The City of Morro Bay, as the “Lead Agency” for the proposed Bess project, commissioned Rincon Consultants, Inc. to produce the Draft Environmental Impact Report (DEIR). You/we were their clients, and they failed us. . . committed egregious omissions, failed to offer complete evaluations, cherry-picked data and failed to offer objective and unbiased advice. They offered unfeasible mitigation measures and advised that “no significant impact” would result from approval of the BESS project in every instance except one. The DEIR is written as if someone working for Vistra was sitting at the desk with Rincon, advising and approving every section. The DEIR should have been a guide and resource for us to evaluate the impacts of the BESS project, including the (1) construction and operation of BESS, (2) the removal of the old Power Plant, and (3) the planning for redevelopment of the Power Plant Property. Instead, in many ways, *it is an insult to our sense of reason*.

There is no immediate explanation for this failure, nor for the departure of our Community Development Director, Scot Graham so soon before the DEIR was to be made public, or the surprising exit of Cindy Jacinth, the BESS Project Manager. Our City has few people at the helm, at this point, with historical knowledge or perspective of what led us to this point in time. New employees can not possibly have the affection for Morro Bay that long-time residents have, nor will they view the DEIR with suspicion. Therefore, the Draft EIR must be taken at face value. We feel it is our responsibility to educate and inform them.

We must also note the obvious: Vistra’s Offsite Consequence Analysis (OCA) was published and presented to the public just days after the DEIR was made available. It was not included as part of the DEIR, and therefore shall not be considered in our comments, except to say that *statements made in the OCA appear to contradict some of the statements in the DEIR . . . as if Vistra’s intention is hide their scheme of deception “in plain sight”*. The OCA bears the vague “date” of “March 2024” posted

on the cover page. Please note that the OCA was presented to the community on March 20, 2024, nine days after the DEIR was made public on March 11, 2024. The OCA, in so many words, found that Vistra’s BESS would have no significant impact to the health, safety and welfare of Morro Bay. *We strongly disagree.*

**We request that the conclusions of the Offsite Consequence Analysis (OCA) prepared by Ramboll and first presented to the public on March 20, 2024, not be considered when reviewing the Draft EIR.**

**Vistra’s BESS on the power plant property is contrary to the City’s General Plan (Plan Morro Bay) and contradicts the citizens’ vision of the future of Morro Bay.** In 2021, the City of Morro Bay drafted “Plan Morro Bay” which outlines our vision for the future of our community. The “industrial” land use designation for the Power Plant Property was changed to “Visitor Serving/Commercial.” This General Plan was years in development and has been Certified by the California Coastal Commission. To aid sensible planning, municipalities create rules, codes and laws that regulate land use, usually for the safety and well-being of their citizens. We trust that the decision to change the land use designation for the PPP was well-studied and well-considered for the community’s social, environmental and economic well-being.

Locating BESS on the Embarcadero overlooks the fact that battery storage in populated or environmentally sensitive areas is potentially hazardous . . . to humans, to wildlife, air and water quality, recreation, our fishing industry, tourism and the economic vitality of the Morro Bay community. BESS facilities *require* an industrial land use designation *because* they impose industrial hazards.

**We request that the Final EIR note this fact: The land use designation for the Power Plant Property does not currently allow industrial uses or BESS facilities. The zoning must be changed before a BESS could be installed in the proposed site.**

“Industry” on the Embarcadero does not conform to Morro Bay’s General Plan, nor does it agree with the clear vision set forth by Morro Bay citizens as revealed in the survey presented to the community in January, 2023.<sup>1</sup> Although this survey was written to imply that the development of BESS was a foregone conclusion, the desires

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<sup>1</sup> <https://www.morrobayca.gov/DocumentCenter/View/18067/Master-Plan-Survey-Response-Results>

of the citizens were unequivocal and overwhelmingly *against* a BESS on the Power Plant Property. They / we were not fooled.

**Land use is, and will continue to be, the primary, overarching consideration for the Power Plant Property.** Again, BESS is presented as the best use for the Tank Farm Site (AOC-1) because of the “toxic” contamination in this area, per the California Department of Toxic Substances. “Brown” sites such as these CAN and HAVE be cleaned up.<sup>2</sup> The Standard Oil clean up of Avila Beach is a prime example. Little has been done to investigate remediating this land because of the deed restriction “conveniently” placed on the property by PG&E when it was sold to Duke Energy in 1997, and because of the ongoing presumption that BESS will be built there. *We reject the presumption that the Power Plant Property can not be remediated.*

**We request that an in-depth study be conducted regarding the feasibility of remediating this site, so that it is suitable for recreation, commercial and residential use, and that this option be offered as an Alternative on the Final EIR.**

Component Number 3 of the Project Description is to develop and adopt a new Master Plan for the Power Plant Property that would change the land use designation of the BESS Site from Visitor Serving Commercial to General (Light) Industrial. Despite the City’s General Plan, and in spite of the citizen’s refusal to accept BESS on the property, the Power Plant Master Plan assumes (insists) that BESS be built in the midst of the property, comprising 24% of the site area. The City continues to hold their sham workshops to this end.

**The land use designation for the Power Plant Property may ultimately be decided by Morro Bay voters in November, 2024.** In 2023, signatures were collected for an Initiative, which aims to maintain the Land Use Plan that was established by Plan Morro Bay. The Initiative got hundreds more signatures than necessary to be placed on the November (2024) ballot as Measure A-24. Simply stated, a YES vote on Measure A-24 will require that uses for the Power Plant Property that do not conform to the existing General Plan must be approved by a vote of Morro Bay residents. The Proposition is not against anything. It simply gives us the power to control what happens on our Embarcadero. *No formal public discussion that has to do with changing the the zoning to allow industrial uses on the Power Plant Property should take place until we know the outcome of this vote.*

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<sup>2</sup> <https://www.npr.org/2021/10/14/1045598031/landscape-architecture-julie-bargmann-oberlander-prize>

**We request that the Final EIR note this fact: The land use designation for the Power Plant Property may ultimately be decided by Morro Bay voters in November, 2024.**

**Proponents of BESS cite historic “memes” to further their argument, with which we adamantly disagree:** “Once an industrial site . . . why not again”? “Morro Bay’s heritage is an energy producing, energy friendly community”. “The tank farms are toxic and can only be used for industrial purposes.” “Let us be proud leaders in the green energy future.” The DEIR reinforces this meme on Pg E-6 under Project Objectives: “Site the BESS Facility to minimize environmental and social impacts by being located on land that has historically been used for power generation.” In other words, what they mean to say is: “Let’s add insult to injury”. We fully reject this argument and say: “Let’s choose a better future for our community.” *What happened in the past has no bearing on our future direction.*

**We request that the supposed “historic nature” of Morro Bay in past energy industries *not* be a pre-determinant to our future, and *not* be used to further any argument that encourages industrial uses of the Power Plant Property.**

**Civic leaders should have been able to rely on the advice offered in the DEIR to help make informed decisions. Our City documents, specifically Plan Morro Bay, have left room for “administrative approval” when making decisions regarding projects like BESS. Rincon’s DEIR is so faulty that it can not be trusted, and therefore should be recirculated or outright rejected.**

The term “significant impact” appears 107 times in the EIR. And except in one instance, Rincon finds that there is “no significant impact” in *any* of Vistra’s proposed plans once (often infeasible) mitigation measures are applied. Since we are new to CEQA and EIRs we wondered: “who establishes the standard for significant impact?” Here’s what we found:

- “Threshold of Significance”, when used in a CEQA context, is the level of effect, defined by CEQA, for a given environmental impact above which the *lead agency* will consider impacts to be significant, and below which it will consider impacts to be less than significant.
- Being the “lead agency”, the City of Morro Bay would have had to define what impacts they considered to be significant. However, when Plan Morro

Bay was written, it did *not* establish levels of “significant impact”, with the exception of establishing and stating *ordinary* ordinances and policies regarding development criteria (such as setbacks, trees, noise, etc.). Projects such as BESS were not addressed specifically, therefore *allowing latitude for “judgement”*.

- CEQA states: “Thresholds used only for a specific project are not required to be adopted by ordinance or other formal means. However, “[w]hen using a threshold, the lead agency should briefly explain how compliance with the threshold means that the project’s impacts are less than significant”.<sup>3</sup> *Our lead agency did not establish thresholds, and opted for discretionary approval for special projects.*
- “Discretionary Approval” as used in CEQA, is an action taken by a governmental agency that calls for the exercise of *judgment* in deciding whether to approve and/or how to carry out a project.
- Therefore, *our City leaders and administrators relied on the research and advice of a professional consultant (in this case Rincon) for guidance in making their judgement* to approve or reject Vistra’s BESS project. As we have stated above, *Rincon failed us by offering grossly misleading, and often faulty determinations.*

**Given the evidence that Rincon Consultants, LLC, was not a trustworthy resource and offered us a heavily biased, misleading and inadequate report, we request that the Draft EIR be rejected as flawed. We request that a different consultant be retained to write the Final EIR.**

It would be impossible to address all of the instances of Rincon’s neglect, given the time and space allowed. Here are but a few examples where the information advanced by Rincon is faulty or misleading:

- Table ES-1 on page ES-3 of the DEIR describes the three buildings proposed to contain the batteries. The notation “two-story” is next to the height. This is the first example of Rincon’s revealing their bias. *To describe a 35.2 foot building “two story”, with an up-to 8’ (sometimes said to be 10’) screened area for equipment on the roof is a flat-out calculated deception.* This fantasy

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<sup>3</sup> State CEQA Guidelines § 15064(b)(2)

has flitted in to the news media and fluttered about in consequential public meetings. Like poisoned Koolaid, it has sweetened the public's belief that these monstrosities are about the size of a motel on Main Street. How can we trust Rincon after this misrepresentation?

**We request that there be no "editorializing of facts" in the final EIR. We would also like to see a reference to scale (perhaps representing a 6' figure near an elevation) so that the public is not duped.**

- In the discussion of "BESS Facility Operation" on pg 4.1-18: "The BESS Facility would include three enclosed buildings, each approximately 30 feet tall." Again, even without the rooftop screening the buildings are closer to 40' than 30'. *Why misrepresent the facts, when the facts are so readily available?*

**We request that in the Final EIR, whenever facts are available they should be stated.**

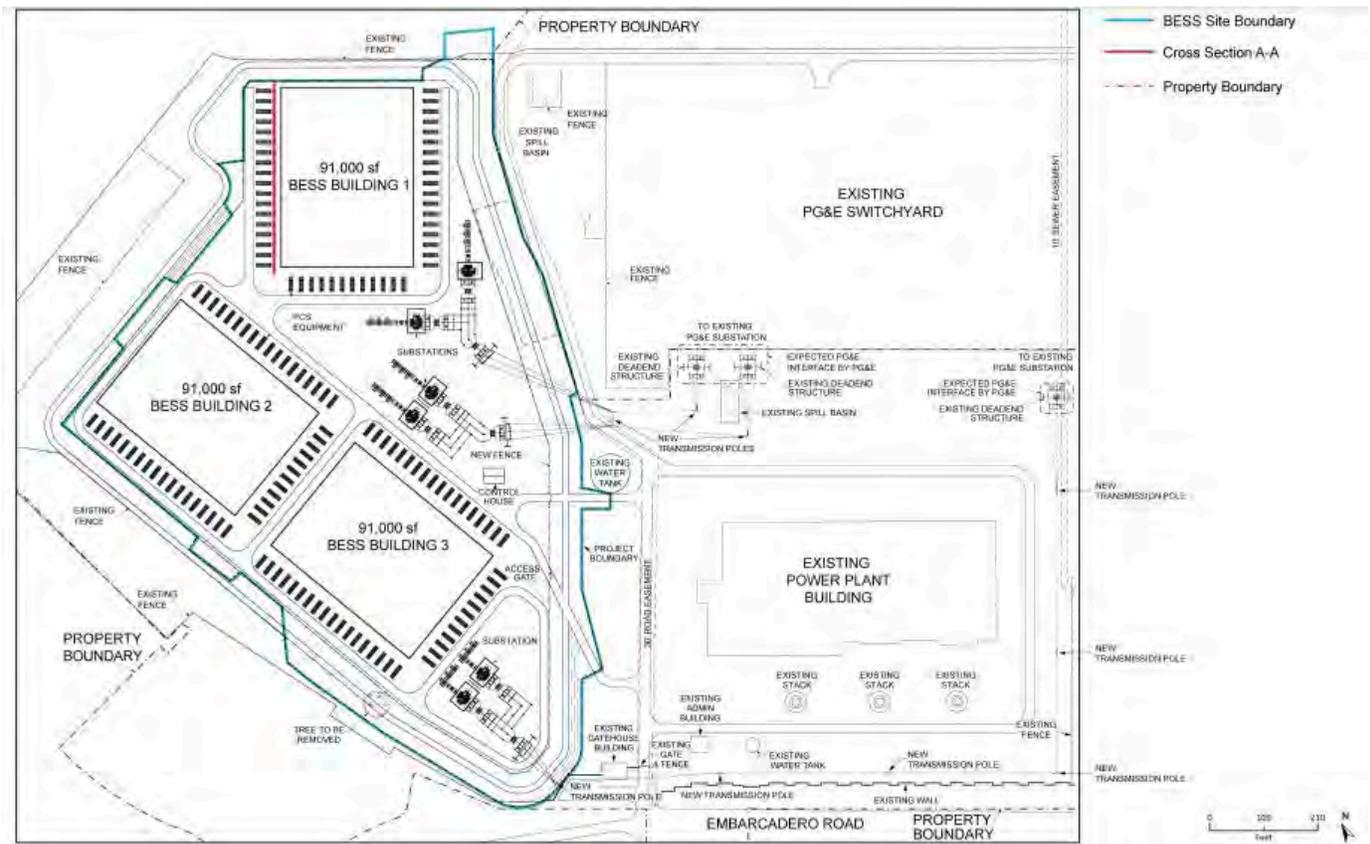
- Several references are made to "existing berms". These berms are being given credit for everything from tsunami protection to acoustic shielding and visual screening. On pg. 4.7-30 & 4.7-40 the DEIR states: "The former fuel oil tank farm area, including the west, north, and northeast sides of the BESS Site facing the ocean, is *protected by existing berms that are approximately 33 feet in height.*" It is not until page 4.8-11 (312 pages in to the pdf) that we learn that "The existing berms are up to 33 feet in height, and after initial site grading [?] *would be a minimum of approximately 10-12 feet above the BESS Site grade.*" I would like to propose that the existing berms are not currently 33' above grade or we could see them from the sidewalk. Although we can not see the berms, we feel they must be closer to 10'. However, no cross-section of the site and no topographical map is included in the DEIR. *How can we trust anything with such inconsistencies?* pg. 4.5-4 refers to a topographic map (footnoted), establishing that the site is approximately 10' above sea level. I suppose one must look on-line for the map to which the DEIR refers.

**We request that a cross-section of the site (that includes the buildings) and a clear and detailed topographical map be included in the Final EIR. Additionally, toward the introduction of the EIR, perhaps near the "methodology" section, a notation must be made**

that explains when measurements are taken above sea level or above grade, or standardize the measurements and use one or the other.

- The DEIR on Pg E-6 under Project Objectives: “The BESS Facility will take advantage of existing infrastructure and *not create impacts to undisturbed areas of the City of Morro Bay.*” If I had a Pinocchio Meter, I would have to rate this statement “mostly a lie”.

Surely, this statement refers to using the existing switchyard (see section 2.6.1), dead-end structures and substation from the old PG&E Power Plant (see pg. 2-13). Putting aside the question of whether this switchyard is adequate to handle the BESS energy output, the statement implies that they have done whatever possible to reduce the impact on our community. Take a look at this site plan from pg. 2-10. Do you see the proposed new transmission poles? They are in the fine print, and could easily be overlooked.





the simulation). At a distance, in this picture, they are barely visible. *We suspect that (perhaps) this is a deliberate misrepresentation of the impact of the towers.* However, standing on the sidewalk or on the North T Pier they would be imposing. They will also cause an acoustic disturbance that might have been avoided if the poles were placed in the shortest line to the existing PG&E infrastructure. In my opinion, installing new transmission poles on the Embarcadero is the *opposite* of the statement: "The BESS Facility will . . . **not create impacts to undisturbed areas of the City of Morro Bay.**" (expletive deleted)



**Simulated View 1.** Simulated view after construction of the BESS and demolition of the power plant building and stacks.

4.1-10

**We consider these transmission lines and poles a significant negative aesthetic impact. We request that if BESS is built that the transmission poles be placed as far from the sidewalk and the Maritime Museum as possible.**

- **Vistra and Rincon have taken great pains to convince us that BESS’s convenient access to PG&E’s existing infrastructure makes their proposal necessary, logical and cost-effective, saving electric customers gobs of money in the future.** The DEIR on Pg E-6 under Project Objectives: “The BESS Facility will take advantage of existing infrastructure . . .”

BESS is projected to power 450,000 homes. The energy that Morro Bay’s BESS will store will be generated at California Valley Solar Ranch, which produces 250mw of power <sup>4</sup>, approximately 60 miles to Morro Bay “as the crow flies”, or from Diablo Canyon Nuclear Power Plant (about 25 miles to the south), unless new sources of energy are developed. BESS facilities are most efficient when they are placed adjacent to the energy source or along a major tributary of the grid. In fact, in the future, a “macro grid” is likely to be built, and Morro Bay is unlikely to be along the “grid highway”.

This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us. (more on the fiscal impacts on pg. 29)

**We request that the final EIR undertake an extensive analysis of the existing PG&E facilities, and discuss and reveal how these antiquated “existing infrastructures” will need to be upgraded in order to handle the projected output of BESS.**

- **Rincon has leaned heavily on approximations and guesses to fudge their assessments.** Is it standard practice to use “waffle words” in a document so important as an EIR? They have used the following words multiple times:

- Potential - 1,770
- Approximately or Approximate - 262
- Assume - 45
- Best Practices (undefined) - 12
- Substantial - 198
- Significant - 679

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<sup>4</sup> [https://en.wikipedia.org/wiki/California\\_Valley\\_Solar\\_Ranch](https://en.wikipedia.org/wiki/California_Valley_Solar_Ranch)

These words are often useful in accurately conveying a message. However, these words are all subjective, and subject to opinion and interpretation. *When a quantity, measurement, number or duration is known, then state it.* Otherwise, the entry is simply a “guess”.

**We request that the Final EIR be culled of all of the above words wherever possible. When something is unknown it should be clearly stated.**

- **Again, is the following statement a simple mistake or willful misrepresentation?** On page 2-6 the DEIR states: “The Project Applicant developed and operates the 750- MW BESS at Moss Landing, in Monterey County.” *Correction: the Moss Landing BESS run by Vistra is 400MW<sup>5</sup>.*

**No Comment.**

- **Throughout the document, Morro Bay is portrayed as a dismal little town, giving anyone unfamiliar with our community the wrong impression. Here are Rincon’s representations (pgs. 4.1-13-14):**

Figure 4.1-5 Key Viewpoint 4



Photograph 4. Existing view looking southwest from southbound Highway 1.

Figure 4.1-7 Key Viewpoint 6



Photograph 6. Existing view looking west from Redcliff Avenue and Berwick Drive.

<sup>5</sup> <https://www.nsenergybusiness.com/projects/moss-landing/>  
#:~:text=At%20400MW%2F1%2C600MWh%20capacity,and%20Electric%20Company%20(PG%26E).

Here is how we see our town: a beautiful, safe harbor, a sanctuary for wildlife, with an active fishing industry and a variety of tourist destinations, vital to our economic well-being.

*In fact, the noticeably ugly areas of our town are owned by Vistra!*



- **The most egregious omission in the DEIR is the failure to address the possibility of a “thermal runaway event” at the Morro Bay BESS and the damage that would be caused.** Much space is given to the discussion of safety precautions and monitoring systems that will be in place to prevent a lithium-ion battery fire. But the draft EIR simply *ignores* the possibility of a disastrous “thermal runaway” fire occurring at Vistra’s BESS. These types of fire are *the most significant risks* posed by BESS fires, and they occur at a tragically regular *and foreseeable* rate, according to the *BESS Failure Incident Database* <sup>6</sup>. Others will comment on the environmental damage and health risks of lithium-ion battery fires. We will focus on the practical considerations, and use a recent “thermal runaway” event to make our points:

On May 15, 2024, a BESS “thermal runaway” event occurred at the Gateway Energy Storage facility BESS in Otay Mesa, California. The fire burned for days (possibly weeks), causing the roof to collapse. It was still smoldering as this letter was written. *As tragic as the Otay Mesa fire has been, comparing it to a potentially similar event in Morro Bay is instructive and frightening.*

The Gateway Energy Storage facility BESS in Otay Mesa is a 250 MW facility. The batteries are housed in buildings, stacked on “racks”, similar to the proposal for Morro Bay’s BESS.

Morro Bay’s BESS is proposed to be the largest in the world, currently planned at 600MW. The batteries will be housed in buildings.

The Otay Mesa BESS is located in a relatively remote, dry desert environment, away from residential and tourist areas.

Morro Bay’s climate is moist and subject to seawater mist. *Moist and salty environments are especially hazardous for lithium-ion batteries* <sup>7</sup>, *causing corrosion, which is the major cause of events that lead to thermal runaway.*

In Otay Mesa, the Juvenile Detention Center and the Correctional Facility are both located more than a mile from the BESS; they had shelter-in-place orders for the duration of the event. During the Otay Mesa fire, the area was evacuated

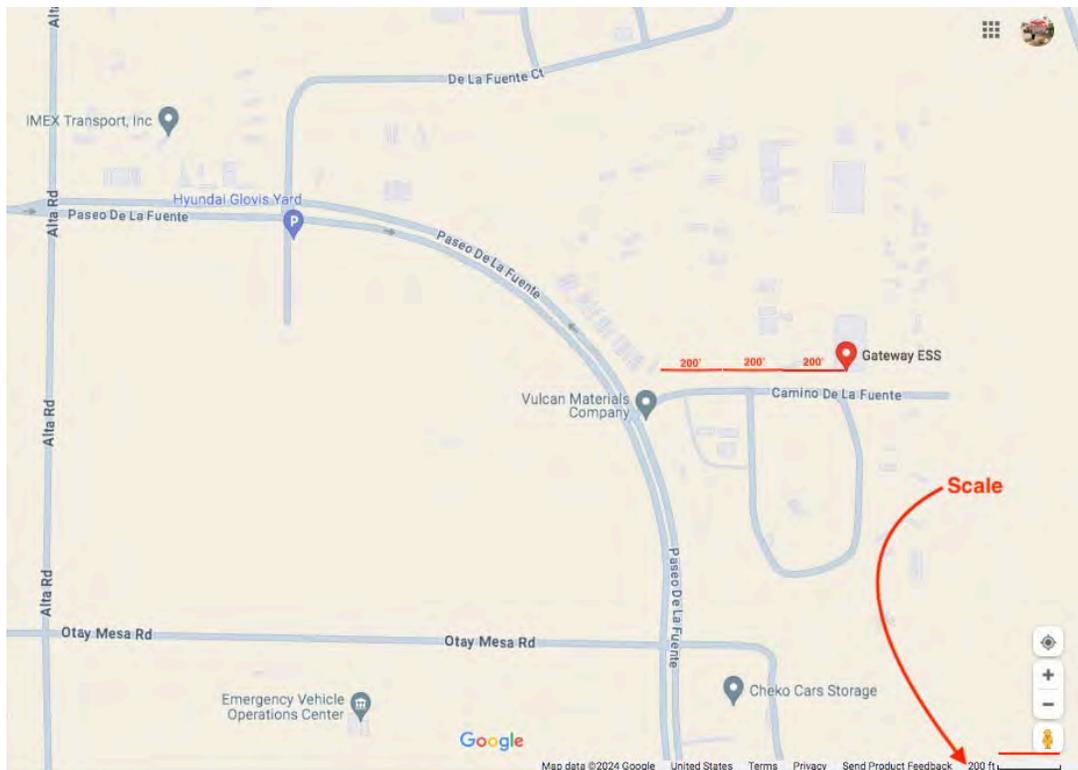
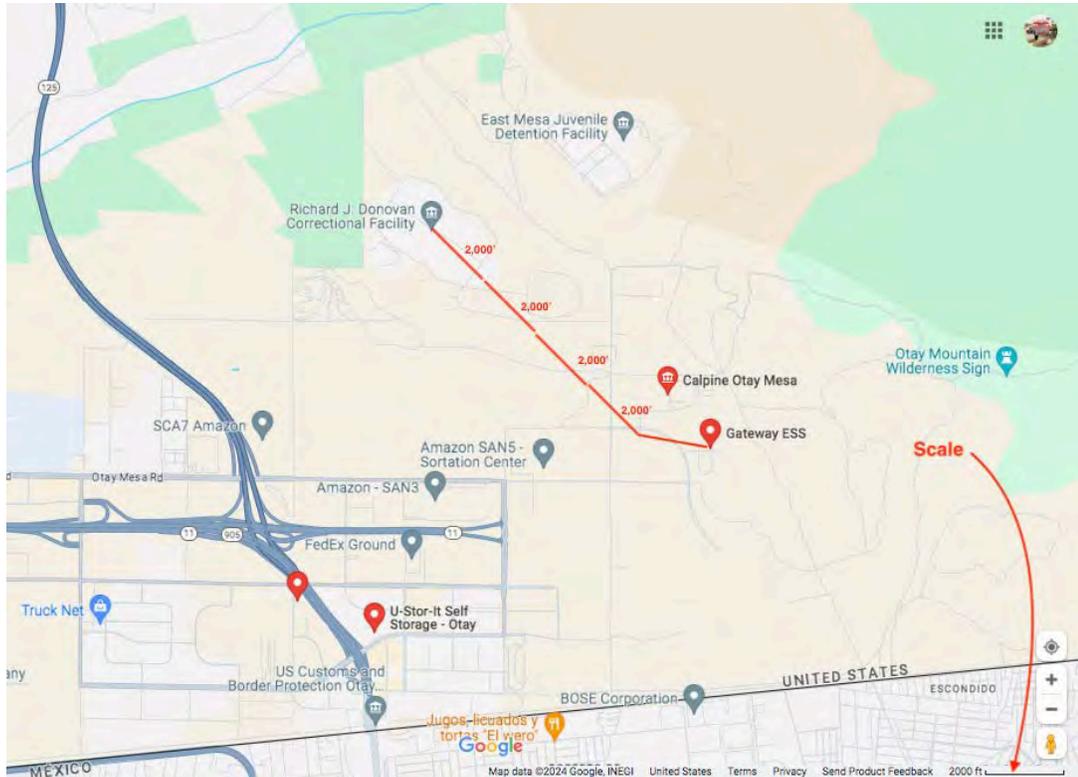
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<sup>6</sup> [https://storagewiki.epri.com/index.php/BESS\\_Failure\\_Incident\\_Database](https://storagewiki.epri.com/index.php/BESS_Failure_Incident_Database)

<sup>7</sup> <https://drive.google.com/file/d/1UtHDc7YSxzJJid8IzI-Mcld-H1eJlX-B/view>

within 600' of the fire. Toxin-sniffing robots were employed to test air samples within the 600' area.

### Gateway Energy Storage facility BESS in Otay Mesa, California



In Morro Bay, most of the Embarcadero from Beach Street to Coleman Park is within the 600' perimeter. Everyone in the area would need to be evacuated. Tourists on the beach and at the Rock parking lot would need to drive or walk *toward* the fire in order to escape it, and our narrow roads would not accommodate the traffic and the expected chaos. Fishermen, restaurants and shops would be out of work indefinitely.

Morro Bay's BESS is proposed near our Embarcadero, only a few hundred feet from our fishing piers, tourist center and the sea otter habitat. *Our High School, Morro Dunes RV Park and the nearest residences are less than a mile away.*

The unlimited resources of Cal Fire responded to the Otay Mesa fire. Forty (and at times 50) firefighters were on the scene 24/7.

Morro Bay employs 13 firefighters.

Otay Mesa's desert climate was dry at the outset of their fire. At this point, the cause of the fire is unknown.

**We request that the Final EIR fully investigate and justify how it is possible to have excluded "thermal runaway" hazards in the DEIR. We believe it is very likely that such a fire would occur in Morro Bay due to the salty coastal climate. We believe that no mitigation measure would be adequate or feasible that would reduce to impact to an acceptable level. The project should be rejected because of the likelihood of a "thermal-runaway" fire.**

- **During the Otay Mesa incident, it is reported that within the first few days about 5,000,000 gallons of water had been used to cool the fire and keep it from spreading to adjacent buildings.** (Note: 5,000,000 gallons is more than 10 times the capacity of an olympic pool! <sup>8</sup>) *If a similar fire were to happen at Morro Bay's BESS, where would the cooling water come from, and how would the "spent" water be contained?* The spent water could not be allowed to run into our flood-control infrastructure, nor could it be allowed to drain and permeate in to the "rock and gravel" base that Vistra suggests would be used, contaminating our groundwater. We suggest that Vistra plan for on-site water storage of no less

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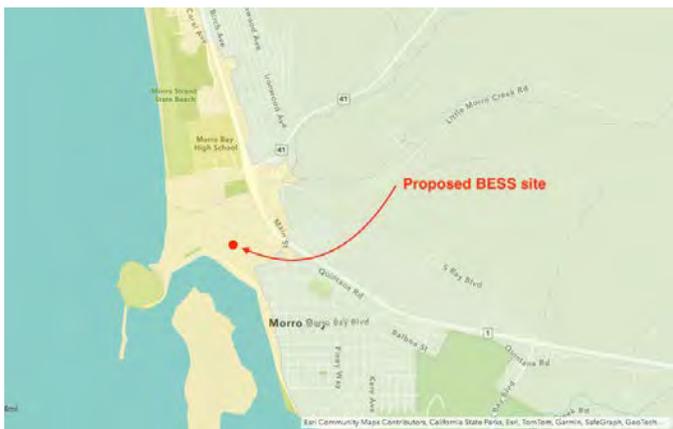
<sup>8</sup> [https://www.corvallisoregon.gov/osborn/page/olympic-sized-50-meter-pool#:~:text=The%20Olympic%20sized%20pool%20is,1%2F2%20million%20gallons\).](https://www.corvallisoregon.gov/osborn/page/olympic-sized-50-meter-pool#:~:text=The%20Olympic%20sized%20pool%20is,1%2F2%20million%20gallons).)

than 5,000,000 gallons, not use our community's fresh water for the storage, and install a system for capturing, cooling, cleaning and re-using the spent water.

**We reject any plan to use City water for fire suppression, or the disposal of any "spent" water within the city limits of Morro Bay.**

- **Rincon has misjudged and/or misrepresented the threat of a tsunami at the proposed BESS site in Morro Bay.** Per pg. 4.7-30, the DEIR states: "the BESS Facility . . . has been sited to mitigate sea-level rise and tsunami risk. The former fuel oil tank farm area, including the west, north, and northeast sides of the BESS Site facing the ocean, *is protected by existing berms that are approximately 33 feet in height.*"<sup>9</sup> These external berms will remain intact and only the berms inside the former fuel oil tank farm area would be modified."

The Vistra tsunami map shown on pg. 4.7-14 correctly portrays the tsunami inundation outline. It is Vistra's "assertion" that the sandpit, the breakwater, the distance from the open ocean and the direction of the waves will "muffle" or mitigate the effects of a tsunami. As we have shown, the "existing berms" are 10-12' high (although no cross-sections or topographical map have been offered in the DEIR as evidence). *Isn't an official tsunami inundation zone map meant to warn of a potential tsunami in the region, regardless of special circumstances? You can't "muffle" the map.* Vistra can't predict in which direction a tsunami will approach. It is hogwash to imply that the tsunami risk is not a concern. We believe this map makes the tsunami zone more clear. The tsunami inundation zone is shown in light yellow:



<sup>9</sup> This statement has previously been proven false.

We request that a full disclosure of the risks that tsunamis pose to be included in the final EIR.

- We believe that the square footage of additional non-permeable surface (NPS) has been grossly miscalculated, which may skew projections of the total runoff and drainage needs, potentially create hazardous conditions for the batteries and possibly cause the project to be non-conforming to local NPS ordinances.

As stated on pg. 4.10-9: “The BESS Site currently contains approximately 157,000 sf (or 16 percent of the total site area) of impervious area, and the project would increase impervious area on the BESS Site by approximately 170,000 sf to 327,000 sf (or 33 percent of the total site area).

First, lets assume that 327,000 sf = 33% of the total site area. *We will conclude that the total site area is just around 1,000,000 sf.*

Here are our calculations for the additional square feet of NPS <sup>10</sup> based on information available provided in the DEIR and the Project Description:

concrete pads for buildings -	3 x 91,000 sf =	273,000 sf
concrete pads for power conversion systems @ 10' x 30' <sup>11</sup> (300 sf) ea. -	180 x 300 sf =	54,000 sf
concrete pad for control house	=	1,200 sf
concrete pads for 8 transmission towers	8 x 100 sf <sup>12</sup> =	<u>800 sf</u>
Total additional / new sf <sup>13</sup>	=	329,000 sf
existing sf of NPS (from above)	=	<u>157,000 sf</u>
Total sf of NPS	=	486,000 sf

If my figures are correct, and if the information regarding the *known* existing NPS is correct, then the NPS on the BESS site will comprise 48.6% of the total square feet. *This may be contrary to City policy or industry standards regarding*

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<sup>10</sup> Refer to pg. ES-3

<sup>11</sup> pg. 4-1 <https://www.morrobayca.gov/DocumentCenter/View/15256/BESS-Project-Description>

<sup>12</sup> An “educated guess”, based on the conceptual drawings on pg. 2-14

<sup>13</sup> These figures do not include any overhangs, sidewalks or hardscape not shown in the DEIR

*the allowable percentages of NPS in a development.* However, we are concerned with runoff. If 100 sf of NPS yields 62 gallons of runoff per 1" of rain <sup>14</sup>, then the **486,000 sf of NPS will yield a staggering 30,132,000 gallons of water per 1" of rain.** Will the notorious "existing berms" keep the runoff within the project site, creating a "pool" that will threaten the batteries? Will the permeable surfaces of the BESS site and the planned drainage manage all this water? Can the City infrastructure handle it, or will it need to be improved and upgraded to handle the flow? Will a torrential storm cause so much water that the batteries will be flooded and damaged?

Per CEQA Guidelines Appendix G and as noted on pg ES-10: A project may not "Substantially alter the existing drainage pattern of the site or area . . . through the addition of impervious surfaces, in a manner which would: result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and/or impede or redirect flood flows."

***We request that final EIR recalculate the projected runoff and explain exactly how the runoff will be handled. If the projected runoff is contrary to CEQA guidelines, then the project must be rejected. If the projected number of NPS surpasses the City's allowable, then the project will have to be redesigned to reduce the square footage of the non-permeable surfaces or rejected.***

**We strongly disagree with Rincon's assessment that there will be "no significant impact", with or without mitigation, in the following situations:**

- **We are concerned about the displacement of soil due to the size and number of pilings drilled or driven in to the ground for the containment building foundation.**

CEQA defines environment as "the physical conditions which exist within the area which will be affected by a proposed project, including land . . ." The

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<sup>14</sup> <https://www.bothellwa.gov/1304/Calculate-Your-Stormwater-Runoff#:~:text=Calculate%20the%20volume%20of%20water,produces%2062%20gallons%20of%20water>

plans submitted to the City by Vistra, and on page 2-9 states: “Each building would require approximately 5,500 to 6,500 pilings to a pile depth of approximately 70 feet (the depth of each pile would be determined during the final design-level geotechnical work based on loads and other location-specific analysis).” NOTE: All geotechnical survey work *should have been done prior to presenting plans to the City* . . . but this is such a small detail in relation to all the other horrifying ideas presented by Vistra.

Let’s pretend that there are “only” 6,000 pilings for each 91,000 square foot building. Every 15 square feet will have a piling. Let’s assume that these are steel pilings, and maybe they are I-beams, and that these I-beams are a conservatively small S20x86<sup>15</sup>. Each cross-section has approximately 16 square inches, and for the sake of argument, let’s assume that each inch of piling displaces 16 cubic inches of soil, *if the pilings are driven and not drilled*. 16 cu.in. x 70’ = a displacement of 13,440 cubic inches. There are 1728 cubic inches in a cubic foot, giving us a minimum of 7.75 cubic yards of displaced soil per piling. Doesn’t sound so bad? Now multiply that time the number of pilings per building. 7.75 x 6,000 = 46,500 cu.ft = 1,722 cubic yards per building, 5,167 cu.yd. for the three containment buildings alone. AND, if holes are drilled for the pilings, the numbers increase exponentially. How can this be a good idea?

**We imagine that installing 18,000 or more pilings in the earth under the project site would be like poking needles in a shortbread cookie every few centimeters. Too many holes and the “cookie will crumble.” Will this process weaken and destabilize the the ground? Will it lead to crumbling and failure in an earthquake? To say that the final design will be determined at a later date is not good enough. We request that this concern be fully discussed in the final EIR.**

- **We are concerned about security and the threat of an attack on BESS.**

If built, Vistra’s BESS will be the largest energy storage facility in the world. *Warnings that centralized energy systems, power plants and “the grid” would be potential targets in military conflicts and terrorist attacks are not uncommon, and should be taken seriously.* In a public meeting, when asked

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<sup>15</sup> <http://www.advantagemetalservices.com/i-beam-specifications-chart.html>

about the threat of a terrorist attack on the BESS facility, David Yeager (Vistra's Director of Project Development for Morro Bay's BESS) cavalierly stated that "electricity is running through the lines and is already part of the grid". In so many words, *Yeager suggested that the risk would be no greater after the 600 MW Bess is installed than there is today. Not only is this an insult to our sense of reason, it indicated the lack of care he and his company have for our community.*

As far as I can tell, the only security measures that Vistra plans to take is to install a 6' cyclone fence topped with 1' of barbed or concertina wire around the facility. Per the DEIR pg. E-4, "The BESS Facility would not require new continuous, exterior lighting." There is no discussion of airborne threats. There is no discussion of Morro Creek, which can not be fenced or blocked, and the clear path it makes from HWY1 through the property. On page 2-19, the DEIR states: "The O&M building would accommodate *up to* 15 permanent O&M staff, operating in three daily shifts." This means that if each staff has one 8-hour shift, then *there are less than 2 people on staff at all times. This seems criminally inadequate to protect and monitor a 24 acre BESS site.*

In addition, per page E-4: "Operational activities at the BESS Facility would include the following:

- Routine inspection and testing;
- Vegetation, weed, and pest management;
- Security;
- Routine maintenance;
- Occasional equipment repair and replacement; and
- Communicating with customers, transmission system operators, and other entities involved in facility operations."

*Given that two employees are planned to staff this 24 acre facility, how much time and attention will be focused on security?*

**CEQA requires that mitigations be "effective and feasible". We can't imagine how this threat to human life might be mitigated if the BESS is located where it is planned. Deny the project on that basis, alone.**

- **We do not believe that the DEIR gives adequate weight to the possibility of damage by seawater intrusion.**

On December 29, 2023, an unusual event took place in Morro Bay. There had been no precipitation during the week. The tides were normal: high tide was at 2.83 ft. at 1:22 a.m. on 12/29. The wind had risen from to about 10 mph from the ESE. There was nothing abnormal about this weather. Yet, when we arrived around 11:30 a.m. on the Embarcadero for our morning walk, we were stopped by traffic control. We drove around to where Highway 41 joins Embarcadero.



Weather conditions on December 29 2023

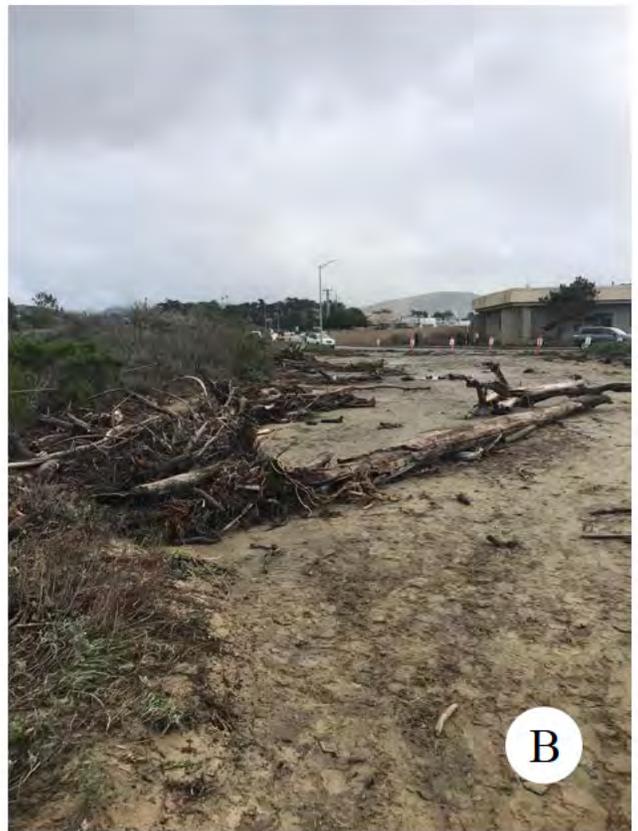


Data provided by:  
<https://www.wunderground.com/history/weekly/us/ca/san-luis-obispo/KSBP/date/2023-12-29>

A rogue wave must have breached the highest part of the dunes, strong enough and large enough to sweep driftwood logs over the crest of the dunes and in to a sandy parking area across the street from the defunct water treatment facility. All of the water you see in these pictures is sea water.



These pictures were taken around 11:40 a.m. on December 29, 2023.



As similar event occurred on November 30, 2023. There was no precipitation for several days prior to the event. The highest tide of the day was 4.82 at 11:33 a.m. (It is normal to have 7' tides during "king tides".)



But the 20 mph winds (see chart on next page for weather conditions on December 2, 2023) must have kicked up a rogue wave, which came ashore at the Rock parking lot with such force that it knocked over concrete benches, which weigh several hundred pounds, and moved them 20 feet from where they had been. For anyone unfamiliar with the Rock parking lot, note that the parking area is at least 10-12'. Again, all of the water you see is sea water.

During this era of climate change and the unpredictable and erratic behavior of nature, we request that the final EIR not rely on standard models or historic data to predict inundation from the sea. The final EIR must consider "worst case scenarios". Given that the future can not be predicted, and that "worst case" is the total inundation of BESS by seawater, the project must be rejected.

## Weather conditions on December 2, 2023



- **We believe that the projected impacts of noise during the construction and operation of BESS is a whitewash. Construction of BESS will take over 3 years and will negatively impact our community.**

### **During Construction:**

In the DEIR, the construction period is portrayed as “temporary”. If BESS is constructed, our community will be exposed to years of construction noise and vibrations. We do not consider this “temporary”. (In fact, because we are in our mid-late 70’s, *we would be exposed to this disturbance for a great part of the rest of our lives, irreparably affecting our lifestyle.*) Restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay. *We do not consider 3-4 years of construction as “temporary”.* So far in this Comment Letter, we have

**Table 4.8-5 Typical Construction Equipment Maximum Noise Levels**

Type of Equipment	500 feet	1,000 feet	2,000 feet	3,000 feet
Backhoe	58	52	46	42
Concrete Saw	70	64	58	54
Crane/Excavator	61	55	49	45
Front End Loader	59	53	47	43
Jackhammer	69	63	57	53
Paver	57	51	45	41
Pneumatic Tools	65	59	53	49
Dozer	62	56	50	46
Pumps/Roller/Portable Generator	60	54	48	44
Truck/Grader	66	60	54	50
Scraper	67	61	55	51
Pile Driver	90	84	78	74

Source: Appendix J

referred to pages in the DEIR, but this table, from page 4.8-9, is so damning that it must be shown:

First, let's establish that 1) Tognazzini's Restaurant is about 1,000 from BESS; 2) Coleman Beach (also known as Mother's Beach) is about 600' from BESS; and 3) the beaches are less than 1,000 from BESS. (see site photo, next page)

In their own words Rincon states on pg. 4.8-12: "The FTA identifies a daytime noise level of 90 dB Leq as a reasonable criterion for construction noise impact assessment (FTA 2006). The FTA guidance states that adverse community reactions may result if this noise level is exceeded during construction/ demolition activities. Additionally, the World Health Organization (WHO) recommends that noise exposure levels should not exceed 70 dB over a 24-hour period, and 85 dB Leq over a 1-hour period to avoid hearing impairment (WHO 2022)." I don't know who Rincon thinks they're kidding!



