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U.S. Department of Transportation
Docket Management Facility
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California State Lands Commission
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**Re: Clearwater Port Liquefied Natural Gas Deepwater Port
Docket #USCG-2007-28676
State Clearinghouse #2007091106**

To: U.S. Department of Transportation Docket Management Facility,
California State Lands Commission

The following comments are submitted by the Environmental Defense Center (“EDC”) on behalf of the Santa Barbara Channelkeeper, in response to the Notice of Intent/Notice of Preparation (“NOI/NOP”) of a Draft Environmental Impact Statement/Environmental Impact Report (“DEIS/EIR”), dated September 19, 2007, regarding the proposed Clearwater Port Liquefied Natural Gas (“LNG”) Deepwater Port Project. The Santa Barbara Channelkeeper’s mission is to protect and restore the Santa Barbara Channel and its watersheds through citizen action, education, field work, and enforcement. The EDC is a non-profit public interest law firm that represents community organizations in matters of environmental protection. EDC has been involved in energy issues since our inception in 1977; in fact, one of our first cases was in response to the proposed LNG project at Pt. Conception.

The proposed Project could jeopardize the unique ecology of the Santa Barbara Channel by introducing a major source of air and water pollution and by threatening migrating whales and other sensitive wildlife in the Channel. This region is nationally and internationally prized for its ecological significance, and it is home to the Channel Islands National Marine Sanctuary and Park. The proposed offshore LNG terminal would be located adjacent to the Sanctuary, and LNG carriers would travel within the Sanctuary boundaries.

In addition, the proposed Project would have global ramifications by creating a new source of greenhouse gas emissions at a time when it is critical to reduce our carbon footprint on a global basis. LNG is a fossil fuel whose production, transport, and combustion would result in tens of millions of greenhouse gas emissions each year. LNG is also a foreign source of fuel, and this raises questions regarding its reliability and ability to meet our energy needs. According to California's adopted Energy Action Plan, our State must first pursue clean, reliable sources of energy before increasing our reliance on fossil fuels.

Due to the magnitude of the impacts of the proposed Project, including threats to a national marine sanctuary and park, and the current importance of energy planning and global climate change awareness, it is especially important for the DEIS/EIR to fully evaluate and disclose all potential impacts and to provide a full range of alternatives for the public and decision-makers to consider.

Proposed Action / Project Description

The NOI/NOP states that the proposed Project would have an "expected operating life of approximately 30 years."¹ However, a Deepwater Port license does not have an expiration date, and therefore the Project may have a much longer life.² The DEIS/EIR must analyze the full potential extent of Project operations, and acknowledge that there are no guarantees that the Project will be terminated after 30 years.

The NOI/NOP limits its focus to impacts from construction and operation of the LNG terminal and associated pipelines. The Project, however, is much larger than that. The Project involves the following phases: production of natural gas (including exploration, drilling, production, processing and liquefaction activities); transportation of the gas from the source of origin to offshore California; offloading LNG from the tankers onto Platform Grace; regasification at Platform Grace; transportation of natural gas from Platform Grace to a distribution system and to market; and ultimate use and consumption of natural gas by consumers. The DEIS/EIR must evaluate the "whole of the project" and the impacts that will result from all phases of production and use of natural gas. This

¹ Notice of Intent/Notice of Preparation of a Draft Environmental Impact Statement/Environmental Impact Report, Notice of Meeting, and Request for Public Comments, September 19, 2007, p. 11.

² 33 U.S.C. §1503(h).

analysis must include a full “life cycle” analysis that addresses direct project effects, as well as indirect effects such as global warming and climate change.

The DEIS/EIR must also consider the impacts of decommissioning activities, including decommissioning of the LNG facilities as well as the offshore and onshore pipelines.

The DEIS/EIR must disclose the source of the gas. This information is critical to determining the impacts of the entire Project, as well as to evaluate whether the gas will meet regional air quality and public health standards. Additionally, the characteristics of the gas will affect whether there will be any risks associated with leaks caused by the potential incompatibility of the gas with onshore distribution systems.³

The DEIS/EIR must identify how much of the gas will be delivered to consumers in California, and how much will be transported out of State.

The DEIS/EIR must identify the type of fuel for the LNG tankers.

The DEIS/EIR must evaluate the impacts of the Project based on its maximum capacity.

The DEIS/EIR must address some questions and concerns raised in the Cabrillo Port LNG Project Final EIS/EIR about using an existing platform as an LNG terminal. Specifically, the Cabrillo Port EIS/EIR stated:

Offshore oil platforms can be used only for the intended use for which they were permitted. Altering or converting the function of an offshore oil platform for either exclusive use as an offshore LNG terminal or dual use as an offshore LNG terminal and oil and gas production facility requires a new Development and Production Plan for that platform, approved by the U.S. Department of the Interior, Minerals Management Service.

Currently, most offshore oil platforms are more than 20 years old. These platforms were not built either to berth LNG carriers or to support ancillary equipment. A comprehensive structural analysis would be needed to determine if a platform is sufficiently structurally sound to extend its lifespan and to support a DWP for

³ For example, between 2003 and 2005, Washington Gas, Inc., a natural gas distributor in the State of Maryland, experienced an unusually high number of dangerous gas leaks in certain areas of its suburban gas distribution network. Washington Gas contracted scientific analysis to determine the cause of the leaks. In a detailed report, the analysts concluded that the chemical composition of natural gas delivered by Washington Gas from the Cove Point LNG terminal to consumers in the high-leak areas contributed to degradation of seal quality in the gas pipeline network and the unusual number of gas leaks discovered among Washington Gas customers. ENVIRON International Corporation. 2005. Investigation of the Causes of Leaks in Natural Gas Pipeline Compression Couplings (prepared for Washington Gas Company, Springfield, VA).

LNG. Adding berthing capability to an existing platform would create a larger object in the viewshed and would extend the life of an existing offshore visual effect that is currently scheduled for removal at the conclusion of all oil and gas operations.⁴

The Final EIS/EIR then goes on to question whether an offshore oil platform would “have the capacity to provide a continuous and reliable supply of natural gas at reasonable rates.”⁵ Finally, the EIS/EIR notes that the lack of storage on the platform would result in a slower regasification process, thus requiring the need for tankers to be moored for longer periods of time.⁶

Given these concerns, the DEIS/EIR for the Clearwater Port Project must address the following issues:

- Is it feasible to convert an oil and gas production platform to an LNG terminal? Who has jurisdiction over the use of the platform?
- How would the life of the existing platform be extended if the Clearwater Port Project is approved?
- How would this proposal affect current operations at Platform Grace?
- Is it technically possible to berth LNG carriers and support the necessary equipment on Platform Grace?
- Is Platform Grace “sufficiently structurally sound” to accommodate such equipment and operations?
- Who would be liable in the event of an accident? It is our understanding that Chevron retains some liability for the platform, as does Venoco, the current operator. Would they be liable for an accident, along with NorthernStar?

Currently Identified Environmental Issues

Purpose and Need

A statement of purpose and need must be broad enough so that the lead agencies can develop a “reasonable range of alternatives to evaluate in the [EIS/EIR].”⁷ In this

⁴ Final Environmental Impact Statement/Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port, March 2007, p. 3-31.

⁵ *Id.*

⁶ *Id.* at pp. 3-31, 3-32.

⁷ CEQA Guidelines §15124(b); 40 C.F.R. §§1502.13-14.

case, the DEIS/EIR should identify the purpose as the need to meet energy demands in the State of California.

In evaluating the need for LNG, the DEIS/EIR should include up-to-date information regarding the State's current and projected energy demand, as well as its current and projected supplies. The attached report from the Santa Barbara-based Community Environmental Council presents a very detailed and comprehensive analysis which demonstrates that California does not need LNG to meet its future energy needs, and that cleaner alternatives exist to meet our State's demand.⁸

The DEIS/EIR should also include information from the *2006 California Gas Report*, published by the California Gas & Electric Utilities. This report shows that projected demand for natural gas is relatively flat. According to the report, "gas demand for electric power generation is expected to be moderated by CPUC-mandated goals for renewable power generation and electric energy efficiency programs."⁹ This prediction is consistent with historical data, which shows that natural gas consumption in California actually *decreased* by 8.9% since 2000, despite a growing population.¹⁰

With respect to supply, the DEIS/EIR should evaluate all potential sources of natural gas, including production within California as well as gas delivered to California from other states, Canada, and Mexico, and foreign gas that is imported into the United States through other LNG facilities.

The DEIS/EIR should also evaluate clean energy alternatives such as conservation, efficiency and renewable energy sources. As part of this analysis, the DEIS/EIR should consider the effect of the State's Renewable Portfolio Standard ("RPS") goals and mandates on the need for LNG. For example, state law requires us to achieve 20% of our electricity demand from renewable energy sources by 2010,¹¹ and the California Energy Action Plan, which has been endorsed by the Governor, requires us to achieve 33% of our demand from renewable sources by 2020.¹²

In assessing need, the DEIS/EIR must also examine the reliability factor of LNG. LNG represents a foreign source of energy, dependent upon the availability of the supply in other countries, stable politics, and assurances that the host country or operator will not decide to ship the LNG somewhere else for higher profit. International competition has already had an effect on U.S. gas supplies. In January 2006, LNG originally scheduled for

⁸ Hunt, Tam (Community Environmental Council). 2006. Does California Need Liquefied Natural Gas? The Potential for Energy Efficiency and Renewable Energy to Replace Future Natural Gas Demand. April. Attached hereto.

⁹ California Gas & Electric Utilities. 2006. 2006 California Gas Report. Attached hereto, see p. 6.

¹⁰ Ratepayers for Affordable Clean Energy. 2006. Letter to Mr. Dwight Sander, California State Lands Commission. April 6. See Figure 4: Historical and Projected Natural Gas Demand in California. Attached hereto. This graph shows that the California Energy Commission's forecasts of natural gas demand have been overstated, and do not match actual consumption in the state.

¹¹ SB 107 (2006).