The chart above states that a pile driver operates at 84 db at a distance of 1,000'. There will be at least 17,000 piles driven for the foundation alone. A quick look-up on Google states that 85 db is similar to a diesel truck at 50' or the sound of a

food blender. At 90 db, for a sustained period of time, one would experience hearing loss. On pg. 2-16 of the DEIR, the project description states that: "Construction activity would occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday." *This is unacceptable!*

Per the DEIR on pg. 4.8-14: "heavy equipment noise would result in an increase over existing ambient noise levels in the vicinity of nearby sensitive receptors, but would not exceed 85 dB Leq at any nearby sensitive receptor location for any one-hour period . . . Noise levels at R-2 (Morro Dunes R.V. Park) may reach 69 dB Leq during temporary pile driving activities. Therefore, *noise levels during construction and decommissioning would not exceed the applicable significance threshold and these impacts would be less than significant.*

How contorted is Rincon's reasoning that they can suggest that there would be "no significant impacts"? How would the 170 campers at Morro Dunes R.V. Park feel, and what is the likelihood that they will return to Morro Bay? How would your life be affected if you had a newborn or an autistic child at home? How will this affect the sea otters and other wildlife?

### **Post-construction & Operation:**

Per industry advice, "The most common form of noise control is a noise barrier (or wall) of appropriate height. This is path mitigation because it places a barrier between the source and receiver to block the direct path of sound."<sup>16</sup> Those "infamous berms" are employed again, as an acoustic barrier. Also consider that "Sound travels in a direct path from the source to the receiver."<sup>17</sup> If the source of the noise is as high as 35-45', and if the berms are 10-12 feet, it only takes a second-grader to figure out that there is up to 30' of unmitigated sound transmission.

The buildings that will house the batteries will be 35' or more, and the roof-top equipment will be installed above that, producing 85 db each, 24/7. Each of the 180 Power Conversion Systems would be approximately 15 feet tall and will project 80 db each. Although these noise levels at 500' may not be greater than a refrigerator hum, they will be continuous and annoying, and they will still be louder than the measured ambient night time noise. The berms, as we have seen, are 10-12 feet, and will offer little relief. As more BESS facilities are being built, noise and its negative implications has become a crucial consideration and concern for the developers<sup>18</sup> because of complaints from the communities.

If we are to believe that BESS will be built, and if we are to believe that it will consume 1/4 of the 107 acres of the Power Plant Property, and if we are to believe that the balance of the 107 acres will be put to the use for which it is zoned (Visitor Serving Commercial), then we have to assume that BESS will be within just a few feet from these tourist and neighborhood attractions. The ongoing noise from BESS while in operation will be a repellant to all concerned.

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<sup>16</sup> <https://www.energy-storage.news/dont-let-noise-be-a-drain-on-bess-developments/>

<sup>17</sup> [https://www.hud.gov/sites/documents/DOC\\_16417.PDF](https://www.hud.gov/sites/documents/DOC_16417.PDF)

<sup>18</sup> <https://www.energy-storage.news/dont-let-noise-be-a-drain-on-bess-developments/>

If you can imagine the annoyance of a built BESS near the Embarcadero in 2026, then how would it be once the visitor amenities are finally built in 2030.

*Rincon has distorted the data and stretched every recommended standard to its breaking point. Finally on pg 4.8-18 the DEIR states: "No mitigation is required because this impact would be less than significant."* We are aghast!

Rincon acknowledges, on 4.8-8: "The City has not adopted specific construction/demolition noise level standards that would apply to the project." *We have established that this is true, and we believe the decision to leave these standards "open" was to give our City leaders room to make judgements regarding individual projects.* I hope that we have also established that Rincon and the DEIR can not be trusted to offer their advice or influence the judgement of our City.

I hope and believe that others, with more technical experience and data, will comment on the noise associated with BESS in more detail. We have only looked at it from a logical and reasonable point of view. *Rincon's conclusions are not logical or reasonable* and can not be used for guidance.

**We do not believe that the noise generated by BESS, during construction or operation has "less than significant" impact. Rincon's statement to the contrary is absurd.**

- **We contend that Vistra's BESS project will have a *net negative* fiscal impact for Morro Bay.** A widely-assumed misperception is that BESS will bring financial resources to our City. As far as I can tell, although energy *generation* is taxable, energy *storage* is not. We can assume that Vistra will pay no tax on the energy they receive, store or distribute. Vistra has stated publicly that they intend to invest \$990 million in the BESS project, estimating that the City of Morro Bay would receive \$1.3 million annually from the property tax revenue. This all sounds great! Right? *But all of the "external costs" of the BESS will be borne by the citizens of Morro Bay.*

Has Vistra over-estimated their investment in order to sway politicians? Will they take advantage of tax incentives offered by various government agencies that will ultimately cost Morro Bay revenue? If Vistra were to switch to their "container" alternative, will containers be taxed the same as a taxable improvement to the land? Does Vistra's estimated investment include items (like

machinery, equipment or the batteries themselves) that are not subject to property tax? Vistra may qualify for a sales tax rate reduction for manufacturing machinery and equipment.<sup>19</sup> You can bet that they will try to dodge taxes in any way possible.

***If Vistra's project is allowed to go through, what will the costs be to the City?***

How many staff will we have to add for inspectors, bookkeeping, community interface, etc? (Let's say 3, conservatively.) How many fire fighters will we have to add to our force? (Moss Landing added 8 after their BESS incidents. Let's be conservative and estimate 5. ) How many police officers? (Let's say 3.). Now more math \*:

Building Inspector	1 @ \$72,000	- \$72,000
Office Assistant	2 @ \$52,000 =	- \$110,000
Firefighter	5 @ \$60,000 =	- \$300,000
Police Officer	3 @ \$90,000 =	- <u>\$270,000</u>
		- \$752,000
Estimated Loss of Tourism		
Revenue. (see below *)		- <u>\$750,000</u>
Total Estimated Loss of Revenue		
if BESS is built		- \$1,502,000
Mr Watson's estimate of increased		
property tax revenue		+ <u>\$1,300,000</u>
Net Loss of revenue		- <b>\$302,000</b>

\*These figures for employee costs were gleaned from the City's website, and are only estimates.<sup>20</sup> I arrived at my estimates by assuming a full-time position, doubling the hourly wage in order to cover the benefits, which include Retirement: California Public Employees' Retirement System (CalPERS) Insurance: The City has a cafeteria-style health benefits program through CalPERS with a contribution of up to \$1,589/family; dental, life, and vision programs are also offered through MetLife with a maximum contribution of \$186.63/family. Sick and Vacation Leave Paid Holidays Paramedic Pay: monthly paramedic pay is added to the base salary. Optional Benefits: Employees may pursue membership in an available Deferred Compensation Plan<sup>21</sup>

<sup>19</sup> <https://www.taxnotes.com/special-reports/energy-taxation/salt-and-battery-taxes-energy-storage/2023/07/27/7gzwj>

<sup>20</sup> <https://www.morrobayca.gov/DocumentCenter/View/19088/FY-2023-24-Pay-Schedule>

<sup>21</sup> [https://www.fctconline.org/media/uploads/morro\\_bay\\_ffemt\\_and\\_ffpm\\_closes\\_04.14.23v2.pdf](https://www.fctconline.org/media/uploads/morro_bay_ffemt_and_ffpm_closes_04.14.23v2.pdf)

Now you can see why the County of San Luis Obispo is so keen on allowing Vistra to proceed with BESS: Because they could net over \$11 million a year in property taxes.

*\* The significant impacts from this project include fiscal impacts due to the loss of tourism, also. Morro Bay generates over \$161,000,000 in tourist spending. Revenue from tourism results in about \$7,500,000 per year.<sup>22</sup> Now, suppose we “only” lose 10% of our tourism due to the construction of BESS. That’s \$750,000 per year.*

Once the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

- **We don't know whether to laugh or cry when we read the contortions of logic regarding Rincon’s analysis of aesthetic “compatibility” with our zoning codes. Needless to say, we highly disagree that the BESS Facility would not result in significant adverse effects on scenic vistas.**

Regarding the aesthetic and visual impacts of BESS, here is what Rincon has to say: Per DEIR pg. 4.1-18 —“Due to the existing berms and vegetation around the perimeter of the Project Site, and the lower elevations of the tank farm pads where the buildings would be placed, *no additional vegetative screening is proposed*. Section 17.14.090 of the (Morro Bay) Zoning Code describes required standards for the protection of visual resources and *compatible design* for new development within the coastal zone of the City . . . The proposed BESS Facility buildings would be partially obscured by the *existing berms, vegetation, fencing*, and topography. Additionally, the BESS Facility buildings would be approximately the same height as existing trees in the vicinity, would not obstruct public views of the hills in the background, and would not present as a dominant feature . . . The proposed substations and associated gen-tie transmission line would be faintly visible against the BESS Facility buildings and the hills in the background. However, *the BESS Facility, gen-tie line, and*

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<sup>22</sup> <https://www.morrobayca.gov/DocumentCenter/View/17552/C21-FY-22-23-Mid-yearReport-Final-#:~:text=The%20City%20levies%20and%20retains,to%20visitors%20to%20Morro%20Bay>.

*substations would be visually consistent with the character of the existing PG&E substation and infrastructure, and would not contrast highly with these elements . . . BESS Facility design would not highly contrast with the existing substation and utility infrastructure in the vicinity of the Project Site. Compliance with the City's Zoning Code requirements and the goals and policies in Plan Morro Bay would further protect scenic resources upon project development. As a result, the BESS Facility would not result in significant adverse effects on scenic vistas."*

It would be funny if it weren't so pathetic.

- Welcome back "existing berms". (If not for you, the project would probably not be feasible.) Knowing that these berms are actually 10-12', they will *not* obscure the 35-45' BESS building from view.
- I guess we can assume from the statement(s) above that the trees and vegetation around the site are also 35-45' because they, too, will partially obscure the view. (We don't think so!) Of course, Vistra does not plan to add trees or landscaping features for any reason.
- Since when does a 6' cyclone fence topped by 1' rolled barbed wire obscure a view? Shame on you, Rincon!
- No, the BESS facility will not block the view of Cuesta Ridge to the east, as long as you are standing far enough away from the containment buildings. Cuesta Ridge is 2,000' above sea level, on average.<sup>23</sup> But when Visitor-Serving Commercial businesses are built around the BESS buildings, they will look exactly like COSTO-sized warehouses, blocking anything of beauty around them.



- And best of all — “. . . *the BESS Facility, gen-tie line, and substations would be visually consistent with the character of the existing PG&E substation and infrastructure, and would not contrast highly with these elements*”.

**Good for you, Vistra. Your facility will be compatible with the least attractive part of our town. This may be the most honest statement in this entire DEIR.**

No comment.

- **If Vistra chooses to alter their plans as submitted to the City of Morro Bay on December 21, 2020, this DEIR will have to be withdrawn, and the process will have to start from the beginning.**

On December 21, 2020, Vistra Energy submitted plans and applied for an application to install a 600MW Bess at 1290 Embarcadero, Morro Bay. (The building plans were revised and resubmitted on 10/15/21, without significant changes.) The Project Description <sup>24</sup> submitted by Vistra states: “The proposed project would be comprised of *buildings to house the batteries*, power conversion systems, substations and an interconnection to the existing PG&E switchyard . . . The batteries will be installed in three (3) buildings. Each building will house approximately 2,400 racks *containing lithium-ion batteries*. The battery modules (approximately 60,000 per building) will be housed in racks that are approximately 9- to 24-feet tall, depending on the use of stacked racking systems. The racks will be grouped into blocks with their own access, fire protection systems, and safety systems . . . The total storage in each building will have a capacity of approximately 200 MW.”

Vistra has made public statements implying that they might like change their project plans from “3 buildings” to “174 containers” (referred to as the “enclosure alternative”). The DEIR flatly states that Vistra is considering “Alternative #5”, which is the “container” option. They have also said that battery designs may improve in the future, and they reserve the right to choose a different battery

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<sup>24</sup> <https://www.morrobayca.gov/DocumentCenter/View/15256/BESS-Project-Description>, Note that this document is not dated.

technology at a later date. *Additionally, any “new” battery technology will not have been tested by time, and our community does not want to become energy storage guinea pigs for a still-emerging industry.*

But there can only be one “project” for an EIR, and that project is based on plans and an application submitted for three warehouse sized buildings containing lithium-ion batteries.

*According to CEQA §15088.5, this draft EIR must be withdrawn and recirculated for public comment if Vistra chooses to change their design, starting the process over from the beginning, or at least submit a supplemental EIR.*

- **We simply reject all of the Alternatives suggested in DEIR. An Alternative #6 should have been suggested: Find an site in an unpopulated area adjacent to the source of the energy you intend to store.**

Per Section 5.3.2 of the DEIR: "Based on the alternatives analysis provided above, the No Project Alternative [Alternative #1] would be the environmentally superior alternative because no change to existing conditions would occur." To Morro Bay's detriment, CEQA Guidelines Section 15126.6(e) provides that, "if the No Project Alternative is the environmentally superior alternative, then the EIR shall also identify an environmentally superior alternative among the other project alternatives."

We should all keep in mind that, although “commissioned” by the City of Morro Bay, the Draft EIR was paid for by Vistra and written to their advantage (intentionally or not). It should be an unbiased report, but it is not. If read as a complicated murder mystery, the DEIR offers endless nuggets of revealing information. When all of the dots are connected a picture of Vistra's motivations emerge.

Whether we love or hate the old Power Plant building and the stacks, they are *not* official historical resources. The DEIR suggests, on page 5-10, that they *might be eligible* “for the National Register of Historic Places and California Register of Historical Resources.” Maybe so, but they are not

currently protected by any “landmark” designation. Over years much discussion has ensued about removing them and remediating the ground on which they stand. Component #2 of the Project Description is “demolition and removal of the existing Power Plant building and stacks”, which one could assume is a “contractual obligation”. Vistra has estimated that it would take at least two years and \$84 million to remove the stacks. Kudos to the genius who hatched this plan to protect the decrepit old Power Plant! Who benefits most if these are protected (or even *suggested* to be protected) National Landmarks and not allowed to be destroyed? Vistra.

"The environmentally superior alternative among the other alternatives analyzed is the BESS Facility Without Demolition Alternative [Alternative #3]. The BESS Facility Without Demolition Alternative would eliminate the proposed project’s significant and unavoidable impact on historical resources because the BESS Facility Without Demolition Alternative would not demolish structures that contribute to the Morro Bay Power Plant’s eligibility for the National Register of Historic Places and California Register of Historical Resources."

**The DEIR does not offer a realistic Alternative. An Alternative #6 should have been suggested: choose a location away from populated areas. Morro Bay’s Embarcadero is an inappropriate site for BESS.**

Issues not considered in the DEIR, but should be investigated.

- **It has been assumed by Vistra that because the old tank farm site is contaminated with toxins, that “capping” the site with massive concrete foundations will keep the toxic chemicals from reaching the surface, coming in contact with sensitive flora and fauna, entering the groundwater and poisoning the atmosphere. Because of climate change and sea level rise, “capping” is no longer a feasible strategy for controlling toxins in soil.**

A 2023 study by Kristina Hill, an associate professor at the University of California at Berkeley and the lead author of the paper, *A Hidden Climate Danger Threatens*

*Coastal Communities*<sup>25</sup> states that “when groundwater rises toward the surface, whether from sea level rise or increasingly intense climate-driven storms, [toxic] contaminants can leach into it and spread to other waterways, potentially poisoning people and wildlife.” It stands to reason that the more shallow the water table, the more immediate effect sea level rise will have on pushing toxic chemicals toward the surface and/or in to the groundwater. Hill’s team used elevation as a proxy for groundwater, determining that contaminated sites located below 10 meters (33 feet) are at risk from flooding. *Per Vistra’s project elevations, the BESS ground level is approximately 30’ above sea level, or less.*

According to Hill’s study, the threat is from below. “Capping seemed like a great strategy back in the ‘80s as it was like putting an umbrella over the chemicals, protecting them from water and from movement,” said Hill. “But now the water is coming up from below so the umbrella doesn’t work.”

There is no reference in the DEIR to the water table under AOC-1, the proposed BESS site. This would be of interest to anyone who is commenting on water quality or the effects of toxic run-off from fire-cooling measures. **But our concern is how sea level rise will push the water table, and therefore the toxic contamination, toward the surface of the project site.**

**We request that the following information regarding the Power Plant Property’s AOC-1 be included in the final EIR: What was the water table in the past? What is it today? How has it changed? With computer modeling, demonstrate how sea level rise will affect the groundwater and the water table at various times in the future. Ultimately, we believe that this information will prove that “capping” the ground at AOC-1 will NOT protect sensitive habitat. We insist that the contamination and toxins currently at the project site be removed and the ground returned to its natural state.**

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<sup>25</sup> [https://www.bloomberg.com/news/articles/2023-09-28/a-hidden-climate-danger-threatens-coastal-communities?utm\\_source=website&utm\\_medium=share&utm\\_campaign=email](https://www.bloomberg.com/news/articles/2023-09-28/a-hidden-climate-danger-threatens-coastal-communities?utm_source=website&utm_medium=share&utm_campaign=email), See also Appendix A

- **We are concerned with the ownership of the project and their responsibility to the City of Morro Bay. Who owns this property? And who is the developer of this project? Who will be responsible for it in the future? How can we be sure that agreements and contracts are fulfilled. Can we protect ourselves from ending up with a graveyard of contaminants at the end of the life of this project, if built? Are we being petty? We are skeptical.**

The San Luis Obispo County Assessor's records state that Morro Bay Dynegy LLC is the current legal owner of the property at 1290 Embarcadero, (AKA 1387 Main St.) Morro Bay, 93442, (APN): 066-331-046, This property is commonly referred to as the Power Plant Property (PPP). Current Assessed Value: \$28,773,826. (Dynegy Morro Bay LLC is a subsidiary of Vistra Corp. but is Morro Bay Dynegy LLC a subsidiary of Vistra Corp.? — we are not attorneys)

Pg. 1-1 of Project Application, states that Morro Bay Power Company LLC (Vistra) is the project developer and applicant. Morro Bay Power Company LLC is not listed as a subsidiary of Vistra Corp. Why is Morro Bay Power Company LLC not listed as a subsidiary of Vistra Corp? <sup>26</sup>

*Vistra is not specifically named as the property owner or the developer.*

*And why does Vistra Corp own 50 % of Morro Bay Mutual Water Company?*

Vistra Corp was formerly Vistra Energy Corp. The project application refers to "Vistra", but not Vistra Corp. We get a little queasy when ownership and responsibility get tangled in a web of "identity confusion". San Luis Obispo County has been the victim of past scams by "energy companies", and Vistra (in one name or another) has filed bankruptcy in the past. Of course, smooth-talking Brad Watson, Vistra's Director of Community Affairs, had a slick explanation for this minor blip in Vistra's background.

- **We would like to see Vistra Corp named as the project applicant, the project developer and the legal property owner.**
- **We would like Vistra Corp to be financially liable for all of the operations at the Power Plant Property, now and in the future.**

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<sup>26</sup> <https://www.sec.gov/Archives/edgar/data/92488/000119312518222829/d561329dex211.htm>

- **We request that Vistra Corp post “Completion Bonds” for each phase of the project’s three components:**
  - (1) construction and operation of a 600 megawatt (MW) Battery Energy Storage System (BESS) on approximately 24 acres of the Project Site (BESS Site)**
  - (2) demolition and removal of the existing Power Plant building and stacks**
  - (3) adoption of a Master Plan that would change the land use designation of the BESS Site from Visitor Serving Commercial to General (Light) Industrial.**
- **We request that Vistra provide proof of liability insurance, the the limits designated by our City attorney, and provide Certificates of Insurance to any and all agencies that request them.**
- **We request that Vistra Corp post a bond for future decommissioning of the BESS in an amount that accurately projects the future costs of said decommissioning; OR deposit cash in an interest-bearing trust account in the name of City of Morro Bay, to be managed by the City of Morro Bay.**

We are relying on the words of our cohorts for the following statements, to which we whole-heartedly agree (and in which we had a hand in writing):

- **Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses** - This facility, projected to be the largest in the world, requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety

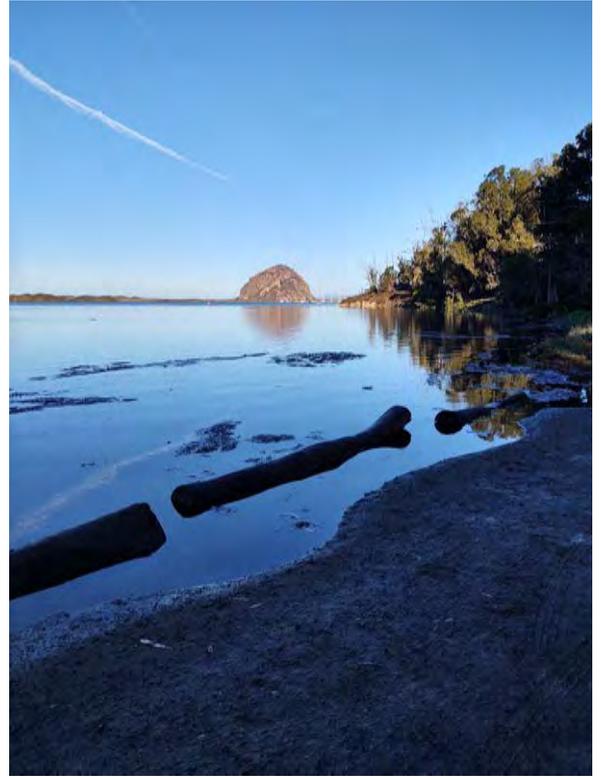
risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

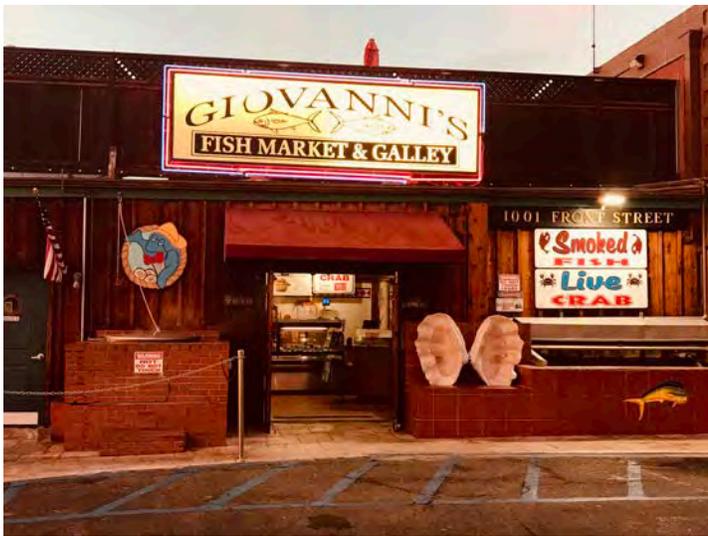
- **BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species** - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters' sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.
- **Fire protection and emergency response strategies were not addressed in the draft EIR** - According to the draft EIR, the fire hazard analysis and safety protocols will be outsourced and performed by consultants DNV Energy, USA through the Morro Bay Fire Dept. at a later date. This is not acceptable. Per CEQA §15126.4, "formulation of mitigation measures shall not be deferred until some future time." **By law**, all impact and mitigation analysis *must be included* in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training.
- **The DEIR must be rewritten and recirculated for our comments** - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires. It

discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5 is a substantially different project with important differences in the impacts, if there is a change to that alternative, or any other, the applicant must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

- **BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act** - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Morro Bay is unique for its iconic “Morro Rock,” at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The “rock” and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. Also, *under the Coastal Act, new development shall protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.*

In fact, the unique character of Morro Bay is Coastal Dependent!





**It is our opinion that the draft EIR was/is so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. CEQA §15088.5**

Finally: We request that our Comment Letter, and all of the Comment Letters received, be published in their entirety, without redaction, without summarization and without editing.

Sincerely,

Gail Johnson

Paul Reyburn

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

"Those who can make you believe absurdities  
can make you commit atrocities."

- Voltaire

# A Hidden Climate Danger Threatens Coastal Communities

More than 132,000 sites in the US, many of them in low-income neighborhoods, are susceptible to rising groundwater that could release toxic chemicals.

The former site of Montrose Chemical Corp., where DDT was produced decades ago, in Torrance, California.

*Photographer: Allen J. Schaben/Los Angeles Times/Getty Images*

By [Todd Woody](#)

September 28, 2023 at 4:30 AM PDT

A little-known climate threat lurks under our feet: rising groundwater that could release toxic chemicals from more than 132,000 contaminated sites in coastal areas of the US. In a [first of its kind study](#), researchers estimated the number of polluted industrial sites and mapped them to areas likely to experience groundwater inundation due to [rising seas](#).

"A lot of people don't realize that the ocean actually extends under the land in coastal areas, so as the ocean rises, it pushes up the groundwater toward the surface," said Kristina Hill, an associate professor at the University of California at Berkeley and the lead author of the paper, which was published last week in the journal *Earth's Future*.

Factories, fuel stations, military bases and other industrial facilities have left surrounding soil contaminated with carcinogenic chemicals and heavy metals. Some became [Superfund sites](#) whose cleanup is overseen by the federal government. Far more are managed by individual states.

When groundwater rises toward the surface, whether from sea level rise or increasingly intense climate-driven storms, those contaminants can leach into it and spread to other waterways, potentially poisoning people and wildlife. Benzene, trichloroethylene (TCE) and other cancer-causing chemicals known as volatile organic compounds can vaporize and enter homes, schools and businesses through sewer pipes or cracks in building foundations.

In 2020, administrators [temporarily shuttered a high school](#) in Oakland, California, after TCE was discovered in groundwater beneath the building. They feared it would vaporize and contaminate the air inside.

Hill and her colleagues identified 326 Superfund sites vulnerable to groundwater rise in coastal areas. In the San Francisco Bay Area, they found more than 5,000 state-managed toxic sites near the coast and extrapolated that there may be more than 132,000 such sites nationwide. They used elevation as a proxy for groundwater, determining that contaminated sites located below 10 meters

(33 feet) are at risk from flooding. California, New York and New Hampshire are most vulnerable due to the size of Superfund sites and coastal areas in those states, according to the researchers.

Analyzing demographic data, the researchers found that contaminated areas subject to groundwater rise are disproportionately located near communities of low-income residents and people of color.

"I think these communities deserve to be at the front of the line to have those soils fully remediated," said Hill, who studies sea level rise and other climate impacts on urban hydrology.

Jacob Carter is a research director at the Union of Concerned Scientists who has analyzed potential impacts of sea level rise on toxic sites and formerly worked on climate-related Superfund issues at the US Environmental Protection Agency.

"I think this is a very significant study," said Carter, who was not involved in the research. "If you look at toxic remediation plans, they generally don't mention sea level rise and other climate change issues and they're typically not planning for these things."

Climate-related groundwater rise can scramble the calculus on cleaning up toxic sites. Rehabilitating these locations can drag on for years, if not decades, and the high cost of removing soil has resulted in it being left in place at many sites, covered by an impermeable clay or concrete cap meant to contain the contamination.

Now, though, the threat is from below. "Capping seemed like a great strategy back in the '80s as it was like putting an umbrella over the chemicals, protecting them from water and from movement," said Hill. "But now the water is coming up from below so the umbrella doesn't work."

One challenge, according to Hill, is that most states have not mapped coastal groundwater. One state that has is California. In 2022, for instance, regulators ordered the owner of a Bay Area Superfund site slated to be redeveloped as a housing project to assess whether it should change its toxic cleanup plan, given the potential for sea level-related groundwater rise.

"I don't think too many policymakers are likely aware of the impact of rising groundwater or other climate change impacts on toxic sites or maybe even if these sites exist in their area," said Carter. "These are some of the most dangerous chemicals known to mankind and we should be doing everything we can in our power to prevent their release."

“Every absurdity has a champion  
to defend it.”

Oliver Goldsmith

Ronda C. Hash

[REDACTED]  
Morro Bay, California 93442

May 28, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

Re: My public comment to Draft EIR for Battery Energy Storage System (BESS)  
proposed project in Morro Bay

Dear Ms. Fowler:

I am a citizen of Morro Bay and I am opposed to the BESS project proposed for Morro Bay. I ask that you not certify the Environmental Impact Report (EIR), and ask you to deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. Impacts to this community will be significant, and effective mitigation will not be feasible. Lithium-ion battery storage systems have no place in the middle of a small city on the shores of the Pacific Ocean, and especially in such a rich natural environment that we enjoy in Morro Bay. Not only does Morro Bay have an environmentally sensitive estuary, it is brimming with wildlife in both the water and air, some endangered. Our small city hosts many visitors of the estuary and bird sanctuary, as well as the annual Monarch Butterfly migration. Native plants are abundant in our area as well. These natural beauties are irreplaceable and endangering them in any way is unconscionable.

In recent years, there has been a significant increase in fires related to Battery Energy Storage Systems (BESS). While BESS offers a viable solution for energy storage, the associated fire risks cannot be ignored. The fires related to BESS can be attributed to various factors such as thermal runaway, manufacturing defects, battery damage, and improper installation. Lithium-ion batteries pose significant fire hazards when stored improperly. They contain flammable electrolytes that can ignite and create a fire that can quickly spread, leading to property damage, injuries, and even fatalities. When lithium-ion batteries are stored together, there is a risk of a chain reaction where a single battery's thermal runaway can cause other batteries to catch fire. The combined effects of electrolyte decomposition, lithium salt dissolution, electrode damage, and short circuits mean that lithium cells fail rapidly when contaminated with water, even with humidity and condensation (such as fog). According to the collected data on Weather Spark, Morro Bay has some type of cloud cover and/or fog every day of the year. Some months lighter than other, and some days it just never goes away, and some days the fog is like rain. Based on the data collected on the amount of fog that Morro Bay receives annually, the proposed location would be a safety hazard to our community as a whole.

The fires are left to burn out of their own, applying water to Lithium-ion batteries will cause them to reignite, releasing toxic and corrosive gasses into the air. As the technology is new, the long term effects from these toxins are unknown. No studies have been completed as to the effects of the toxic plumes on wildlife or ecosystems. The Draft EIR states that any effects from the toxic plumes would be negligible, which is erroneous as effects are truly unknown. The conclusion by the writers of the Draft EIR that the winds will just blow away any problems from the toxic plumes from a BESS fire is cavalier at best and dangerous to all that make this area their home.

The second water condition is the Pacific Ocean, which will be just feet from the proposed BESS location. Due to climate change the acceleration of sea level rise is a well studied and documented fact by scientists around the world, including those at NASA. Along with the rise in sea level, the waves in California are getting bigger. Maverick Big Waves use to be an occasional phenomenon on the California coastline; however, they are becoming the norm every winter and in some locations, all year long. In January 2023, a study by Peter Bromirski of the University of California, San Diego, Scripps Institution of Oceanography, was published proving that the waves on the California coastline were getting bigger. He explained that the waves ride on top of the sea level, which is rising due to climate change. Mr. Bromirski used data collected over almost a century to demonstrate the winter wave height increases. The changes will affect coastal communities, infrastructure bio systems, the study states. Bromirski goes on to state that as sea level rise progresses, the impacts of wave activity will be aggravated, resulting in increased coastal erosion and flooding of low lying regions. These issues are particularly problematic along the California coast, where vulnerable sea cliffs will experience increasing wave impacts. Because of sea level rise, projections at the end of the twenty-first century indicate that even moderate waves will produce coastal impacts comparable to recent extreme winter wave events. The study, "Climate-Induced Decadal Ocean Wave Height Variability From Microseisms: 1931-2021," was published in the Journal of Geophysical Research: Oceans.

Due to several fault lines running off shore and the increasing incidents of extreme weather and natural disasters, a Tsunami should be considered a forgone conclusion. The bern that is between the ocean and the proposed BESS will not stop a Tsunami. The writer leads the reader away from the proposed BESS location with comments about how northern Morro Bay is more at risk then the proposed BESS location. This statement is completely irrelevant to the subject at hand and is nothing more then an attempt to minimize the what will happen with a BESS during a Tsunami. Especially as the California Coastal Commission (CCC) denied Morro Bay the option of simply enlarging the sewer system they already had in place based on the danger of potential Tsunami and required that the sewer be moved to the east side of Hwy 1. I note that the proposed BESS will sit closer to the ocean than the old sewer system did. The ocean is unforgiving in every way, be it by corrosion or actual contact from waves. We must give her the respect she requires.

The final issue with water at the proposed location for BESS is flooding. The extreme weather of the 2022-2023 winter brought heavy rain and flooding. The area where Vistra seeks to build a BESS was under approximately four feet of water from flooding caused by the heavy rains. Morro Bay was without electricity as the PG&E electrical station was heavily flooded. All roads in and out of Morro Bay's south side were closed due to flooding and landslides. People on the south side of town were basically trapped, with no way out. Fortunately, no one was in danger. I was trapped on the south side;

however, when there was a break in the weather around 4:00 p.m. and I simply left my car in a parking lot and walked home to the north side. I waded in my walk on the freeway as I passed the PG&E Substation and witnessed myself the height of the flood waters in the subject area. What would happen if the BESS was flooded and there was a fire or explosion, as every fire article I read stated they tend to do, and the people trapped on the south side had no way to evacuate because all the roads from that area were flooded. This is a frightening and very real scenario, especially as extreme weather will only get worse in the future.

In the recent winter of 2023-2024, Morro Bay was subject to extreme wind and rain storms. We were twice under hurricane watch and once under tornado watch. Los Osos the small town just south of Morro Bay, was the recipient of the tornado and videos shared online showed the high winds throwing heavy objects, such as a very large and heavy trampoline through the street, bouncing across cars and anything else in its path as easily as a frisbee. As we continue this year to witness extreme weather across the world, knowing that these conditions will only get worse, we must take precautions in all new construction, especially with dangerous industry such as the proposed BESS.

The bottom line is that our little town of just over 10,000 residents is watery in every imaginable way. I have only touched on a small part of why Morro Bay is simply an extremely poor choice of location for a BESS. I live here because I love the ocean. The ocean has “mana,” life-affirming spiritual energy. That energy comes not only from the water, but everything that lives in it, on it and around it. Morro Bay has been entrusted with the keeping of two national treasures, the Morro Rock, also known as the Rock of Gibraltar of the Pacific, and the estuary that supports hundreds of species in their natural habitat. We have a duty to protect them. I do not want to see any of this area and its natural treasures lost solely for the sake of human greed for power and energy.

Under the California Coastal Act, new development shall protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic Morro Rock at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The rock and quiet harbor attracts thousands for visitors year round for art shows, surf contests, annual kite festival, marathons, Iron Man Triathlon, the witches annual bay paddle board, Christmas lighted boat parade, car shows, fishing, kayaking, boating, annual Monarch Butterfly migration, Annual Bird Watchers Festival and so much more. The Coastal Act prioritizes coastal dependent development, which battery storage is not.

The Draft EIR must be rewritten and recirculate for our moments. The Draft EIR, as written, does not inform the citizens of the hazards of lithium-ion battery fires. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species, whose habitats are adjacent to the proposed project site.

Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other; however, Vistra officials have indicated that they now support an alternative design, which is a substantially different project. For all of these reasons, and many more, the draft EIR must be rewritten and recirculated for our comments.

The BESS is a profit-driven industry benefitting the developer and the larger metropolitan areas of our state, but Morro Bay will carry the burden and whatever monetary benefit promised to the City cannot out weight the consequences. Once the true impacts to our community and the surrounding habitats is revealed, we believe the agencies responsible will not certify this draft EIR or approve the BESS project in Morro Bay.

Sincerely,

Ronda C. Hash  
Resident of Morro Bay

CC: Mayor Wixom and Morro Bay City Counsel; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

City of Morro Bay  
Attn: Senior Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
Email: BESScomments@morrobayca.gov

Cc: City Council and Mayor Wixom  
Planning Chair and Commissioners  
California Coastal Commission  
Dawn Addis, Assemblymember 30th district  
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Dawn Addis, Assemblymember 30th district  
Salud Carbajol, 24th District US Congress  
John Laird, State Senator, 17th district  
Board of Supervisors, San Luis Obispo County  
Federal Energy Regulatory Commission (FERC)  
California Air Resources Board (CARB)  
California Environmental Protection Agency (CalEPA)  
California Office of Environmental Health Hazards (OEHHA)  
US Environmental Protection Agency (US EPA)  
California Governor Gavin Newsom

Re: Public comment to Morro Bay’s draft EIR for battery storage proposal

May 28, 2024

Dear Ms. Fowler,

Having lived in San Luis Obispo County for sixty-two years and as a previous resident of Morro Bay, I am deeply connected to our local coastal area and its unique environment. I currently reside in Los Osos and have a profound appreciation for the nautical heritage and waterfront life of Morro Bay, along with the exceptional ecosystem of its estuary. There is no other place on the West Coast that can rival the beauty and ecological significance of Morro Bay.

As a personal note, in 2001, my wife and I embarked on a six-year nautical journey, sailing from our home port of Morro Bay through the South Pacific to New Zealand and returned in 2007. Throughout our sailing travels over the years, from Hawaii to French Polynesia and from Tonga to New Zealand, we encountered individuals who admired Morro Bay as a world-renowned seaport that epitomizes tranquility, scenic beauty, and environmental health.

The Morro Bay estuary, nestled between Morro Rock and the sandspit, serves as a sanctuary for diverse wildlife, including numerous fish species, birds, and marine mammals. However, this delicate ecosystem is threatened by various factors, such as climate change, sea-level rise, habitat loss, industrialization, and pollution.

The industrialization of the beachfront with a battery energy storage system is fundamentally incompatible with the character and environmental significance of Morro Bay. It presents an unacceptable risk for the community to bear. In general, the entire project directly contradicts the principles of environmental justice.

The US Environmental Protection Agency's mission statement on the topic of environmental justice states:

“Environmental justice” means the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices

<https://www.epa.gov/environmentaljustice>

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An immediate structural barrier highlighted by the environmental justice precept is that the entire Morro Bay BESS site selection process was based on Vistra Energy's hasty decision to utilize a decommissioned legacy property it already owns adjacent to a PG&E-owned electrical grid that it would prefer to sell energy to, all for convenient economic reasons. In other words, the people of Morro Bay and all nearby living organisms and ecosystems would be forced to endure the inheritance of a decommissioned power plant passed on from one utility to the next since 1955. The current owner, Vistra Energy, is attempting to perpetuate a “bricks-and-mortar” type of structural barrier that crosses into the very fabric of social and environmental structures in the vicinity.

One might engage in a lengthy debate about the precepts of environmental justice, which is different from my purpose here. It is time for specifics.

Specifically, the Draft EIR fails to address the grave risks associated with lithium-ion batteries. The most hazardous risk is the potential for a thermal runaway (TR) fire and the release of toxic fumes in

the event of such an event. An ongoing incident at a similar energy storage facility in Otay Mesa, California, is a stark reminder of the potential dangers associated with such projects. Thermal runaway fires keep happening in the battery storage industry despite marketing claims. However, the extent of the draft EIR analysis on the BESS fire danger is that “we cannot be assured there will not be a fire,” as stated on the last page. This is grossly inadequate.

The largest of these TR fires are tracked on a global database:

[https://storagewiki.epri.com/index.php/BESS\\_Failure\\_Incident\\_Database](https://storagewiki.epri.com/index.php/BESS_Failure_Incident_Database).

Here are some of the reported BESS thermal runaway events/fires in recent years:

- A BESS thermal runaway on May 15, 2024, in Otay Mesa, near San Diego, that was thought to be extinguished after 22 hours but reignited several times and continues as of May 28th, 2024;
- two Vistra BESS fire incidents at Moss Landing in 2021 and 2022;
- one Moss Landing PG&E BESS fire;
- a lithium-ion battery fire at the port of Oakland on May 12 of this year;
- a BESS fire in Germany, April 27, 2024;
- 900 tons of li-ion batteries burning in Viviez, France, February 18, 2024;
- a BESS fire in Surprise, AZ, with an explosion blowing the doors off the facility and causing permanent injuries to the trained HAZMAT team;
- a BESS fire in Flagstaff AZ;
- a 14-day BESS fire in Chandler, AZ;
- a fire at the “Big Bessie” facility in Australia in 2023,
- at least four BESS fires in NY leading to moratoriums and proposed legislation;
- a BESS fire in Valley Center, California, 2023;
- over 30 BESS fires in South Korea;
- a 2020 BESS fire in Liverpool, UK;
- The BESS fire database indicates there have been at least 87 BESS fires reported.

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Yesterday ( May 27th, 2024), the Otay Mesa conflagration listed in this database was still burning in Otay Mesa, California. It has burned for at least eleven days. This is a direct example of what could happen in Morro Bay if Vistra Energy builds a BESS plant here. The failure to identify the impacts and hazardous materials releases that will follow thermal runaway is a fatal flaw requiring recirculation of the draft EIR.

Sadly, we now have a near-local thermal runaway test case to analyze.

<https://www.msn.com/en-us/news/us/energy-storage-facility-fire-in-otay-mesa-still-not-fully-contained/ar-BB1n5uWA>

<https://hoodline.com/2024/05/containment-progresses-in-11-day-otay-mesa-energy-storage-facility-fire-evacuations-lifted-road-closures-in-effect>

The Otoy Mesa fire is a textbook thermal runaway case and is an example of what could happen in Morro Bay. If it were to happen here, an unmitigated disaster would occur because of the proximity of residential neighborhoods, a bustling downtown, a high school, a mobile home park, and recreational areas, along with a hypersensitive ecosystem that harbors numerous federally protected and endangered species positioned within tribally-designated lands.

Let's begin with the wind. Onshore wind flow in Morro Bay prevails from the Northwest about  $\frac{3}{4}$  of the time.

The following images shows the Gateway Otoy Mesa BESS location mapped under the same wind direction assumptions.

Here is a direct comparison of the two sites :



In fog-bound becalmed air surrounding Morro Bay—a frequent occurrence from May to October—any toxic gas emissions are likely to condense out of a lingering cloud as a poisonous mist that would be hazardous to all life forms.

Within the vicinity of the project site are homes, numerous restaurants and shops, residential areas, strolling tourists, bicyclists, surfers, paddleboarders, swimmers, endangered sea otter nurseries, endangered Peregrin Falcon nests, steelhead trout in Morro Creek, the endangered western snowy plover and other nesting birds, and many protected species.

As the fire reignites over many days or weeks, most of the city would be evacuated for an extended period. Wildlife would be killed, nests abandoned, and tourists would leave the area for months if not years. Firefighting assistance from neighboring jurisdictions may be unable to access the facility due to gridlock during an evacuation. Residents and visitors may be sickened or permanently harmed from exposure to toxic smoke. All of this would be due to the project's unacceptable location.

The Otay Mesa example raises some critical questions. What is the composition of these toxic gas emissions? What will those toxic fumes do to a small community, its visitors, and wildlife? What would happen to Peregrine Falcon nests atop Morro Rock that might be threatened? How would the sea otter rookery inside the estuary fare? Is the US Coast Guard prepared to clear the area of boaters, kayakers, and canoeists? Would the Morro Bay Harbor Patrol and Cal Fire have the skills to rescue swimmers and surfers in a veil of toxic smoke? How will we evacuate from Morro Rock and the Embarcadero, and where will we go for several weeks? What do we do if the nearby Morro Bay High School enters a shelter-in-place mandate for more than a few hours? How much water does it take for fire suppression for a thermal runaway event that lasts several weeks? Where is that water going to come from?

Where does the contaminated water go after its use for fire suppression? If Otay Mesa needed 40 firefighters for 250 MW at one point, and we have a much larger 600 MW facility here, how many firefighters would we need for a worst-case scenario, and where would they come from? If the barricaded perimeter in Otay Mesa where fire personnel detected toxic corrosive gasses is 600 feet, what would the barricaded area in Morro Bay need to be for a facility almost three times the size? Would the Morro Bay Fire Department maintain adequate staffing to be on call for such an event 24/7?

If I had more time to research the answers to these questions, I would comment on them in this document. For now, I want to focus primarily on toxicity issues. I hold undergraduate degrees in chemistry and biological sciences and have completed graduate studies as a marine ecologist before obtaining a DDS degree. My career has been in dentistry and health care administration for many years. In short, I am intensely interested in protecting human health and well-being and ecological concerns.

Let's look at potential toxicity risks from LIB fires. Current studies on this topic abound, but arguably one of the most comprehensive, titled **Toxic fluoride gas emissions from lithium-ion battery fires**, <https://www.nature.com/articles/s41598-017-09784-z>, determined that "Lithium-ion battery fires

generate intense heat and considerable amounts of gas and smoke. Although the emission of toxic gases can be a larger threat than heat, the knowledge of such emissions is limited. This paper presents quantitative measurements of heat release and fluoride gas emissions during battery fires for seven different types of commercial lithium-ion batteries. The results have been validated using two independent measurement techniques and show that large amounts of hydrogen fluoride (HF) may be generated, ranging between 20 and 200 mg/Wh of nominal battery energy capacity. In addition, 15–22 mg/Wh of another potentially toxic gas, phosphoryl fluoride (POF<sub>3</sub>), was measured in some of the fire tests. Gas emissions when using water mist as an extinguishing agent were also investigated. Fluoride gas emission can pose a serious toxic threat and the results are crucial findings for risk assessment and management, especially for large Li-ion battery packs.”

The study also revealed that “An irreversible thermal event in a lithium-ion battery can be initiated in several ways: spontaneous internal or external short-circuit, overcharging, external heating or fire, mechanical abuse, etc. This may result in a thermal runaway caused by the exothermal reactions in the battery<sup>6,7,8,9,10</sup>, eventually resulting in a fire and/or explosion. The consequences of such an event in a large Li-ion battery pack can be severe due to the risk for failure propagation<sup>11,12,13</sup>. The electrolyte in a lithium-ion battery is flammable and generally contains lithium hexafluorophosphate (LiPF<sub>6</sub>) or other Li-salts containing fluorine. In the event of overheating the electrolyte will evaporate and eventually be vented out from the battery cells. The gases may or may not be ignited immediately. In case the emitted gas is not immediately ignited the risk for a gas explosion at a later stage may be imminent. Li-ion batteries release a various number of toxic substances<sup>14,15,16</sup> as well as, e.g. CO (an asphyxiant gas) and CO<sub>2</sub> (induces anoxia) during heating and fire. At elevated temperature the fluorine content of the electrolyte and, to some extent, other parts of the battery such as the polyvinylidene fluoride (PVdF) binder in the electrodes, may form gases such as hydrogen fluoride HF, phosphorus pentafluoride (PF<sub>5</sub>) and phosphoryl fluoride (POF<sub>3</sub>). Compounds containing fluorine can also be present as e.g. flame retardants in electrolyte and/or separator<sup>17</sup>, in additives and in the electrode materials, e.g. fluorophosphates<sup>18,19</sup>, adding additional sources of fluorine.”

The study is summarized under its Conclusions sections as follows:

“Significant amounts of HF, ranging between 20 and 200 mg/Wh of nominal battery energy capacity, were detected from the burning Li-ion batteries. The measured HF levels, verified using two independent measurement methods, indicate that HF can pose a serious toxic threat, especially for large Li-ion batteries and in confined environments. The amounts of HF released from burning Li-ion batteries are presented as mg/Wh. If extrapolated for large battery packs the amounts would be 2–20 kg for a 100 kWh battery system, e.g. an electric vehicle and 20–200 kg for a 1000 kWh battery system, e.g. a small stationary energy storage. The immediate dangerous to life or health (IDLH) level for HF is 0.025 g/m<sup>3</sup> (30 ppm)<sup>22</sup> and the lethal 10 minutes HF toxicity value (AEGL-3) is 0.139 g/m<sup>3</sup> (170 ppm)<sup>23</sup>. *(Note-typographical correction cited by Author is applied in this document)*. The release of hydrogen fluoride from a Li-ion battery fire can therefore be a severe risk and an even greater risk in confined or semi-confined spaces. This is the first paper to report measurements of POF<sub>3</sub>, 15–22 mg/Wh, from commercial Li-ion battery cells undergoing abuse. However, we could only detect POF<sub>3</sub> for one of the battery types and only at 0% SOC, showing the complexity of the parameters influencing the gas emission. No POF<sub>3</sub> could be detected in any of the

other tests. Using water mist resulted in a temporarily increased production rate of HF but the application of water mist had no significant effect on the total amount of released HF. The research area of Li-ion battery toxic gas emissions needs considerable more attention. Results as those presented here are crucial to be able to conduct a risk assessment that takes toxic HF gas into account. The results also enable strategies to be investigated for counteractions and safety handling, in order to achieve a high safety level for Li-ion battery applications. Today we have a rapid technology and market introduction of large Li-ion batteries but the risks associated with gas emissions have this far not been possible to take into consideration due to the lack of data.”

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Further studies have been performed since the above landmark study was published, many of which focus on electric vehicles. However, the research applies to large-scale projects like the Morro Bay BESS concept. A notable review titled, **Review of gas emissions from lithium-ion battery thermal runaway failure — Considering toxic and flammable compounds**, <https://www.sciencedirect.com/science/article/pii/S2352152X24008739>, lists a table of hazardous compounds summarized for 8-hour exposure limits and 15-minute exposure limits.

Table 2. Common LIB off-gas components, hazards and exposure limits.

<b>Substance</b>	<b>Hazard<sup>a</sup></b>	<b>Exposure Limit, 8 h (mg/m<sub>3</sub>)<sup>b</sup></b>	<b>Exposure Limit, 15 min (mg/m<sub>3</sub>)<sup>b</sup></b>
<b>Carbon dioxide,</b> CO <sub>2</sub>	Cause headaches, dizziness, confusion, loss of consciousness, and asphyxiation at high concentrations [52].	9150	27 400
<b>Carbon monoxide, CO</b>	Toxic if inhaled, may damage the unborn child, causes damage to organs through prolonged or repeated	23	117

exposure and is an extremely flammable gas.

**Hydrogen, H** Extremely flammable. See noted

2

**Hydrocarbons** Flammable. See noted

**Hydrogen fluoride, HF** Fatal if swallowed, is fatal in contact with skin, is fatal if inhaled and causes severe skin burns and eye damage. 1.5 2.5

**Hydrogen chloride, HCl** Severe skin burns and eye damage, is toxic if inhaled, may damage fertility or the unborn child, causes serious eye damage, may cause damage to organs through prolonged or repeated exposure, may be corrosive to metals, may cause respiratory irritation and contains gas under pressure and may explode if heated. 2 8

**Hydrogen cyanide, HCN** Fatal if swallowed, is fatal in contact with skin, is fatal if inhaled, causes damage to organs through prolonged or repeated exposure, is very toxic to aquatic life (with long lasting effects) and is an extremely flammable liquid and vapour. 1 5

**Nitrogen dioxide, NO** Fatal if inhaled, causes severe skin burns and eye damage; and may cause or intensify fire (oxidiser). 0.96 1.91

2

<b>Sulphur dioxide, SO<sub>2</sub></b>	Severe skin burns and eye damage and is toxic if inhaled.	1.3	2.7
<b>Solvents</b>	Highly flammable liquid and vapour [53]. Very irritating to eyes, skin and airways [44].	DEC 700, PC 8.5 <sup>c</sup>	DEC 1000, PC 8.5 <sup>c</sup>

2

a

Cited from the European Chemicals Agency [53], unless otherwise stated.

b

Cited from the HSE [47], unless otherwise stated.

c

Cited from the IFA [54] for the solvents DEC (Romania) and PC (Germany), other common electrolyte solvents (e.g. EC and DMC) are not listed.

d

Hydrocarbons, such as CH<sub>4</sub>

4

, are described as acting as simple asphyxiants without other significant physiologic effects when they are present in high concentrations, hence are not given limit values as the significant factor is the availability of oxygen [55]. This is assumed for H<sub>2</sub>

2

The health risk levels inherent in these cellular toxins are unacceptable. The concept of “safe” exposure limits for some of these compounds—particularly hydrogen fluoride, hydrogen cyanide, hydrogen chloride, and nitrogen dioxide- are questionable, mainly when applied to vulnerable human populations similar to the aged demographics of Morro Bay inhabitants or the adolescents in the nearby high school. We have no idea of the potential for harm to sea otter populations or fast-metabolizing avian communities such as the peregrine falcon and many other species.

Let us focus on just one of these toxins, hydrogen fluoride, which, according to the first of two studies presented above, has a 10-minute toxicity of just **30 parts per million** for the average human being. Most of us are not capable of grasping the scale of this. Visualize a million dollars, if you will, a stack of 1 million dollars in 100 dollar bills. It would be about 358 feet tall, longer than a football field. Then, scalpel-slice a hundred-dollar bill lengthwise in thirds like a sheet of tissue paper

and compare it to the big stack above you. That's 30 parts per million; don't get a hitch in your neck while looking skyward. My point is that it doesn't take much to disrupt the sensitive biochemistry of a living cell, whether human, animal, plant, fungus, bacterial, archaeon, or other.

Let's discuss water and its role in provoking and combatting thermal runaway fires. Since large continuous streams of water over many days are necessary to combat these fires, what would the runoff consequences be for Estero Bay, the adjacent Morro Bay Estuary, and surrounding environments? A recent research paper has studied this in an article titled: **Assessment of Run-Off Waters Resulting from Lithium-Ion Battery Fire-Fighting Operations**, <https://doi.org/10.3390/batteries10040118>. The study concluded as follows:

“In the present work, the two battery modules were triggered in thermal runaway and subsequent degassing and fire. Water was applied to mock-up firefighting operations in order to analyze the composition of the extinguishing water. The tests presented in this paper highlight that waters used for firefighting on NMC Li-ion batteries are susceptible to containing many metals, including Ni, Mn, Co, Li, and Al. Those metals are mixed with other carbonaceous species (soots, tarballs). It is also important to note that particles present in the water can be nanometric or in the form of nanostructured clusters. In addition to the solid contaminants, liquid compounds can be present, especially organic carbonates coming from the electrolyte (EC and EMC in this case) and also gaseous species such as PAH. A comparison with PNEC values showed that this water could be potentially hazardous to the environment, depending on the actual situation encountered in the case of thermal runaway propagation with a Li-ion battery-based system.

These tests also make it possible to identify some trends concerning the reaction scenario. By comparing the two extinguishing operations on the prismatic cells, one can see that when the fire is developed, the water is much more concentrated in PAH and cathode metals (Ni, Mn, Co). On the other hand, the concentrations of elements coming from the liquid electrolyte (typically Li, P, F), more easily accessible, are present in equivalent quantities. Liquid organic carbonates are preferably found in the case of degassing without ignition. These low boiling point liquids are otherwise vaporized and found mainly in the gaseous phase. The comparison of the results between the prismatic cell module and the 18,650-cell module also confirms the importance of the cell and module geometry, influencing, in particular, the mechanical strength of the system and, therefore, the confinement of the inner materials.

As large Li-ion batteries are fast spreading (in so-called Battery Energy Storage Systems, BESS, for example), and only few data on the environmental impact of fires in those systems are available, it is crucial to develop consolidated knowledge in this field further. Several directions could be suggested for future tests like developing higher level (or full scale) testing to increase test

representativity. Owing to field operational constraints in terms of emergency response following a fire, considering time between event initiation and water suppressant application as a parameter in future studies also seems important. Other investigations worth being performed are, for instance, a detailed assessment of air, water, and soil local impacts following Li-ion BESS significant incidents or in-depth environmental impact studies of key Li-ion substances like organic carbonate solvents (EC, EMC, etc.).”

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Most, if not all, of these contaminants, would pose a long-term risk to the adjacent environment, including Estero Bay, the estuary, protected wetlands, soils, and water supply in the event of a fire.

Water plays a significant role in starting lithium-ion battery fires. A battery manufacturer, for example, states that “Understanding the effects of water on lithium batteries is crucial for safety considerations. Water infiltration can lead to detrimental reactions, including heat generation, hydrogen gas release, and potential fire hazards. Recognizing the signs of battery malfunction and taking appropriate safety precautions, such as proper storage and protection from moisture, are essential for maintaining battery integrity and reducing the risk of incidents.”

<https://www.redway-tech.com/the-truth-about-lithium-batteries-and-water-what-you-need-to-know/>

Following a hurricane-induced flood inundation in Florida in 2022, a number of electric vehicles caught fire while submerged.

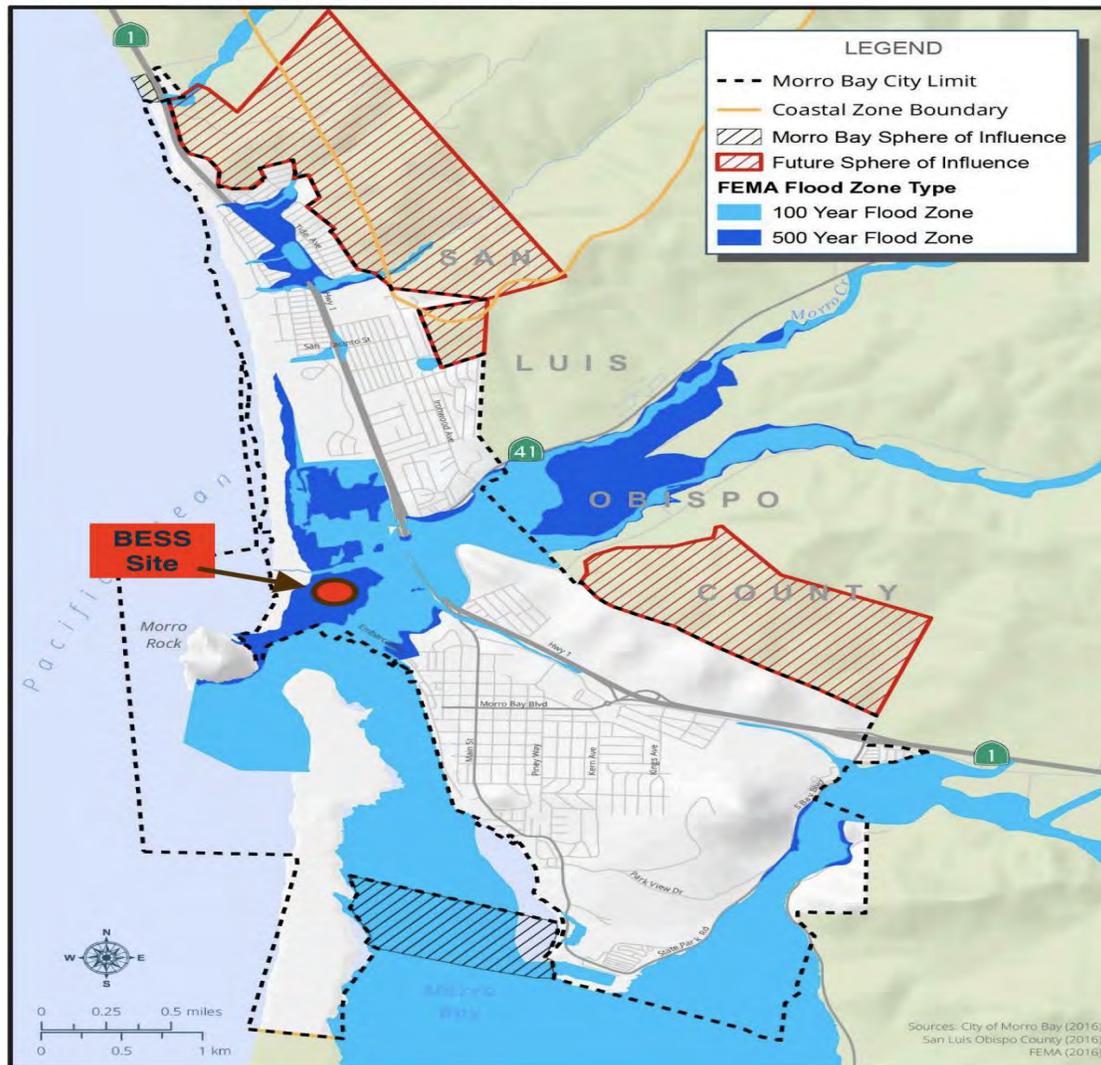
“As of Oct. 26, USA TODAY has been able to confirm 11 cases in which EVs caught fire in Florida after flooding from Ian, all believed to be due to the cars' battery packs shorting out after being submerged in saltwater or physical damage to the batteries during the flooding.”

<https://www.usatoday.com/story/money/cars/2022/10/26/electric-vehicle-fires-florida-flooding-what-happened/10553207002/>

**Considering the risks of inundation for Lithium-ion batteries, it is astounding to realize that the Morro Bay BESS plant proposal intends to place a massive quantity of these batteries in a well-known flood plain, within a declared tsunami zone, adjacent to a seaside water level that is certain to rise as global warming progresses.** This is the same flood plain that the City of Morro Bay declared as unsafe for its aging sewage plant due to biological environmental hazards during inundations that have occurred over the years. That sewage plant was moved to high ground in a more remote area at a cost of approximately 126 million dollars. Using the same ethic, how can a water-vulnerable 600 MW BESS plant even be planned to be built within that flood plain not far from the old sewage plant site?

Fina

Figure 4.8-2 Morro Bay FEMA Flood Zones



Finally, I am not convinced that the risk of tsunami inundation can be remedied. Tsunami surges are not infrequent in the Pacific Basin. Anyone who was in the Morro Bay area in January of 2022 will remember the tsunami event of January 15 of that year. Though no breaking shore wave occurred, a rapid tidal surge up to eight feet entered the bay, flooded shorelines, and pulled boats from their

moorings. Portions of the Santa Cruz, California waterfront were destroyed. We were fortunate because the seismic source was in faraway Tonga, about six thousand miles away

## TONGA TSUNAMI HITS THE CALIFORNIA COAST

[https://en.wikipedia.org/wiki/2022\\_Hunga\\_Tonga%E2%80%93Hunga\\_Ha%CA%BBapai\\_eruption\\_and\\_tsunami](https://en.wikipedia.org/wiki/2022_Hunga_Tonga%E2%80%93Hunga_Ha%CA%BBapai_eruption_and_tsunami)

LOCAL

## **SLO County tsunami advisory issued after Pacific Ocean volcano erupts**

BY KAYTLYN LESLIE

UPDATED JANUARY 15, 2022 5:46 PM

<https://www.sanluisobispo.com/news/local/article257358447.html>

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I have lived long enough to recall the tragic tsunami of 1964, which caused the death of 131 people, devastated the ports of Alaska, Washington and Oregon, and wrecked a great portion of Crescent City, California.

[https://en.wikipedia.org/wiki/1964\\_Alaska\\_earthquake](https://en.wikipedia.org/wiki/1964_Alaska_earthquake)

<https://www.sfgate.com/news/article/Crescent-City-tsunami-1964-Alaska-earthquake-12517983.php>

The industrialization of the beachfront with a battery energy storage system is fundamentally incompatible with the character and environmental significance of Morro Bay and it presents an unacceptable risk for the community to bear. This DEIR for a project that is undecided about its different alternatives must be withdrawn and rewritten after the specific design of the project has been selected and plans are drafted and submitted. Developers should not be allowed to pursue multiple project designs at once and decide later which project to build. The failure to inform the public of the potential for exposure to toxic, corrosive fumes as a result of thermal runaway, is a massive fatal flaw in the DEIR. The proposed BESS site is hazardously placed within the declared tsunami zone. Building it here invites a large-scale disaster due to the physical forces of water on the move and the electrochemical ignition vulnerabilities of Lithium-ion batteries when submerged. Moreover, it is contrary to standard protocols to defer identifying impacts and mitigation measures until after the EIR process. If this project is approved, the town's character will be destroyed, and the residents, tourists, and wildlife will be harmed. The project site is in a densely populated residential and tourist area with schools nearby, and it is in a flood and tsunami zone. Any agency that would approve such a project without fully independent scientists analyzing its potential impacts in a worst-case scenario is recklessly endangering the health and safety of its residents, visitors, and ecosystems. The project proposed is contrary to the Coastal Act, contrary to Plan Morro Bay, contrary to the wishes of the residents of Morro Bay, and this DEIR does not meet the CEQA requirements of informing the public. There is no way to make a seaside battery storage project in Morro Bay safe. The project is a high-risk venture in a high-risk location based on a technology with a history of unpreventable and uncontrollable toxic, corrosive runaway fires. The citizens of this city are not willing to take such extreme risks, and this project should be built in a more suitable location. We citizens hope and believe that after recirculation and all of the potential impacts are identified, considered and reviewed, the city will not certify this EIR and will ultimately reject the project.

Sincerely, Richard J. von Stein DDS

## Public Comments to BESS EIR

Dominique Naylor <[REDACTED]>

Tue 5/28/2024 4:59 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Sarah.MacGregor@coastal.ca.gov <Sarah.MacGregor@coastal.ca.gov>; Council <Council@morrobayca.gov>;

PlanningCommision@morrobayca.gov <PlanningCommision@morrobayca.gov>

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Dear Ms. Fowler,

I am a resident of Morro Bay and I am writing to express my significant concerns regarding the proposed Battery Energy Storage System (BESS) plant in Morro Bay. While I appreciate the city's efforts to embrace renewable energy solutions, I firmly believe that placing a BESS plant anywhere in our community, particularly on the shoreline in front of Morro Rock, is highly unsuitable and poses several risks.

The Coastal Commission previously required the relocation of the water treatment plant due to potential flood concerns, which placed a financial burden on residents in the form of assessments to recover the enormous costs. The area indeed flooded in the winter of 2022, demonstrating its vulnerability. It does not make sense to place a BESS facility in this flood-prone area along the coast. An lithium-ion battery plant, with all of its potential problems, would be better served in a less densely populated area.

If a fire like this broke out at the proposed BESS Plant in Morro Bay during a flood similar to what we experienced in 2023 and 2024, the residents, their pets and their livestock living on Little Morro Creek Rd., just east of the plant, would be unable to evacuate. During both of those flood years we were trapped on our road which has only one way out. We would be direct recipients of the toxic fumes.

Lithium-ion battery plants have a well-documented history of catching fire worldwide, posing substantial safety hazards. For instance, in September 2022, a Tesla Megapack caught fire at a battery storage facility in Moss Landing, CA. In 2019, an explosion at an energy storage facility in Surprise, Arizona, injured nine first responders. Similar incidents have been reported in New York, and Australia. Most recently on May 15, 2024 in Otay Mesa, CA a fire repeatedly reignited itself over the course of several days. I understand it continues to burn at the time of this writing.

These examples illustrate the inherent risks associated with lithium-ion battery plants, and the potential for such hazardous events in Morro Bay. The seriousness of these safety concerns for our community cannot be overstated.

The proposed site for the BESS plant in the Embarcadero is particularly troubling. The Embarcadero is a major tourist attraction and an economic hub for our city. The presence of an industrial facility with known safety risks could deter visitors, negatively impact local businesses, and reduce property values in the surrounding areas.

The location would be better served as open space for tourists and the local community to gather and enjoy the beauty of the Central Coast. This would attract more visitors to appreciate the coastal beauty

and wildlife rather than deter them with an industrial eyesore that has the potential for enormous risks to humans, pets, livestock, wildlife, and sea life.

In conclusion, I urge the City Council to not approve the BESS Plant in our community.

I am outraged that the BESS plant is even being considered for our beautiful coastline.

Thank you for considering my concerns.

Sincerely,

Dominique Naylor

[REDACTED]

Morro Bay CA 93442

## BESS Draft EIR

Teresa McClish <[REDACTED]@gmail.com>

Tue 5/28/2024 5:02 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

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Hello: My question on the Draft EIR is that given an alternative analysis is reduced compared to a project alternative, I see that Alt 2 (Plan MB consistency) identifies GHG Emissions as significant and unavoidable, but not Alt 1 (no project) - is there a reason? Additionally, What would the potential impact for Energy be for Alts 1 and 2 - particularly considering Plan Morro Bay Goals C-5 and C-6.

Thank you!

Teresa McClish

## FW: Inclusion 5-28-24 Agenda: Please Protect MB Residents, Visitors and Wildlife

Michael Codron <MCodron@morrobayca.gov>

Tue 5/28/2024 6:11 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

---

**From:** Judy Setting <[REDACTED]>

**Sent:** Tuesday, May 28, 2024 5:39 PM

**To:** Carla Wixom <cwixom@morrobayca.gov>; Zara Landrum <zlandrum@morrobayca.gov>; Jennifer Ford <jford@morrobayca.gov>; Cyndee Edwards <cedwards@morrobayca.gov>; Laurel Barton <lbarton@morrobayca.gov>; Assemblymember.Addis@assembly.ca.gov

**Cc:** Yvonne Kimball <ykimball@morrobayca.gov>; Michael Codron <MCodron@morrobayca.gov>; Kim Fowler <kfowler@morrobayca.gov>

**Subject:** Inclusion 5-28-24 Agenda: Please Protect MB Residents, Visitors and Wildlife

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Dear Government Officials Elected to Protect Us,

At the polls in 2022 Morro Bay residents made it clear that due to safety concerns they do not want a 600 MW BESS. They voted out Mayor Heading by 1900 votes. Only 5100 people cast votes. That is a huge margin. Mayor Heading was leading a pro-BESS movement and the majority of Morro Bay residents **do not want a BESS** here.

**600 Megawatts** of batteries is an **extremely high concentration** and for safety reasons **should not be installed in one area**. In the event of flooding or fire, the thermal runaway causing fires and toxic gas releases will be greater for a 600 MW BESS. The surrounding safety distance for high concentration battery energy storage systems **should be greater than the specified distance of just 440 yards**. For a 600 MW BESS it should be a minimum of 1.75 miles.

The **proposed location is not safe**. It is too close to a well-populated RV park, community park, beaches, pedestrian/bike path and tourist hub.

We have been told there is "**only a small probable chance**" of devastating explosions and toxic gas releases. **The important variable is there is a chance**. This property is in a flood zone. A catastrophe will be devastating for the health of wildlife, plants, people, and air quality. A **catastrophe will end a way of life or worse lives** for many.

Will you please take a moment to answer these 3 questions?

Where will the **5,000,000 gallons of contaminated toxic water** that is used for cooling thermal runaways be stored?

Aside from the industrial building **noise pollution**, upon completion of the BESS, will you like **having a constant humming noise in our City**?

How will it feel to have our precious Morro Bay **listed on the National Terrorist Target** list?

Will you protect our peaceful, healthy way of life and **listen to the majority** of residents?

Thank you for helping me.

*Judy Lynn Setting*

To all email recipients of this letter,

The Environmental Impact Report as presented by Vistra for the proposed BESS fails miserably to completely address impacts to our environment in Morro Bay.

Morro Bay's environment would be at high risk for severe damage to the health of our people, the bay, its waters, ecosystem, animals and structures if a BESS was built. It is well established that lithium batteries are high fire risk, with unpredictable ability to extinguish the chemical fire (ie: Otay Mesa).

Perhaps the EIR is written with the goal in mind to present the risks to the environment by glossing over the threats to Morro Bay, hoping it will not be challenged.

For instance, the EIR cites a study to review the containment of a fire in the lithium batteries. The study is for a limited time of 24 hours, from start, to fully extinguished. A quick google search for lithium battery fires throughout the world, show this to be unrealistic. But, to the casual observer of the report, perhaps Vistra thinks they have adequately addressed fire danger. We know this is not realistic.

Vistra downplays the toxic chemicals emitted during a fire by identifying only a few expected poisonous chemicals. Deep in the middle of the report, it notes that construction is expected to last up to four years (with the pounding, vibrating noise of construction and heavy trucks). Nowhere does it address the effect to the wildlife, or local business for restaurants and hotels. No mention of how this disruption will negatively impact the otters as they birth and raise their pups. No mention of the toxicity in the air causing harm to the birds in our National Bird Estuary.

It defies logic that this proposition by Vistra is being considered at this level. Morro Bay is totally incompatible with the installation of a lithium battery storage site. It is protected by the Coastal Commission, Otters are protected under the Wildlife and Countryside Act of 1981 and the Conservation of Habitats and Species Regulations 2017. We are home to a National Bird Estuary Preserve. Morro Bay and its wetlands are part of Pacific Flyway path.

Annually, **over one billion birds** travel through this path during their migration. The health of the wetlands is imperative to maintain the birds' strength as a source for much needed food.

Our location is isolated from adequate roads necessary to build and maintain the largest (or any) BESS in the world. We are not an industrial location. Regardless of how much money is thrown to Morro Bay, we will never be able to appropriately house industrial projects. We are a small town, with limited roads and a thriving ecosystem.

The EIR is inadequate, likely because Morro Bay is the wrong place for the suggested system. The environment in Morro Bay cannot handle the placement of a BESS without significant risks.

In the effort to better manage the California energy grid, it would be an irreparable mistake to allow a BESS to be built in Morro Bay. What is the point of enacting protections to animals, the habitat, the preservation of the coast and hopefully, the inherent goal of protecting our communities if we abandon these stated goals?

Regards,

Rob Thoresen

# CESA-- New Long Duration Energy Storage Systems (+8 hrs.)

Steve Paige <[REDACTED]>

Tue 5/28/2024 8:20 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>; Council <Council@morrobayca.gov>; Sarah.MacGregor@coastal.ca.gov <Sarah.MacGregor@coastal.ca.gov>; Planning Commission <planningcommission@morrobayca.gov>; Carla Wixom <cwixom@morrobayca.gov>; CentralCoast@coastal.ca.gov <CentralCoast@coastal.ca.gov>; info3@waterboards.ca.gov <info3@waterboards.ca.gov>

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Does Lithium Ion Battery Storage suffer from flawed long term KWH storage calculations and design life drawbacks?

The first day efficiency of a Tesla Megapack is 87% to 90% for the complete charge/discharge cycle. Tesla warranty for the megapack makes no mention of a warranty guarantee of 70% the original battery KWH rating at ten years like it does with the residential Powerwall storage. My guess is the megapack does not have enough product history and the life cycle is not mature enough for Tesla to offer a similar warranty. Comparatively, the Tesla Megapacks would have to be replaced 2 to 2.5 times in the 40 year life of a Liquid Air Energy Storage plant or LAES.

### TESLA POWERWALL LIMITED WARRANTY (USA)

Effective Date: April 19, 2017

Applies to:

13.5 kWh Powerwall 2 AC	Part Number 1108567-xx-x
Gateway	Part Number 1099752-xx-x
Backup Gateway	Part Number 1109752-xx-x
Gateway Meter	Part Number 1112484-xx-x

### Ten Year Limited Warranty

Tesla, Inc. warrants that:

- (1) Your Powerwall will be free from defects for ten years following its initial installation date; and
- (2) Your Powerwall will have an energy capacity of 13.5 kWh on its initial installation date, and will retain energy capacity as shown in the table below.

Application	Energy Retention <sup>1</sup>	Operating Limitation
Solar self-consumption/ backup only <sup>2</sup>	70% at 10 years following initial installation date	Unlimited cycles
Any other application or combination of applications	70% at 10 years following initial installation date	37.8 MWh of aggregate throughput <sup>3</sup>

Note that this Limited Warranty (including its duration) is subject to a number of important exclusions and limitations, which are set out in detail below.

Meanwhile Liquid Air Energy Storage of LAES will operate for 40 years at 50% to 57% efficiency with routine maintenance. No rare metals needed. No recycling hazardous materials. No toxic fire hazard. No city wide emergency response plan. No toxic groundwater contamination.

Power is stored in the phase change from air, to liquid air, and back, using off the shelf refrigeration technology and insulated pressure vessels at 0 to 15 PSI. In LAES storage case, a catastrophic tsunami would release only the storage medium, clean air, without fear of thermal runaway or toxic contamination of the air or groundwater.

LAES is not the only pressure based system. Please take the time to watch the State of California sponsored CESA (California Energy Storage Association) webinar on all the energy storage options being explored in California at:

<https://www.youtube.com/watch?v=XJb1bmAOSWE&t>



From the webinar, the advantages of pressure based systems:

### Advantages of Pressure Based Systems

- Use standard turbomachinery, well-known, mature, bankable technology
- Chemicals? No thermal oil, molten salt tanks, no pools of electrolytes
- No dependence on unstable or risky supply chains (e.g., Li, Ni, Cobalt)
- Equipment can be sourced locally (mostly concrete, steel)
- Most of plant is recyclable (steel, water, plastics)
- Degradation minimal to non-existent (*no augmentation needed*)



## Long-Duration Energy Storage Comes in Several Flavors (they are all “batteries”)

Mechanism	Sample Technologies	Potential Energy leveraged
Electrochemical	Li-ion, flow batteries	Voltage differences
Gravity	Pumped Hydro, gravity systems	Height differences
Thermal	Molten Salt, thermal oils	Temperature differences
Pressure	Compressed air, liquid air, <b>liquid CO<sub>2</sub></b>	Pressure differences

I will be at the next council meeting. Please consider my 'request motion' to have an open public teaching council meeting on CESA's energy storage options in California. The City of Morro Bay has been stuck with the remains of a toxic tank farm site, the stacks, and the PGE turbine building. Clean energy means clean remnants in an earthquake or tsunami catastrophe also.

As a City resident, the State remedy for the tank farm property should not encroach on the City's or my potential residential and commercial benefit of the property. The State and PGE should be required to clean up this site like Avila beach was, not constrict zoning. Only then could this BESS discussion and planning not be legally tainted.

Steve Paige

████████████████████

Resident of Morro Bay

## Morro Bay BESS

David Drenick <[REDACTED]>

Tue 5/28/2024 8:36 AM

To:Council <Council@morrobayca.gov>

Cc:sarah.macgregor@coastal.ca.gov <sarah.macgregor@coastal.ca.gov>;Planning Commission  
<planningcommission@morrobayca.gov>

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While the need for energy storage is not in dispute, I oppose the installation of a BESS at the proposed location in Morro Bay for several reasons.

- 1) The proposed location is a clear danger to the town in the event of a fire. There are enough dangerous, toxic fires at other modern BESS plants to justify denying the construction at this central location that would impact so much of our small town.
- 2) As population grows in SLO COunty, the demand for coastal recreational property increases. The California Coastal Commission used the phrase "highest and best use" with respect to California's tideland grants. The Morro Bay Power Plant depended on the single pass cooling system. A BESS does not. It can be located anywhere along the power transmission route. The Morro Bay Tideland's highest and best use is for visitor serving and marine recreational facilities.
- 3) There is no doubt that the seas are rising, and possibly much faster than anybody anticipated. It's utter folly to believe a sand berm will insulate a lithium battery plant from seawater. Hurricane strength events are moving further north as the oceans warm. A substantial storm combined with a rising sea level could cause a sudden breach of a sand berm. Lithium batteries inundated in sea water would likely require the evacuation of much of Morro Bay.

Build the BESS at a safe elevation away from the Morro Bay High School, residential neighborhoods and our primary center for tourism, the Embarcadero..

David Drenick|

[REDACTED]  
Morro Bay, CA 93442

## Public comment to BESS Environmental Impact Report

Wally K <[REDACTED]>

Tue 5/28/2024 2:53 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>

Cc: Morrobayeir@gmail.com <Morrobayeir@gmail.com>

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Dear Ms. Fowler,

We are residents and visitors of Morro Bay and the surrounding communities, and we are opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are our public comments to the draft EIR submitted by the City and its consultants. We are very concerned and our fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California.

On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected. The evacuation order for some commercial businesses (Otay Mesa Gateway facility is not in a residential area) was for a larger area, and stated:

**"This evacuation order requires immediate movement out of the affected area due to an imminent threat to life. All persons in the impacted area should prepare to evacuate. Evacuation order means there is extreme danger in your area. You must leave now; do not wait. Contact your neighbors and share information."**

Cal Fire Capt. Brent Pascua stated that these thermal runaway events can last anywhere from seven days to a couple of weeks, but firefighters are planning for *two to four weeks*, and then they will "reevaluate."



If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. An evacuation order would likely encompass the entire city. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may have trouble evacuating. All of this would be due to the location of the project and could be avoided if the project were moved to a suitable location.

Otay Mesa raises some important questions. What will those toxic fumes do to a small community, visitors and the wildlife? How will we evacuate from Morro Rock and the Embarcadero and where will we go for several weeks? How much water does it take to douse a thermal runaway event 24/7 that lasts for several weeks? Where is that water going to come from? Where do school students in high school and elementary school go to learn for several weeks? Where does the contaminated water go after it is used for fire suppression? Where do 40 firefighters come from since we only have a fraction of that number here in Morro Bay? There are many, many more questions.

BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." Since 2014, Morro Bay has drawn many thousands of visitors and become a special place for tourists. The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses - This facility requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood

and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic “Morro Rock,” at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The “rock” and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters’ sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. All of the “external costs” of the BESS will be borne by the citizens of Morro Bay.

The DEIR must be rewritten and recirculated for our comments - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires, the single most important and dangerous impact. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5 is a substantially different project with important differences in the impacts, if there is a change to that alternative, the applicant must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. The significant impacts from this project include fiscal impacts due to the loss of tourism. After having seen what is happening in Otay Mesa and the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,  
Walter Roza

## Public Comments to BESS EIR

Linda Lee Thoresen <[REDACTED]>

Tue 5/28/2024 7:32 PM

To: BESS Comments EIR <besscomments@morrobayca.gov>; Sarah.MacGregor@coastal.ca.gov <Sarah.MacGregor@coastal.ca.gov>; Council <Council@morrobayca.gov>; Planning Commission <planningcommission@morrobayca.gov>

Some people who received this message don't often get email from [REDACTED] [Learn why this is important](#)

**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

Dear Sarah, Members of the Morro Bay City Council, Members of the Planning Commission and all others involved in the planning of the Morro Bay community,

I am not a scientist so I cannot claim to understand the 411 page Environmental Impact Report released by the Vistra energy company based in Texas.

As a senior, I can say that I have visited Morro Bay for over 60 years, first as a vacation destination with my parents, then as a full time resident since the early 70's. Morro Bay is an environment full of beauty, peace, ocean waves, rolling hills, well, you all know your favorite things about our area.

This is the first time I have ever responded to a new proposed addition to our town. I cannot consciously sit back and withhold sharing my opinion regarding the proposed site for the BESS facility.

I have read about the many fires that have occurred at BESS facilities in the United States, including firefighters being injured while trying their best to extinguish these fires. The way the batteries spontaneously combust, the toxic chemicals in the air.

The fire risk is astronomical. Where is the common sense that the largest battery plant in the world would be placed in a small geographical area such as Morro Bay? This is not an industrial town. The roads are inaccessible during heavy flooding. We ended up twice last year being totally cut off from services when the atmospheric storms dumped rain on the area, cutting off access to the roads. The same thing happened in 1995.

What about pollution and destruction to the wildlife in the bay? There are two creeks that merge near the proposed site (Morro Creek and Little Morro Creek).

Morro Bay is abundant in geological beauty, thriving wildlife and at this point, relative safety for its residents and visitors. I understand we have about 800,000 visitors (like me and my parents when I was a kid) annually.

As public stewards for the preservation and sanctity of Morro Bay for generations to come, do not allow any energy company to build an industrial, dangerous facility in Morro Bay, which is clearly unable to provide the necessary infrastructure to support the operation.

Sincerely,

Linda Lee Thoresen

## RE: MB BESS DEIR Comments from SLO County Air Pollution Control District

Michael Codron <MCodron@morrobayca.gov>

Wed 5/29/2024 9:53 AM

To: Andrew Mutziger <amutziger@co.slo.ca.us>; Angie Buoncristiano <abuoncristiano@morrobayca.gov>

Cc: Kim Fowler <kfowler@morrobayca.gov>

Excellent, thank you Andy! We'll provide to Rincon for response. Let me know if you have any questions or want to chat about the project. Thanks, -Michael

---

**From:** Andrew Mutziger <amutziger@co.slo.ca.us>

**Sent:** Wednesday, May 29, 2024 8:20 AM

**To:** Michael Codron <MCodron@morrobayca.gov>

**Cc:** Kim Fowler <kfowler@morrobayca.gov>; Amber Weart <aweart@morrobayca.gov>

**Subject:** FW: MB BESS DEIR Comments from SLO County Air Pollution Control District

Some people who received this message don't often get email from [amutziger@co.slo.ca.us](mailto:amutziger@co.slo.ca.us). [Learn why this is important](#)

**CAUTION:** This is an external email. Please take care when clicking links or opening attachments.

Hi Michael,

I received Cindy's departure response to the APCD comment email I sent yesterday saying that you are the person to contact with for the BESS. So, I'm forwarding you our comments. Please let me know if you have any questions.

Sincerely,

**Andy Mutziger | Division Manager**

Planning, Monitoring & Grants

SLO County Air Pollution Control District

(805) 781-5956 VM • [amutziger@co.slo.ca.us](mailto:amutziger@co.slo.ca.us) • [SLOCleanAir.org](http://SLOCleanAir.org)



---

**From:** Andrew Mutziger

**Sent:** Tuesday, May 28, 2024 4:54 PM

**To:** Cindy Jacinth <cjacinth@morrobayca.gov>

**Cc:** Dora Drexler <ddrexler@co.slo.ca.us>; Karl Tupper <ktupper@co.slo.ca.us>

**Subject:** MB BESS DEIR Comments from SLO County Air Pollution Control District

Dear Cindy Jacinth,

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the Draft Environmental Impact Report (DEIR) for the proposed Morro Bay Battery Energy Storage System (BESS) project located at 1290 Embarcadero in the City of Morro Bay. The project includes three components: (1) construction and operation of a 600-MW Battery Energy Storage System facility (BESS Facility), (2) demolition and removal of the existing power plant building and stacks, and (3) adoption of a Master Plan, which would apply to the entire Power Plant Property and would change the land use designation of the BESS Site from Visitor Serving Commercial to General (Light) Industrial and the zoning from Visitor Serving Commercial (VSC) to Industrial-General (IG). The project site covers approximately 43 acres of the 107-acre Power Plant Property. The project site includes approximately 24 acres located immediately north of the inactive power plant building that would be used to construct the BESS (BESS Site). This area is currently vacant but was previously developed with above-ground fuel oil storage tanks. The project site also includes approximately 19 acres in the southwestern area of the site that includes the inactive power plant building and three inactive stacks immediately southwest of the power

plant building (Demolition Site). The Project Site also includes the approximately 2.75-acre driveway that connects the power plant building to Quintana Road.