¹² Energy Action Plan II: Implementation Roadmap for Energy Policies. Sept. 21, 2005.

delivery to a terminal in Cove Point, Maryland, was redirected to Europe.¹³ More recently, Indonesia reportedly decided to deliver LNG supplies to Japan and South Korea that had already been committed to a U.S. buyer.¹⁴

Project Alternatives

The DEIS/EIR must analyze a range of alternatives to the Project. Alternatives must be feasible and capable of meeting most of the basic project objectives while avoiding or substantially lessening project impacts.¹⁵

As set forth in the NOI/NOP, alternatives are limited to: the No Action / No Project Alternative; alternative locations; alternative capacity; alternative pipeline routes; and alternative methodologies, technologies and design concepts. While these alternatives are reasonable to include in the DEIS/EIR, they are all variations of an LNG project. All of these alternatives will result in significant and unavoidable impacts. In order to meet the requirement that alternatives must avoid or substantially lessen project impacts, it is critical that the DEIS/EIR also include alternatives that can feasibly meet the basic project objective (providing a reliable energy supply to the State) while reducing or avoiding impacts. Therefore, the DEIS/EIR must also include alternatives such as conservation, efficiency and renewable sources of energy. The DEIS/EIR could also include other alternatives such as retrofitting existing power plants, expanding existing pipeline systems, and securing natural gas supplies from other states, Mexico and Canada. As an example of the latter, the DEIS/EIR should analyze an alternative that would reverse the CPUC's 2004 decision allowing various California gas and electric utilities to reduce their natural gas contracts with the El Paso Natural Gas Company, Transwestern Pipeline Company and Gas Transmission Northwest.¹⁶

In conclusion, the DEIS/EIR must include alternatives that may achieve substantially the same energy benefit as the proposed project, including conservation, efficiency, and clean renewable sources such as wind and solar. These alternatives also provide the benefit of achieving greater independence from foreign sources of energy.

Affected Environment / Baseline

The DEIS/EIR must include information regarding the existing physical setting, both offshore and onshore. For example, the DEIS/EIR should disclose information regarding the existence of numerous seismic faults and characteristics that may affect the terminal as well as the offshore and onshore pipelines. Weather conditions in the area

¹³ Associated Press. 2006. Natural gas imports leave U.S. vulnerable. Feb. 12.

¹⁴ Marketwatch, 2007. Indonesia mulls diverting Sempra's LNG to Japan, Korea: Nikkei. Mar. 28.

¹⁵ CEQA Guidelines §15126.6; 40 C.F.R. §§1502.13-14.

¹⁶ Peevey, Michael, Geoffrey Brown and Susan Kennedy (California Public Utilities Commission). 2004. Order Instituting Rulemaking to Establish Policies and Rules to Ensure Reliable, Long-Term Supplies of Natural Gas to California, Rulemaking 04-01-025. Jan.

should also be analyzed, as sea conditions can be very rough, and emergency response can be limited.

The DEIS/EIR must include information regarding the incredible ecological significance and characteristics of the region. The DEIS/EIR must identify all state and federal ecologically protected areas. The DEIS/EIR should include information presented in the Channel Islands National Marine Sanctuary's 2005 Biogeographic Study.¹⁷ The most current whale sighting data should also be included.

The University of California, Santa Barbara's ("UCSB") Ocean and Coastal Policy Center at the Marine Science Institute has produced a series of White Papers on the wetlands, watersheds, marine ecosystems and important policy issues associated with the Southern California Bight.¹⁸ This information should be included in the DEIS/EIR.

In order to facilitate and ensure identification of Project impacts, the DEIS/EIR must set forth the specific locations of all potentially affected sensitive species' habitats and plant communities through proper surveying and delineation techniques. This includes properly timed surveying and delineation methods consistent with CEQA Responsible Agency protocol and best available science. For instance, the Coastal Commission has guidelines and protocol for defining and delineating wetlands and undertaking raptor surveys.¹⁹ Results of surveying and habitat delineations must be presented in maps to inform DEIS/EIR readers of the extent and location of at-risk biological resources. Potentially affected species and habitats include species and areas directly and indirectly affected, such as species and habitats near pipeline and transportation corridors and in downstream waterways, and species and habitats impacted indirectly by the Project at the source(s) of gas production.

The DEIS/EIR will be relied upon by CEQA Responsible Agencies, which may include Ventura County, the City of Oxnard and the California Department of Fish and Game. The DEIS/EIR should therefore be prepared in a manner that considers the Responsible Agencies' CEQA guidelines and thresholds of significance. For instance, the Ventura County Initial Study Assessment Guidelines identify and define specific significant biological resources including wetlands that must be considered in EIRs used in Ventura County's jurisdiction.²⁰ Utilizing the Responsible Agencies' CEQA guidelines and thresholds of significance will ensure that the DEIS/EIR will identify biological resources of concern for impact assessment.

¹⁷ NOAA National Centers for Coastal Ocean Science (NCCOS). 2005. A Biogeographic Assessment of the Channel Islands National Marine Sanctuary: A Review of Boundary Expansion Concepts for NOAA's National Marine Sanctuary Program. Prepared by NCCOS's Biogeography Team in cooperation with the National Marine Sanctuary Program. Silver Spring, MD. NOAA Technical Memorandum NOS NCCOS 21. 215 pp.

¹⁸ UCSB, at <http://www.msi.ucsb.edu/msilinks/OCPC/OCPCtexts/ocpc2.html>.

¹⁹ California Coastal Commission. Undated. Wintering Raptor Survey and Nesting Raptor Survey. Attached hereto.

²⁰ Ventura County. 2006. Ventura County Initial Study Assessment Guidelines. February. See p. 25. Attached hereto.

Environmental Impacts

In addition to the requirements of CEQA and NEPA, the Deepwater Port Act itself requires that certain environmental criteria must be used to evaluate a deepwater port project, including:

- (1) the effect on the marine environment;
- (2) the effect on oceanographic currents and wave patterns;
- (3) the effect on alternate uses of the oceans and navigable waters, such as scientific study, fishing, and exploitation of other living and nonliving resources;
- (4) the potential dangers to a deepwater port from waves, winds, weather, and geological conditions, and the steps which can be taken to protect against or minimize such dangers;
- (5) effects of land-based developments related to deepwater port development;
- (6) the effect on human health and welfare; and
- (7) such other considerations as the Secretary deems necessary or appropriate.²¹

Under CEQA and NEPA, the DEIS/EIR must evaluate the direct *and* indirect effects of the Project,²² which include impacts from the full life cycle of the Project, including the initial exploration, drilling, production, and processing impacts, as well as the transportation, re-processing and consumption impacts.

The DEIS/EIR must also analyze the impacts caused by extending the life of Platform Grace. As noted in the Final EIS/EIR for the Cabrillo Port LNG Project, using an existing offshore oil platform as an LNG terminal “would extend the life of an existing offshore visual effect that is currently scheduled for removal at the conclusion of all oil and gas operations.”²³ Is delayed removal allowed under the Outer Continental Shelf Lands Act (“OCSLA”)?

Finally, the DEIS/EIR must analyze the impact of using the Platform as an LNG terminal on existing operations at the Platform. For the past several years, Platform Grace has not been used as a production facility, but has been used to transport oil and gas from Platform Gail to shore. More recently, Venoco resumed drilling at the platform. How would the proposed Clearwater Project affect Venoco’s operations – including both producing as well as receiving and shipping oil and gas from Platform Gail?

²¹ 33 U.S.C. §1505.

²² CEQA Guidelines § 15126.2(a); 40 C.F.R. § 1502.16.

²³ Final Environmental Impact Statement/Environmental Impact Report for the Cabrillo Port Liquefied Natural Gas Deepwater Port, March 2007, p. 3-31.

Aesthetics

The DEIS/EIR must identify all affected views, including those from on shore, from recreational and commercial boats off shore, and from the Channel Islands. While the Santa Barbara Channel has featured large vessel traffic for decades as a component of its unique and beloved seascape, the proposed year-round presence of one to two docked LNG tanker ships, significantly closer to the mainland and heavily used viewsheds than the vessel traffic lanes, would represent the addition of a new and unprecedented industrial component to the aesthetic composition of the area.

Of particular importance for the impact analysis are the region's numerous potentially affected viewsheds at areas of high coastal density (such as existing coastal neighborhoods), at recreational areas with ocean views such as public beaches, surf breaks, and hiking trails, and at other high-use coastal areas such as US Highway 1, and coastal passenger railways.

The year-round docking of one to two LNG carriers could cause significant impacts to offshore views and thus must also be rigorously analyzed. The proposed Project site lies in close proximity to an array of existing offshore uses and activities, many of which occur because of the very aesthetic character of the seascape that this Project will impact. Recreational boaters, fishers, passengers on charter dive boats and Channel Islands National Park concessionaire vessels, aircraft passengers, and others will be impacted and thus must be included in the DEIS/EIR's analysis.

In order to meaningfully disclose the extent of impacts to the multitude of viewsheds that will be impacted by both the construction and operation of the proposed Project, accurate photo simulations depicting the Project components (particularly the docked LNG carrier ships) shall be prepared. The DEIS/EIR must include both day and night time photo simulations, and include illustration of the "worst case" scenario for viewshed impacts, i.e. clear, high-visibility days. In addition, night time photo simulations must accurately incorporate predicted light output from a detailed artificial lighting plan for the Project (this lighting plan must be also be included for impact analysis with respect to marine biological resources, which are discussed below).