Sensitive receptors in the vicinity of the project site include permanent residents living in the Morro Dune RV Park located approximately 400 feet from the northern border of the project site, Lila Keiser Park located approximately 400 feet from the northern border of the project site, and residences located approximately 500 feet southeast of the project site. Mitigation measures AQ-1(a) and AQ-1(b) in the DEIR are appropriate to minimize toxic human health impact from the BESS Facility construction, the demolition and removal of the power plant building and stacks, and the future decommissioning of the proposed BESS Facility.

#### DEIR Section 2.6.2 Demolition of Existing Power Plant Buildings and Stacks

This section includes a subsection titled *Environmental Remediation* (Pages 2-24 and 2-25) that acknowledges the demolition of the power plant and stacks will include the need for asbestos abatement. APCD recommends the DEIR be revised to ensure the demolition phase of the project coordinates with the APCD Compliance Division as described below to ensure proper asbestos abatement:

##### Proper Abatement of Regulated Asbestos-Containing Material (RACM)

Demolition, renovation, and tenant improvement activities can have potential negative air quality impacts, including issues surrounding proper handling, abatement, and disposal of regulated asbestos-containing material (RACM). RACM could be encountered during the demolition, renovation, and tenant improvement of regulated structures, such as commercial buildings, above or below ground utility pipelines, etc. If a project includes these activities on a regulated structure, it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standards for Hazardous Air Pollutants (40CFR61, Subpart M – asbestos NESHAP).

NESHAP requirements for regulated structures include but are not limited to:

1. Hire a Certified Asbestos Consultant to conduct asbestos survey report.
2. Submit a notification form and survey to the APCD, at least ten (10) business days prior to demolition, regardless of RACM. For renovation and tenant improvement projects, a notification and survey must be submitted at least ten (10) business days prior to RACM asbestos abatement.
3. Submit a written work plan addressing asbestos handling procedures in order to prevent visible emissions.

Go to [slocleanair.org/rules-regulations/asbestos.php](http://slocleanair.org/rules-regulations/asbestos.php) for more information.

#### DEIR Section 4.2 Air Quality

1. Page 4.2-11 of the DEIR notes that there will be a diesel-fueled emergency fire pump. The BESS facility will need to apply for an APCD Authority to Construct or Permit to Operate ([click here](#)) for this fire pump.
2. Tables 4.2-1 and 4.2-2 state that the Federal Primary Standard for PM<sub>2.5</sub> is 12 µg/m<sup>3</sup>, annual arithmetic mean. On March 6, 2024, [US EPA change this standard](#) to 9.0 µg/m<sup>3</sup>, annual arithmetic mean. APCD recommends these tables be updated accordingly.
3. DEIR pages 4.2-7 and 4.2-8 acknowledge SLO County APCD's expanded fugitive dust mitigation measures. These measures are intended to be included in the air quality mitigation measures for projects that are within 1,000 feet of sensitive receptors or if the project will disturb more than 4-acres. APCD recommends the DEIR be revised to include fugitive dust into the Impact AQ-2 assessment and the expanded fugitive dust mitigation measures be added to the air quality Mitigation Measures list.
4. The project's unmitigated construction phase air quality impact analysis is summarized in DEIR Table 4.2-4 Demolition and BESS Facility Construction Emissions (page 4.2-15), demonstrating impacts in excess of the quarterly Tier 1 and Tier 2 construction phase thresholds in APCD's CEQA Handbook

(CEQA Handbook). For these kind of exceedances, the CEQA Handbook calls for APCD's standard and best available control technology (BACT) mitigation measures. The DEIR includes Mitigation Measure AQ-1(a) SLOAPCD Standard Mitigation Measures for Construction Equipment. These measures are applicable for the project to implement. However, Mitigation Measure AQ-1(b) in the EIR as also titled *SLOAPCD Standard Mitigation Measures for Construction Equipment*, but the measures listed are BACT measures. Therefore, ACPCD recommends this mitigation measure be renamed accordingly.

DEIR Section 4.6 Greenhouse Gas Emissions

APCD concurs with the conclusions in this section.

Again, thank you for the opportunity for APCD to comment on the MB BESS DEIR. If you have any questions or comments, feel free to contact me at 805-781-5912.

Sincerely,

**Andy Mutziger | Division Manager**

Planning, Monitoring & Grants

SLO County Air Pollution Control District

(805) 781-5956 VM • [amutziger@co.slo.ca.us](mailto:amutziger@co.slo.ca.us) • [SLOCleanAir.org](http://SLOCleanAir.org)



# Jacqueline Piper

[REDACTED]  
Morro Bay CA 93442

United States  
[REDACTED]  
[REDACTED]

May 28, 2024

City of Morro Bay

## **I am writing this letter to oppose the BESS project.**

I **oppose** it for the following reasons:

### **SAFETY of FIREFIGHTERS**

**Morro Bay firefighters are not in any position to deal with a battery fire catastrophe. If you have done your research you know in our county and around the world battery fires are happening an average of one a week. Depending on the size of the fire 40-60 firefighters may be needed. You also have to have adequate water supply. Gallons and gallons of water are needed to attempt to put battery fires out. Why would you knowingly put Morro Bay's 15? first responders in this situation? Unacceptable!!**

### **SAFETY of RESIDENTS**

**The toxicity of battery fires is worse than that of a house fire. It is a chemical disaster and residents who cannot immediately leave must shelter in place with windows and doors sealed. The smoke the fire emits is thick and black. Because of the plants location the wind will blow the wind onshore and will surely sicken many of this towns residents. There is no buffer between the plant and the city, think of the High School. Battery fires can last for days. Why would your knowingly put Morro Bay citizens in this situation? Unacceptable!!**

## **SAFETY of the ESTUARY**

**Morro Bay Estuary is a semi-enclosed body of water protected from full exposure to the Pacific Ocean by a lengthy sandspit running south from Morro Rock. Located in San Luis Obispo County, this estuary is one of the largest wetland ecosystems on California's central coast.**

**This alone should give you great pause about putting our natural resources in danger. Chemical water runoff goes into the ground, creeks and ocean. Why would you destroy this very special natural ecosystem? The beauty of this estuary brings people to our city. What will happen to our tourist industry? This project is in the heart of where our residents make their living. Embarcadero evacuation will happen and that will affect tourism, boating, fishing and the Coast Guard. (Morro Bay is the only coast guard station from Monterey to Santa Barbara). Will the City of Morro Bay or Vistra take responsibility for**



**business and residents financial losses? Think about it, everyone-including you, may have to pay more for fire insurance, as if wildfires aren't enough.**

**You may feel that a fire or explosion at this plant is only a possibility. It's more likely a probability than a possibility. An incident with BESS will occur; it is only**

**be a matter of time. This industry is still new and they are learning how to fight fires on the fly. Do you think that is why there are several “alternative” designs? There is no way to replicate the conditions of a BESS fire so each and every fire is a leaning experience for everyone involved.**

**IT IS TOO SOON TO INVITE THIS TECHNOLOGY INTO OUR CITY LIMITS.**

**The futures of many living things in the City of Morro Bay lie in your hands. Are you responsible enough to do the right thing and oppose this project? Oppose it for our First Responders, our Residents, our Environment. If that doesn't resonate with you, can you do it for our Children? If you still can't, please, let the residents make the right decision for you.**

**Sincerely yours,**

Jacqueline Piper

**\*\*The video re: Germany's done by a fire captain with 15 years firefighting. He is also a mechanical engineer. The comments are interesting, too, with first hand experiences. Google the fires he mentions-you'll learn a lot,**

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, California 93442

Email: BESScomments@morrobayca.gov

Re: Public comment to draft EIR for battery storage proposal

May 20, 2024

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay.

My husband and I were married in Morro Bay more than 21 years ago. At that time we lived in Malibu, but fell in love with Morro Bay and worked hard to move up to Morro Bay, which we were blessed to do 6 years ago. Morro Bay is a very special place and it's ecology needs to be protected.

We are very concerned about the dangers this project poses to the safety of the residents and the nature.

We ask that the draft EIR be rewritten and recirculated for another period of public comment, as it failed to adequately inform us of the impact of the project.

-The BESS plant is not a coastal-dependent industry, is unsafe for people and wildlife, and is contrary

to the Coastal Act priorities. The project location is a tourist area, in a flood zone, and is the wrong location for

battery storage.

-If the applicant plans to switch from the current project to alternative #5, the "Enclosure alternative"

this is a significant change. The applicant should withdraw the current application and submit one for the new

plan, starting the entire process over from the beginning, or at least submit new plans and a supplemental EIR.

-The city must recirculate the EIR because they did not identify and address the thermal runaway battery fires as a potential impact, and did not address the risk created from having the project site in a flood and

tsunami zone. Saltwater exposure to lithium-ion batteries makes them combustible; but the draft EIR did not

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MAY 28 2024

City of Morro Bay  
Community Development Dept.

*mailed*

discuss this, nor what would happen if the BESS is flooded. There are endangered southern sea otters and their

nurseries in Morro Bay, nesting peregrine falcons and Great Blue Herons, and many sensitive species. The otter

pupping can happen all year long, and their nurseries can be impacted by construction noise and vibrations

even if there is no fire. There will be significant impacts for any of the sensitive species in the Morro Bay national

estuary that were not addressed by the EIR and may be unavoidable in the proposed project site.

-The city improperly deferred the fire safety analysis to a consultant hired by the fire department, DNV

Energy USA, Inc. who has not yet performed the work. The draft EIR should be rewritten and recirculated after

all of the impact and mitigation analysis is done, so the public can be properly informed and comment.

Find additional parts of the EIR you want to address, and see if their conclusions are supported by the

evidence they set forth. Did the city address all of the significant impacts? Do the mitigation measures really

reduce the level of significance? Ask specific questions.

The Offsite Consequence Analysis reveals that residents will be exposed to toxic plumes when there is a battery fire, but

ANY exposure is unacceptable. To find the Offsite Consequence Analysis, go to this link or search on "Morro Bay Energy

Storage" website for March 20 meeting materials. Look for flaws in their assumptions. Why wasn't this presented as part of

the EIR and why is it so hard to find? <https://morrobayenergystorage.com/march-20-meeting-materials/>

The Coastal Act is important! This process could end up before the Coastal Commission. Here is an intro to the Act, this can

be useful to cite in your letter. [IntroductionToCoastalAct.pdf](#)

The EIR process is guided by the California Environmental Quality Act ("CEQA"). Use the language of CEQA to comment.

The applicant must identify all potential “impacts” and determine whether they are “significant” and if so, are there “mitigation measures” and if so, do they bring the impact to “less than significant.” Follow the reasoning in the EIR, see if it makes sense and comment on that. A CEQA roadmap is here for reference; this is used by scientists to review impacts.

CEQA\_Handbook\_2023\_final.pdf; final-approved-appendix-G.pdf

We are asking for recirculation of the EIR; here are two pages from CEQA about that. Recirculating EIR.pdf.

This one of many articles about lithium-ion battery fires and thermal runaway. You can google those terms and find a lot

more. Research makes you more informed! Safety of Grid Scale Lithium-Ion BESS.pdf, dated June 5, 2021.

The EIR described only the species that might be found on the project site itself, and it found any impacts from construction

noise and vibrations to be insignificant. There was no analysis of the impacts to plants or wildlife from toxic smoke or

contaminated runoff from putting out a fire. The “Atlas of Sensitive Species in Morro Bay,” written for the National Estuary

Project, is here. You can google it or click this link: Sensitive Species Morro Bay Area.

Please do not be short sighted in your approval of this project and protect one of the most beautiful spots on this plant.

Thank you for consideration,

Jacqueline and Chris Spiros



City of Morro Bay  
995 Shasta St.  
Morro Bay, CA 93442

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5/24/2024

MAY 28 2024

Attention: Cindy Jacinth, Planning Manager

City of Morro Bay

Community Development Dept.

**Re: Vistra Energy & BESS Project is not good!**

Dear Miss Jacinth:

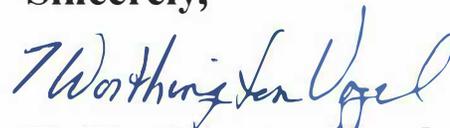
With a large senior population, a high school less than a quarter mile away, and tourists frequently in large numbers, Morro Bay is not an appropriate location for a 600 megawatt lithium battery storage facility.

In addition, as a small city, Morro Bay has a small number of firemen, medical personnel and police officers on duty at any given time which increases the risk that it could become a significant hazard to the community.

The location of the proposed storage facility also runs contrary to the general principle that, in the best interest of the community, industrial facilities should be on the outskirts of the city.

In addition to the battery fire at Moss Landing, there were a number of plants and storage facilities across the country in 2023 that exploded or enveloped in large. So the fire hazard must be weighed.

Sincerely,



T. Worthington Vogel

MAY 28 2024

Dear Ms. Fowler,

We are residents and visitors of Morro Bay and the surrounding communities, and we are opposed to the BESS project proposed for Morro Bay and ask you to not certify the EIR, and deny the project. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are our public comments to the draft EIR submitted by the City and its consultants. We are very concerned and our fears are justified by what is happening now at the Gateway BESS facility in Otay Mesa, California.

On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected. The evacuation order for some commercial businesses (Otay Mesa Gateway facility is not in a residential area) was for a larger area, and stated:

**"This evacuation order requires immediate movement out of the affected area due to an imminent threat to life. All persons in the impacted area should prepare to evacuate. Evacuation order means there is extreme danger in your area. You must leave now; do not wait. Contact your neighbors and share information."**

Cal Fire Capt. Brent Pascua stated that these thermal runaway events can last anywhere from seven days to a couple of weeks, but firefighters are planning for *two to four weeks*, and then they will "reevaluate."

If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. An evacuation order would likely encompass the entire city. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may have trouble evacuating. All of this would be due to the location of the project and could be avoided if the project were moved to a suitable location.

Otay Mesa raises some important questions. What will those toxic fumes do to a small community, visitors and the wildlife? How will we evacuate from Morro Rock and the Embarcadero and where will we go for several weeks? How much water does it take to douse a thermal runaway event 24/7 that lasts for several weeks? Where is that water going to come from? Where do school students in high school and elementary school go to learn for several weeks? Where does the contaminated water go after it is used for fire suppression? Where do 40 firefighters come from since we only have a fraction of that number here in Morro Bay? There are many, many more questions.

BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." Since 2014, Morro Bay has drawn many thousands of visitors and become a special place for tourists. The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural

resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses - This facility requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic, flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic "Morro Rock," at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The "rock" and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more.

The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters' sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. We ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. All of the "external costs" of the BESS will be borne by the citizens of Morro Bay.

The DEIR must be rewritten and recirculated for our comments - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires, the single most important and dangerous impact. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5

is a substantially different project with important differences in the impacts, if there is a change to that alternative, the applicant must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. The significant impacts from this project include fiscal impacts due to the loss of tourism. After having seen what is happening in Otay Mesa and the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,  
Nancy Haber

May 24, 2024

City of Morro Bay  
Attn: Kim Fowler interim planning manager  
955 Shasta Avenue  
Morro Bay, CA  
93442

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MAY 28 2024

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler

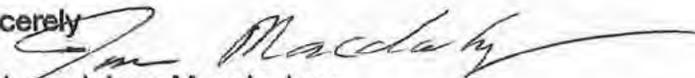
My husband and I have been coming to Morro Bay from Bend, Oregon for seven or eight years. This is what we love about your town. The water, the rock, the otters, the restaurants, the residents, the harbor seals, the views. Watching people enjoy the water and the shore. This is Morro Bay.

Morro Bay is not equipped nor should it ever be a location for a battery energy storage system. That simply does not fit with the mission of Morro Bay. Morro Bay is for people like us who enjoy the ambiance and all that goes with it.

In fact I think you should send a delegation to Bend to explore what could be done to the PG&E power plant location. We turned our lumber mills and surroundings into something that attracts tourists and residents alike. We have all benefited from the vision Bill Smith had for the Mill site. Your decommissioned plant is an ideal location for something along these lines. No manufacturing.....please come to Bend and see what you could do with your site.

Please keep Morro Bay, Morro Bay.

Sincerely



Craig and Jane Maccloskey



Vivian & Barry Branin

Morro Bay, Ca 93443

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MAY 28 2024

May 25, 2025

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442

City of Morro Bay  
Community Development Dept

9:57am

RE: My Public comment to the Draft EIR for the Battery Energy Storage System (BESS) proposed project in Morro Bay.

Dear Ms. Fowler,

We are inviting you to take a short and scenic walk with us to Morro Rock. We will meet at the Maritime Museum, where we see the big green historic submarine on display. When we cross the street to the waterfront we hear the sharp barks of the sea lions. They are waiting for handouts from the fishermen coming and going, or to catch tidbits thrown to them by the local restaurant patrons who are eating at Dockside restaurant. The pesky seagulls are ready to steal away each morsel.

The nearby otter nursery is a joy to behold! A gathering of endangered mature sea otters is busy taking care of the precious babies. We see the young ones wrapped up in seaweed while the mothers are out looking for the next meal.

In the tall trees along the street by the power plant, the trees are often loaded with white egrets. It is truly a majestic sight as they spread their wings and call out to each other.

There may be Night Herons sitting on the rocks at waters edge, or seated on a large pole as we walk along the Board Walk.

At a certain time of year, if we are lucky, we witness schools of Dolphins swimming and diving in the Bay.

Recently there was also a young Gray whale that spent days swimming and resting.

As we stand looking at the view, we are often treated with a pod of Brown Pelicans coming in to the bay to feast. Majestic Creatures diving from high to partake of fish.

Then we arrive at the Rock itself with nesting Peregrine Falcons. Many of us follow the life cycle of the Falcons, from egg laying, hatching, to flight. A local man shares his telescopes and knowledge with anyone interested in knowing more about this endangered, fascinating bird.

Seated on the bench by the Rock we enjoy observing the Falcon nests on the north side of the Rock, and the many surfers who come to enjoy the unique big waves of that cove.

BUT WAIT!!!

One can only imagine a proposed BESS plant adjacent to our beloved Harbor. It is easy to envision the FIRE caused by the Thermal run away of the Lithium Batteries. Toxic gases will spew and particles of debris will fall! This will quickly destroy our special place. Happening at any moment a fire could wipe out surrounding homes and businesses and the Tourist business that is the foundation of our City's economic base. We have seen such destructive and fastmoving fires in Paradise, Ca and Maui, Hawaii. Fires caused by Lithium batteries have occurred in Otay Mesa and Moss Landing, Ca as well as Buckeye, Az, Australia and many other locations.

Morro Bay recently experienced huge floods in January 2023, when the City was thrown into hours of chaos and uncertainty. The main escape routes out of the city were closed due to the high waters. Accidents, threats of terrorism, and tragic events, happen in our world daily. The proposed BESS location is yards from the Pacific Ocean and its constant treat of Tsunami.

PLEASE do not allow these possibilities to happen here in our unique, historic small town. Say NO to BESS!!

Thank you for considering our comments.

Vivian and Barry Branin

*Vivian Branin*  
*Barry Branin*



to council ▾

RECEIVED

MAY 28 2024

City of Morro Bay  
Community Development Dept.

To whom this may concern, my name is Robert Ivers and live here in Morro Bay. For the last 4 years I've been bringing awareness to every resident living in this area about the Potential hazards associated with Lithium-ion Batteries catching fire. I cannot understand why you all are still in the process in going ahead with this project especially of this magnitude. I attended the last meet at Del Monte Middle school and spoke about the Potential risks of a Major Earthquake and possible Tsunami. Also, "Thermal Runaway" seems to be a very high risk as well with these types of batteries. I surely hope and pray that you all rethink about moving forward with this (BESS) facility in our beloved City and surrounding areas. This Project Poses a significant THREAT and DANGER on so many levels. We are living in very precarious times right now especially the state of this Country. Also, an uptick in seismic activity here in California, Oregon and Washington. I surely hope you all been paying attention to residents here in Morro Bay and myself on our concerns, Thankyou.

the city.

ROBERT IVERS



Carole Truesdale

Morro Bay, CA 93442-1313

RECEIVED

Mobile: [REDACTED]

MAY 28 2024

City of Morro Bay

Attention: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, CA 93442

City of Morro Bay

Community Development Dept.

Email: [BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

RE: Public comment to draft EIR for battery storage proposal

Dear Ms. Fowler,

I have been, and still am a resident of Morro Bay since 1995 and a homeowner. I am opposed to the BESS project by Vistra Energy for Morro Bay, CA.

The EIR did not adequately address the thermal runaway battery fires as a potential impact and did not address the risk created from having the project site in a flood and tsunami zone.

After doing some research, **Lithium-ion batteries cause a significant number of fires each year**<sup>1,2,3,4</sup>. In the United States, it is estimated that about 9,000 residential fires are caused by batteries annually<sup>2</sup>. The U.S. Consumer Product Safety Commission reported an average of one battery fire every two days in 2020<sup>3</sup>. Over a five-year period, there were more than 25,000 issues involving fires or overheating related to lithium-ion batteries<sup>4</sup>.

In fact, A **Tesla Megapack lithium battery power unit** caught fire at the massive Moss Landing energy storage facility in **Moss Landing, California**. The incident occurred on **September 20, 2022**. As a result of the fire, nearby **Highway 1** was shut down, and residents in the area were ordered to **shelter in place**.

Fortunately, there were no reported injuries<sup>1</sup>. The Moss Landing facility, which consists of **256 Tesla megapacks**, serves as a large battery for the state grid and is PG&E's largest storage facility, providing **182.5 megawatts** of power<sup>1</sup>. Additionally, Moss Landing is home to another lithium-ion battery energy storage system run by **Vistra Corp Energy Company** using **LG batteries**<sup>2</sup>. In a separate incident, the Moss Landing energy storage facility was knocked offline due to overheating batteries in **December 2020**<sup>3</sup>

Lithium batteries release toxic fumes that can be harmful to humans and the environment<sup>1,2,3</sup>. The gas emitted is lethal and can cause various harmful effects when inhaled, such as coughing, difficulty breathing, sore throat, and shortness of breath<sup>1</sup>. In electric vehicles, Li-ion batteries release toxic gases during fire primarily from combustion of the electrolyte, which contains lithium hexafluorophosphate (LiPF<sub>6</sub>) and can also include other fluorine containing compounds which provide the potential for emission of HF during heating and combustion<sup>2</sup>.

[REDACTED]  
Morro Bay, CA 93442-1313

Page-2- Ms. Fowlers  
City of Morro Bay

Morro Bay is unique, especially with The **Morro Bay estuary** which is noted as a coastal wetland located midway between San Francisco and Los Angeles in California. It covers approximately 10 miles of shoreline and is formed by the meeting of freshwater from Chorro and Los Osos Creeks with saltwater from the Pacific Ocean. The estuary is largely protected from the ocean by a lengthy, naturally-occurring sandspit, creating calm, warm waters that allow a wide variety of plants and wildlife to thrive. This area is a thriving home to sea otters, sea lions, and other amphibians that grace our bay.

Our rolling hills are filled with grazing cattle nurtured by the green foliage that spreads across our area foothills and migrant birds that nest in the various trees that grow on our land.

It is important that we remain stewards of this land to protect from predators that want to destroy the Environmental Sensitive Habitats (ESHAs) of Morro Bay, especially the property that the proposed battery storage plant is currently being addressed as a site for BESS.

Our Community Vision represents a summary of the future aspirations underlying the General Plan, which was adopted and reads as follows:

In 2040, Morro Bay remains a small oceanfront town and thriving year-round destination, known for its natural beauty creative people, outdoor recreation working waterfront, and welcoming community spirit. It is a friendly safe, resilient, and healthy place where people of all ages and economic levels live, work, play and visit.

The natural environment and wildlife are cherished and conserved and are essential elements that integrate with and define our urban landscape. Our healthy wetland, iconic Morro Rock, and bustling harbor are complemented by expansive parks, connected bicycle lanes, safe streets, and pathways that are accessible to people of all ages and abilities.

We have a deep appreciation for nature and honor our native, cultural, and maritime heritage. We maintain and support our working waterfront and carefully preserve our estuary, watershed, natural shoreline, and surrounding open space. We adapt to change in the climate, economy and culture without compromising our small-town character.

Our vibrant economy is strengthened by sustainable resource practices, a responsive City government, and leading-edge technology that empowers local business owners and attracts new businesses and investors. We are a diverse multigenerational community where head-of-household jobs, sustainable living wages, and affordable housing options serve as a foundation that allows people of all ages and income levels to thrive.

Modern, well-maintained public amenities and supportive community service nurture our residents, community organization, and neighborhood groups. We actively participate in government decisions and take pride in volunteerism. We welcome personal expression and creativity, as reflected in our varied visitor attractions bustling dining scene, vibrant art culture, community events, public art, and outdoor activities. Our diverse housing, safe and eclectic neighborhoods, and reliable transit system are enhanced through suitable urban infill and mixed-use development that accommodates modest residential and commercial growth.

Carole Truesdale

Mobile: [REDACTED]

[REDACTED]  
Morro Bay, CA 93442-1313

Page -3- Ms. Fowler

Mindful of our rich heritage, we take great pride in our community and work together towards a bright future.

Nowhere in this vision do we want to attract any business opportunity that has the capability of destroying all we have worked so hard to preserve due to fires/toxicity to environment, humanity, and wildlife.

In reading this EIR I found numerous issues not addressed properly... it is time that restoration verses mitigation be the important factor of any development. In my opinion, the BESS plant is not a coastal-dependent industry, it is unsafe for people and wildlife, and is contrary to the Coastal Act priorities. The project location is a tourist area and is the wrong location for battery storage.

Thank you for your time in reading this document.

Sincerely,

*Carole A. Truesdale*

Carole A. Truesdale

Cc: City of Morro Bay  
Attn: Mayor and City Council  
595 Harbor Street  
Morro Bay, CA 93442  
[council@morrobayca.gov](mailto:council@morrobayca.gov)

Morro Bay Planning Commission  
Attn: Chairman and Commissioners  
955 Shasta Street  
Morro Bay, CA 93442  
[planningcommission@morrobayca.gov](mailto:planningcommission@morrobayca.gov)

California Coastal Commission  
Attn: Sarah MacGregor, Coastal Planner  
725 Front Street, Suite #300  
Santa Cruz, CA 95060  
[sarah.macgregor@costal.ca.gov](mailto:sarah.macgregor@costal.ca.gov)

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MAY 28 2024

City of Morro Bay

Community Development Dept.

My concern as follows:

- There are no exact plans for the facility.
- NOT SAFE due to its history of fires.
- Thermal Runaways would endanger the surrounding human population as well as protected Wildlife.
- Morro Bay's economy would be negatively affected.
- The LARGEST battery storage facility in the WORLD in a small tourist driven coastal town is too high a risk.
- Profits for VISTRA and no benefits for Morro Bay.

Thank you for your attention to my above stated concerns.

Silvio De Santis

RECEIVED

May 14, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

MAY 28 2024

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reasons:

## **1. INTRODUCTION**

Having grown up in Long Beach, California, my family had the good fortune of visiting Morro Bay every year beginning around 1958. Morro Bay is an important part of my personal history as well as being a jewel in the crown of the California Coast. As an adult, I again began to regularly visit Morro Bay around 2002. I remember being delightfully surprised by the small raft of Southern Sea Otters that were, by then, well-established in Morro Bay. I have learned that otters were reintroduced to the Central Coast in the late 1980s. I was, like many other visitors to Morro Bay, immediately enchanted by these fascinating creatures.

In 2017, my husband and I became permanent residents of Morro Bay and quickly developed a deep sense of stewardship towards all natural areas and wildlife on the Central Coast. We revel in the abundance of marine mammals inhabiting our bay and destinations further up and down the coast. Along with the otters, I particularly love Northern Elephant Seals, Harbor Seals, California Sea Lions, and our various dolphin and whale species. I also love the abundance of bird species who live in or migrate through Morro Bay. When I say "love," I mean that I cannot stand to see any harm done to these animals. I feel fiercely protective. As a resident of Morro Bay, I know that I am not alone! I have never met anyone here who does not share a similar sense of stewardship.

When I learned that a BESS installation was being planned for our community, right on the Embarcadero, I could not believe this was possible,

given our sensitive wildlife and habitats. I attended a meeting convened by VISTRA and asked them for data regarding the potential harms of toxic chemicals (which WILL inevitably be released by BESS, one way or another) upon our coastal and marine wildlife. They said they didn't have any data as they couldn't possibly test every species for sensitivity to the toxins associated with BESS whether conveyed by wind/air or water runoff. In fact, even in terms of potential harms to humans, they explained that they only tested four (4) of the myriad chemicals that could and will be released by BESS during normal operations and/or fire/thermal runaway. And the results were calculated based on only a 24-hour exposure period. We know that thermal runaway events last days or weeks!

In addition, I became very concerned about the potential negative impacts of BESS, in terms of Human Disturbance, upon our very special and very sensitive Southern Sea Otter population.

## **2. THE SOUTHERN SEA OTTERS OF MORRO BAY NEED PROTECTION**

I am choosing to focus on the Southern Sea Otter in my rejection of the BESS proposal. It is important to note: Southern sea otters are listed as federally threatened under the Endangered Species Act. They are also protected under the Marine Mammal Protection Act and California state law.

We are fortunate to have a unique situation here in Morro Bay in that our otters can be viewed at close range while they fully engage in their daily habits and life cycle. They have established a nursery where young can be observed with their mothers during their early days of complete dependence, and while they are taught to swim and forage on their own. One can hear squeals when mama is too far away, or when a pup tires of swimming and wishes to climb back atop mama's belly for cuddles, grooming, and naps.

The graphic below shows the location of the proposed BESS (where it says Power Plant) and its obvious proximity to the Otter Nursery designated by the number 2. Further, otters range across the length and breadth of the bay 24/7. How will VISTRA shield them from harm from toxic chemicals, noise, and human disturbance?



I find it striking that our otters are so relaxed and unafraid of the humans who view them, both from the shore and from boats. I believe this is a testament to the respect and consideration afforded them by our residents and visitors alike. (It also makes them vulnerable to human disturbance—accidental and intended.) Our otter viewing spots have become tourist attractions--thereby positively impacting our local economy--and wildlife institutions continually educate us about sea otters and their proper care and treatment.

### **The Morro Bay National Estuary Program says:**

Here are some important reasons to care about sea otters.

- They are recovering from a species-level disaster. Sea otters globally were nearly extirpated because humans coveted their fur. As they recover their former range, we have it in our power to help or hinder their return.
- As they re-colonize, revitalization of coastal ecosystems follows. Sea otters are a keystone species and exert an influence on their ecosystem that is disproportionate to their small size. We are only in the early chapters of understanding the extent to which their hearty appetites benefit the places we live, play, and find food on California's coast.
- They are vulnerable. Characteristics that make them unique among marine mammals also make them especially sensitive to oil spills, pollution, changes in food supply, and human disturbance.

- We can make a difference. It can sometimes be difficult to see how our actions help the planet or its residents but, particularly regarding disturbance to sea otters by our recreation, there are simple things we can do to make their world safer and more peaceful.
- Finally, sea otters are your neighbors. I encourage you to reconsider your definition of your community. All the creatures around you are your neighbors. If you live on the Central California coast, you are part of our coastal ecosystem and sea otters are your neighbors. Show them the respect and care all neighbors deserve.

I wish to emphasize the third bullet point above:

- They are vulnerable. Characteristics that make them unique among marine mammals also make them especially sensitive to oil spills, pollution, changes in food supply, and human disturbance.

Clearly, worries about exposure to toxins are well-justified (more to follow), but what about *human disturbance*? The website at the link below offers education about how and why our otters need protection from human disturbance and interference. How does VISTRA plan to mitigate harms to sea otters during the construction and operation of the BESS facility? Has this been addressed in the EIR? Construction of such a facility adjacent to the sea otter nursery and habitat will create harmful noise and human disturbance on an unprecedented scale since the return of the otters to Morro Bay in the late 1980s.

[Sea Otter Savvy](https://www.seaottersavvy.org)<https://www.seaottersavvy.org> Sea Otter Savvy | Sea Otter Viewing Guidelines & Disturbance Education

**California State Parks** is also concerned with protecting our sea otters and other wildlife. Every weekend during the summer months, Sealife Steward volunteers are out on the waters of Morro Bay in their kayaks and SUPs. “They help people understand why keeping a respectful distance from wildlife is important.” Currently, there are discussions about eventually limiting the number of kayaks and SUPs allowed on the bay at any one time. To me, this is an indication of the sensitivity of our marine mammals to human disturbance—otters in particular.

[California State Parks \(.gov\)](https://www.parks.ca.gov)<https://www.parks.ca.gov> › ...Morro Bay State Marine Reserve - California State Parks - CA.gov

## **From the California State Parks Website referenced above re California State Parks and Marine Protected Areas (MPAs):**

Like state and national parks protect wildlife and habitats on land, marine protected areas (MPAs) conserve and restore wildlife and habitats in our ocean. Under the California Marine Life Protection Act (MLPA) passed in 1999, California began a historic effort to establish a science-based, statewide network of MPAs through a collaborative effort that includes the California Department of Fish and Wildlife and California State Parks. California is taking a regional approach to the design and implementation of MPAs, and has divided the state into five regions: The north coast, north central coast, San Francisco Bay, central coast, and south coast.

MPAs contribute to healthier, more resilient ocean ecosystems that can better withstand a wide range of impacts such as pollution and climate change. By protecting entire ecosystems rather than focusing on a single species, MPAs are powerful tools for conserving and restoring ocean biodiversity, and protecting cultural resources, while allowing certain activities such as marine recreation and research. There is a global body of scientific evidence about the effectiveness of marine protected areas and reserves to restore marine ecosystems. For more information, visit Partnership for Interdisciplinary Studies of Coastal Oceans.

In the waters adjacent to the Morro Bay State Park there are two MPAs, Morro Bay State Marine Reserve (SMR) and Morro Bay State Marine Recreational Management Area (SMRMA)

- Morro Bay State Marine Reserve (SMR)
  - This area includes the area below mean high tide line within Morro Bay east of longitude 120° 50.34' W.
  - Hundreds of species of birds reside or migrate to these rich and diverse MPAs.

- Invertebrates such as gaper clams, shore crabs, and fat innkeeper worms along with many other species reside in the mud.
- **Permitted/Prohibited Uses: No fishing. All take of living marine resources is prohibited.**
- Morro Bay State Marine Recreational Management Area (SMRMA)
  - This area includes the area below mean high tide within Morro Bay east of the Morro Bay entrance breakwater and west of longitude 120° 50.34' W.
  - The bay supports more than two-dozen endangered species.
  - Marine mammals such as sea otters, sea lions and harbor seals eat and rest along the banks of Morro Bay.
  - **Permitted/Prohibited Uses: No recreational or commercial take of living marine resources, except north of 35 °19.70 N, recreational take of finfish and oyster aquaculture is allowed; Waterfowl hunting is allowed unless otherwise restricted by hunting regulations.**

### **3. HUMAN DISTURBANCE THREATENS SOUTHERN SEA OTTERS**

**Report on Human Disturbance of Southern Sea Otters from U.S. Fish & Wildlife Service:** <https://www.fws.gov/press-release/2023-10/southern-sea-otter-841-observed-pup-wildlife-biologists-encourage-ethical>

**PRESS RELEASE - October 26, 2023**

Feeding and caring for a pup requires significant energy reserves. Not equipped with blubber like whales and seals, sea otters must rely on their fur coat and their super-high metabolic rate to stay warm. The average adult sea otter has to actively forage and eat 20 to 30 percent of its body mass in food each day just to meet its energy requirements. That's why it's incredibly important for sea otters to conserve their energy, and why they are often seen resting on their backs on the water's surface when they are not foraging—their survival, and the survival of their pups, depends on it.

To help give sea otters and their pups the best chance at survival in the wild, it's important for members of the public to give them and their pups space, especially when recreating on the water. Any attempts to approach from the water could be detrimental to the otter's survival. Southern sea otters are protected by the Endangered Species Act, Marine Mammal Protection Act, and California state law. These laws prohibit the unauthorized harassment, hunting, capture, or killing of these animals.

Approaching a sea otter so closely that it changes its behavior may constitute a violation of these laws and could result in penalties, including fines up to \$100,000 and potential jail time up to one year.

We ask that everyone please adhere to the following guidelines for the safety of both people and southern sea otters

- Be alert: Be aware of your surroundings and alert to nearby wildlife when recreating.
- Maintain a safe distance: If a sea otter notices you, you are likely too close and should back away.
- Keep at least 60 ft. (or five kayak lengths) away, passing by parallel rather than pointing directly at any animals and moving slowly but steadily past rather than stopping.
- Slow down: Take caution in areas where sea otters are known to be present. Watercraft should slow down around kelp forests, where sea otters often rest but can be difficult to see. Be aware that a sea otter may come up from underwater unexpectedly.
- Keep pets leashed: Keep pets on a leash on and around docks and harbors, and never allow interactions, even if the animals appear to be playing. Look for a designated pet beach as an alternative.
- Never feed sea otters: Feeding otters can cause them to become aggressive which could result in their removal from the population and placement in an animal care facility.

Additional background on southern sea otters including habitat, life cycle, and range: <https://www.fws.gov/species/southern-sea-otter-enhydra-lutris-nereis>

“These reports of increased human-caused disturbance are alarming and could be fatal to the sea otters if the disturbance causes them to over-expend energy, especially mothers who need energy reserves to have the strength and stamina to feed and raise their young pups,” said Gena Bentall, Director of Sea Otter Savvy, an outreach and education program that educates community members, commercial tourism companies, and other ocean users about ethical sea otter viewing along the Central California coast. “Sea otters live each day paycheck to paycheck energetically. Human disturbance creates a deficit in their already taxed daily energy budget.”

A southern sea otter grooms while her pup nurses in Moss Landing, Calif. Sea otter moms are tough. Female sea otters expend enormous amounts of energy on pup-rearing, which they do without assistance from the pup's father. By the time the pup nears weaning at around 6 months old, mom's daily energy demands are almost twice as high. When prey is limited, that makes mom's job even harder.

“Sea otters face significant challenges in the wild, from shark bites to adapting to a changing climate, all while maintaining the energy to survive and raise their young. Additional unnecessary human-caused disturbance adds another threat to their already difficult life in the wild,” said Lilian Carswell, southern sea otter recovery and marine conservation coordinator with the U.S. Fish and Wildlife Service. “By maintaining a safe distance and giving them their space, you can help sea otters thrive in the wild.”

While getting up close and personal with a sea otter may seem adorable and harmless, it can cause harm and sets a bad example when it comes to how we interact with wildlife. Sharing photos and videos of close wildlife encounters causes further harm by encouraging others to seek out those interactions as well.

Getting too close can interfere with the animal's ability to forage and get essential rest, ultimately affecting the animal's overall health.

## **Why is resting so important for otters?**

Not equipped with blubber like whales and seals, sea otters must rely on their fur coat and their super-high metabolic rate to stay warm. The average adult sea otter has to actively forage and eat 20 to 30 percent of its body mass in food each day just to meet its energy requirements. That's why it's

incredibly important for sea otters to conserve their energy, and why they are often seen resting on their backs on the water's surface when they are not foraging—their survival depends on it.

#### **4. NOISE PRODUCED BY BESS FACILITY CONSTRUCTION AND OPERATION WILL DISTURB OUR PROTECTED SEA OTTERS**

The reports in the previous section emphasize the well-established need for protection of Morro Bay's otters from *human disturbance*, if we wish to see them survive and thrive in the years ahead. Remember that they are "federally threatened under the Endangered Species Act." And remember that the Morro Bay otter habitat is ***right next to the shore/Embarcadero and across the street from the proposed BESS site.***

Our otter nursery, pinpointed earlier in this letter on a graphic, has signs asking observers to be quiet. There is concern that human vocalizations may disturb the otter pups and their mothers. How can we even consider a large-scale, long-term, industrial project right across the street from this nursery when even human voices are considered harmful to our otters?

The section following this one will outline the types of noise we can expect to be produced by the BESS installation during its construction/demolition phase and during its operational phase. For now, suffice it to say that one can surmise from the facts stated in the five quotes below that all such noise poses a threat to the health and well-being of our sea otter community.

***"Their dependence on restricted nearshore habitats also puts sea otters at risk for acoustic disturbance from activities occurring both on land and at sea."***

[https://www.navy-marinespeciesmonitoring.us/files/5814/5321/1496/Ghoul and Reichmuth 2016-The Effects of Noise on Aquatic Life II.pdf](https://www.navy-marinespeciesmonitoring.us/files/5814/5321/1496/Ghoul%20and%20Reichmuth%202016-The%20Effects%20of%20Noise%20on%20Aquatic%20Life%20II.pdf)

***"The relatively high critical ratios determined in the present study (25–34 dB) indicate that the auditory system of the sea***

***otter is not specialized for operating in noisy conditions. This is in contrast to the relatively low critical ratios measured for other marine carnivores . . . “***

***“The lack of predicted decline in critical ratios at lower frequencies suggests that sounds below 2 kHz are more difficult for sea otters to resolve from spectrally overlapping background noise, or conversely, that low-frequency noise can more easily mask signals of interest in the same frequency range.”***

***“Because sea otters require prolonged periods of undisturbed rest at the surface to counterbalance extremely high metabolic costs associated with foraging at sea (Yeates et al. 2007), these animals are particularly vulnerable to even brief intervals of disturbance. Specifically, disturbance from airborne sounds or activity at the surface causes long metabolic recovery times to more energetically efficient resting states (Yeates 2006) and imposes especially high costs on reproductive females (Thometz et al. 2014).”***

[https://bpbuse1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub\\_162\\_2014.pdf](https://bpbuse1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub_162_2014.pdf)

***“Further, the unexpectedly elevated low-frequency hearing roll-off documented for both sea otter subjects in this study is significant and worthy of further investigation, as most anthropogenic noise in marine environments, including that related to transportation and oil and gas production, is generated at frequencies below 1 kHz.”***

<https://epis.boem.gov/final%20reports/5220.PDF>

In other words, our sea otters reside very close to the proposed BESS facility and the noise it will produce. Noise will disturb their extremely important rest periods. The construction/demolition

phase, in particular, will be characterized by low-frequency noise which is difficult, if not impossible, for otters to filter out and will cover the environmental sounds that they need to hear for their survival. More details are included below in excerpts from reports dated 2014 and 2016, respectively.

Excerpts from: [https://bpb-us-e1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub\\_162\\_2014.pdf](https://bpb-us-e1.wpmucdn.com/sites.ucsc.edu/dist/d/804/files/2019/06/pub_162_2014.pdf)

J Comp Physiol A  
DOI 10.1007/s00359-014-0943-x

ORIGINAL PAPER

## **Hearing in the sea otter (*Enhydra lutris*): auditory profiles for an amphibious marine carnivore**

Asila Ghoul · Colleen Reichmuth

Received: 2 July 2014 / Revised: 10 September 2014 / Accepted: 12 September 2014 © Springer-Verlag Berlin Heidelberg 2014

### **Hearing in noise**

The utility of measuring critical ratios to describe the ability of an animal to detect a signal that is coincident with noise is that the ratios hold across noise levels (Fay 1988) and media (air or water; Fay 1988; Southall et al. 2000, 2003a). Additionally, significant background noise is present in most typical environments used by animals. Relatively low critical ratios suggest specialization for detecting signals in noise, while relatively high critical ratios suggest a poor ability to resolve the signal of interest from the acoustic background. Critical ratios have been measured for many birds and mammals (for review, see Fay 1988) as well as many marine mammals (for review, see Richardson 1995b; Reichmuth 2012), providing a framework for comparative studies of auditory masking.

The relatively high critical ratios determined in the present study (25–34 dB) indicate that the auditory system of the sea otter is not specialized for operating in noisy conditions. This is in contrast to the relatively low critical ratios measured for other marine carnivores, including California sea lions, harbor seals, northern elephant seals, and spotted seals (Southall et

al. 2000, 2003a; Sills et al. 2014), which indicate a refined ability for signal processing in noise. The data for the sea otter do follow the expected trend of increasing critical ratios with increasing frequency from 2 to 22.6 kHz, the highest frequency tested. Over this span, the sea otter's critical ratios are quite similar to those of cats (Costalupes 1983a) and increase at a rate of 2.9 dB/octave, compared to the well-established mammalian trend of 3 dB/octave (Fay 1988). The lack of predicted decline in critical ratios at lower frequencies suggests that sounds below 2 kHz are more difficult for sea otters to resolve from spectrally overlapping background noise, or conversely, that low-frequency noise can more easily mask signals of interest in the same frequency range. While there are no critical ratio data presently available for other mustelids, the sea otter critical ratios below 2 kHz are more similar to those of some rodents (e.g., Mongolian gerbil, *Meriones unguiculatus*; Kittel et al. 2002) than they are to terrestrial or marine carnivores. Although the critical ratios for the sea otter were measured in air, they are expected to be the same under water, despite differences in absolute hearing sensitivity between the two media.

## **Ecological considerations**

Given that sea otters, like sea lions, are semi-aquatic mammals with what appear to be primarily air-adapted ears (Nummela 2008), they can be considered hearing generalists with a fairly broad range of hearing that extends to more than 30 kHz. This is not surprising given that other carnivores also have sensitive high-frequency hearing, and that many vocalizations produced by sea otters contain spectral energy extending across the frequency range of hearing, with peak energy focused in the range of best hearing (McShane et al. 1995; Ghaul and Reichmuth 2012). In air, their vocalizations are used during several types of social interactions (Kenyon 1969; McShane et al. 1995). Significantly, their loudest and most common calls are used to establish and maintain contact between mothers and their dependent pups (Sandegren et al. 1973) in dynamic conditions when other sensory cues are unavailable. Additionally, sea otters are known to be acoustically vigilant to potential threats while hauled out or at the surface (Scammon 1874), reinforcing the idea that there are selective pressures for the retention of sensitive aerial hearing in this species. At this point, it remains difficult to determine whether sea otters have any degree of specialization for underwater hearing as a result of their aquatic lifestyle, in part because it is not possible to know how sea

otters might compare to fully terrestrial carnivores listening for sounds under water.

### **Conservation implications**

Given the paucity of relevant information about the auditory sense of sea otters, even the most basic information can be applied to considerations of anthropogenic noise and associated disturbance in the coastal waters they inhabit. The auditory profiles describing aerial and underwater hearing obtained in this study—while based on a single subject— provide a useful, conservative measure of hearing for the species. The upper and lower frequency limits of these data can be used to distinguish sound sources of relevance to sea otters from those of lesser concern. The description of relative sensitivity within the audible frequency band can illustrate the different perceptual effects of various sound frequencies and suggest why certain sounds may be more salient to sea otters than others. The finding that audiogram shape is not dramatically different in air and under water for sea otters implies that a common set of parameters concerning hearing can be generally applied to both airborne and waterborne sounds. Perhaps most importantly, hearing thresholds obtained in quiet conditions and in the presence of noise (to establish critical ratios) can be used to estimate the distances over which many sounds may be detected by a hypothetical sea otter in different noise backgrounds. This basic approach, which relies on appropriate measurement of signals and noise, estimates of sound propagation in representative environments, and audiometric data such as those obtained in this study, can be applied in conservation and management contexts (see, e.g., Erbe and Farmer 2000; Southall et al. 2003b; Dooling and Popper 2007).

Another management tool that has been suggested for marine mammals with respect to anthropogenic sounds is the development of auditory weighting functions for groups of species with similar hearing capabilities (Southall et al. 2007). Such weighting functions establish the relevant bandwidth for noise exposure assessments by compensating for the differential frequency response of the auditory system, and allowing sounds of lesser concern to be identified and deemphasized. The information about hearing sensitivity obtained in the present study allows sea otters—for the first time—to be appropriately considered in the context of existing (Southall et al. 2007) and proposed (Finneran and Jenkins 2012) weighting functions for other marine mammals. In terms of measuring anthropogenic

sound, and predicting auditory effects resulting from exposure to anthropogenic sound, we suggest that sea otters can be reasonably grouped with sea lions and other otariid pinnipeds based on the similarities in their measured audiograms.

While sea otters share similar hearing capabilities with otariid pinnipeds, their differences in ecology and physiology become important at the level of behavioral effects associated with sound exposure. Because sea otters require prolonged periods of undisturbed rest at the surface to counterbalance extremely high metabolic costs associated with foraging at sea (Yeates et al. 2007), these animals are particularly vulnerable to even brief intervals of disturbance. Specifically, disturbance from airborne sounds or activity at the surface causes long metabolic recovery times to more energetically efficient resting states (Yeates 2006) and imposes especially high costs on reproductive females (Thometz et al. 2014). These physiological limitations, as well as life history constraints such as strong fidelity to small home ranges, may impede a sea otter's ability to respond to sounds or disturbance in ways that are available to other marine species.

Excerpts from:

[https://www.navymarinespeciesmonitoring.us/files/5814/5321/1496/Ghoul and Reichmuth 2016-The Effects of Noise on Aquatic Life II.pdf](https://www.navymarinespeciesmonitoring.us/files/5814/5321/1496/Ghoul_and_Reichmuth_2016-The_Effects_of_Noise_on_Aquatic_Life_II.pdf)

## **Chapter 41**

### **Auditory Sensitivity and Masking Profiles for the Sea Otter (*Enhydra lutris*)**

**Asila Ghoul and Colleen Reichmuth**

**Abstract** Sea otters are threatened marine mammals that may be negatively impacted by human-generated coastal noise, yet information about sound reception in this species is surprisingly scarce. We investigated amphibious hearing in sea otters by obtaining the first measurements of absolute sensitivity and critical masking ratios. Auditory thresholds were measured in air and underwater from 0.125 to 40 kHz. Critical ratios derived from aerial masked thresholds from 0.25 to 22.6 kHz were also obtained. These data indicate that although sea otters can detect underwater sounds, their hearing appears to be primarily air adapted and not specialized for detecting signals in background noise.

## **1 Introduction**

Sea otters (*Enhydra lutris*) are amphibious coastal-living marine mammals that have faced numerous obstacles on their path to population recovery since being hunted to near extinction in the late nineteenth century. Despite international protection (Kenyon 1969) and “red” listing by the International Union for Conservation of Nature (2013) as an endangered species, some populations remain threatened and are considered vulnerable to a variety of environmental and anthropogenic pressures. ***Their dependence on restricted nearshore habitats also puts sea otters at risk for acoustic disturbance from activities occurring both on land and at sea (emphasis added).*** Growing concern about human-related impacts has led to intense and multidisciplinary efforts to improve the overall knowledge of this sensitive species.

A. Ghoul (\*) • C. Reichmuth

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e-mail: asila@ucsc.edu; coll@ucsc.edu

© Springer Science+Business Media New York 2016 349 A.N. Popper, A. Hawkins (eds.), *The Effects of Noise on Aquatic Life II*, Advances in Experimental Medicine and Biology 875, DOI 10.1007/978-1-4939-2981-8\_41

## **5. NOISE PRODUCED BY CONSTRUCTION OF BESS FACILITY**

Among other possible types of human disturbance that will be generated by the construction (including demolition of existing structures) of the BESS facility, noise will be among the most harmful. Noise in proximity to the Morro Bay Southern Sea Otter Habitat and Nursery will negatively impact our Southern Sea Otters. How long will we, and our otters, be subjected to noise from these activities?

The draft EIR to which I am responding states:

***“From preparing the battery plant site to demolishing the Morro Bay Power Plant and stacks, Vistra would take five to eight years to complete the project, according to the EIR.***

***First, Vistra will prepare the site for construction — a 12- to 18-month process . . .” Mar 28, 2024***

A reading of the report excerpts referenced above leads me to conclude that our otters will indeed be disturbed and adversely impacted by the low frequency and other noise generated by transportation and construction activities surrounding the BESS facility, as well as the proposed demolition of the power plant and three stacks on the property in question.

## **6. NOISE PRODUCED BY OPERATION OF BESS FACILITY**

***“The transformers at a BESS facility are much larger than those you see on telephone poles. There are three sources of noise from within the transformer: (1) core noise, (2) coil noise, and (3) fan noise. The core and coil noise are caused by electromagnetic forces which occur two times for every cycle of AC power” May 30, 2023***

From: **Battery Energy Storage Systems (BESS) - Acentech**

Excerpts below from: Noise Monitoring Services at [https://www.noisemonitoringservices.com/battery-energy-storage-system-bess-noise-challenges-and-solutions/#:~:text=Noise%20levels%20tend%20to%20range,Battery%20units%20\(often%2020%20ft.](https://www.noisemonitoringservices.com/battery-energy-storage-system-bess-noise-challenges-and-solutions/#:~:text=Noise%20levels%20tend%20to%20range,Battery%20units%20(often%2020%20ft.)

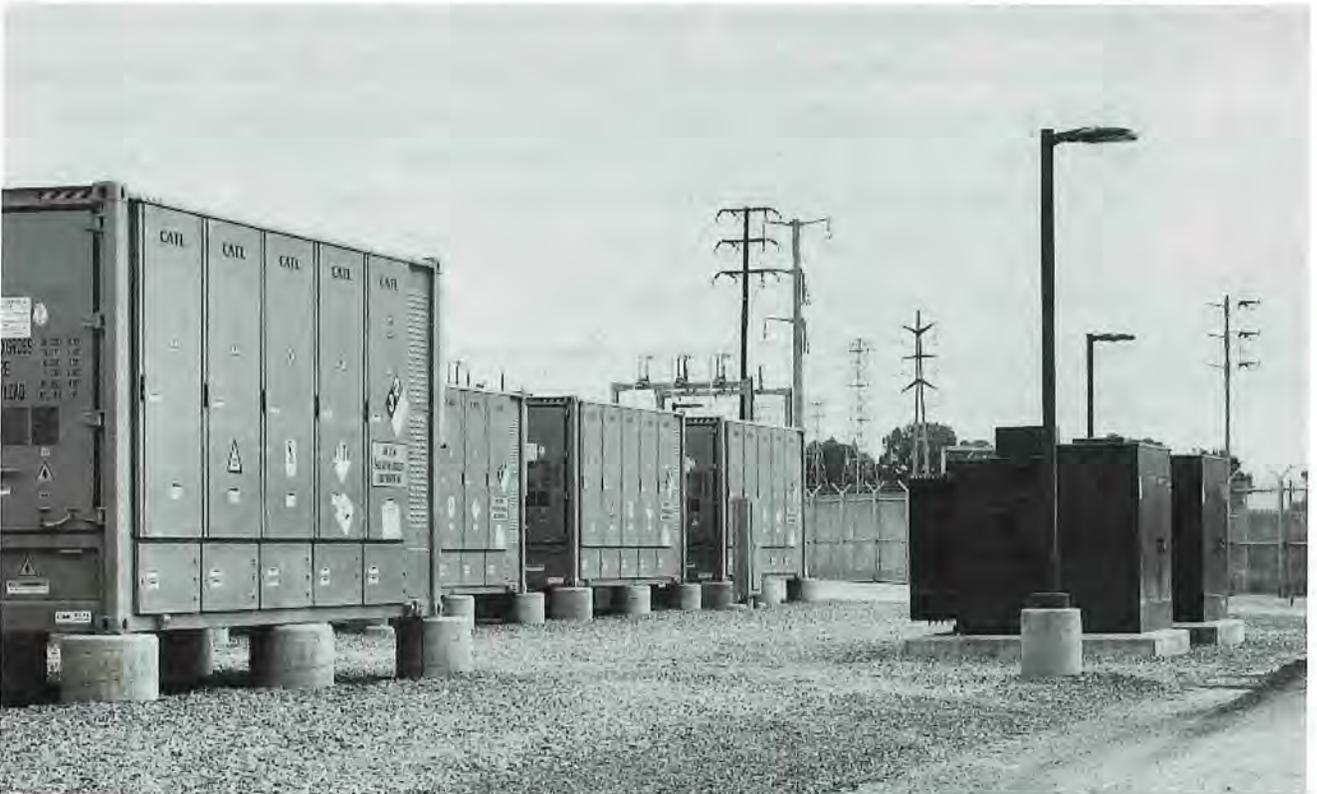
Over the last few years, a new type of noise source has come to light as a significant environmental noise issue. Battery Energy Storage Systems (BESS) are relatively new to the US, and communities are only just starting to become aware of the noise issues they can create. BESS’s are generally large power storage facilities, often comprised of hundreds of battery units the size of shipping containers spread over many acres of land. As Battery Energy Storage Systems are often located close to residential areas, they are becoming an increasing noise problem. Due to the high noise levels produced by BESS equipment, these facilities often require implementation of substantial noise control measures to comply with city noise ordinances.

This article examines the noise issues associated with BESS facilities and the noise control measures available to ensure they comply with local noise limits.

As of writing (in March 2024), we've worked on noise studies for 13 BESS facilities since 2022, mostly located in Southern California and Arizona. We're fast becoming the experts in this specific area of noise control. Our work has involved sound measurement of equipment, noise modeling and mapping of entire BESS facilities and design and testing of noise mitigation systems for BESS equipment. One particularly challenging project, requiring every noise control measure that could be thrown at it, is presented later in this article.

The function of a BESS facility is to store and release electrical energy as needed. These battery energy storage systems typically consist of rechargeable batteries, power conversion systems, cooling systems and control electronics.

BESS facilities tend to produce high noise levels generated mostly by the compressors and fans in the electrical equipment cooling systems.



**The battery units at a BESS site make up the core of the facility**

Our field measurements show a wide range of noise levels generated by the cooling systems of BESS equipment. Noise levels tend to range from 70 to 92 decibels when measured 1 meter from the component. Key components and noise sources of a BESS facility include:

- **Batteries:** Rechargeable battery units are the core of the Battery Energy Storage System. Battery units (often 20 ft. in length and 8 ft in width and height) include cooling systems to maintain optimal operating temperature. The cooling systems use fans and condensing units which can generate noise levels up to 92 dBA at 1 m from the equipment. Fan operations are controlled by an onboard temperature control system. During hot weather, it can be expected that all fans over the entire BESS facility could operate simultaneously as the batteries charge or discharge together. This may occur at any time of day or night and cause several hours of sustained noise at a constant level. This noise is often tonal, which can mean the facility noise levels are held to a more restrictive noise limit.
- **Power Conversion System (PCS):** The PCS is an essential component of the BESS as it converts electricity between direct and alternating currents. There is usually a lower quantity of PCS units than batteries (typically there is one PCS unit for each group of six or eight battery units). PCS units contain cooling systems with fans that can produce significant noise, in addition to some hum or electronic noise. Our field measurements show that PCS units can generate noise levels of about 85 decibels when measured 1 m from the equipment.
- **Transformers:** BESS facilities may have one or two large transformers that produce a constant hum. Typical noise levels for transformers are lower than the batteries and PCS units, producing a level of about 75 decibels at 1 m from the equipment. Again, this noise is generally tonal in nature.

With the noise levels outlined above, it's not difficult to see why these facilities can be a nuisance when located near residences. A BESS facility comprising of several hundred battery units can easily produce noise levels over 70 decibels at residences located 100 ft from the site. With typical city

noise ordinances requiring compliance with 45 dBA noise limits at night, mitigating these facilities can be a challenge! See below for a case study on one of the more challenging BESS facilities we've worked on.

## **7. CONCLUDING REMARKS**

The Southern Sea Otter, also known as the California Sea Otter, is a precious member of Morro Bay's marine habitat. Our colony has grown slowly and steadily for the past 25 years. It is currently under Federal, State, and Local protections. All agencies with jurisdiction over the Southern Sea Otter were to have been notified in the draft EIR and given the opportunity to respond. I do not believe that VISTRA has acted in compliance with this requirement. VISTRA is attempting to intrude upon the culture of Morro Bay, with its diverse and sensitive marine ecosystem, and its community of wildlife stewardship-minded residents and regular visitors, with the intent of inflicting its BESS facility on our waterfront. It has not bothered to consider impacts to our wildlife. I doubt if VISTRA knows the first thing about the uniqueness of our marine environment. I strongly object to this potentially devastating intrusion.

In addition, I ask that the draft EIR be recirculated due to procedural errors that render it inadequate. First, the proposal does not designate which model is being proposed for the facility—buildings, or separate containers. How can mitigations be proposed for a moving target? Second, the OCA was released nine days after the EIR. The EIR should have been delayed until after the OCA was released. Third, all agencies with jurisdiction over elements of the EIR should have been notified and allowed to respond.

Sincerely,

Carolyn P. Krueger

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

RECEIVED

May 14, 2024

MAY 28 2024

City of Morro Bay  
Community Development Dept.

City of Morro Bay

Attn: Kim Fowler, Interim Planning Manager

955 Shasta Avenue

Morro Bay, California 93442

[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reasons:

It is our responsibility to speak for our voiceless animal neighbors, as well as for the human wildlife that flocks to our habitat to enjoy such things as seeing the juvenile Gray Whale that visited our harbor in March of this year 2K24. People came from all over to watch the show, which did not seem to bother this baleen whale's feeding.

Last weekend, 2-4May2K24, Morro Bay hosted a Cruisin' Morro Bay Car Show. This weekend 19May2K24, Morro Bay will host Ironman 70.3.

These events, along with many other events throughout the year, draw large numbers of tourists into our small community, which is more or less a cul de sac, with few access roads that would be able to accommodate an emergency evacuation, in the event of a toxic fire at the Vistra Corp. proposed Massive Battery Storage Plant that is being suggested for the retired PG&E plant in Morro Bay. This proposal would house batteries in three warehouse-sized buildings, or 174 individual enclosures. According to David Yeager, a spokesperson for Vistra Corp., at this point, Vistra Corp. has no CLEAR plan. Although all of their proposals look really nice on their laptops, back at their offices, there are few reassuring descriptions of their plans.

Community fears are in regards to potential Fires, Explosions, Toxic Leakage, Contaminants Leaching into Morro Bay Harbor affecting the Marine Wildlife and Bird Populations, and evacuation response in the event of Explosions or Fires. If an Emergency event happens during a Community event the Battery Storage Plant would block the only escape route leaving the main attraction--Morro Rock. Does Vista Corp. have an effective Escape Route Plan?

Morro Bay has a Tsunami Warning System in the event of a Tsunami. In the event of a Tsunami reaching the Vista Corp. Battery Storage Plant sitting on the Morro Bay harbor, if the plant is not enclosed, large amounts of water will flush over the Battery Storage units. The run-off water will not be contained and will affect the harbor with toxic backwash that will contaminate the harbor and potentially affect the Estuary as the tide comes in, as well as the residents living in close proximity. There is also the question of electrocution, with such high power and water.

On 7February2K24, residents of Morro Bay, Cayucos, and Los Osos were asked to take cover as a severe thunderstorm capable of producing a tornado passed through our area, according to the National Weather Service. How often will this be a problem in the future, considering the weather effects of global warming?

There are concerns about toxic chemicals that will fill our air, as well as vapor clouds, thermal runaway, and water run-off. Vistra has not made clear how we will be protected from and unaffected by these issues. There is a need for Independent Investigations regarding the effects of various toxicities involved with this venture with straightforward responses that can be trusted.

As a resident of Morro Bay and a protector of my environment and its inhabitants, I have serious concerns regarding the safety of my community, including the Otter Habitat and the Birds of the Windy Cove Rookery with its Monterey Cypresses. According to The California Department of Fish and Wildlife: Morro Bay Estuary is a semi-enclosed body of water protected from full exposure to the Pacific Ocean by a lengthy sandspit running south from Morro Rock. Located in San Luis Obispo County, this estuary is one of the largest wetland ecosystems on California's central coast. Fresh water flowing from Chorro and Los Osos creeks mixes with salt water from the ocean, creating a range of diverse ecosystems in the estuary that support many sensitive species.

**Morro Bay State Marine Reserve (SMR) and Morro Bay State Marine Recreational Management Area (SMRMA)** are neighboring marine managed areas that encompass nearly four square miles of this estuary. Morro Bay SMR protects less than one square mile of a very shallow, inland portion of the estuary including mostly tidal flats and coastal marsh habitats. Morro Bay SMRMA protects more than three square miles of sandy beach, tidal flat, coastal marsh, and eelgrass bed habitats. The estuary provides critical bird habitat and is recognized as a National Estuary; the bay is also home to a small commercial fishing fleet, and partially borders the charming fishing and tourist town of Morro Bay.

**Morro Bay SMR:**

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource.

[California Code of Regulations Title 14, Section 632\(b\)\(92\)](#)

[\(opens in new tab\)](#)

**Morro Bay SMRMA:**

It is unlawful to injure, damage, take, or possess any living, geological, or cultural marine resource, EXCEPT:

Take of waterfowl in accordance with general waterfowl regulations is allowed. North of latitude 35° 19.700' N only: Recreational take of finfish, commercial oyster aquaculture, and storing finfish taken outside of the SMRMA for bait purposes is allowed.

[California Code of Regulations Title 14, Section 632\(b\)\(91\)](#)

Approaching from a distance, the first indication a visitor is near Morro Bay is the appearance of Morro Rock on the horizon. Formed approximately 23 million years ago, Morro Rock stands more than 575 feet tall and is the most visible in a chain of volcanic plugs in the area, remnants of extinct volcanoes.

Situated about 600 feet south of Morro Rock is the beginning of an approximately four-mile-long sandspit that protects Morro Bay from direct exposure to ocean waves. This protection helped to create Morro Bay Estuary, a semi-enclosed body of water that covers 2,300 acres. Cold seawater enters the estuary through a small inlet near Morro Rock and mixes with fresh water from Chorro and Los Osos creeks. The mix of fresh and salt water creates unique habitats including beaches, tidal flats, marshes and eelgrass beds. Morro Bay's eelgrass beds moderate currents and wave action, and filter and decontaminate the bay's water.

While Morro Bay serves as an important resting and foraging ground for migratory birds, it is also a year-round home for many animals that rely on the sheltered waters for food and breeding grounds. California Brown Pelicans search for fish, rafts of Southern Sea OTters float on their backs with pups on their bellies, and Bat Rays glide over the shallow mudflats at high tide. Invertebrates such as Pacific Oysters, Washington and Gaper Clams, Ghost Shrimp, and Shore Crabs inhabit the mudflats. Fishes including Topsmelt, Shiner Perch, Bay Pipefish, and Pacific Staghorn Sculpin also make their homes here. The dense meadows of eelgrass found within the SMR and the SMRMA are nursery grounds for Rockfish, fFatfish, and a variety of invertebrates, and serve as an important resting and foraging area for the Black Brant, a small goose that feeds on eelgrass. Morro Bay Estuary is also home to more than a dozen threatened

or endangered species such as the Moro Shoulder Band Snail, California Red-legged Frog, and California Black Rail.

Morro Bay Harbor is also the home of The Morro Bay Heron Rookery at Windy Cove and, according to The Morro Coast Audubon Society:

Visit the Heron Rookery in Morro Bay State Park to view the cutest babies in Morro Bay. Egrets, Herons and Cormorants are in various stages of their nesting cycle. Adults are in their magnificent breeding plumage and nestlings are visible and active. The Rookery is located between Windy Cove and The Inn at Morro Bay (60 State Park Road). Windy Cove is located just north of the State Park Museum.

The Egrets, Herons and Cormorants nest and feed from the Morro Bay Harbor. These waters must remain clean and a suitable habitat in order for the wildlife and birds that find protection and safe feeding there to nest and raise their young. This Heron Rookery is a Natural Preserve.

The California Watchable Wildlife ad: **Morro Bay State Park - Site # 141**

*Morro Bay State Park's most prominent landmark is Morro Rock*

This rich estuary includes creek-side wetlands, salt marsh sloughs, open water, eel grass beds, and Morro Rock, a reserve for endangered peregrine falcons. The park museum offers views of thousands of migratory loons, buffleheads, wigeons, and northern pintails, resident cormorants, American white pelicans, and brown pelicans are mixed among the group. More than 10,000 wintering brant feed in the eel grass, a haven for fish such as halibut and jacksmelt. Harbor seals, sea lions, and southern sea otters appear along the bay. Gulls and terns circle over mudflats with legions of sanderlings, willets, and other shorebirds. Watch for great blue herons, great egrets, and black-crowned night herons at the nature preserve; nesting herons share nearby eucalyptus trees with monarch butterflies, hummingbirds, and even red-shouldered hawks. The park incorporates interpretive displays, hiking trails, and the Morro Bay State Park Museum of Natural History to enhance the visitors' overall park experience.

In addition, the Morro Bay National Estuary Program says:

Here are some important reasons to care about sea otters.

- They are recovering from a species-level disaster. Sea otters globally were nearly extirpated because humans coveted their fur. As they recover their former range, we have it in our power to help or hinder their return.
- As they re-colonize, revitalization of coastal ecosystems follows. Sea otters are a keystone species and exert an influence on their ecosystem that is disproportionate to their small size. We are only in the early chapters of understanding the extent to which their hearty appetites benefit the places we live, play, and find food on California's coast.

- They are vulnerable. Characteristics that make them unique among marine mammals also make them especially sensitive to oil spills, pollution, changes in food supply, and human disturbance.
- We can make a difference. It can sometimes be difficult to see how our actions help the planet or its residents but, particularly regarding disturbance to sea otters by our recreation, there are simple things we can do to make their world safer and more peaceful.
- Finally, sea otters are your neighbors. I encourage you to reconsider your definition of your community. All the creatures around you are your neighbors. If you live on the Central California coast, you are part of our coastal ecosystem and sea otters are your neighbors. Show them the respect and care all neighbors deserve.

Sincerely,

DAVID L. YOHE

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

INGRID W. KELLY  
[REDACTED]  
MORRO BAY, CA 93443-0545  
E-Mail [REDACTED]

RECEIVED

MAY 28 2024

City of Morro Bay  
Community Development Dept.

May 24, 2024

City of Morro Bay  
ATTN: Ms. Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, CA 93442

RE: Public comment to draft EIR for battery storage proposal

Dear Ms. Fowler,

I have been a resident of Morro Bay since 1994 and I love it here and I don't want to see it destroyed by allowing a Battery Energy Storage System (BESS) to be constructed. I sincerely would like you and the City Council to deny such a construction.

After reviewing the EIR, it appears to me that there is a lot of omitted information and definitely a lot of missing answers about the impact on our beautiful city.

It is my understanding that BESS systems are very dangerous and could destroy, not only Human Life; but, also Wildlife. I have heard about the terrible fires that can destroy a facility and release toxic chemical gases. The East Coast and West Coast, Moss Landing and Otay Mesa have had bad fires and it is my understanding that South Korea has stopped all System construction because of the disastrous situation there.

Morro Bay is a grand tourist area and our town depends on tourist dollars. I can imagine that there are a lot of tourists that will not come to Morro Bay because of such a system. The businesses, motels, restaurants and fishing industry will all close and the town will become a "Ghost Town."

The local government is working on building a Round-A-Bout at Main Street and Highway 41 because of the traffic problem. Can you imagine the problem if there had to be an Evacuation due to a toxic fire at the BESS facility? Morro Bay High School, a few blocks from the intersection, is very close to the proposed site and an Evacuation of 850 students would be impossible when you consider the number of parent vehicles that would be trying to pick-up their children. And then there is the rest of the population that would need to be Evacuated. IMPOSSIBLE !!!

California has a lot of open space between the Coast and Nevada border and there is no reason that a BESS facility needs to be in a city where it could kill hundreds or thousands of Human Beings as well as untold numbers of Wildlife.

Again, I sincerely would like you and the City Council to deny this construction.

Sincerely Yours,

*Ingrid W. Kelly*  
Ingrid W. Kelly

CC: Morro Bay City Council; Planning Chair & Commissioners; Coastal Planner; California Coastal Commission

May 27, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

RECEIVED

MAY 28 2024

City of Morro Bay  
Community Development Dept

Re: Community Letter in Response to Draft Environmental Impact Report (DEIR) for Battery Energy Storage System (BESS) proposed project in Morro Bay

Dear Ms. Fowler,

We are residents and visitors of Morro Bay and the surrounding communities, and we are opposed to the BESS project proposed for Morro Bay. The draft EIR is inadequate in identifying the potential impacts to our community and environment. These are our public comments to the draft EIR submitted by the City and its consultants.

**BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay** - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

**Construction of BESS will take over 3 years and will negatively impact our community** - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

**Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses** - This facility, projected to be the largest in the world, requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

**BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act** - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high

amplify such risk. Also, under the Coastal Act, new development *shall* protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic “Morro Rock,” at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The “rock” and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

**BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species** - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters’ sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. We demand that the agencies responsible for the protection of sensitive habitat, endangered species and special status species honor their obligations and deny the project.

**Fire protection and emergency response strategies were not addressed in the draft EIR** - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. **By law**, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. **All of the “external costs” of the BESS will be borne by the citizens of Morro Bay.**

**The DEIR must be rewritten and recirculated for our comments** - The draft EIR, as written, does not sufficiently inform us of the hazards of lithium-ion battery fires. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. If the developer changes to an alternative project, they must withdraw the current application and start the process over. For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. Once the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,

# Plan



## MORRO BAY

In 2040, Morro Bay remains a small oceanfront town and thriving year-round destination, known for its natural beauty, creative people, outdoor recreation, working waterfront, and welcoming community spirit. It is a friendly, safe, resilient, and healthy place where people of all ages and economic levels live, work, play, and visit.

The natural environment and wildlife are cherished and conserved and are essential elements that integrate with and define our urban landscape. Our healthy wetlands, iconic Morro Rock, and bustling harbor are complemented by expansive parks, connected bicycle lanes, safe streets, and pathways that are accessible to people of all ages and abilities.

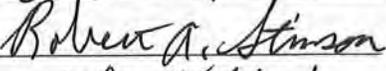
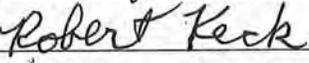
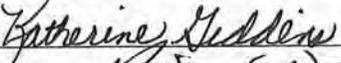
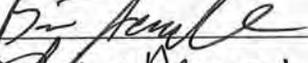
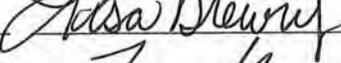
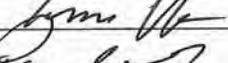
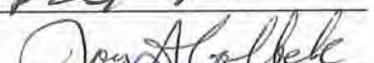
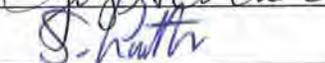
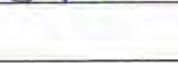
We have a deep appreciation for nature and honor our native, cultural, and maritime heritage. We maintain and support our working waterfront and carefully preserve our estuary, watershed, natural shoreline, and surrounding open space. We adapt to changes in the climate, economy, and culture without compromising our small-town character.

Our vibrant economy is strengthened by sustainable resource practices, a responsive City government, and leading-edge technology that empowers local business owners and attracts new businesses and investors. We are a diverse, multigenerational community where head-of-household jobs, sustainable living wages, and affordable housing options serve as a foundation that allows people of all ages and income levels to thrive.

Modern, well-maintained public amenities and supportive community services nurture our residents, community organizations, and neighborhood groups. We actively participate in government decisions and take pride in volunteerism. We welcome personal expression and creativity, as reflected in our varied visitor attractions, bustling dining scene, vibrant arts culture, community events, public art, and outdoor activities. Our diverse housing, safe and eclectic neighborhoods, and reliable transit system are enhanced through suitable urban infill and mixed-use development that accommodates modest residential and commercial growth.

Mindful of our rich heritage, we take great pride in our community and work together toward a bright future.

I have read and agree to the attached "Community Letter in Response to the Draft Environmental Impact Report (DEIR) for the Battery Energy Storage System (BESS) proposed project in Morro Bay, California".

Date	Print your Name	Signature	Where do you live?
1) 5.14.24	ROBERT CHAPA		MORRO BAY CA
2) 5-14-24	LINDA VOELKERS		Morro Bay CA
3) 5-14-24	Robert Stinson		Morro Bay
4) 5-14-24	Robert Keck		Morro Bay
5) 5-14-24	Katherine Giddens		Morro Bay
6) 5-14-24	Robin Wessman		Morro Bay
7) 5-14-24	Brian Laughlin		Morro Bay
8) 5-14-24	Lisa Drewry		Bakersfield
9) 5/14/24	Tim Volpe		Morro Bay
10) 5/14/24	PAUL GUIGNARD		MORRO BAY
11) 5/15/24	Louise Guignard		MORRO BAY
12) 5/22/24	Kelsey Ross		Morro Bay
13) 5/22/24	ROBERT ROSS		Morro Bay
14) 5-23-24	Joy Colbek		Morro Bay
15) 5-26-24	SILVIA LAURETTI		Morro Bay
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I have read and agree to the attached "Community Letter in Response to the Draft Environmental Impact Report (DEIR) for the Battery Energy Storage System (BESS) proposed project in Morro Bay, California".

Date	Print your Name	Signature	Where do you live?
1) 5-7-24	Silvio De Santis	Silvio De Santis	Morro Bay
2) 5/7/24	Rosemary L. De Santis	Rosemary L. De Santis	Morro Bay
3) 5/9/24	ANNE-MAIE SCHNETZER	Anne-Maie Schmetzer	MORRO BAY
4) 5/9/24	Joan Acee	Joan Acee	MORRO BAY
5) 5/9/24	Cynthia Delgren	Cynthia Delgren	MB
6) 5/9/24	Paula Radke	Paula Radke	MB
7) 5-9-24	Kathleen Angley	Kathleen Angley	M.B
8) 5-9-24	Shay Koi	Shay Koi	M.B
9) 5-9-04	Carl Moody	Carl Moody	MB
10) 5-9-24	Gwen Worthington	Gwen Worthington	M.B
11) 5-9-24	DAVID YOHI	David Yohi	MORRO BAY
12) 5/9/24	Robin Kresh	Robin Kresh	Morro Bay
13) 5/9/24	Judith Harvey	Judith Harvey	Morro Bay
14) 5.9.24	Susan Shields	Susan Shields	MB
15) 5-9-24	Caroline Inouye	Caroline Inouye	Los Osos
16) 5-9-24	PATRICIA PYLE	Patricia Pyle	MORRO BAY
17) 5/9/24	Patricia Daly	Patricia Daly	Morro Bay
18) 5/9/24	Katy Goshes	Katy Goshes	Los Osos
19) 5/9/24	Elaine Cartwright	Elaine Cartwright	Morro Bay
20) 5/20/24	Mori Scheer	Mori Scheer	MORRO BAY
21) 5/20/24	Judith L. Meissen	Judith Lynn Meissen	Morro Bay
22) 5/21/24	Roman J. Salvador	Roman J. Salvador	Morro Bay
23) 5/21	Debbie Highfill	Debbie Highfill	MB
24) 5/21	Nancy Foley	Nancy Foley	MB
25) 5/21	Kick von Steen	Kick von Steen	Los Osos
26) 5/21	Westerly Miller	Westerly Miller	MB
27) 5/21	Shay Swadener	Shay Swadener	MB
28) 5/21	Tom HIXSON	Tom Hixson	W BAY
29) 5-21	Dana HIXSON	Dana Hixson	M. Bay
30) 5-21	Vivian Branin	Vivian Branin	Morro Bay

I have read and agree to the attached "Community Letter in Response to the Draft Environmental Impact Report (DEIR) for the Battery Energy Storage System (BESS) proposed project in Morro Bay, California".

Date	Print your Name	Signature	Where do you live?
1) 5/21	ED KELLY	[Signature]	M.B.
2) 5/21	Terry McCrea	[Signature]	Templeton
3) 5/21	Catherine Montgomery	Catherine Montgomery	Atascadero
4) 5/21	Westerly Miller	[Signature]	Morro Bay
5) 5/21	TIM HIXSON	[Signature]	MORRO BAY, CA
6) 5-21	DANA Kim HIXSON	Dana Hixson	Morro Bay, Ca
7) 5-21	Richard Barnard	Richard Barnard	Monterey County
8) 5/21	Rosemarie Barnard	Rosemarie Barnard	Monterey CA
9) 5/23	IGOR MARCIKAV	[Signature]	MORRO BAY, CA
10) 5/23	Adrian Helguin	[Signature]	Tulare, CA
11) 5/23	Rob Heely	Robin Helguin	Tulare, Ca
12) 5/23	MARK KORKOVAK	[Signature]	Morro Bay, CA
13) 5/23	Barbara Paves	Barbara J. Paves	Cayucos, CA
14) 5/23	Carrie Callise	Carrie Callise	Cayucos, CA
15) 5/23	Vivian Mills	Vivian Mills	"
16) 5/23	Dale Montoya	[Signature]	MORRO BAY CA
17) 5/23	Kubira Miley	Kubira Miley	Cayucos, CA
18) 5-23	CAROL Miter	Carol Miter	CAYUCOS, CA
19) 5/23	Mary HAUB	Mary H. Haub	Los Osos, CA
20) 5/23	Deborah Jo Bird	Deborah J. Bird	Morro Bay, CA
21) 5/23	Anne Godespey	Anne Godespey	Morro Bay, CA
22) 5/23	Mary [unclear]	[Signature]	Cayucos CA
23) 5/23	LEROY RICHARDS	[Signature]	MORRO BAY CA
24) 5/23	Paul Westerdale	Paul Westerdale	Morro Bay
25) 5/23	Wendy Kurczel	[Signature]	Cayucos
26) 5/23	[unclear]	Colleen Overholt	Morro Bay
27) 5/23	Allison Goursky	[Signature]	Minneapolis, MN
28) 5/23	Sandra McLoughlin	[Signature]	Morro Bay
29) 5/23	Adrianna Carrizo	[Signature]	Cayucos
30) 5/23/24	MARK KEMPSEIL	[Signature]	MORRO BAY

I have read and agree to the attached "Community Letter in Response to the Draft Environmental Impact Report (DEIR) for the Battery Energy Storage System (BESS) proposed project in Morro Bay, California".

Date	Print your Name	Signature	Where do you live?
1) 5/16	MARYELLEN PARLIER	Mary Ellen Parlier	M.B.
2) 5/16	TODD GARIN	Todd Garin	M.B.
3) 5/16	ROBYN BLACK	Robyn Black	M.B.
4) 5/16	BERTHA BARELA	BERTHA BARELA	M.B.
5) 5/16	DAVID WEISMAN	David Weisman	M.B.
6) 5/16	Leticia Caldwell	Leticia Caldwell	M.B.
7) 5/16	VALARIE CUMMINGS	VALARIE CUMMINGS	MORRO BAY
8) 5/16	Ed Grieggs	Ed Grieggs	M.B.
9) 5/16	DEBORAH BARKER	Deborah Barker	M.B.
10) 5/16	Michelle Turner	Michelle Turner	
11) 5/16	Augette vanHumbek	Augette vanHumbek	Morro Bay
12) 5/16	SHAWN CHAPMAN	Shawn Chapman	Morro Bay
13) 5/21	Michelle Leicester Cadaret	Michelle Leicester Cadaret	Morro Bay
14) 5/21	Nicole Dorfman	Nicole Dorfman	Morro Bay
15) 5/21	Silvio De Santis	Silvio De Santis	Morro Bay
16) 5/21	RACHEL WILSON	Rachel Wilson	Cayucos
17) 5/21	Seychelle Canales	Seychelle Canales	M.Bay
18) 5/23	THOMAS MITER	Thomas Miter	CAYUCOS
19) 5/23	Soy Watts	Soy Watts	La S OROS
20) 5/23	Everlyn Bingham	Everlyn Bingham	Morro Bay
21) 5/23	JENNIFER EGAN	Jennifer Egan	MORRO BAY
22) 05/23	Patricia Birch	Patricia Birch	Morro Bay
23) 5/23	Bonnie Fasthinder	Bonnie Fasthinder	M.B.
24) 5/23	PAMELA DANIELS	Pamela Daniels	MORRO BAY
25) 4/23	Aldo Chavez	Aldo	Santa Maria
26) 6/26	Seychelle Canales	Seychelle Canales	Morro Bay
27)			
28)			
29)			
30)			

May 20, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, Ca. 93442

RECEIVED

MAY 28 2024

City of Morro Bay  
Community Development Dept.

I am a resident of Morro Bay and I am in firm OPPOSITION to the BESS project proposed for Morro Bay.

As a 38 year resident of this city I have seen many changes over the years and have so enjoyed all the amenities that this area has to offer. Spending time with family fishing, hiking, kayaking, watching the otters and the seabirds or just walking on the beach have all been such a joy. I love the small town rural vibe with the beautiful surroundings. Getting to see the fishing boats coming and going. The sail boats and surfers also add to our own local flavor. Company would often visit just to experience all this area has to offer. Tourists come to spend time at the Rock and shop the Embarcadero and they add an interesting mix to our area.

I have issues with the draft EIR for several reasons. I request that it be rewritten and recirculated for another period of public comment per CEQA sec.15088.5. The DEIR offers 5 different alternatives so we have no way of accurately determining which project we would specifically be commenting on. Their current preferred option delays the demolition of the stacks and increases the footprint of the site with a different storage configuration (DEIR ES-7). It is therefore, incomplete and also appears to minimize the impact that the construction, operation and eventual decommissioning would have on this area for years to come. In addition, is unclear whether any wear and tear on infrastructure would reassessed and remediated by the applicant.

This project is not coastal dependent and would be better suited to a location closer to an energy producing source. There are many power substations throughout the state which would allow for more efficient power capture and

dispersal. That is, placement closer to where the bulk of the power would be needed. The proximity of the ocean to the site is also of concern. There are fault lines in the area and as such we are in a potential tsunami/flood warning area. This was of such concern to the Coastal Commission during the evaluation of the sewer treatment plant refit, near the current BESS proposed site, required that the city move that plant up and away from the shore.

As touched upon above, the draft is incomplete for just some of the additional reasons given the volatile history and danger of lithium batteries (i.e., BESS sites in Moss Landing and Bess Otay site, San Diego).

Risk- in the event of off gassing, fire or thermal runaway. Wind direction also cited as not a possible problem even though it could carry toxic fumes around the area (note the 'remain in place' order for a 5 mile radius was needed during a event at the Moss Landing BESS event requiring the closure of Highway one for a period of time). Otay BESS required its own 'shelter in place' order and, in addition, required the lockdown of the R.J. Donovan Correctional Facility.

Safety issues are not adequately addressed for OCEAN life in the area. in the event of off gassing, fire or explosion. 'No significant impact' is an often used phrase but does not actually address our fragile and environmentally sensitive areas including:

Wild life Preserve

Bird Sanctuary and rookery areas

Otter pupping area

Natural Estuary

All other ocean life that could be impacted

Monarch migration route

Safety issues are not adequately addressed for HUMAN life in the area in the event of off gassing, fire or explosion:

Coast Commission. The ever present potential of off gassing, fire and explosion threats remain uppermost in my mind.

This critical infrastructure might also represent an attractive target for possible misdeeds or vandalism. It is unclear whether the appropriate governmental agencies be monitoring possible increased threat levels.

For all the above referenced concerns it is imperative that:

All impact and mitigation analysis should be done on a rewritten and recirculated DEIR project proposal so the public can be informed and respond on the specific relevant ramifications.

Thank you for your consideration of these issues,

  
Susan McDaniel

  
Morro Bay, Ca. 93442

RECEIVED

W. EDWARD KELLY  
[REDACTED]  
MORRO BAY, CA 93443-1956  
E-Mail [REDACTED]

MAY 28 2024

City of Morro Bay  
Community Development Dept.