Air Quality

Offshore Emissions Impact To Onshore Areas

The DEIS/EIR must acknowledge and evaluate the *onshore* impacts to air quality from the Clearwater Port Project *offshore* air pollutant emissions. Numerous studies demonstrate that offshore emissions will transport onshore and impact mainland air quality. The California Air Resources Board ("CARB") has concluded that emissions within up to 102 miles off the California coast (ranging coast-wide from 24 NM to 90 NM, or 27 to 102 miles) "are likely to be transported ashore and affect the air quality in

California's coastal air basins, particularly during the summer."²⁴ CARB refers to this area as "California Coastal Waters," and bases its conclusions on:

[More than] 500,000 island, shipboard, and coastal meteorological observations. These data were taken from official records of a number of agencies including the U.S. Weather Bureau, Coast Guard, Navy, Air Force, Marine Corps, Civil Aeronautics Administration and Army Air Force.²⁵

Similarly, the federal government acknowledged the significant impacts offshore sources can have on onshore air quality when Congress directed the U.S. Environmental Protection Agency ("U.S. EPA") to control sources of pollution located offshore on the outer continental shelf ("OCS").²⁶ In enacting these requirements, Congress was motivated by "the fact that OCS air pollution is causing or contributing to the violation of Federal and State ambient air quality standards in coastal regions."²⁷ Specifically, Congress noted that:

The magnitude of OCS pollution and the fact that the prevailing winds bring much of this pollution onshore has led the Environmental Protection Agency to express concern about the onshore air quality impacts from OCS development, along the coasts of both California and the Gulf States.²⁸

Clearwater Port offshore air pollutant emissions include platform emissions and marine vessel emissions, all of which must be evaluated for their potential impacts to onshore air quality in Ventura County and other downwind areas.

Ventura County Air Quality

To adequately describe the air quality baseline, the DEIS/EIR must identify whether Ventura County is in attainment or nonattainment for state and federal air quality standards for each regulated air pollutant, including PM-2.5. The DEIS/EIR must also disclose and consider the fact that the Ventura County Air Pollution Control District ("VCAPCD") is requesting a voluntary reclassification to a higher (i.e., worse) federal non-attainment status.²⁹ The reason for this request is that "[a]ir quality trends for the county indicate possible slower air quality improvements over the next few years and attainment may not occur by 2010."³⁰ The U.S. EPA is obligated to grant such a request

²⁴ California Air Resources Board (CARB). 1984. Report to the California Legislature on Air Pollutant Emissions From Marine Vessels, Vol. 1, Ch.VI. June. Within the Project area, the range of California Coastal Waters extends as far as 90 miles from the California coastline. See p. 79. Attached hereto.

²⁵ CARB 1984 at 80.

²⁶ 42 U.S.C. § 7627.

²⁷ S. Rep. 101-228, 101st Cong., 1st Sess. 28 (1990).

²⁸ *Id.*

²⁹ Ventura County Air Pollution Control District (VCAPCD). 2007. Draft Ventura County 2007 Air Quality Management Plan Revision. Feb. Attached hereto. See pp. 10-11.

³⁰ *Id.*

when an area is doing everything practicable to attain the standard, but is not able to do so by its statutory attainment date.³¹

Project Emissions Inventory

The DEIS/EIR must identify and evaluate the full scope of emissions that may impact onshore air quality as a result of Project construction, startup, and operation. Emission estimates for all state and federal regulated air pollutants, including PM-2.5, must be provided.

As discussed above, this inventory must identify offshore emissions that occur within California Coastal Waters, including LNG carrier emissions. Within the Project area, the range of California Coastal Waters extends (approximately) as far as 90 miles from the California coastline.³² The DEIS/EIR must specifically identify the point (or points) at which Project LNG carriers would enter California Coastal Waters. For each potential shipping route, this point should be identified based on its distance from shore, as well as on a map of the Project area.

In addition, the DEIS/EIR must utilize reasonable and fully transparent assumptions to calculate emission estimates. Assumptions should be based on actual operating conditions for the platform and marine vessels. For example, engine emission factors should reflect the actual load at which engines will be operated. Similarly, construction emission estimates should be based on reasonable and realistic equipment, activity, and scheduling assumptions.

To the extent actual construction and/or operating conditions are unknown, then the DEIS/EIR should utilize appropriately conservative assumptions to ensure that actual emissions are not underestimated. For example, the Clearwater Port license application states that “Clearwater Port does not and will not own and operate the LNG carriers and would thus not be able to dictate the fuel used in the carrier operations.”³³ Vessel emissions vary tremendously depending on the fuel used. Therefore, to ensure the DEIS/EIR estimates do not understate the actual emissions that would result from the Project, the analysis should conservatively assume that all Project LNG carriers will utilize fuel that generates higher emissions (e.g., marine diesel).

Regulatory Setting

Clearwater Port is subject to Clean Air Act permit requirements. However, the CEQA impact analysis and requirement to mitigate impacts is not relieved by U.S. EPA’s Clean Air Act permitting decision. To the extent the Clean Air Act permit does actually require offsets (pursuant to VCAPCD Rule 26) for Clearwater Port Project emissions, the

³¹ *Id.*

³² CARB 1984 at 79.

³³ Clearwater Port Project Application at 7.4-45.

DEIR/EIR may properly take this information into account when evaluating air quality impacts and necessary mitigation. However, the DEIS/EIR cannot presume that permit required offsets will mitigate Project impacts without a demonstration that such offsets are actually available in the impacted air district. In addition, the Clean Air Act permit may not actually require offsets for the full scope of Project emissions,³⁴ and any emissions left unmitigated by the permit must be mitigated to the maximum extent feasible pursuant to CEQA. Furthermore, the Clean Air Act permit process may not be complete prior to finalization of the EIS/EIR, making it impossible to know with certainty whether the permit will in fact require offsets for any or all Project emissions. Thus, the prudent approach for the DEIS/EIR is to evaluate air quality impacts from *all* Project emissions and identify mitigation measures to avoid such impacts.

Air Quality Mitigation Measures

The DEIS/EIR must describe feasible measures which could minimize significant air quality impacts.³⁵ “Formulation of mitigation measures should not be deferred until some future time.”³⁶ Identification of air quality mitigation measures should not be deferred until a hearing on the Final EIS/EIR. Doing so seriously undercuts meaningful public involvement and informed federal and state decisions.

In addition, the DEIS/EIR must identify mitigation measures that will mitigate impacts to *Ventura County's* air quality. This Project's air quality impacts would directly affect the health of Ventura County's residents, and those adverse health effects are not mitigated by providing air quality benefits in other regions. In addition, if the Clean Air Act permit requires offsets pursuant to VCAPCD Rule 26 for Project emissions, the DEIS/EIR must also determine whether offsets are actually available within the VCAPCD. Even if offsets are available, the DEIS/EIR must identify mitigation measures to address any remaining Project emissions that are not subject to the Clean Air Permit offset requirement.

Emissions from Residential and Industrial Use of Project Natural Gas

The importation of gas with higher heating values, or “hot gas,” through the Clearwater Port Project may cause additional NO_x emissions and resulting air quality impacts that must be evaluated in the DEIS/EIR. There is a direct causal relationship between the quality of imported natural gas and the potential for increased NO_x emissions. These increased emissions could significantly impact ozone non-attainment areas, including the VCAPCD and the South Coast Air Quality Management District

³⁴ For example, the full extent of marine vessel emissions may not be addressed in the Clean Air Act permit.

³⁵ CEQA Guidelines § 15126.4(a)(1); 40 C.F.R. § 1502.16(h).

³⁶ CEQA Guidelines § 15126.4(a)(1)(B).

(SCAQMD).³⁷ Increased emissions from residential and industrial end users of Clearwater Port natural gas are therefore reasonably foreseeable, indirect Project impacts that must be disclosed and evaluated in the DEIS/EIR.³⁸

The fact that natural gas imports must comply with California Public Utilities Commission (CPUC) specifications does not ensure that Clearwater Port gas will not increase air pollutant emissions in areas of residential and industrial end-use. CPUC specifications would allow gas imports with a higher Wobbe Index than has been identified by SCAQMD and others as the maximum Wobbe Index necessary to limit the potential for increases in NOx emissions in areas that receive imported natural gas.³⁹ The potential air quality impacts from gas with higher heating values must, therefore, be evaluated in the DEIS/EIR. In addition, mitigation measures, such as nitrogen injection, should also be considered.⁴⁰

Greenhouse Gas Emissions

Inventory of Emissions – The DEIS/EIR must address the global climate change impacts that will result from the proposed Project. To do so, the DEIS/EIR must include an inventory of all of the greenhouse gas emissions resulting from the full life cycle of the Project (from extraction to consumption), as the global climate change impacts of all phases of the Project will be felt worldwide, including in California.⁴¹

The attached report by Rick Heede provides an example of how the lead agencies should determine the total greenhouse gas emissions for the Project.⁴² This report has been used by the California Coastal Commission to determine the impacts of an LNG project on coastal resources.⁴³

This type of analysis is required to meet CEQA's directive that an EIR must consider the "whole of an action," and must disclose both direct as well as reasonably

³⁷ See e.g., Wiese, Kurt (SCAQMD). 2006. Letter to Amy Zimpfer (U.S. EPA) re US EPA's Proposed Authority to Construct Cabrillo Port Clean Air Act Permit NO. LNG-VT-2006-01. July 28. Attached hereto. See p. 2.

³⁸ CEQA Guidelines § 15126.2; 40 C.F.R. § 1508.8(b).

³⁹ Wiese 2006 at 2.

⁴⁰ *Id.*

⁴¹ See, e.g., Jefferson, Jamie (for Edmund G. Brown, Jr., Attorney General). 2007. Letter to Maureen Parkes (Contra Costa County Planning Commission): Comments on the ConocoPhillips Rodeo Refinery Expansion Project and Final Environmental Impact Report (File #LP052048). May 8. Attached hereto. See p. 3: "The standard will be measured on a lifecycle basis in order to include all emissions from fuel consumption and production, including the 'upstream' emissions that are major contributors to the global warming impact of transportation fuels."

⁴² Heede, Rick (Climate Mitigation Services). 2006. LNG Supply Chain Greenhouse Gas Emissions for the Cabrillo Deepwater Port: Natural Gas from Australia to California. May 17. Attached hereto.

⁴³ California Coastal Commission. 2007. Consistency Certification for BHP Billiton LNG International, Inc. April 12.

foreseeable indirect effects on the environment.⁴⁴ An EIS prepared under NEPA must also contain an analysis of both direct and indirect effects on the environment.⁴⁵

Threshold of Significance – The DEIS/EIR must identify the greenhouse gas emissions of the Project as a significant effect. According to a multitude of reports by the Intergovernmental Panel on Climate Change (“IPCC”)⁴⁶ and other scientific institutions, current trends of climate change will reach catastrophic proportions unless existing levels of greenhouse gas emissions are significantly reduced. According to the California Global Warming Solutions Act of 2006, emissions in the State must be reduced to 1990 levels by 2020⁴⁷ (a 25% reduction from current levels⁴⁸). Therefore, any new emissions must be considered significant.