May 20, 2024

City of Morro Bay  
ATTN: Ms. Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, CA 93442

RE: Public comment to draft EIR for battery storage proposal

Dear Ms. Fowler,

My parents moved to Morro Bay 54 years ago and I have been a resident for over 25 years. I love this town and area and don't want to see it ruined. I can't believe that the City is contemplating installing a Battery Energy Storage System within the city. Not only is it dangerous to the population, both Human and Wildlife, but I think that, if installed, it will kill the tourism and, therefore, the businesses that depend on tourism.

The danger of a fire is catastrophic, as you may have heard about other Systems that have had fires, including one on the East Coast and two on the West Coast, Moss Landing and another near San Diego. In addition, I have heard about the horrible fires in a few foreign countries. At the proposed site, it would be extremely difficult to evacuate Human Beings and impossible to do anything about Wildlife. The site is so close to Morro Bay High School, that, if I had a child attending MBHS, I would immediately transfer him or her to a school in another town.

I don't see any reason why a Battery Energy Storage System would need to be installed within the city limits. There is plenty of vacant land North, East and South of the Central Coast. In fact, Morro Bay is rather cool and moist and it gets very hot just East of us. I have been in Atascadero in the summer when it was 105 degrees and, by the time I reach Morro Bay, 15 miles to the West, it is 65 degrees.

I am not an engineer and don't understand much of what I have read in the EIR report; but I don't believe that there has been a thorough investigation and disclosure as to what could happen, if something goes wrong. It sounds to me like there is a real danger and that it would not be a matter of "if, but when"!

In what I have read, I remember something about there would not be a danger because any material that could cause a problem with one's health would not travel beyond the Battery System property. That to me is a Bold-Face Lie as I don't think that person ever stood outside when the wind was blowing. I don't know the exact details; but the wind blows from the West a good portion of the time and that could move that material all over the town of Morro Bay, Baywood Park and Los Osos. I wouldn't want it on my conscience that I killed possibly thousands of People and untold numbers of Wildlife.

Thank you for your attention to this matter.

Very truly yours,

  
W. Edward Kelly

WEK:c

CC: Morro Bay Planning Commission – City of Morro Bay – California Coastal Commission

May 27, 2024

RECEIVED

City Of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Ave  
Morro Bay, CA 93442

MAY 28 2024

City of Morro Bay  
Community Development Dept.

Re: Public Comment to Draft EIR for Morro Bay BESS storage proposal

Dear Ms Fowler,

I am writing to you as a concerned resident of Morro Bay of over 30 years to express my strong opposition to the proposed construction of a lithium battery storage facility in our coastal town. I am retired now however I have worked in an administrative capacity for special districts, county and state agencies my entire career. I strongly feel that the potential environmental impact of such a facility, especially in proximity to the Pacific Ocean and our marine sanctuary is alarming and warrants serious consideration. Per the EIR report in Moss Landing it stated that these facilities should never be located near a school, flood zone, residential areas or near water. This proposed facility location is near all of the above.

Lithium battery storage facilities pose significant environmental risks, particularly when located near bodies of water. The evidence from real-life incidents shows that improper or careless processing and disposal of spent batteries can lead to contamination of soil, water, and air. The toxicity of battery materials is a direct threat to marine and terrestrial organisms, as well as to human health. In the event of a breach or accident, the proximity to the ocean could exacerbate these effects, potentially leading to widespread ecological damage.

Moreover, spent lithium-ion batteries do contain harmful metals such as cobalt, nickel, lead and manganese, which can leach out of landfills or cause fires if disposed of improperly. Inorganic lead dust is the most significant health exposure in the manufacturing of these batteries. Lead can be absorbed into the body by inhalation or ingestion. If you do your research there have been numerous deaths throughout the world from explosions and fires from these BESS facilities. The risk of such incidents is magnified by the presence of saltwater and salt air, which can accelerate corrosion and increase the likelihood of leaks & fires. When these batteries are being shipped over they will spontaneously combust due to exposure from the salt air alone. Imagine having one of these facilities directly on the ocean permanently.

Morro Bay is known for its natural beauty, rich marine life, and as a haven for both residents and visitors who seek tranquility and enjoyment in its pristine environment. The construction of a lithium battery storage facility stands in stark contrast to these values and could irreparably harm the very essence of what makes our town special.

As far as global warming; it is predicted to cause the oceans to rise which would expose this facility to saltwater which is disastrous as we have stated above. In my research I have found that VISTRA, the company wanting to build this facility is currently setting up LLC's which removes them from all liability should their facilities catch fire/explode and emit hazardous toxins into our air and emit hazardous waste into our marine sanctuary and ocean, which obviously would be devastating.

I urge you to consider the long-term environmental and health implications of this proposal and to seek alternative sites and safer solutions that do not compromise the integrity of our coastal ecosystem or jeopardize human lives. Our community deserves a future where economic development does not come at the cost of environmental degradation or safety for its residents and tourists.

Thank you for your attention to this matter. I look forward to your response and to a resolution that prioritizes the well-being of Morro Bay and its inhabitants.



Sincerely,  
Dianne Walling-Roberts

[REDACTED]  
Morro Bay, Ca., 93442

1 [REDACTED]

RECEIVED

William Hyatt

Morro Bay, CA 93442

May 25, 2024

MAY 28 2024

City of Morro Bay  
Community Development Dept.

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, CA 93442  
BESScomments@morrobayca.gov

Public comment to draft EIR for the battery storage proposal

Dear Ms. Fowler,

I am a resident of Morro Bay and have lived here for four years. Our family moved here because of the unique character of the bay and the city. It really is special and we want to maintain it for our future, our families, and protect our wildlife.

I have reviewed the Draft Environmental Impact Report of March 2024, prepared by the City of Morro Bay, community Development Department and I am opposed to the BESS project proposed for Morro Bay.

I respectfully offer the following comments which represent my opinions on the matter:

**ITEM-01**

PUBLIC RESOURCES CODE, DIVISION 20, CALIFORNIA COASTAL ACT (2024)

Article 5, Land Resources, Section 30240 Environmentally sensitive habitat areas; adjacent developments

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

**COMMENT-01**

The Coastal Act (30240) includes special protections for Environmentally Sensitive Habitat Areas, often referred to as ESHA. The area of the planned BESS battery storage facility is adjacent to and upon environmentally sensitive habitats. This area should be remediated and returned to the natural habitat and not permanently covered in concrete. Construction of the structure will permanently scar this area and prevent needed remediation.

**ITEM-02**

PUBLIC RESOURCES CODE, DIVISION 20, CALIFORNIA COASTAL ACT (2024)

Article 6, DEVELOPMENT, Section 30253 Minimization of adverse impacts

New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

(c) Be consistent with requirements imposed by an air pollution control district or

the State Air Resources Board as to each particular development.

(d) Minimize energy consumption and vehicle miles traveled.

(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

#### **COMMENT-02**

The Coastal Act (30253) dictates that new development be designed and sited to minimize adverse impacts to coastal resources, both natural and visitor serving. The proposed project is itself an adverse impact to our coastal resources. It is appropriate that the former tank site be protected because it is in Morro Bay City with its unique characteristics and its status as a visitor destination. The area should be remediated and not cemented over and left for future generations to deal with the contamination.

#### **ITEM-03**

Emergency Evacuation nearby schools, page 4.10-7

The closest schools to the Project Site are Morro Bay High School, located approximately 0.31 mile to the north of the northern boundary of the Project Site, and the Family Partnership Charter School, located approximately 0.30 mile to the southeast of the southeastern boundary of the Project Site. In addition, the Rockies Teen Center, which is currently leased by the Boys & Girls Club, is located approximately 0.25-mile north of the northern boundary of the Project Site. The project would involve the storage of lithium-ion batteries

#### **COMMENT-03**

The EIS is woefully inadequate with respect to the evacuation of nearby schools, only promising to work on it and come up with a plan. There can be no practical way to evacuate the schools in a timely manner. Students are potentially exposed to toxic gases and will be told to shelter in place. Even if buses were available, they would have trouble leaving the area due to everyone else trying to do the same. Very impractical. This EIS should be denied or withdrawn until the evacuation plans are established and the EIS can be resubmitted.

#### **ITEM-04**

Pg ES-6 Alternatives.

There is no serious discussion of an alternative for moving the project to another location, away from population centers, and close to existing high voltage transmission lines. The BESS plant is not a coastal-dependent industry, it is unsafe for people and wildlife, and is contrary to the Coastal Act priorities. The project location is a tourist area, in a flood zone, and is the wrong location for battery storage.

#### **COMMENT-04**

The residents of City of Morro Bay (and others) would not be exposed to the potential toxic gases if the battery storage facility is located at a remote location away from population centers. It appears that the proposed project is focused on the lowest cost option rather than the safety of nearby inhabitants.

Pg 5-2 Alternatives

The is no off-site alternative even considered.

Build the BESS facility away from populated centers and close to a large solar panel farm. Here are some of the benefits of this alternative:

- a. Transmission line losses are greatly reduced because there would be a shorter distance between the source of power generation and the storage of the electrical power.
- b. There will be no potential harm to Morro Bay residents due to toxic gases released during a battery fire.
- c. Air quality in Morro Bay would not be impacted.
- d. Visual Aesthetics of the beach area would not be impacted because the large concrete structures would not be built.
- e. Noise from the pilings would not impact the sensitive otter population in our Bay
- f. GHG would not be impacted on a statewide level because the BESS facility would be built, just at another location.
- g. Residents of Morro Bay will not have to endure years of construction noise and since the BESS facility would not be located near a large population center, the negative impacts to humans would be greatly reduced.
- h. Since the contaminated soils and groundwater would not be concreted over, other options for cleanup could be explored, such as Superfund financing.
- i. Wildlife would not be impacted by the construction activities and cement structure.
- j. The City of Morro Bay will not be burdened by the additional costs to support this facility.

#### **ITEM-05**

Pg ES-5

"The Master Plan would amend the General Plan and LCP Land Use Plan land use designation on the BESS Site from Visitor Serving Commercial to General (Light) Industrial and the zoning from Visitor Serving Commercial (VSC) to Industrial-General (IG)."

Pg 2-26

#### 2.6.3 Master Plan for Redevelopment of the Power Plant Property

"Plan Morro Bay Policy LU-5.4 requires a Master Plan for the redevelopment of the former Morro Bay Power Plant Property and surrounding area. The proposed project includes a Master Plan which establishes a vision for the redevelopment of the Power Plant Property as well as recommended improvements to pedestrian and circulation connections in the area."

#### **COMMENT-05**

This is a significant change for our community. Vistra worked to change our Master Plan immediately after it was finalized and adopted by the City of Morro Bay. Now Vistra wants to change the Master Plan to accommodate this project. The proposed change would alter the character of our City forever and open our water front to permanent industrialization. Our Plan took 7 years to develop and had been approved by the Coastal Commission.

#### **ITEM-06**

Terrorist attack

Pg 2-19 BESS Operation and Maintenance

"The BESS Facility would not require new continuous, exterior lighting. Motion sensor lighting would be placed in specific locations as needed to assure safe ingress and egress from the battery storage building and the substation. The battery storage buildings would include interior lighting. The buildings would be secured, and access would be controlled to allow only authorized persons to enter the buildings."

#### **COMMENT-06**

What about monitoring the perimeter for terrorist infiltration? I believe this facility will be a potential terrorist target and puts our city at risk. If built, it should employ similar protection standards as Diablo Canyon Nuclear Power Plant, with dedicated armed guards, perimeter lighting, security, fencing, and motion sensors.

#### **ITEM-07**

Pg 2-19 BESS Operation and Maintenance

The facility will impose additional costs on the City of Morro Bay.

#### **COMMENT-07**

It appears that Vistra will not provide their own firefighters. Is Vistra going to supplement additional firefighters at the MB Fire Department? VISTRA should fund all additional and costs to the City.

#### **ITEM-08**

Pg 2-20

"The BESS Facility would also contain battery management systems with battery protection units. Battery protection units actively monitor each battery's operating conditions at all times and are programmed to warn, alarm, and automatically take preventive action if certain metrics exceed programmed tolerance levels."

#### **COMMENT-08**

The battery monitoring and charging system should include a full charge or total power loaded input algorithm (like a gas tank when the pump shows gallons), in addition to monitoring cell battery voltage. Also please specify all parameters monitored in the charging and maintenance modes.

#### **ITEM-09**

Pg 2-21

The battery technology is not yet specified.

"**Explosion Prevention Protection.** The batteries selected for use at the BESS Facility, such as lithium-ion or other technologies ....."

#### **COMMENT-09**

The specific battery technology is not yet specified. This EIS should be withdrawn until the battery technology is specified. Otherwise we cannot fully comment on the plan.

#### **ITEM-10**

Pg 2-24

## **Environmental Remediation**

There is believed to be underground contamination at the construction site.

### **COMMENT-10**

The applicant should identify and cleanup any contamination before building on the property.

### **ITEM-11**

2.8 Required Approvals

Not mentioned, this construction will require approval of the voters, if Measure A is passed.

### **COMMENT-11**

If Measure A is passes as expected, then approval of the project will require approval of the voters of Morro Bay. What are Vistra's plans if Measure A is passed?

### **ITEM-12**

Evacuation of tourists at the Rock and residents exposed to toxic gases.

### **COMMENT-12**

This should be included in the EIS. Residents need to know what the plan is for evacuation. What is the radius for evacuation or shelter in place? Will US 1 and Hwy 41 be adequate for those wanting to leave or will they be trapped in their cars. These questions need to be answered in this EIS and not deferred.

### **ITEM-13**

**Impact BIO-1.** Construction and future decommissioning of the BESS Facility and demolition of the Morro Bay Power Plant building and stacks have the potential to result in temporary and permanent impacts to special-status plant and wildlife species. Implementation of required mitigation would reduce this impact to a less than significant level.

### **COMMENT-13**

I believe that pile driving has the potential to affect the nearby sensitive otter population. Plans are for 5,500 to 6,500 pilings to a pile depth of approximately 70 feet (the depth of each pile would be determined during the final design-level geotechnical work based on loads and other location-specific analysis).

### **ITEM-14**

Pg 2-9 Battery Energy Storage System

"The battery capacity of the BESS Facility would be adequate to provide for continued operation of the ventilation and cooling systems during a normal loss of grid power. As a result, no diesel back-up generators are required for the operation of the BESS Facility."

### **COMMENT-14**

Diesel back-up power is needed for emergency backup power, not "...during a normal loss of grid power."

If the grid is down and the batteries are expended, it would seem that emergency back generators would be needed to insure operations of any emergency functions such as fire pumps, fire systems, communications, parameter security, etc. The city improperly deferred the fire safety analysis to a consultant hired by the fire department, DNV Energy USA, Inc. who has not yet performed the work. The draft EIR should be rewritten and recirculated after all of the impact and mitigation analysis is done, so the public can be properly informed and comment.

### **ITEM--15**

Pg 2-15

"Improvements to the water system, including a new diesel fire pump as part of an upgrade to the existing fire loop system, may be required to supplement City water service to provide adequate fire protection."

### **COMMENT--15**

To ensure that water to fight fires is available, the facility should commit now to install an emergency diesel water pump. Otherwise there may not be sufficient water to fight the unexpected fire(s).

### **ITEM-16**

How do the Plans for the Wind turbines maintenance support impact the plans for the VISTRA property?

**COMMENT-16**

The EIS shows a parklike area where the towers and old PG&E building are, but the maintenance support plans for ships and docking show the area being further industrialized with expanded dock and service yards. What are Vistra's plans with regard to the windmill farm support.

**ITEM-17**

4.1.4 Impact Analysis, pg 4.1-8

a. Methodology

"Visual resources are generally defined as including natural and built features in the visible landscape. Landforms, water, and vegetation are among the natural elements that define an area's visual character."

**Impact AES-1.**

The project would not have a substantial adverse effect on a scenic vista. Compliance with Plan Morro Bay policies and Title 17 of the Morro Bay Municipal Code would protect scenic vistas and ensure that development under the Master Plan would not adversely affect public views. These impacts would be less than significant.

Mitigation Measure – None required.

Residual Impact - Less than significant.

**COMMENT-17**

The scenic vista would be greatly altered. The proposed massive facility would negatively change the view of the coastline. This structure will be an eyesore to the views enjoyed by residents and visitors. Figure 4.1-3, pg 4.1-11 and Figure 4.1-4, pg 4.1-12 shows a massive structure, that will be visible from surrounding areas and Morro Rock parking. The simulation analysis selected specific viewpoints that seek to minimize the visual ugliness of the proposed project. The project is a massive concrete structure constructed on the beachfront. The negative effect on the visual change of the beachfront cannot be overstated, in my opinion. It will be highly visible and have a negative visual appeal. Closeup it will be seen as a massive unappealing structure. I predict that future nearby development will be relegated to industrial use because it will be unattractive and unappealing for visitor serving commercial and residential use, and who would want to attend a conference next to this structure where there is a risk of toxic gas exposure from the facility. The negative affect on the visual appeal is Significant and Unavoidable, in my opinion.

**ITEM 18**

Another fire from a "safe" battery storage facility! The San Diego-Union Tribune (Karen Kucher, Rob Nikolewski, and Caleb Lunetta, 5/16/24, "Firefighters extinguish 'unpredictable' blaze at battery storage facility in Otay Mesa") reported a fire from the Gateway Energy Storage facility in Otay Mesa. "Firefighters maintained a 600-foot safety barrier around the facility on Camino De La Fuente for more than 22 hours because air monitors showed dangerous levels of hydrogen, a highly flammable gas." "About 50 firefighters, as well as county and city hazardous materials teams and the sheriff's bomb squad, gathered at the scene Thursday morning." "But using water has a downside. Not only can the batteries violently react to the moisture, but water evaporates off the heated batteries and creates a gas that can be toxic and/or highly flammable in confined areas." "...businesses and the small number of homes within a quarter-mile of the industrial park where the facility is located were evacuated and shelter-in-place orders were in effect within a half-mile of the site out of an abundance of caution."

**COMMENT 18**

VISTRA explains how safe this battery facility will be and yet fires continue to occur at similar facilities. Is this the plan: call in 50 firefighters, the hazmat team, and the bomb squad?? The city must recirculate the EIR because they did not identify and address the thermal runaway battery fires as a potential impact, and did not address the risk created from having the project site in a flood and tsunami zone. Saltwater exposure to lithium-ion batteries makes them combustible; but the draft EIR did not discuss this, nor what would happen if the BESS is flooded, not the impact on nearby schools.

Sincerely,

William Hyatt



Cc:

City of Morro Bay

Attn: Mayor and City Council

595 Harbor Street Morro Bay, CA 93442

[council@morrobayca.gov](mailto:council@morrobayca.gov)

Morro Bay Planning Commission

Attn: Chairman and Commissioners

955 Shasta Avenue Morro Bay, CA 93442

[PlanningCommission@morrobayca.gov](mailto:PlanningCommission@morrobayca.gov)

California Coastal Commission

Attn: Sarah MacGregor, Coastal Planner

725 Front St., suite #300

Santa Cruz, CA 95060

[Sarah.MacGregor@coastal.ca.gov](mailto:Sarah.MacGregor@coastal.ca.gov)

May 27, 2024

RECEIVED

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

MAY 28 2024

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler,

I am a resident of *hislop*. I am opposed to the BESS project proposed for Morro Bay for the following reasons.

*We cannot have industrial  
as the forefront of the  
waterfront. It must be  
removed & <sup>eco</sup> + visitor friendly.*

*A vote YES on Ballot Measure  
A-241*

Sincerely,

*FRAN KAVICKA*

Sign your name here



CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

RECEIVED

May 27, 2024

MAY 28 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobay.gov](mailto:BESScomments@morrobay.gov)

City of Morro Bay  
Community Development Dept.

RE: Response to the DEIR for the proposed BESS project in Morro Bay

Dear Ms. Fowler:

I am a resident of Cayucos and a frequent kayaker in Morro Bay and I am opposed to the BESS project proposed for the Embarcadero in Morro Bay. Although I am generally in support of BESS facilities, an incident at the proposed location along the Embarcadero could have devastating consequences not only for the residents and wildlife in Morro Bay, but also for the residents of the surrounding communities including my community of Cayucos.

#### CUMULATIVE EFFECTS:

This DEIR did not address the cumulative effects of several projects that are proposed. Cumulative effects are required to be addressed by CEQA. The P.G. & E. substation (bordering the project) will need to be upgraded to handle not only this power but the power that will come into the substation from the underwater cables that will come into Morro Bay from the wind farms. The cumulative effects of these have not been considered even though BOEM discusses this in their report on wind farm leases. Morro Bay is also on the short list for an Operations and Maintenance Facility in Morro Bay. A study that was commissioned by REACH shows that an ideal location for this facility would be on the property right next to the proposed BESS Storage. The impact of this facility on the Embarcadero has not been addressed in this study and should have been addressed since there are multiple documents that are addressing this topic. CEQA requires these cumulative effects to be addressed and they were not addressed in this document.

<https://www.boem.gov/newsroom/press-releases/boem-completes-environmental-review-offshore-wind-leasing-central>

<https://reachcentralcoast.org/wp-content/uploads/Waterfront-Infrastructure-Report-121522.pdf>

<https://ceqaportal.org/tp/CEQA%20Project%20Description%202020%20Update.pdf>

## AESTHETICS:

The visual aesthetics of the proposed facility across from the Morro Bay estuary was totally downplayed by the EIR. The photos that they showed were from a distance. Their plans show building massive towers across the front of the power plant property and yet the photo they showed was at such a distance that it was barely visible. They also failed to show the visual effect of the proposed facility on boats as they enter our harbor looking at our iconic Morro Rock and beyond. The BESS facility and its surrounding barbed wire topped with razor wire fences will definitely be visible from the waterfront. For safety, they are also planning to remove any vegetation and that will further degrade the visual aesthetic. Their proposal to block the view is to use 33 foot tall berms. These berms are to serve a dual purpose—block the view and create a revetment to prevent damage from storms and tsunamis. Other businesses along the waterfront are not allowed to build revetments to protect their property from tsunamis and water damage because the water is then pushed onto the property of others intensifying their flooding. Vistra should be treated like any other business, and not be allowed to build their berms. The berms are also a visual barrier for people viewing the bay from Highway 1.

## TRANSPORTATION/TRAFFIC/HAZARDS AND HAZARDOUS MATERIALS:

When asked about the ability to evacuate in case of an incident, Vistra replied, “Emergency response and evacuation procedures are addressed in Section 4.7, Hazards and Hazardous Materials. The MBFD has retained an independent engineering and safety consultant to assist with a public safety analysis of the BESS Facility which would be used by the City and MBFD specifically in making decisions regarding BESS safety element design, emergency planning, and hazard minimization.” This boilerplate response does not address the unique location of the proposed BESS. This is one of the areas that it is impossible to adequately mitigate. There simply are not multiple ways to leave town. There is not a safety element design, emergency plan, or hazard minimization that can take care of the fact that our major evacuation route Highway 1 sits approximately ¼ mile away from the BESS facility and that evacuees would be sitting in the toxic gasses from the fire while in the gridlock that Highway 1 would become. And furthermore, by law all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published.

The proposed location along the Embarcadero has the potential to have devastating consequences on the community. The location is between the tourist community and

the iconic tourist area Morro Rock. If there was an incident at the BESS facility (such as the one currently happening at the Otay Mesa BESS fire which is still smoldering after 11 days), those at The Rock would have to drive towards the fire, instead of away from it. I recently attended the Morro Bay Kite Festival and it took me 1 hour and 2 minutes just to clear the parking lot at the rock and this is with drivers who are calm and waiting in queue instead of drivers that are panicked. It took an hour and 40 minutes to drive past the proposed facility. We have numerous events at the Rock every year (the Ironman Triathlon, Surfing Championships, Surf Camp for the Handicapped) that are coastal dependent, but that would now be placed in harm's way by a BESS plant.

I am also a kayaker. I cannot imagine quickly kayaking to my launch point to get away from the toxic gasses and then to discover once I am there that the 2 boat launch ramp is backed up. I have waited more than an hour to load my boat. I would then have to drive down the Embarcadero toward the fire to try to get out of town. Again, all ways out of town from the boat ramp are on the Embarcadero and Highway 1.

The facility also sits approximately ¼ mile from the only main highway out of town—Highway 1. The Vistra prevailing winds document shows the wind blowing right across the highway that we would need to use to evacuate the community. The toxic gasses blowing across the highway would block our main route out of town.

Morro Bay High School also sits .31 miles away from the facility. This campus has a swimming pool and an outdoor stadium. Quickly evacuating these facilities in case of a fire would be difficult. The school buses needed to evacuate the facility would need to travel through the smoke on Highway 1.

#### CASE IN POINT ON TRANSPORTATION/TRAFFIC:

On January 9, 2023, I was in Morro Bay when the creek flooded. All ways out of town were blocked. Highway 1 had flooded and the Los Osos Valley Road flooded. I was stranded in Morro Bay for 9 hours until the California Highway Patrol told me that only if I had a full tank of gas, I could now evacuate. I had to drive to San Luis Obispo on Highway 1, cut over to Highway 101, and then take Highway 46 to Cayucos. A 3 mile drive became a 1 ½ hour adventure. No matter what planning had taken place, the flooding of the major roads out of Morro Bay meant that it was impossible to evacuate. Fortunately, not being able to evacuate for hours on January 9th did not have devastating consequences. There were no toxic fumes to contend with. This would not be the case with a BESS fire. My vehicle is not an adequate shelter-in-place location.

## HAZARDOUS AND HAZARDOUS MATERIALS: TERRORISM CREATING AN ENVIRONMENTAL DISASTER

Although terrorism is not an environmental impact, the results of a terrorist attack would be an environmental disaster.

Vistra's solution to this is that they will work with the Morro Bay Police Department to mitigate this. I don't see how you can mitigate this adequately with our small police department of 18 sworn officers. Again, their response is boiler plate. Imagine a terrorist organization noting that critical infrastructure is located in the middle of a tourist community that cannot easily evacuate and that will release toxic gasses and destroy a valued ecosystem when ignited. Vistra has stated that our substation already makes us subject to terrorism as if that makes it okay to add another terrorist target to our waterfront. Or what if the terrorists target the substation and miss hitting the BESS plant? It does not make sense to add another terrorist target next to an existing terrorist target.

The United States Army and the Department of Homeland Security have BESS facilities listed as Critical Infrastructure that are subject to terrorist attacks.

"Critical infrastructure is also vulnerable, and hardening thousands of locations against attack would be financially restrictive, at best. Probable infrastructure targets include fuel or water storage facilities, gas pipelines, power distribution plants and food supply locations, many of which are minimally or completely unmanned. In 2013, a targeted attack against a power distribution facility in California almost sent a significant portion of the state into darkness."

[https://www.ausa.org/sites/default/files/publications/LWP-137-The-Role-of-Drones-in-Future-Terrorist-Attacks\\_0.pdf](https://www.ausa.org/sites/default/files/publications/LWP-137-The-Role-of-Drones-in-Future-Terrorist-Attacks_0.pdf)

And from the Department of Homeland Security:

"Terrorists seek to destroy, incapacitate, or exploit critical infrastructure and key resources across the United States to threaten national security, cause mass casualties, weaken our economy, and damage public morale and confidence."

"Critical infrastructure and key resources provide the essential services that underpin American society. The Nation possesses numerous key resources, whose exploitation or destruction by terrorists could cause catastrophic health effects or mass casualties

comparable to those from the use of a weapon of mass destruction, or could profoundly affect our national prestige and morale. In addition, there is critical infrastructure so vital that its incapacitation, exploitation, or destruction, through terrorist attack, could have a debilitating effect on security and economic well-being."In sum, we conclude the proposed BESS project poses no significant health and safety risk to the community during a maximum credible fire event under worst-case conditions.

<https://www.cisa.gov/news-events/directives/homeland-security-presidential-directive-7>

HAZARDS AND HAZARDOUS MATERIALS: TSUNAMIS:



According to the California Department of Conservation, the proposed BESS site is in a Tsunami Zone. A tsunami could have a devastating effect on the Lithium Batteries since lithium catches on fire when exposed to water. Vistra's map shows that the Rock will protect the property from a tsunami but as you can see water coming in directly from the ocean just north of the Rock would not be protected by the rock. Vistra's map does

not show that. The California Coastal Commission required Morro Bay to move their wastewater treatment facility that was in the same zone to the north of the BESS plant. And as we have seen in other tsunamis, we cannot count on earthen berms to protect the plant since these berms may liquify.

<https://www.conservation.ca.gov/cgs/tsunami/maps/san-luis-obispo>

#### AIR QUALITY: FIRES AND THERMAL RUNAWAY:

The EIR does not even mention thermal runaway, yet that is a major concern with BESS facilities. Thermal runaway will expose the residents, visitors, and wildlife of Morro Bay to high toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide and carbon monoxide. Their Offsite Consequence Analysis (not part of the EIR and it should have been) does mention thermal runaway in it, but they only calculated the effects of the combustion of one full enclosure over a 24 hour period. Looking at the Otay Mesa BESS fire, we realize that this is not an adequate time period for evaluation.

“For purposes of modeling, the analysis determined that the maximum credible fire event presented by the proposed BESS is the combustion of one full block (building configuration) or one full enclosure (enclosures configuration) of batteries over a 24-hour period. As noted, this OCA conservatively assumes that during such an event all active control measures fail. However, the OCA does consider passive design measures, such as thermal passivating layers between racks, walls, blocks, and enclosures, which are analogous to firewalls in a building. These passive design features are assumed to work as intended consistent with U.S. EPA guidance.”

They concluded that: “In sum, we conclude the proposed BESS project poses no significant health and safety risk to the community during a maximum credible fire event under worst-case conditions.”

The fire at Otay Mesa in California is a case in point.

As of May 27, 2024, the fire is still active almost 2 weeks after it originally ignited.

<https://www.batterytechonline.com/stationary-batteries/reigniting-san-diego-bess-fire-highlights-thermal-runaway-risks>

“A significant fire at the Gateway Energy Storage Facility in Otay Mesa brings fresh attention to the dangers associated with lithium-ion batteries. The blaze, which began

on Wednesday, May 15, 2024, has persisted for four days with no clear end in sight, according to reports from the San Diego Union Tribune, television station KUSI/FOX5 and others.

Despite efforts by firefighters, including drenching the batteries and ventilating the facility, the fire has repeatedly reignited due to a thermal runaway chain reaction—a phenomenon where overheating lithium-ion batteries catch fire and cause neighboring batteries to do the same. The San Diego Union Tribune reported that more than three dozen firefighters have been battling the blaze, but full containment remains uncertain. Cal Fire Captain Brent Pascua indicated that containment could take anywhere from a week to several weeks based on past incidents.

This BESS facility was constructed in 2020 and was built with the latest technologies and safety standards according to McCalmont Engineering. Obviously, as hard as the industry tries, it is impossible to build a facility that is 100% effective in preventing a thermal runaway. A thermal runaway on our Embarcadero would be an environmental disaster. According to McCalmont Engineering, the designers of Otay Mesa,

“Each battery rack can deliver about 225 kW of peak power and 100 kWh of usable energy before being recharged. The battery racks operate at between 800 and 1000 VDC depending on their state of charge (SOC). To reduce fire risk, the batteries are distributed throughout five separate building structures. In addition, the electrical design for each building includes approx. 454 tons of cooling capacity and its own fire suppression system. The entire system is to be controlled by a SCADA system interoperated with CAISO. All equipment in the facility, including batteries, fire suppression system, and electrical controls is data-connected via a fiber optic system and associated networking. Benefits: As one of the largest energy storage projects ever conceived, when completed the Otay Mesa facility will have immense reserves of both power and energy to provide grid stabilization and peaking capacity for Southern California’s electrical grid. The design of this system required bringing together many diverse aspects, including large scale electrical design, utility expertise, new UL and Code requirements for battery systems, IT and networking expertise, and civil and mechanical design. The resulting project will significantly lower regional carbon emissions and reduce the need for fossil fuel power plants.”

<https://mccalmont.net/wp-content/uploads/2019/05/ESS-Case-Study-2019.pdf>

According to the owners of the Otay Mesa BESS, they expected the fire to reignite. Rev Renewables, a subsidiary of LS Power that owns and operates the Gateway facility, confirmed in an email that the fire had reignited. "While unfortunate, this development was not unexpected," Rev Renewables said in an email, "as these kinds of fires can reignite and take time to be fully extinguished."

Cal Fire Capt. Brent Pascua (Otay Mesa fire) stated that these thermal runaway events can last anywhere from seven days to a couple of weeks, but firefighters are now planning for two to four weeks, and then they will "reevaluate."

The Otay Mesa fire has had 40 firefighters working 24/7 to keep it from spreading further, and their efforts have failed. Flames are seen shooting out the roof of one building and they are just hoping the heat from this building on fire does not damage batteries in one of the four adjacent buildings and start thermal runaway in another building.

If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. As the fire reignites over a period of many days or weeks, most of the city would be evacuated for an extended period. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may have trouble evacuating. All of this would be due to the location of the project and could be avoided if the project were moved to a suitable location.

#### AIR QUALITY IN THE OFFSITE CONSEQUENCE ANALYSIS:

The Plume Study in the offsite consequence analysis was inadequate. As its data points for wind direction, the Plume Study did not use Morro Bay wind or weather data. Instead, they used the data available at the San Luis Obispo Airport and the Oceano Airport. Their Offsite Consequence Analysis did not consider any areas to the west of the proposed BESS facility. It did not consider the restaurants, fishing boats, pleasure boats or wildlife that is in the harbor,



Figure 1-11: Distances to sensitive receptors (Proposed Project)

although the harbor is only about 300 feet away. All of these areas have sensitive receptors and should be included. They never even mentioned the wildlife that would be negatively impacted and that is because these studies have never been completed.

**BIOLOGICAL RESOURCES:**

Morro Bay is a national estuary that overlaps with environmentally sensitive habitat areas. We are also a bird sanctuary that is a stopover for more than one billion birds each year. Morro Rock has one of the largest Peregrine Falcon breeding colonies. We are the home of the Southern Sea Otter which is protected under the Federal Endangered Species Act as a threatened species which is protected under the Marine Mammal Protection Act and as part of the State Marine Preserve. Because the sea otter is a Federally Protected Mammal, any taking of this species is illegal. If the otter's sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases this would be unlawful. It is also foreseeable.

The draft EIR is woefully short on the potential environmental effects on our wildlife and this is largely due to the fact that they don't know what the potential effects are.

At the April 24th Vistra Community Meeting, Dr. Shari Libicki of Ramboll was asked the following question:

Question: "Have there been studies regarding impacts of unplanned hazardous chemical release on our local wildlife species?"

Dr. Libicki: "These ecological studies, offsite consequence analysis are in their infancy in terms of their ability to do things and its primarily because people don't understand for each species, for humans there are all of these studies to determine what does hydrogen fluoride do for people and you can imagine how much more difficult it is to look at all the various species and determine what the hydrogen fluoride is doing for them so, the short answer is "no" and the slightly longer answer is we just don't have the data."

<https://www.mbnep.org/state-of-the-bay/are-bird-populations-that-depend-on-the-bay-and-surrounding-lands-stable/>

Our endangered species and all wildlife deserve to be protected. This EIR is woefully inadequate in protecting our wildlife because the data simply does not exist. We are too valuable of an ecosystem to risk the damage to our ecosystem for an industry that is not coastal dependent.

#### LAND USE/PLANNING/RECREATION:

*Plan Morro Bay* has the tank farm property that is the proposed location for the BESS with a land use of Visitor-Serving Commercial. This land is zoned Visitor-Serving Commercial because it is the best use of the land. The California Coastal Act states that new development shall protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. This property lies right across the street from Coleman Beach and our bay and estuary. This area attracts thousands of tourists each year who eat in our restaurants, shop in our stores and just enjoy lounging on the beach while listening to the waves, and seabirds and sea lions.

Tourism generates approximately \$161,000,000 to businesses each year from the approximately 800,000 tourists who visit. In tourism, perception is everything. Even the potential for a devastating event, can have devastating effects. According to Forbes Magazine, San Francisco saw a 19.7% drop in tourism in 2023 because tourists perceive San Francisco as being unsafe. In the same time period, Chicago saw a 6.5% rise and New York saw a 7.5% rise in tourism. If Morro Bay saw a drop in revenue

similar to that in San Francisco, it would be approximately \$35 million dollars. Our community cannot afford that loss. The National Library of Medicine confirms our concerns.

According to the National Library of Medicine, "Most disasters have profound impacts on individuals, organizations and communities, and consequently on tourism activities."

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7115519/#:~:text=Disasters%20and%20other%20forms%20of,tourist%20arrivals%20following%20major%20events>.

By changing the land use designation to Light Industrial, Morro Bay puts not only its residents and wildlife at risk, it risks devastating our tourist economy. Even a slight incident at the BESS facility would have devastating effects on our economy. It would also keep people from enjoying one of the last easy to access coastlines for those escaping the heat from the San Joaquin Valley.

#### POPULATION/HOUSING:

Morro Bay and the Central Coast currently have a massive housing shortage. We also have limited land and water (especially in Los Osos and Cambria) to allow the construction of new homes. Therefore, when the supply is limited and when the demand is high the rental prices increase displacing long term residents often living on fixed budgets. Vistra estimates that it will have 100 to 300 workers on-site at any time during construction. These 100 to 300 workers will need housing. When the wastewater treatment facility in Morro Bay was constructed, large numbers of construction workers were brought in from other areas since the population of Morro Bay does not have the skilled labor needed to construct these facilities. When the wastewater treatment facility was constructed, Anvil (the company in charge of the construction) rented homes in my neighborhood and in other neighborhoods to house their workers. The occupants of one of the homes in my neighborhood were evicted in order to allow Anvil to rent their home because Anvil was willing to pay over twice what the home was currently rented for. Long-term tenants were displaced to provide housing for the construction workers.

#### NOISE:

The construction of the proposed BESS facility will take approximately 3 to 4 years and will commence at 7 a.m. in the morning and finish at 7 p.m. Monday through Friday although Vistra reserves the right to work on weekends if the project requires it. The project will involve drilling in approximately 5500 to 6500 pilings to a depth of 70 feet (1,000 pilings less with the alternate project). The noise from this alone will be horrific

for our tourism industry and wildlife. Vistra’s table considers the noise impact starting at 900 feet from the construction, although our beaches, the bay, and some restaurants are much closer (see map below). Also, I did not find data on the cumulative effect of having several construction pieces of equipment working at the same time.

**Table 4.8-9 Construction Noise Levels**

Receiver	Distance (feet)	Month 1 Site Preparation (dbA L <sub>eq</sub> )	Months 2-10 Foundation and Pile Installation (dbA L <sub>eq</sub> )	Months 11-36 BESS Facility, Substation, and Gen-tie (dbA L <sub>eq</sub> )
R-1	2,000	55	62	51
R-2	900	62	69	58
R-3	1,400	58	65	54
R-4	1,800	56	63	52
R-5	2,600	52	60	49
R-6	2,200	54	61	50

Source: Appendix J

Getting away from noise is one of the reasons that people come to tourist destinations. Also, their study did not consider the effects of noise on our wildlife and birds.



Their research into the effects of noise and vibration on marine life was lacking in that it did not mention the recent study done in Pacific Grove that found that harbor seals were negatively impacted by road construction. This more recent research needs to be

considered in their findings. Also, they did not have specific findings regarding our Southern Sea Otters, and our marine wildlife in their studies.

<https://www.montereyherald.com/2022/04/23/harbor-seal-pupping-season-in-pacific-grove-disturbed-by-road-work/>

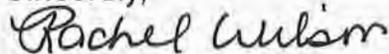
### THE DEIR NEEDS TO BE REWRITTEN AND RECIRCULATED

The DEIR does not sufficiently inform us of the hazards of lithium-ion battery fires. It does not even mention thermal runaway. Its sensitive receptors map does not even acknowledge that there are sensitive receptors to the west of the property. It does not tell us the potential effects of hazardous chemicals on our wildlife.

This DEIR is specific to the 3 building model, yet in meetings with Vistra they are proposing a 174 container model. This is an entirely different project and needs an entirely different EIR. The NOP that Vistra filed was for the 3 building model, not the 174 container model. We do not have enough information on the construction materials (will they be cement walls similar to the 3 building model) to adequately address this model. What percentage of the lot would this new model cover? What would be the noise levels out of the new containers? According to CEQA, if the developer changes to an alternative project, they must withdraw the current application and start the process over. For all of these reasons and many more, the draft EIR must be rewritten and recirculated for our comments.

Due to all of these deficiencies, I respectfully request that the responsible agencies not certify this draft EIR.

Sincerely,



Rachel Wilson

Cayucos

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MAY 28 2024

May 27, 2024

To the Morro Bay City Council members

City of Morro Bay Attn: Cindy Jacinth, Planning Manager 955 Shasta Avenue Morro Bay, California 93442

City of Morro Bay  
Community Development Dept.

Subject: BESS – Vistra Lithium-ion Battery Energy Storage Facility proposal – public comments on Draft EIR

Hello Morro Bay City Council,

I am a full time resident, taxpayer and property owner in Los Osos, California, due south of Morro Bay, California.

I am writing today to register my strong objection and concerns about Vistra Energy's intent to build a Lithium Ion Battery Energy Storage Facility on the waterfront property currently owned by Vistra, where the inactive power plant is located (Assessor's Parcel Number [APN] 066-331-046; 1290 Embarcadero Road). I believe this would be a bad mistake which would jeopardize human and animal life and well being, economic activity and property values in Morro Bay and in adjacent Los Osos where I live with my family.

As we have seen by example of the BESS fire in Moss Landing, California on September 20, 2022, once a lithium ion BESS facility or battery component catches fire, there is no feasible way to extinguish the fire. The only solution, per professional firefighters who have faced such fires, is to allow them to burn until the combustible material is consumed – to “burn out” in common parlance. When a lithium ion battery burns, it releases toxic gasses that are harmful to human and animal life in the area. These toxins are released into the air and may be absorbed into the ground, where they can further impact subterranean life as well as leach into the aquifer and in the case of Morro Bay, directly into the Bay and the Pacific Ocean.

These toxic materials include:

1. **Hydrogen Fluoride (HF):** Highly toxic and corrosive, HF is released from the decomposition of fluorinated electrolytes in the batteries ([EEPower](#)) ([NUS Blog](#)).
2. **Carbon Monoxide (CO):** Produced from the incomplete combustion of organic solvents, CO is a colorless, odorless, and highly toxic gas ([EEPower](#)) ([NUS Blog](#)).
3. **Carbon Dioxide (CO<sub>2</sub>):** While not directly toxic, CO<sub>2</sub> can displace oxygen in the air, posing a suffocation risk in high concentrations ([NUS Blog](#)).
4. **Hydrogen Cyanide (HCN):** A lethal gas that can be produced during the combustion of certain battery materials ([EEPower](#)).
5. **Phosphorus Pentafluoride (PF<sub>5</sub>):** A highly toxic gas that can result from the breakdown of some electrolyte additives ([NUS Blog](#)).
6. **Sulfur Dioxide (SO<sub>2</sub>):** Released if sulfur-containing compounds are present in the battery, SO<sub>2</sub> is toxic and can cause respiratory problems ([EEPower](#)).

7. **Volatile Organic Compounds (VOCs):** Various organic solvents in the battery electrolyte can release VOCs when burned, contributing to air pollution and health hazards ([NUS Blog](#)).
8. **Particulate Matter:** Fine particles, including metals like nickel, cobalt, lithium, and manganese, can be released and pose inhalation risks ([EEPower](#)) ([NUS Blog](#)).

In the case of the Moss Landing incident, residents and visitors were made to shelter in place while the fire burned. If such a situation were to happen at a theoretical Morro Bay BESS facility, this would be unacceptable to me and my family, as we need to travel for work and recreation. We moved to this beautiful area specifically to enjoy the natural world here and this would be an undue burden to place on me, my family, and our community.

Lithium-ion batteries, while highly efficient for energy storage, pose significant fire risks. These fires are particularly dangerous due to their intensity, their difficulty to extinguish, and the release of toxic fumes. The draft EIR appears to downplay these risks; for example, the DEIR mentions:

- In Volume 1, section 4.7.4, which deals with the hazardous emissions and the CEQA thresholds whereby a project is required to address such emissions, it is mentioned that these concerns need not be addressed in the DEIR “Because the Project Site is not located within one-quarter mile of a school (Threshold 3)” – I feel this misses the point entirely considering the real risk posed by a potential fire at the BESS facility. A quarter mile is 1,320 feet, while the High School is approximately 2,000 feet away. This seems like a trivial difference in terms of distance away from a dangerous source of toxic gasses in the event of a lithium ion battery fire.

I urge the City Council to reconsider the following critical points:

**1. Fire Hazard and Emergency Response:**

- Lithium-ion battery fires can escalate rapidly and are notoriously difficult to extinguish. The Draft EIR must provide a comprehensive analysis of the fire hazards specific to the proposed BESS, including a detailed emergency response plan.
- There should be clear guidelines on the availability and adequacy of firefighting resources and personnel trained specifically to handle lithium-ion battery fires. Coordination with local fire departments and emergency services must be explicitly outlined.

**2. Toxic Emissions and Air Quality:**

- In the event of a fire, lithium-ion batteries can release hazardous substances, including toxic gases such as hydrogen fluoride, hydrogen cyanide, phosphorus pentafluoride and others mentioned above. The EIR should include a thorough assessment of the potential air quality impacts from such emissions and the risks to public health.
- Measures to mitigate these risks, such as advanced fire suppression systems and containment strategies, should be detailed and evaluated for their effectiveness.

**3. Environmental Impact on Surrounding Areas:**

- The proximity of the proposed BESS to residential areas and sensitive ecosystems necessitates a rigorous examination of the potential environmental impact. This includes the risk of water and soil contamination from firefighting efforts and runoff.
- The EIR should propose robust environmental safeguards to prevent contamination and protect the local environment.

**4. Risk Assessment and Alternative Technologies:**

- The draft EIR should include a comprehensive risk assessment of lithium-ion battery technology compared to other available energy storage technologies that may pose fewer safety and environmental risks.
- Consideration of safer alternatives, such as solid-state batteries or flow batteries, should be explored and discussed in detail.

In conclusion, it is imperative that we undertake a thorough and sober assessment of these and other risks expressed by the community, and understand what preparation would be required for the potential risks involved. The current draft EIR for Vistra Energy's BESS at Morro Bay does not sufficiently address the significant dangers posed by lithium-ion battery fires. I strongly urge the Commission to require a more thorough analysis and robust safety measures to protect the community and the environment.

I also request that the following concerns be addressed in the EIR:

- Morro Bay High School is located less than 2000 feet from the proposed BESS facility – this poses an undue risk to our young students who attend school here
- Citing this BESS facility on the location of the mothballed former PG&E power plant, simply because it is currently owned by Vistra Energy (or any other owner) seems irresponsible and incorrect due to the risk of a lithium ion battery fire at this location given its proximity to the City of Morro Bay's High School, Embarcadero area, its fishing fleet, its tourism businesses, human population, aquatic life (including fish, marine invertebrates, sea otters, sea lions and seals) and properties in adjacent and nearby areas.

Thank you for considering my comments. I look forward to your response and to a revised EIR that addresses these critical issues.

Sincerely,

-Name Removed  
Los Osos, CA 93402

RECEIVED

May 27, 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

MAY 28 2024

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reasons.

This project has an irredeemable/unmitigable problem ---- LOCATION ----

Proposed site - Central coastline / Estero Bay National Estuary / Environmentally Sensitive Habitats (ESHAs) / Area of Endangered Species / and within City of Morro Bay's waterfront commercial and thriving downtown neighborhoods with diverse community character and land use

This proposed plant for lithium-ion battery energy storage is not a coastal-dependent industry. In fact the coastal environment has a negative effect on the lithium battery - from the salt water air to potential for sea water inundation from high tides, sea level rise, and tsunami risk. Conversely, the PG&E power plant did require an ocean location as it used ocean water for the cooling system technology to produce power. BESS technology has no such ocean water requirement.

Besides the ocean proximity this area is in a 100/500 Year Flood Zone. This area is one of the city's most vulnerable areas for overflow flooding due to heavy rainfall. This area is not suitable for project with such sensitivity to hazards of water exposure

This proposed area is entirely within the Coastal Zone and development is required to comply with the California Coastal Act. The Act establishes procedures for development to protect coastal resources, minimize risks to life and property, and protect special communities that because of their unique characteristics are popular destination points. CC Act 30253 Where feasible new hazardous development shall be located away from existing development. CC Act 30250

This area is under the purview of the Morro Bay City Council with the statutory Authorization for floodplain management and the promotion of safety, public health and the general welfare of its citizens. With the proposed BESS Project the potential for increased adverse effects must be considered. Direction for development comes from the General Plan (Plan Morro Bay) drafted by citizens and leaders. Council is tasked with the goal to protect the character and beauty of Morro Bay by maintaining land use designation per zoning. And to strive to safeguard health, lifestyle, wildlife, natural resources, tourism base and fishing legacy by preventing all industrialized uses along the Embarcadero and adjacent beaches. Zoning is

for Visitor-Serving Commercial and Commercial/Recreational Fishing along the Embarcadero between Beach Street and Morro Rock – western border of project property.

The calamity presented with water impact and runaway battery fire is dramatic and visible. We are quickly alarmed with that occurrence but the damage to estuary, sensitive habitat and endangered species is more subtle and insidious. This beautiful location requires our thoughtful stewardship - our protection. As residents who love our home we have the urgent task to preserve Morro Bay and allow it continue to be a healthful LOCATION for ALL LIFE.

Sincerely,

June Swall

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

RECEIVED

May 28, 2024

MAY 28 2024

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler,

I am a resident of Los Osos. Eight years ago, my wife and I purchased a property in Los Osos that abuts on the waters of Morro Bay. Five years ago, we built our new home on the property. Having a beautiful, healthy, and biologically diverse bay was the primary motivation that prompted us to build our home here, and it remains a very important reason why we enjoy living here so much.

I am a co-founder and director of College Bound Today, a nonprofit college access mentoring program that operated successfully in East Los Angeles for eleven years, until my wife and I moved to Los Osos. I have operated my program at both Morro Bay High School (MBHS) and Los Osos Middle School (LOMS) since 2020 pursuant to a Memorandum of Understanding with the San Luis Coastal Unified School District. In addition to my mentoring activities, I have also worked with students at both MBHS and LOMS as a volunteer mock trial attorney coach since 2019.

**1. Risk of Exposure to Toxic Air on the Part of MBHS Students, Teachers, Staff, and Parents**

I am very concerned by Vistra's proposed BESS facility due to its proximity to MBHS -- an approximate distance of only 1.3 miles. If Vistra's facility is eventually built, and if a fire should occur there in the future, the health and safety of hundreds of MBHS students, teachers and staff members would be at serious risk. In the event that it became necessary to evacuate MBHS, the main access to the school would be jammed with waiting cars, and hundreds of parents and other family members would be subjected to prolonged exposure to toxic air fumes as they slowly navigated their way to pick up their loved ones. This risk is not adequately accounted for or addressed in Vistra's DEIS.

One of your fundamental duties as an officer of the City of Morro Bay is to protect and safeguard the health and safety of the students and teachers in the public schools within your city limits. Vistra's proposed BESS facility would create an ultra-hazardous risk to your students and their families -- many of whom are my friends and neighbors here in Los Osos. Like me, they cannot vote in Morro Bay. But they certainly deserve the highest measure of your care and oversight -- despite any claims of supposed increases to the city's tax base that might be advocated by a profit-driven private energy company from out-of-state.

## **2. Deleterious Effects of Loud and Prolonged Noise**

Likewise, the 4-year construction project proposed by Vistra would subject the school to very loud and prolonged levels of noise caused by pile drivers and other construction equipment. Those noise levels would interfere with instruction provided by the teachers and other normal activities engaged in by the students and their teachers at MBHS. The effects of such high noise levels upon the operation of the school are not adequately accounted for or addressed in Vistra's DEIS.

## **3. Specific Mitigation Measures Must be Included in the DEIR - - Not Just "Promised" at Some Undefined Future Date**

Instead of describing in detail the mitigation measures that will be available in the event of a fire at the BESS facility, the DEIS merely offers Vistra's ill-defined promise that a fire hazard analysis will be conducted by the Morro Bay Fire Department at some unspecified future date. As a result, we members of the public are left to guess what mitigation measures might be decided upon in the future.

The DEIS should be rejected for this reason alone. The public has a right to know what the mitigation measures would be in the event of a fire. Vistra's promise the "the check is in the mail" is inadequate as a matter of law.

## **4. The DEIS Fails to Mention or Consider the Possible Risk Posed by a Thermal Runaway**

As is illustrated most recently by the recent thermal runaway at the BESS facility in Otay Mesa, the risk that a plant fire could result in a thermal runaway - - and all the extraordinary equipment, manpower, and chemicals needed to control it - - is a risk posed by all BESS facilities. The fact that the DEIS fails to mention or consider this risk warrants the outright dismissal of the DEIS.

## **5. The DEIS Fails to Adequately Discuss or Evaluate the Serious Risk that Vistra's Proposed BESS Facility Would Pose to Endangered Species and Other Coastal Wildlife**

A wonderful colony of Southern Sea Otters (an endangered species under applicable environmental laws) makes its home in the waters of Morro Bay very near the site of Vistra's proposed BESS facility. The DEIS fails to take into account the risk to the sea otters posed by Vistra's project due to four months of construction noise and a lifetime risk of toxins being injected to their native habitat.

Likewise, the DEIS fails to adequately address the risk posed to other forms of local wildlife such as cormorant, egrets blue herons, and peregrine falcons. These species represent an

important part of the beautiful Pacific Flyway, which we love to view every day from our home - - when weather permits.

## **6. Vistra's DEIS is a Cynical "Bait and Switch" and "Shell Game"**

A few days after Vistra's DEIS was issued to the public, Vistra sent a letter dated May 7, 2024, raising (for the first time) the possibility that Vistra might support an alternative design to that proposed in its DEIR. Known as "Alternative #5," this design calls for the construction of more than 170 containers, instead of 3 large warehouse-sized structures.

As a result, the public is left guessing which design Vistra plans to build in Morro Bay - - the design it proposed in its DEIR, or the design if proposed more recently in its May 7 letter.

Thus, Vistra engages in cynical gamesmanship. Instead of putting all of its cards on the table at the outset, Vistra has chosen instead to dole them out in dribs and drabs forcing the public to guess which "pea" will be under the shell that Vistra eventually flips over when it reaches its "end game."

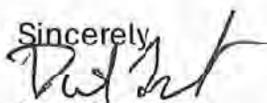
Vistra would have the public exhaust its right to comment when it addresses the design advocated in the DEIS, and then "switch" to another design that Vistra failed to include in the DEIS.

For many people and natural assets, the draft DEIS proposes a very real and serious threat which Vistra mocks by engaging in such gamesmanship. As a result, the DEIS should be rejected.

## **7. Conclusion**

Morro Bay and its surroundings are one of the most beautiful and valuable parts of California's Central Coast. While I know and believe that energy storage facilities of some sort - - not necessarily involving lithium batteries, and certainly not located on the shores of Morro Bay - - will be necessary if California and the rest of our nation is ever to wean itself from carbon-generated electric energy, Vistra's DEIS proposes the wrong technology in the wrong location. The risk that would result to our environment, students and their teachers, and our neighbors is far too great.

I respectfully submit that you should find that the DEIR should be rejected, or at least re-written. The public's right to comment upon all the essential elements of such a project demands that we have an opportunity to have Vistra lay out ALL of the elements of their design and their project so that we can comment upon them.

Sincerely,  
  
Dan Clement



Los Osos, CA 93402

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission



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May 27, 2024

MAY 28 2024

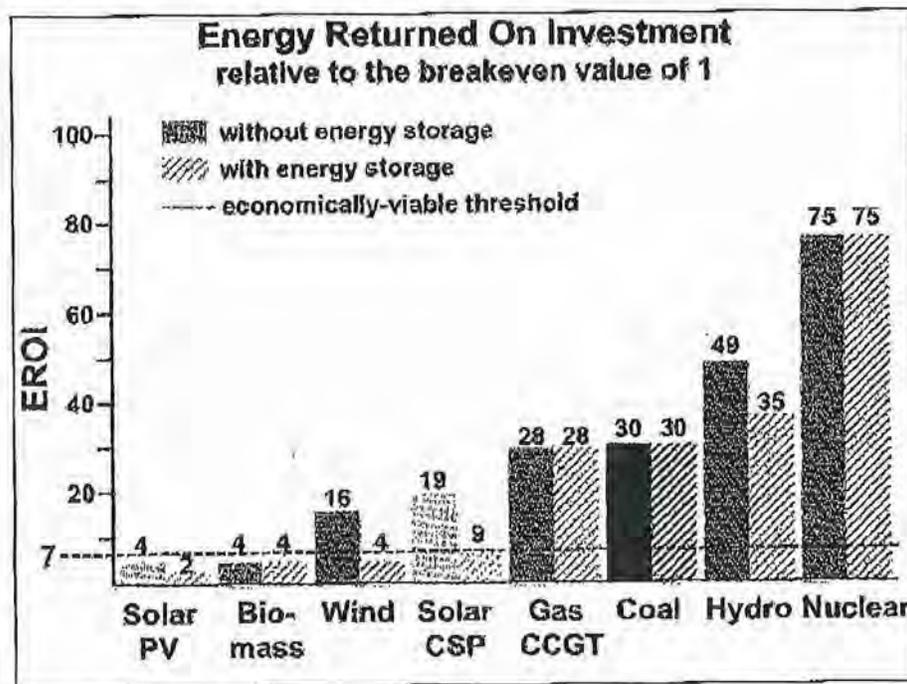
City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, California 93442  
[BESScomments@morrobayca.gov](mailto:BESScomments@morrobayca.gov)

City of Morro Bay  
Community Development Dept.

Dear Ms. Fowler,

I am a resident of Morro Bay. I am opposed to the BESS project proposed for Morro Bay for the following reason. The GHG impacts from the construction and operation of the wind farm and the battery storage facility are under evaluated.

There is no EROEI study to support the battery/wind farm combination in the draft EIR. As you can see in the graph below Energy and Dystopia: Energy Returned on Invested by Caleb Kumar of Stanford University. The combination of wind farm and battery storage is below the economically viable threshold. A combined EROEI of approximately 4:1 for wind energy integrated with battery storage at power plant scale suggests that the energy invested in the entire system (including both wind energy generation and battery storage) yields four units of usable energy for 1 unit invested. This lower value compared to standalone wind energy systems could be due to several factors:



Energy Requirements of Battery Storage: Battery storage systems, especially lithium-ion batteries commonly used for grid-scale energy storage, require energy for manufacturing, installation, and maintenance. This additional energy input reduces the overall EROEI of the

integrated wind and storage system. **Energy Losses in Storage and Conversion:** Energy storage and conversion processes typically involve some level of energy loss, such as inefficiencies during charging and discharging of batteries. These losses reduce the net energy output of the system compared to standalone wind energy generation. **System Integration and Infrastructure:** Integrating wind energy with battery storage at a power plant scale requires additional infrastructure and system integration, which may consume energy during construction and operation.

While a combined EROEI of 4:1 still indicates a net positive energy return, it's essential to consider the trade-offs and challenges associated with integrating renewable energy sources like wind with energy storage technologies. These trade-offs may include economic costs, environmental impacts, and grid stability considerations. Yet there is no engineering analysis of the energy input for the combined system in total, the maintenance costs, the disruptive social costs and the recycling costs?

Building a wind farm coupled with a lithium-ion battery storage system involves various physical energy inputs throughout the entire lifecycle of the project. Here are some of the key energy-intensive processes and activities related to their construction:

#### Manufacturing of Wind Turbines:

1. Production of turbine components such as blades, nacelles, and towers requires energy-intensive manufacturing processes, including mining, refining, and processing raw materials like steel, fiberglass, and copper.
2. Transportation of turbine components to the construction site also consumes energy, particularly if they are manufactured in distant locations.
3. Construction of Wind Farm Infrastructure:
4. Site preparation involves clearing land, leveling terrain, and constructing access roads, which require heavy machinery powered by fossil fuels.
5. Installation of turbine foundations, towers, and turbines themselves involves concrete pouring, steel erection, and assembly, all of which require energy inputs.
6. Electrical infrastructure, including substations, transformers, and transmission lines, must be installed to connect the wind farm to the grid.

#### Installation of Battery Storage System:

7. Manufacturing of lithium-ion batteries involves energy-intensive processes such as mining and refining of lithium, cobalt, nickel, and other materials, as well as chemical processing and assembly.
8. Transportation of battery components and final products to the construction site incurs energy costs similar to those for wind turbine components.

9. Installation of battery racks, inverters, control systems, and other components requires energy for construction and assembly.

#### Construction Logistics:

10. Energy is consumed in coordinating and managing the logistics of construction activities, including transportation of materials, equipment, and personnel to and from the site.
11. On-site construction activities such as assembly, installation, and commissioning require energy for powering construction equipment and machinery.

#### Support Infrastructure:

12. Temporary facilities such as construction camps, offices, and storage areas require energy for lighting, heating, cooling, and other operational needs during the construction phase.

#### Environmental Mitigation and Compliance:

13. Compliance with environmental regulations may involve energy-intensive processes such as habitat restoration, erosion control, sea life habitat considerations and implementation of mitigation measures to minimize the project's environmental impact. *Which may require more energy.*

Constructing a wind farm combined with lithium-ion battery storage involves significant energy inputs across various stages of development, from manufacturing and transportation of components to on-site construction and installation. Evaluating and optimizing these energy inputs are essential for assessing the overall sustainability and energy return of the project. Yet there is no review of this overall energy EROEI in the BESS/WIND FARM EIR evaluation.

Nuclear and hydro come out top with EROI of 75 and 35 (buffered) respectively. Gas and coal fare well on this metric with similar ratings of 28 to 30. Concentrated solar power in the desert with a buffered EROI of 9 just about makes it above the economic threshold. However, corn biomass and buffered wind and solar fall well below the requirement with EROIs of 3.5, 3.9 and 1.6 respectively. (ERoEI for Beginners, May 25, 2016 by Euan Mearns, in Energy Matters)

The economic threshold recognises that modern society can only afford to spend a certain amount of effort and money on generating energy. Weissbach concludes that in order to maintain our lifestyles, we need energy sources that return at least 7 times more than the energy invested in creating the source. Even this is a substantial reduction from the situation we now enjoy.

This combined project would have a negative social consequence on Society yet it is being pursued because the energy consequences are ignored to further financial speculation. Energetically the project is a drain on society once you buffer the wind energy with battery storage. Please read the article attached "[ERoEI for Beginners](#)" to comprehend the subject

when making a decision on the BESS project. To summarize, the basic premise of the BESS/wind farm project of 'saving energy' is false because of a combined EROEI below 7 to 1 at 4 to 1. It does not meet the EROEI threshold for present societal standards as outlined in the article. Basically you can't cheat the laws of thermodynamics by making some people richer.

Steve Paige

Resident of Morro Bay.

CC: Mayor Wixom and Morro Bay City Council; Planning Chair and Commissioners; Sarah MacGregor, Coastal Planner, California Coastal Commission

RECEIVED

MAY 28 2024

Dear Ms. Fowler,

City of Morro Bay  
Community Development Dept.

I own a home and reside in Morro Bay. I oppose the BESS project proposed for Morro Bay and ask you not to certify the EIR and that you deny the project. I am very concerned about the safety and negative impacts of this proposed project. Since I first submitted my comments opposing the plant, I have learned about the ongoing fire at the Gateway BESS facility in Otay Mesa, California.

On May 15, 2024, a module of lithium-ion batteries ignited in a 250 MW BESS "Gateway" facility in Otay Mesa, near San Diego. Firefighters barricaded a 600 foot perimeter as they detected toxic, corrosive gasses, including hydrofluoric acid, in that area. A HAZMAT team and bomb squad were dispatched, and 40 firefighters have been working around the clock to keep the fire contained. The fire was believed to be extinguished, but it reignited itself multiple times over the next week and is still burning. The Otay Mesa BESS situation is a textbook thermal runaway and an example of what could happen here, except that in Morro Bay it would be an unmitigated disaster due to the location of the project site.

Robert Rezende, battalion chief and the Alternative Energy Emergency Response Coordinator for the San Diego Fire-Rescue Department, said he wasn't surprised the fire keeps reigniting because that's common with lithium-ion batteries and the fires can last for an undetermined amount of time. The company that owns and operates the Gateway BESS facility, Rev Renewables, indicated this type of thermal runaway event was not unexpected. The evacuation order for some commercial businesses (Otay Mesa Gateway facility is not in a residential area) was for a larger area, and stated:

"This evacuation order requires immediate movement out of the affected area due to an imminent threat to life. All persons in the impacted area should prepare to evacuate. Evacuation order means there is extreme danger in your area. You must leave now; do not wait. Contact your neighbors and share information." Cal Fire Capt. Brent Pascua stated that these thermal runaway events can last anywhere from seven days to a couple of weeks, but firefighters are planning for two to four weeks, and then they will "reevaluate."

If the Otay Mesa BESS runaway fire were in Morro Bay, it would have devastating consequences. In Morro Bay, within 600 feet of the project site are homes, numerous restaurants and shops, residents, tourists walking around, riding bikes, paddling and surfing; the endangered sea otter nurseries, the endangered western snowy plover and other nesting birds, and many protected species. An evacuation order would likely encompass the entire city. Wildlife would be killed, nests abandoned, and tourists gone for good. Firefighting assistance from neighboring jurisdictions may not be able to access the facility due to gridlock during evacuation. Residents and visitors may be sickened from the toxic fumes. Elderly residents may have trouble evacuating. All of this would be

due to the location of the project and could be avoided if the project were moved to a suitable location.

Otay Mesa raises some important questions. What will those toxic fumes do to a small community, visitors and the wildlife? How will we evacuate from Morro Rock and the Embarcadero and where will we go for several weeks? How much water does it take to douse a thermal runaway event 24/7 that lasts for several weeks? Where is that water going to come from? Where do school students in high school and elementary school go to learn for several weeks? Where does the contaminated water go after it is used for fire suppression? Where do 40 firefighters come from since we only have a fraction of that number here in Morro Bay? There are many, many more questions.

BESS on the power plant property is an infringement of the citizens' vision of the future of Morro Bay - The PG&E power plant was decommissioned in 2014. In 2021, the city drafted "Plan Morro Bay" which outlines our vision for the future of Morro Bay, and changed the "industrial" land use designation for the power plant property to "Visitor Serving/Commercial." Since 2014, Morro Bay has drawn many thousands of visitors and become a special place for tourists. The vision for our city set forth in the Plan does not include battery storage. Morro Bay is a dearly loved small coastal town, and our residents and visitors feel secure here. We love our community character, our natural resources and our wildlife.... the sea otters, peregrine falcons, osprey, great blue herons, owls, and egrets, all of the endangered species, and even our wild turkeys.

Construction of BESS will take over 3 years and will negatively impact our community - If the BESS is constructed, we will be exposed to years of construction noise and vibrations, as well as ongoing noise from the BESS while in operation. Seafood restaurants, shops and beaches are directly across the Embarcadero, and the noise and vibrations will create a severe adverse impact on those businesses and on the economic vitality of this city. Long-time visitors will start avoiding Morro Bay.

Lithium-ion batteries have a history of spontaneous ignition and releases of toxic chemical gasses - This facility requires an industrial location to operate safely. It should not be in the heart of a tourist town, nor adjacent to a national estuary. The project site is in a flood and tsunami zone, creating an extreme fire risk due to saltwater exposure to lithium-ion batteries. When there is a battery fire, residents, visitors and wildlife in Morro Bay will be exposed to highly toxic plumes containing hydrogen fluoride, hydrogen chloride, hydrogen cyanide, and carbon monoxide. Safe evacuation from such a fire will be impossible. If a BESS is built here, our peace of mind, our safety and security, and all of what we love about Morro Bay will be threatened or destroyed. BESS on the Embarcadero in Morro Bay involves health and safety risks that our community is not willing to take, and any agency that certifies this EIR and ultimately approves this project would be recklessly placing the citizens and visitors of Morro Bay in danger.

BESS on the Embarcadero in Morro Bay would be in conflict with the California Coastal Act - The proposed BESS land is in the coastal zone and is protected by the Coastal Act of 1976. The Coastal Act requires that new coastal development shall minimize adverse impacts in areas of high geologic,

flood and fire activity; but the project site, located in a flood and tsunami zone, would actually amplify such risk. Also, under the Coastal Act, new development shall protect special communities and neighborhoods with unique characteristics that are popular visitor destination points for recreational uses. Morro Bay is unique for its iconic "Morro Rock," at 576 feet tall it is the remnant of a volcano and currently a peregrine falcon sanctuary. The "rock" and quiet harbor attracts thousands of visitors year round for art shows, surf contests, our kite festival, marathons, the witches paddle, car shows, kayaking and boating, and more. The Coastal Act also prioritizes coastal-dependent development, which battery storage is not.

BESS on the Embarcadero in Morro Bay would threaten sensitive habitat and endangered species - Morro Bay provides habitat for many sensitive and endangered species. The proposed project site and vicinity borders the national estuary and overlaps with Environmentally Sensitive Habitat Areas (ESHA). The sea otters are protected under the Federal Endangered Species Act as a threatened species, and are protected under the Marine Mammal Protection Act and as part of the State Marine Reserve. If the otters' sleep, feeding, breeding success, or their natural behaviors are disrupted due to construction or chemical releases from battery fires, this would be unlawful. This project will impact many nesting birds but the draft EIR does not identify this significant impact. I ask the city to notify the agencies responsible for the protection of sensitive habitat, endangered species and special status species so they can honor their obligations to protect those species.

Fire protection and emergency response strategies were not addressed in the draft EIR - According to the draft EIR, the fire hazard analysis and safety protocols will be performed by consultants hired by the Morro Bay Fire Department at a later date. By law, all impact and mitigation analysis must be included in the draft EIR, not deferred until after the EIR is published. Additionally, emergency response strategies, including evacuations, shelter-in-place orders, response to terrorist attacks and all other threats will overly burden our local Police Department, who may not have adequate resources, equipment or training. All of the "external costs" of the BESS will be borne by the citizens of Morro Bay.

The DEIR must be rewritten and recirculated for our comments - The draft EIR, as written, does not inform us of the hazards of lithium-ion battery fires, the single most important and dangerous impact. It discounts the threats to our wildlife and our community. It fails to acknowledge the effects on several Endangered Species whose habitats are adjacent to the proposed project site. Vistra, the property owner, has submitted plans to the City and applied for a permit to build their BESS. The draft EIR was written for this specific design, and no other. However, Vistra officials have indicated that the design of the facility has not yet been determined, and they are considering choosing alternative #5 instead of the current project. Since alternative #5 is a substantially different project with important differences in the impacts, if there is a change to that alternative, the applicant must withdraw the current application and start the process over.

For all of these reasons (and many more) the draft EIR must be rewritten and recirculated for our comments.

The BESS is projected to power 450,000 homes; this is 75 times more power than Morro Bay might need in an outage, with our 6,000 homes. This is a profit-driven industry benefiting the developer and the larger metropolitan areas of San Francisco and Los Angeles, but for which Morro Bay will bear the burden. The costs will be high for us; therefore as a community we demand to be kept informed of the progress of the proposal and allowed to participate in the decision-making process. The significant impacts from this project include fiscal impacts due to the loss of tourism. After having seen what is happening in Otay Mesa and the true impacts due to the proposed project location are revealed to our community, we hope and believe the agencies responsible will not certify this draft EIR or approve the battery storage project in Morro Bay.

Sincerely,

Sandra Lee

  
Morro Bay, CA

MAY 28 2024

May 28, 2024

Steve Ray

City of Morro Bay  
Community Development Dept.

Morro Bay, CA 93442

City of Morro Bay  
Attn: Kim Fowler, Interim Planning Manager  
955 Shasta Avenue  
Morro Bay, CA 93442

Via Personal Delivery on May 28, 2024

RE: COMMENTS to VISTRA BESS DRAFT EIR

Dear Ms. Fowler,

Thank you for this opportunity to comment on the Draft Environmental Impact Report (DEIR) on the Vistra Battery Energy Storage System project (BESS) proposed to be located in Morro Bay.

I have been actively engaged in saving the environment for over fifty-six years, the last forty-five years in California. During those decades, I have participated in drafting, re-writing, reviewing, analyzing, commenting on, advocating for, advocating against, adjudicating and litigating a plethora of Environmental Impact Reports (EIR's) and other environmental documents (Negative Declarations, Mitigated Negative Declarations, etc.). Many of those I dealt with as Chair of the Planning Commission of a large Southern California city, a commission charged with actual adjudication of project applications, including issuance of Conditional Use Permits (CUP's) and Coastal Development Permits (CDP's).

I have litigated multiple EIR's, taking two to the California Supreme Court and prevailing in both cases. One, the *Balsa Chica* case, has been a seminal case regarding the California Coastal Act. The second, the *Banning Ranch* case is a seminal California Environmental Quality Act (CEQA) case. Those cases and others, including the cases cited in them and in cases that have subsequently cited and been decided based on them, should be read and used as a guide when considering the merits, or lack thereof, for this BESS DEIR.

You will receive many thoughtful comment letters to the subject BESS DEIR. Among them, I highly recommend that you carefully review and respond to the most excellent letter by Ms. Jeanne Marie Colby. It is comprehensive, thorough, detailed, footnoted, annotated, includes appropriate legal citations (including cases previously mentioned) and has wonderful pictures, graphics and illustrations. I not only concur with it, I hereby incorporate Ms. Colby's letter into this letter by reference.

Failure by the City (including city's consultants) to read, analyze and comprehensively respond to all the material in the footnotes, annotations, legal citations and illustrative materials included not only in Ms. Colby's letter, but in all comment letters submitted, will be considered a less than adequate response.

Let me say that this BESS DEIR is one of the more inadequate I have ever reviewed. In fact, I would declare it as WHOLLY INADEQUATE on a range of issues and levels. Fortunately, because Ms. Colby and so many others have submitted such excellent letters of comment, I don't have to author a novel on this EIR's inadequacies. However, I will address some of it's more egregious ones. They are:

#### WHAT PROJECT ?!

CEQA requires that a proposed project application be complete, detailed and accurate so that the enumerated environmental impacts that need to be disclosed, reviewed and analyzed can be accomplished and that mitigation elements can be developed and imposed on the project to reduce or eliminate those impacts. The project application in this instance FAILS this first basic test.

This is a proposed BATTERY plant. The single greatest perceived environmental threat from this project (to the lives of people and wildlife, to the air and water, to devastating fires, etc.) comes from the batteries.

Yet, the brand, size, specific chemical constituents and other characteristics of the batteries, necessary to evaluate the fire potential, thermal runaway possibilities, toxic gas releases and other effects cannot be measured due to this lack of disclosure!

The written description of the project lists three 91,000 square foot battery storage buildings, three electrical substations each enclosed in a 49,000+ square foot building, 180 Power Conversion Systems (container style structures), with 60 surrounding each battery building on the ground and a 33 feet high "berm" surrounding the entire project site to "protect" the site from tsunamis and other flood events.

Project drawings show the three battery buildings, but not three substation buildings. The substations are shown as outdoor (not enclosed) structures. Does this make a difference to the EIR? Hard to say. No disclosure - no discussion - no analysis!

Project drawings only show 144 (not 180) of the Power Conversion Systems, with 48 (not 60) at each building, some (not all) of them on the ground and some (instead of none) on the roofs of the buildings. Does this make a difference to the EIR? Hard to say. No disclosure - no discussion - no analysis!

As for the "berm", there's no adequate description of its construction constituents. Will it actually hold up to a tsunami? Experts say that you need to allow for a 50 (not 33) feet allowance. Is this plan sufficient? If it is totally enclosed, will all the tsunami/flood waters spread to surrounding properties causing even more damage to them? At an applicant meeting with the public on April 24, 2024, company officials admitted that openings would be cut through the berm to facilitate movement of employees, equipment and vehicles. Will this also not allow water through, thereby flooding the battery operations and destroying any ability to "protect" the batteries from water, especially salt water, which is known to have a major deleterious effect on lithium ion batteries? Of course it will!. Not hard to say. But, for all these questions, no disclosure - no discussion- no analysis!

"Thermal runaway" is a process in lithium ion batteries whereby batteries experience a chemical reaction inside the batteries, for a variety of reasons, catch fire and just continue to burn, re-igniting, burning some more, repeating over and over, for hours, days, and, even, weeks - sometimes exploding - and, always, releasing highly contaminated, toxic gases into the surrounding area, sometimes resulting in injury, or possibly death. It is the single most concerning impact of a BESS plant operation. Yet, NOWHERE in the over 2,000 pages of the DEIR (including Appendices) does the term "thermal runaway" appear. WHY?! It leads to intense speculation as to what else is being hidden. No disclosure - no discussion - no analysis!

Relative to thermal runaway, the applicant released a study, by its consultant, called the "Offsite Consequences Analysis" (OCA) just nine days after the DEIR was released for public comment. The OCA is the first time that the impacts of thermal runaway are acknowledged by the applicant. That doesn't excuse the fact that it was not made available for review under the DEIR process and will, no doubt, be challenged by the applicant and, possibly, the city as not relevant to the comment process. This study should have been known to the city as well, meaning the DEIR release should have been delayed pending this critical information. Let's face it - NINE DAYS?! The stain over this not good for the applicant, the city, or the consultants for both. Once again, no disclosure - no discussion - no analysis!

The lack of the above deficiencies, disclosures and analysis just in the above elements of the project description (there are more) fatally flaws the project and this DEIR. Withdrawal of the project application and submittal of a new, more complete one is necessary. Needless to say, the DEIR will also have to be withdrawn and an appropriate one conducted on the "new" project.

#### WHICH PROJECT ?!

CEQA requires that any significant change in a project requires the EIR for the project to be re-done and recirculated. This is important because it appears that the applicant is changing, or may have already decided to change, the project.

The original project calls for constructing three massive battery storage buildings and appurtenant structures AND demolition and removal of the old power plant and "stacks" existing on the site. However,

the "preferred alternative" discussed in the DEIR is to build the battery plant, but not demolish the power plant and stacks.

In a letter to the city, dated May 7, 2024, and not announced publicly by the applicant or the city, the applicant stated that it "fully supports" alternative 5 in the DEIR, known as the "Enclosure Alternative". This alternative is a major departure from the proposed project - in design, footprint, structures, release of toxic gases, fire danger, and other elements. If the applicant is changing horses midstream, reliance on the old DEIR is totally inappropriate. A new application - a complete one - must be submitted, along with withdrawal of the original one, and a new EIR process engaged.

So - which project will it be? CEQA does not permit vagueness, indecisiveness, or delay in disclosing project information, in reviewing impacts of a project or in determining meaningful mitigation for those impacts.

The citizens of Morro Bay, other responsible public agencies, as well as, city decision-makers are required to have the information and the means to review, analyze and make informed and defensible decisions that are best for the city.

### MANY PROJECTS !!

This BESS project is tied to other projects and must not be considered in isolation from them.

Required as part of the process for any application first submitted on the old power plant (now Vistra-owned) property, the necessity to create a "Master Plan" for the remainder of the property has been engaged. The City, with public participation, over a period of years, created a "Plan Morro Bay" (PMB) which zoned the land use for the Vistra property, in parts, as Visitor Serving Commercial, Open Space and a Mixed Use Residential Overlay east of Embarcadero and Recreational/Commercial Fishing west of Embarcadero. Nowhere is there zoning for an industrial facility.

PMB was memorialized by the city in the city's General Plan (GP), then in the Coastal Land Use Plan (LUP), then in the Coastal Implementation Plan (IP) and, finally, in the city's Local Coastal Plan (CLP). Those documents also had to be approved by the California Coastal Commission (CCC), resulting in the "certification" of the overriding LCP. This made the LCP the legal standard of review for any development in Morro Bay. Any development not conforming to that standard would require an amendment of all above documents.

The DEIR and the project application "assume" approval of such an amendment. Anyone with any experience with the CCC knows that will not be an easy task. The EIR lightly mentions this, then skips on with no solid analysis as to how it will be achieved.

Nonetheless, the Master Plan will need to be comprehensive and as detailed as possible, with impacts disclosed and mitigation proposed. Plus, the Master Plan for the property must be developed, processed and approved, together, as part of the same application, EIR, and approval process as this project application and DEIR. It is not apparent that this process, with BESS and the Master Plan proceeding together is intended or happening. This constitutes another fatal flaw in this DEIR process.

### GROWTH INDUCING IMPACTS !!

CEQA requires, for any proposed project that will instigate, lead to, cause or, induce any other growth or development, to disclose such, and to fully review and analyze that project, its environmental impact (just like for the extant project) and any mitigation required as part of the extant proposed project's EIR process.

By requiring the above mentioned Master Plan resulting from this BESS project, the growth inducing impact provision is activated. There are others.

At a Vistra meeting with the public on April 24, 2024, a Vistra executive, in response to a direct question, stated that Vistra had no relationship to accept or store any energy produced by the proposed wind farm projects offshore of Morro Bay. Two days later, another executive, who had also spoken at the April 24<sup>th</sup> meeting, stated in the *San Luis Obispo Tribune* newspaper that Vistra was looking forward to working with the wind farm proponents and to receiving and storing the energy they produced. Aside from the mixed messaging activity, a senior executive of the applicant gave rise to the prospect of such cooperation between the entities. This triggers the growth inducing impact provisions of CEQA because having a receiving entity at which to receive and store their energy gives the wind farm companies cause to move forward with their projects. Therefore, the growth inducing environmental impacts of the wind farms project must be disclosed and analyzed in the BESS DEIR.

With a BESS plant next door to the PG&E property and reliant on PG&E's switchyard, former PG&E employees and other electrical system engineers to whom I've spoken state that PG&E will most assuredly have to expand and seriously upgrade their facilities and operations to service the BESS operations. That is a growth inducing impact on PG&E that will need to be disclosed and analyzed as part of the BESS DEIR.

Will the BESS project induce additional growth, especially in the industrial sector?

### CUMULATIVE IMPACTS !!

CEQA requires that any other projects known or reasonably anticipated to be planned or developed on the same property, on adjacent properties or within a reasonable proximity to the proposed project, in this case the BESS project, must be identified, disclosed, reviewed and analyzed with appropriate mitigation proposed when any potential environmental impacts with another or several projects combined will result in a level of cumulative environmental impact to the proximal area.

In this instance, we have already identified other projects in the "Growth Inducing Impacts" section that would certainly apply to this section on "Cumulative Impacts" - those being the remainder of the Vistra property subject to the Master Plan process, the wind farms projects, and the PG&E potential project(s). Another project for this category would be any changes to the Morro Bay harbor resulting from expanded port operations due to the needs of some of the identified projects.

The important consideration is that all the identified and reasonably anticipated projects' impacts be reviewed for any and all cumulative impacts that result when all projects are combined and in consideration of the whole proximal area of the development projects.

### WHAT THERMAL RUNAWAY ?!

"Thermal runaway" is a process in lithium ion batteries whereby batteries experience a chemical reaction inside the batteries, for a variety of reasons, catch fire and just continue to burn, re-igniting, burning some more, repeating over and over, for hours, days, and, even, weeks - sometimes exploding - and, always, releasing highly contaminated, toxic gases into the surrounding area, sometimes resulting in injury, or possibly death. Thermal runaway is the single most concerning impact of a BESS plant operation. Yet, NOWHERE in the over 2,000 pages of the DEIR (including Appendices) does the term "thermal runaway" appear. WHY?! It leads to intense speculation as to what else is being hidden. No disclosure - no discussion - no analysis!

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AND WHILE I'M AT IT !!

There are so many other issues in the BESS DEIR to discuss, but many others have submitted some great comments on them. I will note a couple:

In the alternatives section, one major alternative is missing - the OTHER LOCATION ALTERNATIVE. In real estate, the old axiom goes: LOCATION - LOCATION - LOCATION! I am not opposed to battery energy storage, although the danger of those battery systems need addressing - and quickly. For heavens sake, I've spent over half a century trying to save our environment. And the impacts of climate change are real and need serious attention.

But, putting a dangerous industrial plant right in the center of a beautiful coastal town, in the heart of its tourist district, which is the economic lifeblood for the citizens, is just plain STUPID! And thoughtless! Find a more remote location. Just because a company owns a piece of property does not give it the right to endanger the lives and livelihoods of its neighbors. The owners only purchased this land recently. According to news reports, they are spending billions to buy other properties. May I suggest a change of someplace more appropriate to generate profits. It will save their bottom line (it's expensive when companies lose these engagements - ask me about some that I have dealt with previously), and will save the residents of Morro Bay a lot of grief.

WHAT? ME? WORRY?!

No. I'm not worried. I am disappointed that this DEIR is so inadequate. I sincerely hope that the city will completely review (I know - with your consultants) ALL of the comments and attachments, footnotes, etc., that are being submitted by members of the public and responsible agencies. I ask that ALL the responses are made by the city and not, as so often happens in other jurisdictions, dictated by the applicant. The ones who need to worry are those that provide or enable false or misleading information or refuse to provide information at all. I am not casting aspersions or making any accusations. I would just caution that sometimes one is surprised by what comes out in the wash.

Thank you for your consideration.

Sincerely,

  
Steve Ray

CC: MB Mayor and City Council  
MB Planning Commission  
California Coastal Commission  
File

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RECEIVED

## ERoEI for Beginners

MAY 28 2024

Posted on May 25, 2016 by Euan Mearns, in ENERGY MATTERS <https://euanmearns.com/eroei-for-beginners/>

City of Morro Bay

Community Development Dept.

The Energy Return on Energy Invested (ERoEI or EROI) of any energy gathering system is a measure of that system's efficiency. The concept was originally derived in ecology and has been transferred to analyse human industrial society. In today's energy mix, hydroelectric power ± nuclear power have values > 50. At the other end of the scale, solar PV and biofuels have values < 5.

It is assumed that ERoEI > 5 to 7 is required for modern society to function. This marks the edge of The Net Energy Cliff and it is clear that new Green technologies designed to save humanity from CO<sub>2</sub> may kill humanity through energy starvation instead. Fossil fuels remain comfortably away from the cliff edge but march closer to it for every year that passes. The Cheetah symbolises an energy system living on the edge.

I first came across the concept of Energy Return on Energy Invested (ERoEI) several years ago in Richard Heinberg's book *The Party's Over* [1]. I had never contemplated the concept before and I was immediately struck by its importance. If we used more energy to get the energy we need to survive then we will surely perish.

Shortly thereafter I joined The Oil Drum crew and had the great pleasure of meeting Professor Charles Hall, the Godfather of EROI analysis who developed the concept during his PhD studies and first published the term in 1977. ERoEI would become a point of focus for Oil Drum posts. Nate Hagens and David Murphy, both Oil Drum crew, have now completed PhDs on ERoEI analysis aided and abetted by the conversation that the Oil Drum enabled.