The lack of established thresholds does not negate this requirement. As noted by the Attorney General

[E]ven if there is no established threshold in law or regulation, lead agencies are obligated by CEQA to determine significance. Neither CEQA, nor the regulations, authorize reliance on the lack of an agency-adopted standard as the basis for determining that a project’s potential cumulative impact is not significant.⁴⁹

NEPA similarly allows agencies to set thresholds of significance for determining impacts, but it does not *require* that thresholds be set in order to determine significance.⁵⁰

Impacts of the Project on Global Climate Change – The DEIS/EIR must disclose specific impacts of adding to global climate change, including rising temperatures, increased droughts, shifting habitats, loss of species and biodiversity, increased severity and frequency of storms and extreme weather events, famine, increases in pests and diseases, sea level rise, flooding, etc.

An EIR/EIS must contain a “detailed statement” of all significant effects on the environment of the proposed project.⁵¹ In addition, an EIS/EIR must analyze and disclose any irreversible effects.⁵² The emission of greenhouse gases and resulting climate change will cause irreversible harm in California and around the world.⁵³ The IPCC, Union of

⁴⁴ Cal. Pub. Res. Code 21083(b)(3); CEQA Guidelines §§15378(a), 15126.2(a).

⁴⁵ 40 C.F.R. § 1502.16.

⁴⁶ IPCC reports are available at www.ipcc.ch/pub/pub.htm.

⁴⁷ California Global Warming Solutions Act of 2006. Health & Safety Code §38500 et seq.; see §38550.

⁴⁸ 9/27/06 Press Release from the Office of the Governor, available at <http://gov.ca.gov/index.php?/print-version/press-release/4111>.

⁴⁹ Jefferson 2007 at 6. See also CEQA Guidelines §§15064(b), 15126.2(a). Section 15064.7 encourages adoption of thresholds of significance, but does not require them.

⁵⁰ 40 C.F.R. § 1508.27.

⁵¹ Cal. Pub. Res. Code §21100(b)(1); 42 U.S.C. § 4332(C).

⁵² Cal. Pub. Res. Code §21100(b)(2)(B); 42 U.S.C. § 4332(C)(v).

⁵³ Baer, Paul and Michael Mastrandrea (Institute for Public Policy Research). 2006. High Stakes: Designing Emissions Pathways to Reduce the Risk of Dangerous Climate Change. Available at

Concerned Scientists, and the California Climate Change Center have published several studies that identify how climate change will affect the environment.⁵⁴ These impacts include an increase in water temperatures, rise in sea level, reduction of the Sierra snowpack, increase in intensity of storms, changes in ecosystems, and increase in heat waves, ozone formation, and the potential for wildfires. These impacts must be disclosed in the DEIS/EIR.

Impacts of Global Climate Change on the Project – The DEIS/EIR must also analyze the potential effects of increased climate change on the Project, in terms of sea level rise, disruption of pipelines, and other potential impacts.

Cumulative Impacts – The DEIS/EIR must evaluate the cumulative impacts relating to the Project's greenhouse gas emissions and the resulting contribution to climate change. In a case such as this, where the existing environmental problems are severe, the threshold for determining that a project's contribution to a cumulative impact is significant is that much lower.⁵⁵ Therefore, the DEIS/EIR must fully analyze the Project's cumulative impact on global climate change.

Comparison to Alternatives – Finally, the DEIS/EIR must compare the climate change impacts of the proposed Project to other energy alternatives. For example, importing LNG results in approximately 25% more greenhouse gas emissions than using domestic natural gas. This increase results from the need to liquefy, transport, and regasify the gas.⁵⁶ The DEIS/EIR should also compare the greenhouse gas emissions from LNG to the emissions from clean energy alternatives such as conservation, efficiency, and various renewable sources of energy.

Geological Resources and Soils

www.ippr.org; Cayan et al. 2006. Our Changing Climate – Assessing the Risks to California. Available at http://www.climatechange.ca.gov/biennial_reports/2006report/index.html.

⁵⁴ Union of Concerned Scientists. 2006. California Global Warming Impacts and Solutions, available at http://www.ucsusa.org/clean_california/ca-global-warming-impacts.html. California Climate Change Center reports include: Baldocchi and Wong, 2006; Battles et al., 2006; Cavagnaro et al., 2006; Cayan et al., 2006a; Cayan et al., 2006b; Cayan et al., 2006c; Drechsler et al., 2006; Franco and Sanstad, 2006; Fried et al., 2006; Gutierrez et al., 2006; Joyce et al., 2006; Lenihan et al., 2006; Luers et al., 2006; Luers and Moser, 2006; Medellin et al., 2006; Miller and Schlegel, 2006; Moritz and Stephens, 2006; Vicuña, 2006; Vicuña et al., 2006; Westerling and Bryant, 2006.

⁵⁵ *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 721 [270 Cal.Rptr. 650]; *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 120 [126 Cal.Rptr. 2d 441].

⁵⁶ See, for example, Heede 2006; the emissions from these three stages of the proposed Cabrillo Port LNG Project increased GHG emissions by approximately 22%; Jaramillo, Paulina, Michael W. Griffin, and H. Scott Matthews. 2007. Comparative Life Cycle Air Emissions of Coal, Domestic Natural Gas, LNG, and SNG for Electricity Generation. Carnegie Mellon University; Greenpeace. 2004. Liquid Natural Gas: A roadblock to a clean energy future. Sept. 7. This report concludes that LNG can increase CO2 emissions by 20 – 40% over domestic sources of gas.

The DEIS/EIR should include an analysis of geologic hazards and risks, including the risk of erosion and subsidence, to evaluate potential stability and structural integrity of the platform and pipeline (onshore and offshore components).

The DEIS/EIR should include a site-specific analysis of seismic hazards and potential impacts, including the worst case scenario.

The DEIS/EIR should analyze the impacts to the seafloor that will result from construction, platform repairs and modifications, and pipeline installation activities.

In particular, the DEIS/EIR should contain a map that shows the known and inferred location of all faults near pipeline crossings. Reports published since 2004 show offshore faults that are both more active and more numerous than previously known. Additional new information on faults is available online through the Working Group on California Earthquake Probabilities (“WGCEP”) and Southern California Earthquake Center (“SCEC”) Community Fault Model Project. The WGCEP, which consists of the US Geological Survey, the California Geological Survey, and the SCEC, is conducting a major reassessment of earthquake hazards for California. This new information should be assessed in the DEIS/EIR.⁵⁷

The DEIS/EIR should discuss the peak ground acceleration during an earthquake, as well as non-peak acceleration – pipelines are more sensitive to longer-period motions than the ones that usually control the magnitude of peak acceleration.⁵⁸

Pipelines are sensitive to long-period motions, like basin surface waves, so the DEIS/EIR should include 3D simulations using a range of earthquake scenarios to evaluate the amplitude of basin surface waves along the proposed route. Placing pipelines on top of unconsolidated seafloor sediment will tend to amplify and prolong the long-period ground motions, a circumstance that should be evaluated using site-specific studies.⁵⁹

Risk to pipelines is associated with earthquake-induced, deep-seated failure of the side slopes of the ridge that will support them. Such failures, involving landslides, could remove support for the pipeline, possibly causing it to rupture. A complete analysis of the potential for submarine failures should include: 1) detailed multibeam-bathymetric images of ridges and their side slopes to identify previous slope failures and sites of potential future failure; 2) dating of some of these failures; 3) laboratory determination of the strength of sediment from deep, not just shallow, geotechnical borings; 4) measurement of in-situ pore-water pressures to identify zones of reduced strength; and 5) advanced slope-stability analysis to estimate the potential for deep-seated failures.⁶⁰

⁵⁷ Myers, Mark D. (Director, U.S.G.S.). 2007. Letter to Lois Capps (U.S. House of Representatives) with enclosed USGS Comments on the Final EIR for the Cabrillo Port LNG Deepwater Port Project. Apr. 9.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

Geotechnical data should be obtained before the pipeline is constructed in order to address liquefaction issues. Liquefaction-induced ground instability refers to the inability of some geological materials to support buried and surface engineering works during an earthquake. Wet loose sandy materials are most susceptible to liquefaction when shaken; they behave like a dense fluid and lose most of their strength. Horizontal displacements during liquefaction can be as large as ten meters. Furthermore, the land surface can settle vertically as groundwater is expelled from liquefied sands. These ground displacements can severely damage infrastructure that is built on vulnerable sediment. Potentially liquefiable sediment needs to be mapped, and recommendations are needed for a detailed geotechnical investigation along the pipeline corridor and the topographic slopes above the pipeline. This investigation should require sediment sampling and standardized engineering tests for assessing liquefaction hazard.⁶¹

Tsunami waves resulting from fault movement and submarine landslides could have substantial adverse impacts on the pipeline. An analysis is needed of landslides having a wide range of failure modes to constrain tsunami-generation parameters. A detailed analysis of the impact of tsunami waves on offshore structures and pipelines should be conducted, using wave characteristics specific to tsunamis.⁶²

Marine Transportation

Both predicted construction and operational activities, and unintended accidents associated with the proposed Project, could have significant impacts on commercial and private marine navigation in the Project area, all of which must be identified and addressed in the DEIS/EIR. These impacts must be considered relative to both an accurate summary of the current qualitative and quantitative characteristics of marine transportation in the Project area, and considered in the context of potential vessel traffic levels toward the end of the Project's proposed life span, which may be two very different scenarios.

The document must assess impacts from construction of the terminal and the offshore pipeline on commercial vessel traffic, including: large vessels transiting via the coastwise vessel traffic separation scheme, commercial fishing and charter vessels, private recreational vessels, and governmental vessels such as military and research ships.