But recently I have received this via email from Nate:

*10 years on the same questions and issues are being addressed – (and maybe 40 years on for Charlie). A new tier of people are aware of EROI but it is still very fringe idea?*

Are we wrong to believe that ERoEI is a fundamentally important metric of energy acquisition or is it simply that the work done to date is not sufficiently rigorous or presented in a way that economists and policy makers can understand. At this point I will cast out a bold idea that money was invented as a proxy for energy because ERoEI was too complex to fathom.

And I have this via email from my friend Luis de Sousa who did not like the Ferroni and Hopkirk paper [3] nor my post reviewing it:

*On the grand scheme of things: PV ERoEI estimates range from 30 down to 0.8. Before asking the IEA (or whomever) to start using ERoEI, the community producing these estimates must come down to a common, accepted methodology for its assessment. As it stands now, EROI is not far from useless to energy policy.*

And while I disagree with Luis on a number of issues, on this statement I totally concur. So what has gone wrong? Professor Hall points out that it is not the concept that is at fault but non-rigorous application of certain rules that must be followed in the analysis. In this post I will endeavour to review the main issues and uncertainties, and while it is labelled “for Beginners”, I will flirt with an intermediate level of complexity.

## What is EROEI?

EROEI is simply the ratio of energy gathered to the amount of energy used to gather the energy (the energy invested):

$$\text{EROEI} = \text{energy gathered} / \text{energy invested}$$

Note that in common vernacular the term energy production is used. But in fact humans produce very little energy, but what distinguishes us from other species is that we have become very efficient at gathering energy that already exists and building machines that can convert the energy to goods (motor cars, televisions and computers) and services (heat and light and mobility) that collectively define our wealth.

This began by gathering fire wood and food and progressed to gathering coal, oil and natural gas. This led to gathering U and Th and learning how to convert this to enormous amounts of thermal and electrical energy. And now we attempt to gather solar energy through photovoltaics, wind turbines and liquid biofuels.

The prosperity of humanity depends upon the efficiency with which we gather energy. 100 years ago and 50 years ago we hit several jackpots in the form of vast coal, oil and gas deposits. These were so rich and large that energy virtually spewed out of them for next to no energy or financial investment. Examples include the Black Thunder coal field (USA), the Ghawar oil field (Saudi Arabia) and the Urengoy gas field (Russia) to name but a few. But these supergiant deposits are now to varying degrees used up. And as global population has grown together with expectations of prosperity that are founded on energy gathering activities, humanity has had to expand its energy gathering horizons to nuclear power, solar power and energy from waste. And it is known that some of the strategies deployed have very low EROEI, for example corn ethanol is around 1 to 2 [2] and solar PV between 1 and 5 [2,3] depending upon where it is sited and the boundaries used to estimate energy costs. Consider that an EROEI greater than 5 to 7 is deemed necessary to sustain the society we know (see below) then it is apparent that we may be committing energy and economic suicide by deliberately moving away from fossil fuels.

Low EROEI is expected to correlate with high cost and in the normal run of events investors should steer clear of such poor investment returns. But the global energy system is now dictated by climate concern, and any scheme that portends to produce energy with no CO<sub>2</sub> is embraced by policymakers everywhere and financial arrangements are put in place to enable deployment, regardless of the EROEI.

# Net Energy

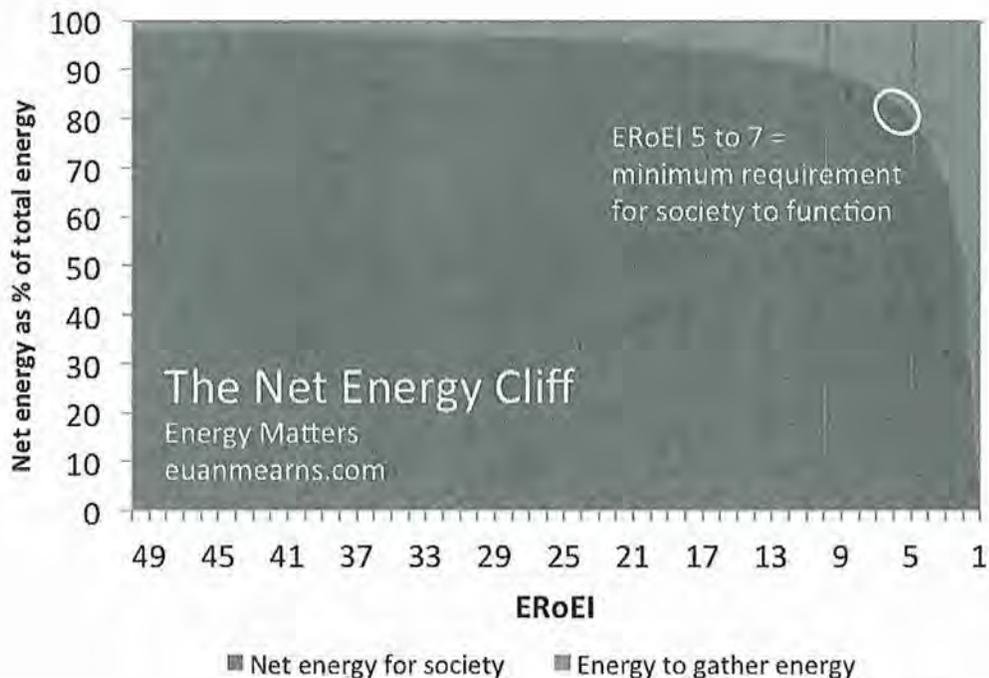
Net energy is the close cousin of EROEI being the surplus energy made available to society from our energy gathering activities. It is defined simply as:

$$\text{net energy} = \text{ERoEI} - 1$$

If we have EROEI = 1, then the net energy is zero. We use as much energy to gather energy as energy gathered. The “1” always represents the energy invested. If EROEI falls below 1 we end up with an energy sink. Low EROEI systems are effectively energy conversions where it may be convenient or politically expedient for us to convert one energy carrier into another with little or no energy gain. Corn ethanol is a good example where fertiliser, natural gas, diesel, electricity, land, water and labour gets converted into ethanol, a liquid fuel that can go in our cars. But it does leave the question why we don't just use liquefied natural gas as a transport fuel in the first place and save on all the bother that creating corn ethanol involves?

## The Net Energy Cliff

Many years ago during a late night blogging session on The Oil Drum, and following a post by Nate Hagens, I came up with a way of plotting EROEI that for many provided an instantaneous understanding of its importance. The graph has become known as the net energy cliff, following nomenclature of Nate and others.



**Figure 1** *The Net Energy Cliff shows how with declining EROEI society must commit ever larger amounts of available energy to energy gathering activities. Below EROEI = 5 to 7 such large numbers of people would be working for the energy industries that there would not be enough people left to fill all the other positions our current altruistic society offers.*

The graph plots net energy as a % of EROEI and shows how energy for society (in blue) varies with EROEI. In red is the balance being the energy used to gather energy.

It is the shape of the boundary between blue and red that is of interest. If we start at 50 and work our way down the EROEI scale moving to the right, we see that energy invested (red) increases very slowly from 2% at EROEI=50 to 10% at EROEI=10. But beyond 10, the energy invested increases exponentially to 20% at EROEI=5 and to 50% at EROEI=2. At EROEI = 1, 100% of the energy used is spent gathering energy and we are left with zero gain.

This is important because it is the blue segment that is available for society to use. This pays for infrastructure, capital projects, mining and manufacturing, agriculture, food processing and retailing, education, healthcare and welfare, defence and government. In fact it is the amount of net energy that powers everything in society as we know it today. The net energy from past energy gathering has accumulated to create what we identify as capital and wealth. Nothing could be more important, and yet the concept remains on the fringe of energy policy and public awareness. One of the problems is that measuring EROEI consistently is difficult to do. One problem is retaining objectivity. If you manufacture PV modules you are unlikely to claim that the EROEI is less than 5, and there are a multitude of variables that can be adjusted to provide whatever answer is deemed to be good.

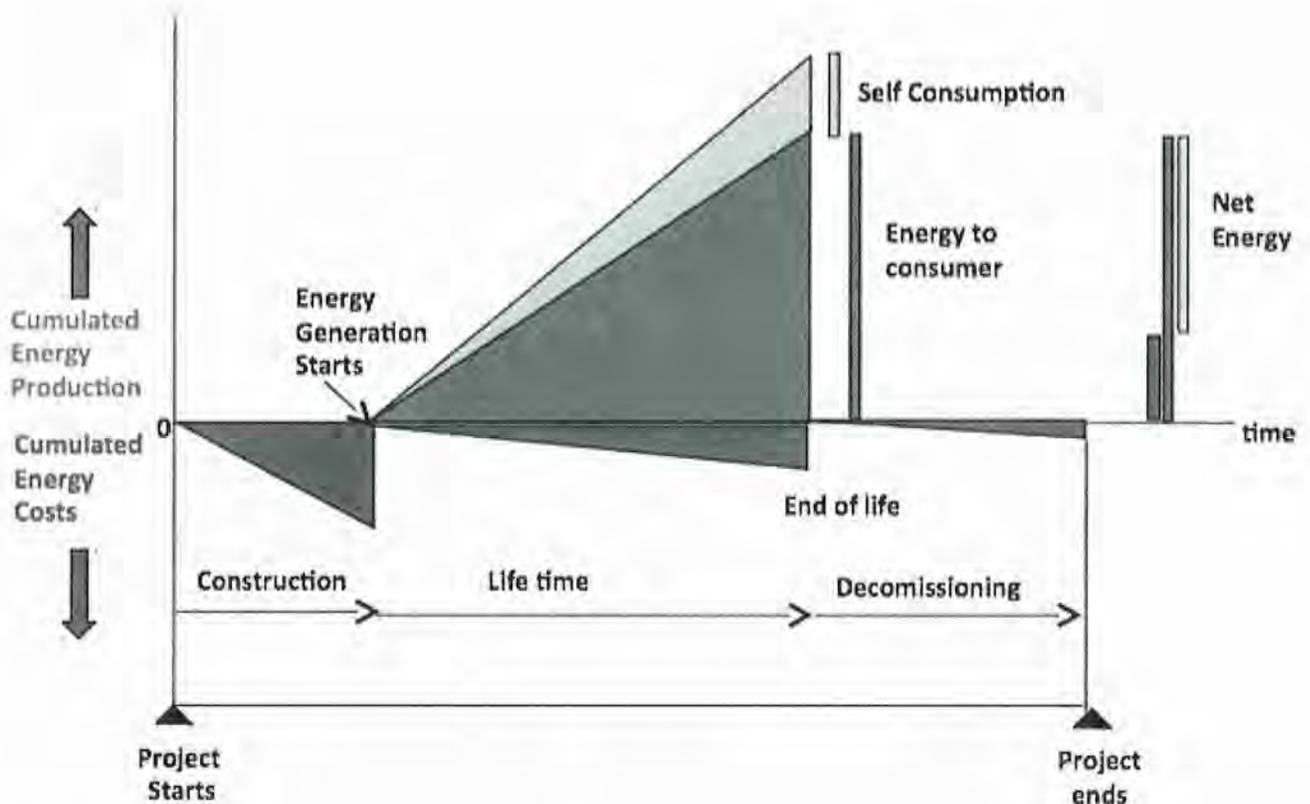
This depiction of Net Energy is also useful in defining that all energy and labour can be divided into energy and labour used in the energy industries and the industries that support them and energy and labour used by society that consumes the surpluses produced by the energy industries. More on this later.

It has been assumed by many that  $EROEI > 7$  was required for the industrial society we live in to function although the source of this assertion remains elusive. But the blue-red boundary provides a clear visual picture of why this may be so. Below 7 and humanity falls off the net energy cliff where a too large portion of our human resources and capital need to be invested in simply staying alive to the detriment of the services provided by net energy such as health care, education and pensions.

## **System boundaries**

### **Energy Inputs**

One of the main uncertainties in EROEI analysis is where to set the system boundaries. I have not found a simple text or graphic that adequately explains this vital concept.



**Figure 2** A simplified scheme for an energy system divided into construction, operation and decommissioning with accumulated inputs and outputs. Graphic from this excellent presentation by [Prieto and Hall](#)

Figure 2 provides an illustration of the life cycle of an energy system divided into three stages 1) construction, 2) operation and 3) decommissioning. Energy inputs occur at each stage but energy outputs will normally only occur during the operational phase. It should be straight forward to account for all the energy inputs and outputs to calculate EROEI but it isn't. For example many / most of our energy systems today are still operational. We do not yet have final numbers for oil produced from single fields. And the decommissioning energy costs are not yet known. Most wind turbines ever built are still operational, producing energy and the ultimate energy produced will depend upon how long they last. And then perhaps some turbines are offered a new lease of life via refurbishment etc.

Energy inputs can normally be divided as follows [2]:

1. On site energy consumption
2. Energy embedded in materials used
3. Energy consumed by labour
4. Auxiliary services

Moving from 1 to 4 may be considered expansion of the EROEI boundary where energy embedded in materials and energy consumed by labour are added to on-site energy consumption. There follows some examples of ambiguity that remains in deciding what to include and what to leave out. These examples are given for purely illustrative purposes.

No one should question that the electricity used by a PV factory should be included. But do you include electricity / energy used to heat or cool the factory? Or just the electricity used to run the machines? Including heating or cooling introduces a site specific variable which will mean that the energy inputs to a PV panel may vary according to where it was manufactured. There are many such site specific variables like transport, energy costs, labour energy costs, health and safety energy costs etc, which when combined in our globalised market has made China the lowest energy cost centre for PV manufacturing today.

It is clear to me that the energy cost of all materials used in the energy production process must be included. And this should include materials consumed at the construction, operational and decommissioning stages. In the oil industry this will include the materials in the oil platform, the helicopter and the onshore office. In the solar PV industry this will include all the materials in the panels, in the factory, and in the support gantries and inverter. As a general rule of thumb, massive energy gathering systems that contain a huge amount of materials will have reduced EROEI because of the energy embedded in those materials.

It is also clear to me that the energy cost of all labour should be included in the EROEI analysis for construction, operation and decommissioning. But it is far less clear how it should be calculated. The energy consumed by labourers varies greatly from country to country and with time. Should we just include the energy consumed by a labourer on his/her 8 hour shift? Or should we include the full 24/7? Should the energy consumed by labourers getting to and from work be included? – of course it should. Should the energy consumed on vacations be included? – not so clear. And how can any of this be calculated in the first place?

The standard way to calculate the energy cost of labour is to examine the energy intensity of GDP. For most countries, the total amount of primary energy consumed is roughly known and the total GDP is known. This provides a means of converting MJ to \$ and we can then look at the \$ earnings of a labourer to get a rough handle on the notional energy use that may be attributed to his salary scale. This is far from perfect but is currently the only practical method available.

Auxiliary services become even more difficult to differentiate. Some argue that the energy cost of the highway network, power distribution network and services like schools and hospitals should be pro-rated into new energy production systems. My own preference is to generally exclude these items from an EROEI analysis unless there are good reasons for not doing so. I think it is useful to go back to the question are we expending energy on energy gathering or are we expending energy on society and most of the infrastructure upon which new energy systems depend was built using prior surpluses allocated to society. In my view it becomes too complex to pro-rate these into an EROEI calculation. The power grid delivering power to the PV factory already existed. But if a new power line needs to be built to export renewable electricity then that should be accounted for.

## Energy Outputs

One might imagine that measuring the energy output would be more straightforward, but it is not so. Many earlier studies on the EROEI of oil set a boundary at the well head or on site tank farm. And it is relatively straightforward to measure the oil production from a field like Forties in the North Sea. But crude oil itself is rarely used directly as a fuel. It is the refined products that are used. To actually use the oil we need to ship or pipe it to shore and then on to a refinery. The energy cost of transport may add 10% to energy inputs and refining may add yet another 10%. It has been suggested that one approach is to calculate EROEI at Point of Use. Crude oil on an offshore platform is of no use to anyone. Gasoline in a filling station is what we want and all the energy inputs involved in getting the gasoline to the forecourt need to be counted.

But here we meet another dilemma. The refinery may produce paraffin and gasoline. The EROEI of both are likely to be similar at the refinery gate. But the gasoline is burned in an engine to produce kinetic energy used for transport and in so doing about 70% of the energy is lost as waste heat. The paraffin may be burned in a stove with near 100% conversion efficiency to space heating. Do we reduce the EROEI of gasoline by 70% to reflect energy losses during use?

This introduces the concept of energy quality where we know that final energy conversions are in three main forms 1) heat 2) motion and 3) electricity that has a myriad of different uses. Is it really possible to compare these very different energy outputs using the single umbrella of EROEI? The routine followed by EROEI analysts to date is to adjust EROEI for energy quality though I'm unsure how that is done [2]. Another option that I like is to hypothetically normalise all outputs to a single datum, for example MWh of electricity (see below). But this again gets to a level of complexity that is beyond this blog post.

There are some other important energy quality factors. Dispatch for electricity is one. Producing a vast amount of electricity from wind on a stormy Sunday night has little to no value. While the ability to produce electricity on demand at 6 pm on a freezing Wednesday evening in January (NH) is of great value. Curtailed wind should clearly be deducted from wind energy produced in the EROEI calculation. Just like the oil spilled from the Deep Water Horizon in the Gulf of Mexico should not be counted as oil produced from the Macondo field.

External environmental factors may also have to be considered as part of the energy quality assessment. It is clear that the oil spilled from the Deep Water Horizon had to be cleared up immediately and the energy cost of doing so almost bankrupted BP. But it is less clear that the energy cost of eliminating CO<sub>2</sub> emissions needs to be borne by the energy production industries. For example, the cost of carbon capture and storage would fall on the consumer and not the energy producer.

## Using energy proxies

In EROEI analysis direct energy use can normally be measured, for example gas and diesel used on an oil platform or the electricity used in a factory. But the indirect energy consumed by, for example materials and labour, are less easy to measure and are often based on proxies. It is nearly impossible to measure the energy embedded in an offshore oil platform. Instead the mass of steel and the number of man days of labour used in construction can be estimated and from these the energy expended and now embedded in the platform can be estimated.

As already discussed, the standard way of estimating the energy cost of labour is to use the energy intensity of GDP data from the countries in question combined with workers salaries.

For materials Murphy et al [2] provide this useful summary (Figure 3)

**Table 3.** Various conversions used commonly in EROI analysis.

Unit	Conversion Factor	Reference
<b>Primary Energy (Heat Content)</b>		
Oil	6.12 (GJ/bbl)	[29]
Natural Gas	41 (KJ/m <sup>3</sup> )	[29]
Coal	22 (GJ/tonne) <sup>‡</sup>	[29]
<b>Energy Intensities (for year 2005)</b>		
	<b>MJ/\$</b>	
average U.S. economy	8.3	[14]
average heavy industry	14	[14]
average oil & gas exploration and dev.	20	[11]
<b>Material Costs</b>		
	<b>GJ/tonne</b>	
Aluminum	241.2	[30]
	100.2	[31]
	272.2	[32]
	11.7 <sup>b</sup> –140	[33]
Steel	32.4	[30]
	9.43 <sup>c</sup> –25.2 <sup>d</sup>	[33]
Copper	200.2	[31]
	93.7	[34]
	104.4	[35]
	51.7–179.7	[36]
	0.08–255.7	[37]
	5.5	[32]
Cement	5.5	[32]
Iron Ore	0.34–2.9	[37]
Stone	0.021–0.057	[37]
Limestone	0.034	[37]
Lead	1.4–31.1	[37]
Zinc	76	[37]
Phosphate	0.083–0.349	[37]
<b>Glass</b>		
Molten Flint Glass	14.2	[33]
Molten Emerald Glass	11.7	[33]
Molten Amber Glass	13.2	[33]
<b>Plastics</b>		
Polyvinyl Chloride (PVC)	59.8	[33]
General Purpose Polystyrene (GPPS)	84.8	[33]
High Density Polyethylene (HDPE)	89.5	[33]
High Impact Polystyrene (HIPS)	87.4	[33]
Low Density Polyethylene (LDPE)	93.9	[33]
Polyethylene Terephthalate (PET)	88.9	[33]
Polypropylene (PP)	88.5	[33]
Linear Low Density Polyethylene (LLDPE)	83.4	[33]
<b>Wood<sup>e</sup></b>		
Dry Lumber	2.33	[33]
Green Lumber	0.95	[33]

<sup>‡</sup> average U.S. coal production; <sup>b</sup> secondary aluminum ingot; <sup>c</sup> Electronic Arc Furnace Billet; <sup>d</sup> Hot Rolled Coil (Integrated Mill); <sup>e</sup> Average of hardwood and softwood.

**Figure 3** *The estimated energy content of common materials [2]*

From this the most striking feature is the vast range within certain materials and between materials. For example aluminium ranges from 100 to 272 GJ/tonne. Steel 9 to 32 GJ/tonne. Part of this will be down to methodological differences in the way the numbers are derived. But part of it may be down to real differences reflecting different energy efficiencies of smelting plants.

## **ERoEI of Global Fuels and Energy Flows**

So what is the current status of ERoEI in the global energy mix? Hall et al 2014 [4] provide the following summary table which is the foundation of the summary graph below.

**Table 1**

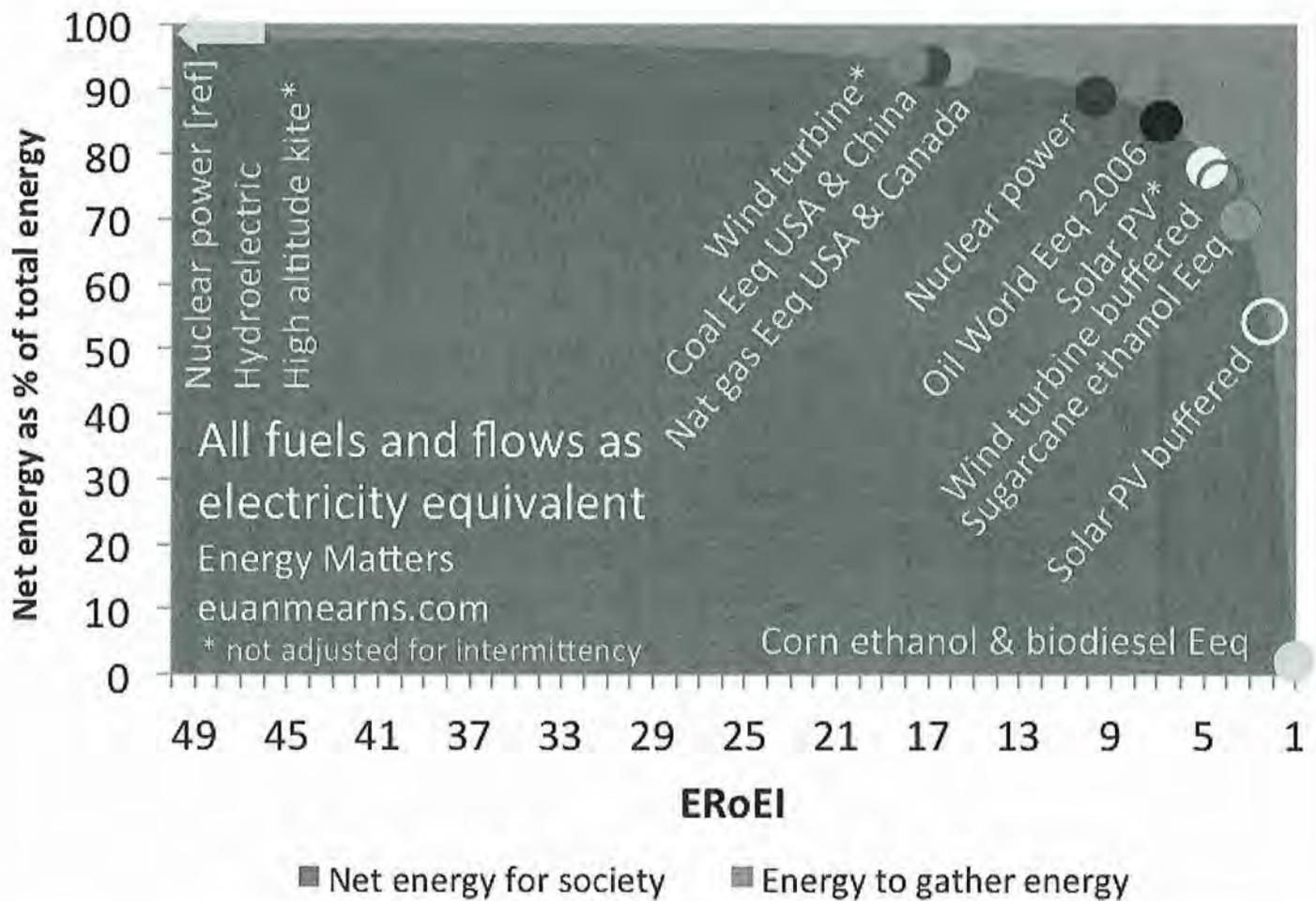
Published EROI values for various fuel sources and regions (adapted from Murphy et al. (2011)).

Resource	Year	Country	EROI (X:1) <sup>1</sup>	Reference
<b>Fossil fuels (Oil and Gas)</b>				
Oil and gas production	1999	Global	35	Gagnon, 2009
Oil and gas production	2006	Global	18	Gagnon, 2009
Oil and gas (Domestic)	1970	US	30	Cleveland et al. 1984, Hall et al. 1986
Discoveries	1970	US	8	Cleveland et al. 1984, Hall et al. 1986
Production	1970	US	20	Cleveland et al. 1984, Hall et al. 1986
Oil and gas (Domestic)	2007	US	11	Guilford et al. 2011
Oil and gas (Imported)	2007	US	12	Guilford et al. 2011
Oil and gas production	1970	Canada	65	Freise, 2011
Oil and gas production	2010	Canada	15	Freise, 2011
Oil, gas & tar sand production	2010	Canada	11	Poisson and Hall, in press
Oil and gas production	2008	Norway	40	Grandell, 2011
Oil production	2008	Norway	21	Grandell, 2011
Oil and gas production	2009	Mexico	45	Ramirez, in preparation
Oil and gas production	2010	China	10	Hu et al. 2013
<b>Fossil fuels (Other)</b>				
Natural Gas	2005	US	67	Sell et al. 2011
Natural Gas	1993	Canada	38	Freise, 2011
Natural Gas	2000	Canada	26	Freise, 2011
Natural Gas	2009	Canada	20	Freise, 2011
Coal (mine-mouth)	1950	US	80	Cleveland et al. 1984
Coal (mine-mouth)	2000	US	80	Hall and Day, 2009
Coal (mine-mouth)	2007	US	60	Balogh et al. unpublished
Coal (mine-mouth)	1995	China	35	Hu et al. 2013
Coal (mine-mouth)	2010	China	27	Hu et al. 2013
<b>Other non-renewables</b>				
Nuclear	n/a	US	5 to 15	Hall and Day, 2009, Lenzen, 2008
<b>Renewables<sup>2</sup></b>				
Hydropower	n/a	n/a	>100	Cleveland et al. 1984
Wind turbine	n/a	n/a	18	Kubiszewski et al. 2010
Geothermal	n/a	n/a	n/a	Gupta and Hall, 2011
Wave energy	n/a	n/a	n/a	Gupta and Hall, 2011
<b>Solar collectors<sup>2</sup></b>				
Flat plate	n/a	n/a	1.9	Cleveland et al. 1984
Concentrating collector	n/a	n/a	1.6	Cleveland et al. 1984
Photovoltaic	n/a	n/a	6 to 12	Kubiszewski et al. 2009
Passive solar	n/a	n/a	n/a	Cleveland et al. 1984
<b>Biomass</b>				
Ethanol (sugarcane)	n/a	n/a	0.8 to 10	Goldemberg, 2007
Corn-based ethanol	n/a	US	0.8 to 1.6	Patzek, 2004, Farrell et al. 2006
Biodiesel	n/a	US	1.3	Pimentel and Patzek, 2005

(1) EROI values in excess of 5:1 are rounded to the nearest whole number.

(2) EROI values are assumed to vary based on geography and climate and are not attributed to a specific region/country.

**Figure 4** Summary of the EROI for a range of fuels and renewable energies.



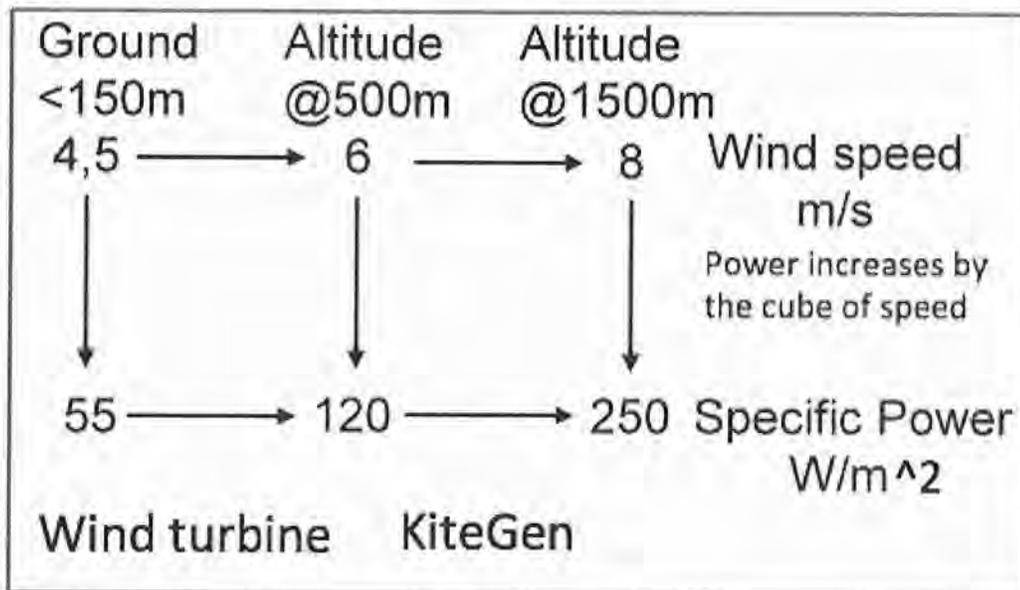
**Figure 5** Placing main energy sources on The Net Energy Cliff framework shows that hydro-electric power, high altitude kites and perhaps nuclear power have very high ERoEI and embracing these technologies may prevent humanity from falling off the Net Energy Cliff. The new bright Green energies of bio-fuels, solar PV and buffered wind (see below) are already over the cliff edge and if we continue to embrace these technologies human society may perish as we expend too large a portion of our energy endowment simply getting energy. Fossil fuels remain comfortably to the left of the cliff edge but are marching ever closer towards it with every year that passes. Eeq = electricity equivalent (see below).

In order to compare fossil fuels with electricity flows on a single diagram it is essential to reduce all of the energy types to a common datum. Its quite simply not valid to compare the ERoEI of coal at the mine mouth with nuclear power since in converting the coal to electricity, much of the energy is lost. The easiest route is to rebase everything to electricity equivalent (Eeq) where I follow the BP convention and adjust the ERoEI of fossil fuels by a factor of 0.38 to account for energy conversion losses in a modern power station.

In an earlier thread, Owen posted a link to a pre-print by Weisbach et al [5] who follow similar methodology reporting all data as electricity. To a large extent their numbers are similar to those reported here with the exception of nuclear that is quoted to be 75. Weisbach report values for solar

PV and wind that are “buffered” to include the energy cost of intermittency. This reduces the EROEI for solar PV by about half and wind by a factor of 4. “Buffered” EROEIs are therefore also included in Figure 6.

The inclusion of high altitude kite is based on a calculation provided by site sponsor KiteGen. I have checked the calculation and am satisfied that the EROEI is potentially  $\gg 50$ . This will be the subject of another post. But suffice to say here that wind speed at altitude may be double that on the ground and power increases by the cube of wind speed. And the mass of the KiteGen structure is a small fraction of a large wind turbine. Hence it is theoretically straightforward to reach an EROEI at altitude that is many multiples of the EROEI of a wind turbine.



**Figure 6** At altitude the wind speed may be double that on the ground. Accessing that kinetic energy resource provides potential for a 2 to 4 fold uplift in the power available for wind generation. This calculation does not include further uplift from higher capacity factor and reduced intermittency at altitude.

The key and fundamental observation from Figure 6 is that three energy sources potentially have EROEI  $\gg 50$  making them vastly superior to all others using this metric. These are hydroelectric power, possibly nuclear power (depending upon whose numbers are believed) and possibly high altitude wind power once the technology matures.

These primary high EROEI sources are followed by coal and natural gas which are the most viable and easily accessible energy sources for electricity today. And yet energy policies are dictating that coal be phased out. This will not matter for so long as natural gas remains plentiful at high EROEI. The high EROEI group may also include nuclear power depending upon whose EROEI numbers one believes.

Biofuels are already over the net energy cliff and should never have been pursued in the first place. Solar PV is at best marginal, at worst an energy sink.

There is a vast range in estimates for nuclear power from 5 to 75 [4, 5] and it is difficult to make sense of these numbers. Nuclear power either sits close to the cliff edge or is a high EROEI low carbon saviour of humanity. Oil will not be used for electricity production and the fact it sits close to the cliff edge today in Eeq form does not matter too much since the energy quality of oil has a special status as an essential transport fuel and this will unlikely change much in the decades ahead.

## **Concluding thoughts**

The concept of EROEI is vital to understanding the human energy system. 50 years ago, our principal sources of energy – oil, gas and coal – had such high net energy return that no one need bother or worry about EROEI. Vast amounts of net energy were simply available for all who had the level of technological development to build a power station and a transmission grid. It is part of human nature to “high grade” mineral deposits targeting the richest seams first. In economic terms these return the biggest profit and in energy terms when it comes to oil, gas and coal, they return the highest levels of net energy. An inevitable consequence of this aspect of human nature commonly known as greed is that we have already used up the highest EROEI fossil fuel resources and as time passes the EROEI of new resources is steadily falling. This translates to a higher price required to bring on that marginal barrel of oil.

At the present time, our energy web comprises a myriad of different resources. The legacy supergiants – Ghawar, Black Thunder and Urengoy et al – are still there in the mix supplemented by a vast range of lower EROEI (more expensive) resources. The greatest risk to human society today is the notion that we can somehow replace high EROEI fossil fuels with new renewable energies like solar PV and biofuels. These exist within the energy web because they are subsidised by the co-existing high EROEI fossil fuels. The subsidy occurs at multiple levels from fossil fuels used to create the renewable devices and biofuels to fossil fuels providing the load balancing services. Fossil fuels provide the monetary wealth to pay the subsidies. Society is at great risk from Greens promoting the new renewable agenda to politicians and school children whilst ignoring the thermodynamic impossibility of current solar PV technology and biofuels ever being able to power human society unaided. The mass closure of coal fired power stations may prove to be fatal for many should blackouts occur.

Wind power, and in particular high altitude wind power, may be different although in the case of ground-based wind turbines care must be taken in moving offshore to ever larger devices that consume ever larger quantities of energy in their creation. And to be viable, ground based turbines must be able to prove they can deliver dispatchable power without subsidies.

It is proposed that money was invented as a means of exchange for the work energy does on our behalf. If we lived in a society with a single global currency (the EJ) and without taxes or subsidies, then money may represent a fair proxy for EROEI although distortions would remain from the different efficiencies with which that money (EJ) was spent. However, in the real world, different currencies, interest rates, debts, taxes and subsidies exist that allow the thermodynamic rules of the energy world to be bent, albeit temporarily. We are at risk of exchanging gold for dirt.

## **Acknowledgement**

The post was much improved by comments provided by Prof Charles Hall.

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City of Morro Bay  
Attn: Kim Fowler  
955 Shasta Ave  
Morro Bay CA 93442

RECEIVED

MAY 28 2024

5/24/2024

Dear Ms. Fowler,

City of Morro Bay  
Community Development Dept.

I am a 37 year resident of Morro Bay and I am opposed to The BESS project for Morro Bay.

The location for The BESS project is too close to the waterfront and the many residents who live here and tourists who visit, year around. Many, like myself, are elderly and would be difficult to evacuate in the event of fire or "thermal runaway". My friends and I are very frightened about this. Many of us, also, live in very old houses that would be impossible to seal off from toxic fumes. My home is 1930's. The idea that the fumes would stay in the area of the plant, is ridiculous. The wind needs to be studied HERE and not in Nipomo or SLO Airport area. Removing tourists from the beach and embarcadero, during an "event" would also be next to impossible, to say nothing of our precious high school students (not even mentioned until page 346 of the report! ")

As far as the MASTER PLAN for that area, there is NOTHING that would be compatible with a BESS Facility. Who would buy housing next to something like this? Or bring their children to play in a park or recreation area

Near this industry.

The noise is a HUGE concern as well (during construction phase) and will destroy our way of life here, which is currently quiet and peaceful. The Birds will leave and this is a bird sanctuary. The others are endangered and would be disturbed as well. The TOWN is dependent on income from tourism and the people will not come here. Everyone has heard of the danger of these BESS projects. Our economy will be destroyed. The trucks and traffic will also be a huge disruption.

The idea of "thermal runaway" was not even in the EIR!! This must be addressed. This project is not coastal-dependent and therefore is contrary to the Coastal Act priorities. It is a flood zone in that area and we could not even keep our sewer plant there.

The project would completely change our way of life here, destroy tourism, and hurt ~~us~~ our birds and animals as well. ANY risk of release of toxic fumes is too much for our community!! ~~It is a~~

If Vistra is going to change their plan to individual containers, then it is a DIFFERENT project and needs to be resubmitted and a new EIR done! It is outrageous to even consider this location for a BESS facility.

Thank you, Patricia Anderson

P.S. I do not have a computer OR internet and had to read the EIR on my phone.

MAY 28 2024

## BESS Failures

City Clerk

It is a daunting challenge to evaluate the cause of Battery Energy Storage Systems (BESS) failures due to the lack of transparency by the practitioners of this lithium battery storage technology. Vistra touts a dramatic decrease in such incidents over the past 15 years. This certainly is one way to look at the data on this subject but not necessarily unbiased. Reports of such conflagrations go back to the year 2011 with 68% of them not indicating the root cause of the failure. This critical lack information allows them to pick and choose what they want to tout regarding safety and hide what could challenge their claims. They hide behind proprietary concerns over their intellectual property and the need to protect themselves from legal liability. This lack of public transparency is certainly disturbing since this is a critical consideration as to whether such a facility can safely be cited on the Morro Bay waterfront and estuary.

Of particular concern to me is the size of the BESS facilities that have come online over the past 15 years and particularly the last 5. BESS facilities 10-15 years ago were generally under 5 MW. The next 5 years saw them increase to between 5 and 50 MW with the trend range continuing to increase to between 50-300 MW. This would be a healthy growth if failures, while statistically decreasing, are becoming more horrific due to their scale. The curse of BESS facilities is initial fires often lead to thermal runaway reactions. These can not be stopped by any common firefighting techniques since they are not true fires. These high temperature runaway reactions easily reach temperatures of over 1000 degrees and do not require oxygen to proceed. They also release large amounts of toxic, corrosive gasses that cannot easily be contained.

In the BESS failure data on the 32 % of incidences where there is some information about when failures are likely to occur, the incidence is most likely to happen in the first three years: year 1—44%, year 2—27%, year 3—14%. Over the next three years there is still a 12% chance and in year 6 there is still a 2% chance of a system failure. The good news is that if a facility survives for seven or more years, the chance of system failure is low, but the data is not robust enough to say it will ever be nil. However, the hazards posed by a BESS facility are constant whenever it fails.

### Fighting a BESS fire and runaway reaction

Below is a table of some of the demands of dealing with a BESS failure. My understanding is that each failure is unique depending on size and location of the Bess facility. If one is to be located on the Morro Bay waterfront, it is important to consider how the unique site will be impacted before, during and after the facility failure. This sort of information is difficult to find in any single location and my knowledge is not that of a professional firefighter and a hazardous environment expert. Only partial training is often given to chemists about such activities and mostly is how to safely evacuate if you cannot safely remedy the fire or spill. Also, while writing about BESS failures, a 250MW BESS facility in Otay Mesa had a serious failure. Some details gleaned from the

San Diego press provided current, important practices for dealing with such an emergency. These practices may be somewhat site specific and will likely continue to evolve as more failures occur. The table below contains a column for Otay Mesa based softly (numbers are soft and could vary significantly) on what was required. The second column scales the Otay Mesa incident emergency requirements to the larger size of the proposed BESS facility for Morro Bay. Certainly, the sites are different, and availability of resources are significantly different between Morro Bay and San Diego.

The discovery of the initial fire was made Thursday afternoon (May 23, 2024 (?)). The fire suppression system was activated. No idea how long to make this decision, but hopefully it was relatively quick to confirm the fire and emergency plan implemented. Activating the fire suppression system involves open hydrants at the site with a capability to provide a flow of 350 gpm. These hydrants are part of the city's well water system. I have no idea how long the well could continue such a flow but expect design parameters were well within what was needed. I am unsure how long the suppression system was left on before turning it off.

Thursday evening a "few" batteries reignited. This is a very serious sign as it likely means a runaway reaction was beginning. Presumably they did not believe this, at least at this time. I do not know if they made that call and on what information. The action they reported to have taken was to ventilate the area where the "fire" (?) was centered. Their analysis described the result as "relatively under control". I believe ventilating the area involves opening vents, likely very large vents, to remove hot gasses. This is disconcerting to me because this would allow any toxic, corrosive gasses to be released into the local environment. How this was monitored was not discussed.

Also, second guessing what they did is a terrible type of "Monday morning quarterbacking". I assure you that is not what I am doing although I may have the advantage of hind sight. What is important to take away from this is the pressure these people were under must have been massive and they likely did what they considered essential to save the facility and the area. An emergency response team was called up which consisted of 40 firefighters and 5 fire trucks. When they arrived and took control of the incident is not clear. They likely knew that this was a very serious problem they were now responsible for and one that has suggested actions to be taken but has no sure cures.

Friday night some batteries flared again. At this point, there is no doubt that there is a runaway reaction, the worst possible outcome. I saw a picture of the ladder trucks with their ladders fully extended to get higher than the fire and they were pouring water on the hot-spots. I could not determine if a firefighter was at the end of the ladder aiming the hose or if the hose was operated remotely to minimize the risk to the firefighter. How long this was continued I do not know, but it could have been continued for days or possibly weeks. I did not hear about the fire suppression system being used at this time either. There is a possibility that the fire on Thursday night damaged the system trying to suppress the initial fire. Again, no information on this, at least here in Morro Bay.

The last I heard about this incident was that the firefighters they hoped to be able to make some decisions at the two-week point or possible the four-week point. This is typical track for BESS failures involving a runaway reaction.

Another issue is the quantity of water needed to fight such an “fire” and how it was contained to prevent harm to the environment. My assumption is that no containment was designed into the facility and the venting of hot gasses seems to confirm that the environment is the ultimate disposal method. I strongly suspect that their neglect of containing the hazardous materials is illegal or should be. Making no effort to do so is unacceptable.

### Stopping a BESS failure

	Method of “fire” control	Otay Mesa	Morro Bay (projected)		
1	Suppression system	504,000 gpd or 3,528,000 gpw	1,209,600 gpd 16,809,600 gpw		
2	2 Firehoses (165 gpm)	7,920 gpd 55,440 gpw	19,008 gpd 133,056 gpw		
3	Evacuation perimeter	600 feet	1500 feet		
4	Firefighters	40 persons	96 persons		
5	Fire trucks	5	12		

**Line Comments:** 1. Gpd—gallons water per day; gpw—gallons water per week. 2. Commercial building size hoses with a 165 gallon per minute flow rate each; volumes for 24-hour continuous use. 3. May vary due to topography of site. 4. Special training required for toxic, hazardous, corrosive gas atmosphere; special training for BESS handling of runaway reaction; Safe housing for firefighters. 5. Definite need for some ladder trucks (2 used at Otay Mesa ?).

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