The DEIS/EIR must address the potential interruption of marine transportation within the Santa Barbara Channel vessel lanes due to accidents at the terminal or on an LNG carrier within the Channel area, including how vessels would be rerouted safely should a major LNG spill or fire occur, and the environmental and economic impacts associated with a major rerouting of regional vessel traffic.

The DEIS/EIR must address the safety of other vessels and mariners – LNG tanker approach and departure routes are proposed to cross orthogonally to existing vessel traffic

⁶¹ *Id.*

⁶² *Id.*

lanes. The DEIS/EIR must also consider the risks of collision not only with other vessels, but nearby oil platforms (e.g., Gail and Gilda).

Any proposed exclusion zone or Area To Be Avoided (“ATBA”) for LNG tanker ships or the terminal should be analyzed with respect to impacts to commercial and recreational marine vessel traffic. In addition, any proposed exclusion zones or ATBA must be evaluated for adequacy in scale with respect to preventing accidents with regional vessel traffic.

The DEIS should consider the expected increase in marine traffic from the LA/Long Beach Port, and how that may increase conflicts with LNG carrier traffic.

Marine Biology

Overview

The proposed Project’s location, associated activities, and complicated natural gas supply chain collectively result in an extremely broad and complex suite of implications and potential effects for marine biological resources.

First, the proposed Project is to be sited adjacent to a series of overlapping state and federal marine protected areas established to conserve and preserve a world-renowned, globally significant hotspot of marine biodiversity. At the same time, the proposed Project represents a major new, long term industrial use of the marine area, one that requires technological components (such as LNG carriers) that are known to cause, or have great potential to cause, significant impacts to marine biological resources over the entire geographic range in which they are used, in this case throughout the Pacific Ocean across which they navigate. The proposed Project is also comprised of major technological components that are largely untested in such large scale commercial applications, and have very little real world data on how and to what extent they will impact marine life and ecosystems, such as platform-mounted ambient air vaporizers and an underwater pipeline for cryogenic fluid transfer. Thus, the Project also presents a significant level of uncertainty with respect to potential impacts to the region’s marine biological resources and habitats.

Consequently, the California State Lands Commission (“CSLC”) and United States Coast Guard/Maritime Administration (“USCG/MARAD”) are obligated to draft a marine biological resources section of the DEIS/EIR that is extremely broad in the purview of its impact analyses, identifying, analyzing and mitigating potential impacts to marine biological resources across the entire supply chain upon which the proposed Project depends, from natural gas production, liquefaction and trans-oceanic delivery, to vaporization, pipelining, and distribution. The DEIS/EIR must also be extremely detailed in its analysis, for example incorporating all relevant data from the extensive existing body of scientific literature relevant to the biogeography of the Project area, and providing data from site specific biological surveys especially at and around Platform Grace, along the

proposed subsea pipeline route and the proposed LNG tanker approach and departure routes, to adequately and accurately depict the marine biological baseline.

Third, given the significant uncertainty involved in the technological systems and the safety (likelihood of accidents) for the Project, impact analysis and mitigation measure formulation must be guided by a precautionary approach that seeks to prevent environmental harm from presently unforeseen impacts.

Finally, this section of the DEIS/EIR must be drafted only after direct consultation with the numerous state and federal agencies with jurisdiction over potentially impacted marine biological resources in the Project area, including the National Marine Fisheries Service (NOAA Fisheries), the National Marine Sanctuary Program, the U.S. Fish and Wildlife Service, the Channel Islands National Marine Sanctuary and National Park, and the California Department of Fish and Game.

Baseline

The DEIS/EIR must address the Project's potential impacts to marine mammals, reptiles, birds, invertebrates, and fish, their habitats, and the ecological systems that link them throughout the entire marine area under US federal jurisdiction in which Project activities are to take place. Similarly, the DEIS/EIR must identify all federal and California state-listed endangered, threatened and rare species that are known to reside within, or migrate through, areas that will be affected by the proposed Project, as well as any other species subject to special protections, such as marine mammals, certain rock fish species, (*Sebastes* spp.) and migratory birds (protected by the Marine Mammal Protection Act, the Magnusson-Stevens Fisheries Conservation Act,⁶³ and the Migratory Bird Treaty Act,⁶⁴ respectively).

For example, baleen whales are known to be hurt and killed by large vessels around the world; since any such unpermitted anthropogenic morbidity or mortality is illegal under the Marine Mammal Protection Act and, for most baleen whale species, also illegal under the Endangered Species Act, the DEIS/EIR must assess and mitigate the potential for LNG tanker collisions with large whales *throughout the entire transoceanic route* that the vessels are to travel to deliver LNG to the proposed facility. In NOAA Fisheries' critique of preliminary environmental impact analysis on the Cabrillo Port LNG terminal proposal, which also involved trans-Pacific shipping of LNG, the agency stated its rationale for the necessity of such analysis as follows:

[V]essel traffic has the potential to affect listed species (e.g. ESA listed marine mammals and sea turtles) and non-ESA listed marine mammals found in nearshore and offshore waters. Adverse reactions by whales to vessel activity have been recorded, and all are vulnerable to collisions with vessels (Laist et al. 2001). The

⁶³ 16 U.S.C. §§ 1801-1882.

⁶⁴ 16 U.S.C. §§ 703-712.

potential LNG vessel routes and species that may be affected should be included in a vessel strike analysis. The Draft ETR (March 2006) indicates that vessels would travel across the Pacific Ocean, and either the West Tanner Bank or Outer Santa Barbara Passage routes may be used as approach routes. The analysis of impacts only refers to the proposed location for the FSRU and associated pipeline and does not include an analysis of the entire route. Jensen and Silber (2003) reported known information on ship strikes to large whales world-wide, and the NMFS Regional Offices also maintain records of reported ship strikes to marine mammals and sea turtles.⁶⁵

Not only does this evince the necessity for USCG and CSLC to include a vessel strike analysis and detailed mitigation plan in the DEIS/EIR, but it also demonstrates the importance of an analytical purview for the document with respect to marine biological resources that includes concomitant activities along the length of the LNG supply chain, not just those that occur at Platform Grace.

Pursuant to CEQA, the CSLC must find that the Project may have a significant effect on the environment where the Project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of an endangered, rare or threatened species; or where the Project may result in possible environmental effects which are individually limited but cumulatively considerable.

Benthic communities

The DEIS/EIR must address potential impacts to benthic communities that arise during and from:

- construction and retrofitting activities on Platform Grace;
- construction activities such as vessel anchoring and pile driving that are to occur during the installation of the satellite service platform (“SSP”) and the LNG pipe running from the dock to Platform Grace;
- construction of the natural gas pipeline running from Platform Grace to shore; and
- drilling/boring activities proposed to install the gas pipeline underneath the beach where it is to arrive at the mainland.

Other activities that have the potential to affect benthic communities should also be addressed.

⁶⁵ McInnis, R. 2006. Letter from Rodney McInnis, Regional Administrator, Southwest Region, NOAA National Marine Fisheries Service, to Mark A. Prescott, Chief, Deepwater Ports Standards Division, U.S. Coast Guard, regarding interagency consultation on Cabrillo Port Deepwater Port with respect to Section 7 of the Endangered Species Act. Received July 14, 2006. Attached hereto. See page 4.

Underwater noise

The DEIS/EIR must address impacts to marine biological resources from the Project's underwater noise, including emissions from construction, operation, LNG transport, and facility decommissioning. Marine mammals, fishes, reptiles, birds, invertebrates, and other ocean wildlife are likely to be affected, and thus must each be considered in this analysis. The NOI/NOP suggests that noise emissions from construction and operation activities of the proposed Project may be discussed in a "Noise and Vibration" section of the DEIS/EIR. However, multiple aspects of the proposed Project, including use of large vessels such as LNG tanker ships, and high-intensity pile driving for mooring of the SSP floating dock, are likely to produce sounds that exceed NOAA Fisheries and California Coastal Commission sound intensity thresholds for harassment and/or harm of marine biological resources in the Project area. In other words, Project noise is likely to cause significant impacts to these resources; consequently, noise impacts from the Project must be included in the Marine Biological Resources section of the DEIS/EIR in order to be compared against the existing environmental baseline (e.g. existing ambient noise levels, marine mammal, reptile, bird and fish distribution relative to the predicted zones of influence of Project noise emissions), assessed for potential synergetic impacts on the resources with other Project activities, and mitigated appropriately to ensure Project compliance with laws protecting marine biota.

In order to best depict the extent of noise impacts from the proposed Project, the DEIS/EIR must delineate the Project's noise emission isopleths (or zones of ensonification) for all existing regulatory noise thresholds (e.g. NOAA Fisheries thresholds for Level A and Level B take for protected marine species) for all major activities associated with the Project, including construction, incoming and departing LNG ship traffic, ship docking and undocking activities including both LNG carrier and tug boat emissions, with both one and two LNG tankers docked at the SSP.

In addition, the CSLC and USCG/MARAD should initiate consultation with NOAA Fisheries, the NOAA National Marine Sanctuary Program, and with resource protection authorities at the Channel Islands National Marine Sanctuary at the beginning of the process (e.g., during DEIS/EIR preparation rather than after the document is released), to ensure that impacts to marine biological resources under their jurisdictions are comprehensively disclosed, analyzed, and appropriately mitigated.

Two Project components with significant potential for harm are worth specifying as particularly important for impact analysis and mitigation. First, pile driving – the applicant proposes extensive high intensity pile driving into the seafloor for the mooring of the SSP floating dock. A significant body of scientific research demonstrates that pile driving noise can harm or kill proximate fish,⁶⁶ a major concern for this Project given the

⁶⁶ Hastings, M.C. and Popper, A.N. 2005. Effects of Sound on Fish. Technical report for Jones and Stokes to California Department of Transportation, Sacramento, CA. Available at

high density of young-of-the-year rockfish present around the legs and jacket of Platform Grace.⁶⁷ For example, in a summary of a 2001 CalTrans study on the effects of pile driving on shiner surf perch, fish biologists reported that:

Results indicate that there was mortality caused by exposure to pile driving sounds, with dead fish of several different species found to at least 50 meters from the pile being driven. There was also an increase in catch by over flying gulls during pile driving, further indicating fish mortality.... Dead/dying fish showed a number of forms of damage including bleeding and damage to the swim bladder.⁶⁸

In addition, noise from pile driving like that proposed for the Clearwater Port Project is known to significantly exceed NOAA's regulatory thresholds for harm and harassment of marine mammals (exposure to impulsive sound that exceeds 180 and 160 decibels, respectively⁶⁹), a major concern given the array of species that exist year round in the area.

The second, key source of underwater noise that must be carefully examined is Project vessel operations. Underwater noise from the LNG carriers is likely to impact marine mammals and fish at all phases of operations, including during the Pacific crossing, during terminal approach and departure, and, of particular concern, during tug-assisted tanker docking and undocking activities, in which marine wildlife may be suddenly exposed to large increases in underwater noise levels that could cause harmful changes in behavior or impacts to physiology.

In general, the high intensity, low frequency noise caused by large vessels can result in threshold shift, masking, harassment and habitat avoidance in marine wildlife.⁷⁰ In addition, shipping noise attenuates very slowly in seawater and is thus extremely persistent in the marine environment, with reports of vessel noise ensonifying, and thus altering the marine environment dozens and even hundreds of kilometers from the vessel traffic itself.⁷¹

http://www.dot.ca.gov/hq/env/bio/files/Effects_of_Sound_on_Fish23Aug05.pdf (viewed October 15, 2007). Attached hereto. See page 13.

⁶⁷ Love, M.S. and D.M. Schroeder. Ecological performance of OCS platforms as fish habitat off California. MMS OCS Study 2004-005. Marine Science Institute, University of California, Santa Barbara, California. MMS Cooperative Agreement Number 1435-01-03-CA-72694. According to the authors, "It is interesting to note that some of the highest densities of YOY bocaccio we have observed anywhere in our studies were found at Platforms Gilda and Grace." Attached hereto. See page 10.

⁶⁸ Hastings, M.C. and Popper, A.N. 2005.

⁶⁹ McInnis, R. 2006. Page 4.

⁷⁰ Jasny, Michael, Joel Reynolds, Cara Horowitz, Andrew Wetzler. 2005. Sounding The Depths II: The Rising Toll of Sonar, Shipping and Industrial Ocean Noise on Marine Life. Natural Resources Defense Council, Santa Monica, CA. Attached hereto. See page 38.

⁷¹ Environmental Defense Center, 2004. Anthropogenic Noise and the Channel Islands National Marine Sanctuary. Attached hereto. See page 11. The report summarizes large vessel noise as follows: *Large container vessels, freighters and tankers ranging from 135m to 337m generate peak source sound levels from 169 to approximately 200 decibels between 8Hz and 430Hz (WDCS 2003 summarizing an array of research, Richardson et al. 1995). Importantly, the physical properties of*

While significant vessel traffic already exists near Platform Grace, discrete and significant additional quantities of underwater noise will be added to the marine environment by the proposed Project. The effects of this additional industrial activity must be rigorously analyzed and mitigated; existing degradation of the marine environment from ship traffic noise does not free the applicant to exacerbate this degradation through additional, unmitigated noise emissions.

Artificial lighting

The DEIS/EIR shall analyze the impacts of lighting on sea birds, song birds, fishes, invertebrates, and any other affected marine wildlife. The proposed Project represents a significantly elevated level of industrial activity and bulk industrial presence at and near Platform Grace relative to existing conditions, implying a proportionally elevated level of artificial lighting.

Because artificial lights are well understood as causing persistent, ongoing harmful and fatal effects to sea birds, migratory song birds, and marine life, and because the proposed terminal is to be sited so near to key reproduction and foraging habitats for an array of state and federally protected bird species, the DEIS/EIR must include detailed, enumerated lighting plans that include a catalog of lights proposed for the construction vessels, the retrofitted platform, the SSP floating dock, and the LNG carriers that are to be docked essentially throughout the proposed 30+ year life span of the Project. This lighting plan should be presented in comparison with the both the existing levels of lighting from activities at Platform Grace, and with the environmental baseline as it existed before Platform Grace was built. The DEIS/EIR must include a detailed plan of how artificial lighting will be minimized to prevent bird and marine life attraction, and how all the adverse effects from lighting will be mitigated.

The permitting agencies should work with the applicant on Project design to create a lighting plan that actually reduces total artificial lighting relative to current Platform Grace emissions, and thus improves or restores the existing night time marine environment. Finally, regional ornithologists and expert State and Federal staff should be consulted before release of the DEIS/EIR to ensure that Project lighting effects are adequately described, assessed, and mitigated.

low-frequency sound and seawater combine to minimize sound absorption and facilitate sound propagation: sound energy travels approximately 4.5 times faster in seawater than in air, and while a high frequency sound of 100 kHz loses 36 dB in intensity per km, the intensity of a medium or low frequency sound (< 1 kHz) decreases no more than 0.04 dB per km (Richardson et al. 1995). As a result, low-frequency tones from a single large vessel are evident in sound readings 139-463 km away (Ross 1976), demonstrating the vast geographic area of ensonification from just a single large vessel. As NRC reports, the high sound levels of cargo vessel emissions make it so "very large geographic areas are affected," and even distant vessel traffic "contributes to the general acoustic environment" (2003). Fully report available at:

<http://edcnet.org/ProgramsPages/PressReleases/Anthropogenic%20Noise%20and%20CINMS%2001-24-06.pdf>

Seawater intake and discharge

The DEIS/EIR shall analyze all impacts to marine biota and marine ecosystems from intake and discharge or exchange of ballast water, including entrainment and impingement of planktonic organisms including zooplankton and ichthyoplankton. The DEIS/EIR shall consider measures to minimize seawater intake, including both best available technologies for reducing entrainment and impingement at major intake points, and design alternatives such as porting the immense quantity of fresh water to be produced during LNG vaporization for use as LNG tanker ballast in place of seawater. All intake and discharge volumes associated with the Project, including both the terminal and the LNG tankers, shall be disclosed.

The DEIS/EIR must also analyze the potential for introduction of invasive exotic species through trans-Pacific shipping and ballast water exchange.

Shipstrike

Impacts to marine organisms due to collisions with Project vessels have been discussed above in the section overview. However, the importance of the analysis and mitigation for this impact are of sufficient importance to warrant repeated emphasis: large vessel traffic associated with the proposed Project portends an increase in the likelihood of collisions with whales that result in serious harm or death for the animals. Given the very low levels of human caused mortality that several of these species, including blue, sperm, fin and right whales can sustain, the DEIS/EIR must not only include detailed analysis of this impact, but an exhaustive mitigation plan to prevent ship strikes in the Channel. The DEIS/EIR must evaluate the likelihood of LNG tankers colliding with any of the numerous whale species that are documented to inhabit the Southern California Bight at various times throughout the year. Based on NOAA Fisheries' assessments which demonstrate that vessel speed has a direct relationship with the chances of harmful or fatal striking of large whales,⁷² the DEIS/EIR must disclose the approach and departure routes for the LNG carriers to the limit of US federal jurisdiction, and these shipping routes should be compared with the large body of existing data on large whale distributions that indicate areas of common congregation of collision-prone whales (e.g. fin, blue and humpback whales), such as certain subsea banks and upwelling zones. In addition, the DEIS/EIR must disclose the speeds that the LNG tankers will travel in US waters where shipstrikes may occur, and a demonstrably effective suite of mitigation measures to minimize the likelihood of harmful or fatal LNG tanker collisions with whales.

The recent deaths of three blue whales, and the link to shipstrikes as a potential cause of death, exemplifies the need to address this risk with respect to the addition of 139

⁷² NOAA National Marine Fisheries Service. 2006. Proposed Rule to Implement Speed Restrictions to Reduce the Threat of Ship Collisions with North Atlantic Right Whales. 71 Fed. Reg. 36303. June 26. Attached hereto.

LNG carriers annually (resulting in 278 one-way trips) through an important whale feeding and migration area.

Ocean acidification

Because increasing anthropogenic carbon dioxide emissions are known to exacerbate ocean acidity,⁷³ the DEIS/EIR should analyze how CO₂ emissions that will result from the delivery and combustion of the Project's natural gas will affect ocean chemistry and marine organisms, particularly calcifiers like mollusks.

Hydrocarbon spills

The DEIS/EIR must detail the potential effects of LNG spills, pool fires, vapor cloud fires, and any other potential accidents involving liquefied or vaporized natural gas.

The DEIS/EIR must evaluate the risks and potential impacts to marine biological resources from spills of any diesel or bunker fuels that are to be used in association with the Project, including spills that occur as a result of accidental damage to existing oil and gas pipelines in the Project area due to Project seabed construction or vessel anchoring activities. Spill analysis must include disclosure as to whether such spills could enter Channel Islands National Marine Sanctuary boundaries and harm qualities or resources therein.

Recreation

Numerous impacts to recreation from the proposed Project may occur. Consequently, the report must analyze all such impacts during construction, operation and decommissioning to recreational boaters, divers, fishers, National Park and National Marine Sanctuary concessionaire vessels, and other ocean users. In particular, the effect of exclusion zones/ATBA must be analyzed for recreational vessel navigation and access to the Channel Islands, given the extensive and year round recreational uses of the area.

Strangely, the NOI/NOP notes that impacts from the proposed Project on commercial fishing should be included in a "Recreation" section of the DEIS/EIR. Project impacts that affect commercial fishing, which could include deleterious impacts to marine biological resources, public safety, and marine transportation, should also be addressed in the socioeconomics section of the DEIS/EIR.

⁷³ Kleypas, J.A., R.A. Feely, V.J. Fabry, C. Langdon, C.L. Sabine, and L.L. Robbins, 2006. Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers: A Guide for Future Research, report of a workshop held 18–20 April 2005, St. Petersburg, FL, sponsored by NSF, NOAA, and the U.S. Geological Survey, 88 pp. According to the authors, "Research findings of the past decade have led to mounting concern that rising atmospheric carbon dioxide (CO₂) concentrations will cause changes in the ocean's carbonate chemistry system, and that those changes will affect some of the most fundamental biological and geochemical processes of the sea." Attached hereto. See page 1.

Hazards and Risk /Safety

LNG is a highly flammable substance. Contact with the liquid gas or its evaporant can cause cryogenic burns. The evaporant displaces oxygen in proximity to a leak and can cause asphyxiation. The vapor from the liquid gas, whether it is streaming from a pipeline or pooled on the ocean surface, ignites easily and can cause a “vapor cloud” flash fire. A flash fire burns quickly throughout its dispersion zone, which can reach for miles and into shipping lanes, and rushes quickly back to its source.

The DEIS/EIR must analyze the full range of impacts, including worst case scenarios, from a potential leak or accident. LNG terminals, tankers, and pipelines are susceptible to a number of potential release events, including: accidental collision with another vessel or offshore platform; a collision between the terminal and an offloading tanker; terrorist attacks; airplane strike; operating error; equipment malfunction and seismic activity.

A 2007 report from the U.S. Government Accountability Office (“GAO”) indicates that the risk of a terrorist attack, in particular, has grown in recent years. Previous studies and risk modeling of LNG release events have been limited. Experts agree that the risks associated with LNG transport and processing, and the impacts associated with those risks, have been ill-defined to date. The GAO’s primary conclusion was that more and better studies must be done in order to protect public health and safety. Other conclusions were that:

- Members of GAO’s expert panel stated that a 1.6 kW/m² standard for heat impacts would be more protective of human health and safety.⁷⁴
- Experts agree that current studies are inadequate for proper risk assessment and management. In particular, experts identified ten areas for further research, including large-scale spill testing on water, large-scale fire testing, and modeling impacts of wind, weather and waves on spill behavior.⁷⁵

These issues will likely be addressed in an update to Sandia National Laboratories’ *2004 Guidance on Risk Analysis and Safety Implications of a Large LNG Spill Over Water*. The updated report will be available in 2008, and the DEIS/EIR should examine its analyses and conclusions.

The proximity of the proposed Clearwater Port Project to existing military bases and operations (including the Pacific Missile Test Range) should be also considered.

⁷⁴ One of the experts advocating a 1.6 kW/m² standard is Dr. Jerry Havens. Dr. Havens has been retained by the California Public Utilities Commission as its foremost expert on LNG safety.

⁷⁵ US Government Accountability Office. 2007. Maritime Security: Public Safety Consequences of a Terrorist Attack on a Tanker Carrying Liquefied Natural Gas Need Clarification (GAO-07-316) Attached hereto.

The DEIS/EIR should set an appropriate ATBA, based on FERC-approved methods developed by ABS Consulting, for determining vapor dispersion and thermal radiation hazards.⁷⁶

The proximity of the proposed Project (both tanker traffic and the terminal) to shipping lanes and other offshore platforms must be addressed in the DEIS/EIR. The Coast Guard should prepare a Waterway Suitability Assessment for the proposed Project, and this information should be included in the DEIS/EIR.

The proximity of the proposed LNG carrier routes to shore should be analyzed in terms of safety risks to onshore communities and nearshore ocean users.

The DEIS/EIR must also analyze safety risks associated with the location of the "new gas receiving and metering facility" next to the existing Reliant Energy Mandalay Power Generating Station, the recently approved gas sweetening plant, and/or the proposed peaker plant. As part of this analysis, the DEIS/EIR should evaluate the risks associated with the use of chlorine at these nearby facilities.

The DEIS/EIR should include an assessment of local, state and emergency response preparedness and capabilities to respond to an incident at the terminal or involving a tanker.

LNG release events in the United States and in other countries should be analyzed in the DEIS/EIR. In addition, the Llyod's Register study, Lovins & Lovins' analysis of a major tanker accident, and the 1972 USCG safety study should be incorporated and analyzed.

The DEIS/EIR should evaluate the national security risks associated with increasing our dependence on foreign sources of fossil fuels.

Noise and Vibration

The DEIS/EIR shall address noise impacts during construction, operation, and decommissioning. The report shall address the impacts of noise (both above water and underwater) from the tankers that transport the LNG to Platform Grace.

Impacts to marine wildlife from underwater noise should be included in the marine biological resources section.

Terrestrial and Freshwater Biology

The DEIS/EIR should analyze potential impacts to the Ormond Beach lagoon, wetlands, and nearshore and coastal habitats.

⁷⁶ Spicer, Thomas O. 2007. Letter to California State Lands Commission. April 2, pp.2-6. Attached hereto.

The DEIS/EIR must analyze direct, indirect, long-term and short-term impacts including those from construction, operation and decommissioning. Additionally, terrestrial and freshwater biology impacts at the place(s) of origin of gas likely to be imported must be considered in the DEIS/EIR to ensure it accurately depicts all Project-related impacts.

Impacts to terrestrial and freshwater biology from combustion of the imported gas must also be analyzed in the DEIS/EIR (e.g. impacts of the Project's contribution to global warming effects on terrestrial and freshwater biological resources). Given the severity of global warming impacts on environmental resources including terrestrial biological and freshwater resources, any contribution to a cumulative global warming effect on these resources must be considered a considerable contribution to a significant cumulative impact.

Pursuant to CEQA, the CSLC must find that the Project may have a significant effect on the environment where the Project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of an endangered, rare or threatened species; or where the Project may result in possible environmental effects which are individually limited but cumulatively considerable.

Responsible Agencies' CEQA thresholds of significance also provide important guidance for the DEIS/EIR to define, delineate, analyze and classify impacts to specific terrestrial and freshwater biological resources. For instance, Ventura County's adopted Initial Study Assessment Guidelines indicate that direct impacts to wetlands of any size are classified as significant impacts.⁷⁷

The DEIS/EIR must assess effects on terrestrial and freshwater habitats and species resulting from installation, maintenance, operation, replacement and ultimate removal of all existing and planned pipelines and other facilities that will be used as part of the Project's onshore gas distribution system. Impacts from pipeline right-of-way ("ROW") and other facility site clearing and grubbing, drilling, boring, and trenching must be identified. The DEIS/EIR should describe effects on specific areas of plant communities and sensitive species' habitats, including acreages of habitats permanently and temporarily impacted to help establish the significance of each terrestrial and freshwater biological impact. The DEIS/EIR must carefully analyze the effects of drilling mud escaping through fractures to surface waters in nearshore and freshwater habitats. Erosion, sedimentation, down-slope and downstream water quality impacts, invasion by non-native plant species, and indirect effects related to off-road vehicle use of maintained pipeline routes should be analyzed. Terrestrial and freshwater biological impacts from construction and operational

⁷⁷ Ventura County 2006 at 26.

noise, lighting, maintenance, and risk of upset and fire associated with onshore facilities which will support the Project must be analyzed.

A number of mitigation measures and alternatives can reduce potentially significant terrestrial and freshwater biological resource impacts. These include:

- Use of existing pipelines;
- Use of existing disturbed pipeline routes;
- Alternative pipeline routes that avoid native habitats, sensitive species' habitats, nest sites, waterways, buffers and areas of geological constraints;⁷⁸
- Attaching pipelines to existing bridges instead of boring or directional drilling under waterways and drainages;
- Pipeline routes which better follow contours along slopes to reduce erosion and sedimentation;
- Minimize width of pipeline ROW clearing;
- Maintenance of ROWs with site-specific native vegetation to reduce erosion and non-native plant invasion of adjacent native habitats;
- Avoiding waterways with flowing water; and
- Seasonal avoidance of nesting sites.

Compensatory habitat and species mitigation programs including habitat restoration requirements shall not be deferred. Instead, mitigation such as restoration plans must be contained in the DEIS/EIR to inform the readers regarding the effectiveness, practicability, feasibility and enforceability of all habitat and species mitigation programs.

Water Quality

Overview

The DEIS/EIR must address water quality impacts from predicted and permitted discharges resulting from Project construction, operation and decommissioning.

The DEIS/EIR must analyze impacts from accidental releases into the ocean or mainland watersheds of all substances associated with the Project, including (but not limited to) fuels, sewage, oil from Project components, from damage to hydrocarbon pipelines in the Project area or from vessel collisions associated with the Project, industrial chemicals such as solvents or paints, grouting for platform jacket reinforcement, adhesives, grey water, LNG, drilling or boring cuttings and fluids, and natural gas odorant (if applicable).

⁷⁸ It appears from the description of alternative pipeline routes that cost and distance to populated areas determined the alternative pipeline routes. No consideration of minimizing impacts to terrestrial and freshwater biological impacts was given in the selection of the currently proposed alternative pipeline routes.

The DEIS/EIR must disclose and address the impacts of any discharges that are significantly different in temperature than that of receiving waters.

The DEIS/EIR must address the risk of permitted or accidental discharges entering and harming the water quality of nearby marine protected areas (“MPAs”), such as California State Areas of Biological Significance, the Channel Islands National Marine Sanctuary, and the Federal and State Marine reserves. The DEIS/EIR should include thorough disclosure of the potential extent of environmental harm from such spills, as well as detailed spill prevention and cleanup plans for agency and public review and comment in the draft document. The DEIR/EIR must also demonstrate that the Applicant has sufficient resources to pay for damages in the event of a worst-case scenario oil spill from the proposed project. Detailed information must also be provided on the insurance policy and coverage maintained by the Applicant and whether this would provide sufficient financial resources to address significant impacts from an oil spill.

Disturbance of Debris Mounds

The applicant has identified that the driving of at least two “anchor piles” will be associated with installation of the SSP floating dock system and could involve major disturbance of existing shell and oil drilling debris mounds on the seafloor around Platform Grace.⁷⁹ Such debris mounds are known to include numerous constituents that, if re-suspended in the water column, could seriously impair surrounding water quality and expose marine biota to toxic and bioaccumulative chemicals.

For example, analogous debris mounds that accumulated at the base of the “4H” platforms near Summerland were subject to analysis by the CSLC and California Coastal Commission in 2001; their report identified numerous heavy metals and harmful organic compounds at levels that significantly exceeded those of control sites.⁸⁰ Specifically, tested debris mound sediments revealed a level of toxicity capable of killing 50% of a given invertebrate test organism at 48% concentration. According to the report, “Strata 1 and Strata 2 of the debris mounds have relatively high concentrations of several metals and organics and would not meet offshore disposal criteria.”⁸¹ In order to protect the environment and assure the public and other agencies that SSP floating dock installation will not result in illegal discharge of similar water pollutants, the DEIS/EIR must include detailed analysis of the metals and compounds that exist within Platform Grace’s debris mounds, an accurate estimate of the extent and duration of proposed disturbance of the mounds, the quantity and constituent profile of toxic material that will be suspended in the water column due to the proposed disturbance, and detailed plans to minimize both intentional and accidental disturbance of these toxic piles. In addition, the likely impacts of these re-suspended pollutants on the marine biological communities that exist on the

⁷⁹ Clearwater Port Application at 7.3-18.

⁸⁰ de Wit, L.A. 2001. Shell Mounds Environmental Review, Final Technical Report, Volume I. Prepared for the California State Lands Commission and the California Coastal Commission. Bid Log Number RFP99-05. March 2001. 36 pages. Attached hereto. See page 3.

⁸¹ Id., pages 3-4.

surface of the mounds and on the jacket legs of the platform must be thoroughly detailed and mitigated.

Stormwater Pollution

The DEIS/EIR shall assess the potential impacts to mainland watersheds and ocean water quality from runoff and/or stormwater discharges associated with all aspects of Project construction and operation, such as pipeline construction and runoff at the offshore terminal. The DEIS/EIR must disclose the details of the applicant's construction and industrial Stormwater Pollution Prevention Plans (SWPPPs), including Best Management Practices to ensure pollutant containment and treatment.

Discharges

The proposed Project will require an NPDES Permit under the Clean Water Act as well. The DEIS/EIR should disclose the requirements of the Clean Water Act and the measures and conditions that would be considered for incorporation into an NPDES Permit.

Pollution from Project Vessels

The DEIS/EIR must disclose and address all potential water quality impacts from Project vessels, such as platform service vessels, construction vessels, LNG tankers, and tugs. This must include detailing of oil spill prevention plans, consideration of risk of spills and collisions with other vessels or other oil platforms, and oil spill response plans. Project area water quality is also likely to be degraded by Project vessels due to cooling water intake, ballast water intake, and atmospheric deposition of airborne pollutants discharged by all project vessels burning diesel or bunker fuel. These impacts must also be disclosed and adequately addressed in the DEIS/EIR.

Environmental Justice

The DEIS/EIR must disclose the cultural, socioeconomic and ethnic populations that will be affected by this Project, and also disclose what efforts have been made to solicit input from such populations.

Agricultural Resources

The DEIS/EIR must identify any potential conflicts or harm to agricultural resources, including both loss of land due to pipeline construction and impacts from increased air emissions.

Cultural Resources

The DEIS/EIR shall analyze potential impacts to cultural resources, both onshore and offshore. The DEIS/EIR consultants should consult with local Native American representatives.

Energy and Mineral Resources

Many experts have raised concerns that importing LNG to California will interfere with our State's ability to reach its renewable energy goals. In 1993, Greenpeace noted that trade in natural gas will not facilitate a transition to clean, renewable energy, but rather "keep the North American energy market heavily biased towards fossil fuels."⁸² A more recent Greenpeace report, titled "Liquid Natural Gas: A roadblock to a clean energy future," concludes that:

The fast tracking of LNG within the California government threatens the tremendous strides that the renewable industry had made in the State. Efforts are underway within the State of California to promote LNG over energy efficiency and renewable energy resources in conflict with the official policy of the State articulated only two years ago in the Energy Action Plan.

There is no reason to fast-track LNG investments. California can meet its future energy demands without building any LNG terminals. If the State pursues aggressive energy efficiency goals, retrofits the old inefficient coastal power plants, and expands the States renewable energy goals, the State can reduce natural gas demand by one-third, the equivalent of three LNG terminals.⁸³

Greenpeace points out that the proposal to open global markets to natural gas will convert natural gas from a "transitional" fuel into a "permanent source of global warming gases."⁸⁴

The current trend towards an increased dependence on Liquid Natural Gas is frightening because it increases reliance on environmentally destructive fossil fuels and significantly delays the possibility of moving towards renewable energy sources by creating a costly infrastructure for LNG.⁸⁵

As noted above, the DEIS/EIR must analyze the effect of importing LNG on our State's ability to meet its Renewable Portfolio Standards. Energy experts have raised the concern that granting LNG contracts makes it more costly and less feasible for renewable energy markets to develop, for the following reasons:

⁸² Greenpeace. 1993. Natural Gas: Bridging Fuel or Roadblock to Clean Energy?

⁸³ Greenpeace. 2004. Liquid Natural Gas: A roadblock to a clean energy future.

⁸⁴ *Id.*

⁸⁵ *Id.*

- Energy demand is finite. This means that there is a limit to how much energy California or the United States needs. Finite demand implies that LNG and renewables must compete for the same consumers in a zero-sum game: one can only benefit at the detriment of the other.
- LNG and renewables are substitutes, not complements. Thus, favoring LNG increases the “price” of renewables.
- There are costs to switching from LNG to renewables. These costs may render certain renewable supplies uneconomic.
- Demand for energy is relatively inelastic (this means that demanders react sluggishly to changes in price, for example, the dramatic increases in gas prices has not lead to dramatic reductions in car use) and long-term LNG contracts will make this demand even more inelastic. This trend hurts the development of renewable energy sources in the long-run since the price of renewables is declining over time while the price of non-renewables (especially oil and gas) is increasing over time. Inelastic demand for energy helps sources of energy that are getting more expensive but hurts energy sources that are getting cheaper.
- Research and Development (“R&D”) on energy sources (by both the US government and the private sector) has been declining over time. This hurts renewables more than traditional energy sources since most renewables are still in their infancy in terms of scientific and engineering R&D. Furthermore, LNG contracts encourage R&D funding to switch away from renewables to LNG research. Less R&D devoted to renewables means less development and higher prices.

In sum, the DEIS/EIR must evaluate the effect of the proposed Project on our State’s capacity to pursue conservation, efficiency and renewable energy sources. The DEIS/EIR must analyze the impacts of the Project on the State’s ability to comply with the California Energy Action Plan and Renewable Portfolio Standard mandates and goals.

Land Use

The DEIS/EIR must identify all relevant policies, plans, regulations and ordinances and evaluate consistency therewith. The DEIS/EIR must analyze consistency with current and allowed land uses in the area.

The DEIS/EIR must identify public lands and publicly protected areas, both on- and offshore, in the Project area. The DEIS/EIR must analyze conflicts with the potential expansion of the Channel Islands National Marine Sanctuary.

The report must disclose existing and planned conservation projects at Ormond Beach and analyze potential impacts from the proposed Project.

The DEIS/EIR must analyze consistency with local, state and federal laws, regulations, policies and plans, including (but not limited to): the Endangered Species Act,

Coastal Zone Management Act, Marine Mammal Protection Act, Clean Air Act, Clean Water Act, California Coastal Management Program, California Coastal Act, California Ocean Plan, Public Trust Doctrine, Local Coastal Plans and Air Quality Attainment and Management Plans. In addition, the DEIS/EIR must consider consistency with the Management Plans of the Channel Islands National Marine Sanctuary and Park.

The DEIS/EIR should analyze consistency with the U.S. Commission on the Oceans and the Pew Ocean Commission recommendations to protect and preserve our precious ocean resources. The recommendations include such measures as invoking the precautionary principle, which has clear relevance to the instant Project which has never been attempted in our Nation's oceans.

Socioeconomics

NEPA requires consideration of socioeconomic effects. The DEIS/EIR must consider potential conflicts with, and impacts to, commercial and recreational fishing and other ocean and coastal activities, including tourism.

Military Operations / Homeland Security

The DEIS/EIR must address the impacts that LNG tanker traffic associated with the proposed Project will have on military operations within the Pacific Missile Range, the Point Mugu Sea Range, and the SoCal Range Complex. Compared with existing vessel traffic within the Southern California Bight, LNG tankers represent extraordinary safety and navigational hazards with respect to accidents or intentional attacks.

In addition, LNG tanker traffic may be piloted through non-standard approach and departure routes to reduce proximity (and thus hazard and risk) to other vessels and mariners. However, by not navigating via the established shipping routes, Project tanker traffic may be transit through, or travel near, any number of the regional military ranges. The reviewing agencies must ascertain whether the Project's tanker traffic will result in logistical or scheduling impingement on the myriad of naval exercises that occur within these areas, and analyze the impacts to military costs and readiness that may occur because of these conflicts.

Cumulative Impacts

The DEIS/EIR must identify other proposed LNG projects along the Pacific coast, as well as any other projects to import LNG to California (e.g., from Alaska). The DEIS/EIR should also include other industrial, coastal and energy project throughout the affected region.

In addition, the DEIS/EIR must identify other, non-LNG, proposals in the area that may add to the impacts from the Project, and/or may conflict with the proposed Project.

October 17, 2007

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Proposed Mitigation Measures

The DEIS/EIR must analyze a range of mitigation measures that are capable of avoiding or reducing Project impacts in each of the above-referenced areas.

Conclusion

Thank you for this opportunity to comment on the scope of the DEIS/EIR for the proposed Clearwater Port LNG Deepwater Port Project. We urge the CSLC and USCG/MARAD to provide a thorough, life cycle review of the potential impacts of this proposed Project, and to fully analyze alternatives that would provide energy to the State without the significant adverse impacts that may result from this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lkrop', is centered below the text 'Sincerely,'.

Linda Krop, Chief Counsel

Nathan G. Alley, Staff Attorney

Karen Kraus, Staff Attorney

Shiva Polefka, Marine Conservation Analyst

Brian Trautwein, Environmental Analyst

cc: Santa Barbara Channelkeeper

Attachments (submitted on CD)

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