

Ratepayers for Affordable Clean Energy
CPUC Rulemaking 04-01-025
March 23, 2004

Addendum G:¹

Global Public and Environmental Health Impacts of LNG

1. Ratepayer Interests Are Both Local and Global

RACE urges the Commission to consider the global impacts of rate basing LNG-related investments.

R.04-01-025 will decide the state's policy on gas procurement for a decade, and will send significant long-term market signals from the world's fifth largest economy to the gas fields of Peru, Russia, the Middle East, Asia and Africa. This message, in turn, will determine whether the world's banks finance new LNG drilling and terminal operations worldwide, or shift the same investment dollars toward renewable energy, conservation and energy efficiency technologies.

Traditionally, the CPUC has limited the criteria of its protection of ratepayers, but in more recent years has accepted other criteria, such as clean air, public health, and a stable climate. While the

¹This addendum prepared with assistance from Rory Cox and Bill Powers.

CPUC has not yet accepted criteria in other nations, the increasingly global nature of energy makes the global impacts of CPUC policy more local in nature.

An obvious example of this phenomenon is energy security. Energy has certainly become a major security issue in the last decade. U.S. overdependence on fossil resources from the Middle East have led to war in the Middle East, and a proliferation of terror that has led U.S. security agencies to highlight U.S. energy infrastructure, such as LNG terminals, as terrorist targets.

While the CPUC is not accustomed to observing the global impacts of its actions, global energy markets are very aware of the significance. LNG is not inevitable, but is, rather, utterly dependent on western countries to prop up Middle East and other gas producers with long-term contracts and domestic infrastructure investments to receive the new import.

2. Foreign LNG Suppliers Compete With Other Energy Resources for California's Long-Term Contracts and Infrastructure Investments

Over this past weekend, Middle Eastern political leaders seeking to make Qatar and Algeria major players in the global liquefied natural gas (LNG) market said their hopes of becoming the replacement for Big Oil might be threatened by the “misguided policies and lack of infrastructure investment by consumer countries.”²

²Agence France Presse, “Misguided consumer policies seen threatening major gas investment,” March 21, 2004.

In particular, these leaders wish to capitalize on dwindling world fossil fuel reserves through the massive exportation of natural gas. The tiny Gulf emirate of Qatar strives to be the LNG capital of the world, while Algeria considers itself strategically positioned to serve the fast growing markets of Europe and North America. Hydrocarbons sales currently make up 96 percent of Algeria's export revenues, with natural gas and LNG accounting for more than half of that - \$24 billion per year, most of it from fossil over-dependent western nations.

But before LNG producers invest tens of billions of dollars in field development, manufacture and transport infrastructure to meet the forecasted demand for their product, they want long term contracts that lock Western consumers into contracts for their product, thus providing financing for the investment. Qatar, which sits on top of the world's third largest gas reserves, has alone announced plans to invest 30 billion dollars to increase its annual gas exports to 60 million tons in 2010 from the current rate of 18 million tons. Algeria has entered into partnerships with British Petroleum and Norway's Statoil worth billions of dollars for the development and export of its gas output.

Thus, all this new fossil fuel development hangs on long-term contracts and infrastructure investments. Khelil warned that all these big plans for LNG investments would be hampered if Middle East producers are unable to sign contracts locking western consumers into long-term contracts, ("20 to 25 years"), that would guarantee them a minimum rate of return. "Long term contracts remain essential for stabilising the market and for the financing of new projects of LNG export." Khelil the slow pace of investment by consumer countries, particularly the United

States, in infrastructure required to receive and distribute the fuel, and warned that the absence of sufficient LNG terminals to receive his region's gas commodity in the United States could have "a very detrimental effect" on the country's power generation sector.

3. California Dependency on Middle East To Power the Grid Not In The Interests of Ratepayers

Thus, any long-term contracts for gas made by the CPUC makes will directly leverage gas drilling and export investment in producer countries, and lock California ratepayers into financing these foreign investments, perpetuating the export of ratepayer dollars outside California and the United States, and further enmeshing Californians in Middle Eastern geopolitical affairs. Given the direct relationship between long-term contracts, infrastructure investments, and drilling, it is critical that the Commission understand the immediate, tangible and serious consequences of locking California into a long-term dependency on countries like Algeria to keep the lights on.

4. Natural Gas Is a Leading Cause of Climate Change

Much more methane escapes during the production and processing of natural gas than had previously been realized. Methane is 20 times more powerful a greenhouse gas than carbon dioxide, so a mere 3 percent rate of leakage from ever-lengthening gas pipelines can undermine the environmental benefits of burning it instead of oil. According to the latest available EPA

figures, pipelines and wells in the U.S. leaked around 1.5 percent of their methane into the atmosphere in 2000. Worldwide, leaky gas pipelines and other gas infrastructure could be spewing as much as 2.3 percent, according to the International Energy Agency.

Given that the forecasted increase in gas demand is based on the promotion of gas-fired power plants, the burning of gas poses an additional threat to climate stability. New natural gas-fired power plants emit half as much carbon dioxide per BTU as coal plants.

5. Environmentally Catastrophic Drilling: Peru

The Camisea Gas Project in Peru is located in previously inaccessible Peruvian jungle in one of the most biologically diverse areas in the world. The project is also located in the midst of indigenous peoples that have had little or no contact with the outside world. Phase I of the project will be completed in August 2004. The project is highly controversial due to (1) extensive environmental damage and (2) the impact on indigenous peoples caused during the construction of the gas wells, gas plant, and 700-kilometer pipeline from the jungle to the coast.

Companies involved in the Camisea project consortium include Hunt Oil, Halliburton, Argentina's PlusPetrol and Techint, and Belgium's Tractebel. The consortium has been fined by the Peruvian government for violating erosion control and water quality standards. The pipeline right-of-way passes through many kilometers of steep jungle terrain with unstable soils and has been completely exposed for two consecutive rainy seasons. The failure of the consortium to

promptly revegetate and close the pipeline right-of-way has resulted in tremendous erosion, landslides, and water quality impacts in the jungle portion of the project. This failure has also opened the region to “invasion” by outside colonists, threatening the health and way-of-life of the indigenous inhabitants. Photos of the erosion caused by leaving the pipeline route exposed to the elements are attached.

Hunt Oil will be responsible for Phase II of the project, the construction of a liquefied natural gas (LNG) liquefaction terminal on the Peruvian coast south of Lima. The target markets for this LNG are California and Mexico. The following excerpt describing the LNG project is from an article titled “Hunt Delays Signing LNG Sales Contracts to 1Q04” in the December 10, 2003 online edition of “Rigzone”:

Hunt Oil has delayed signing definitive sales and gas supply agreements for its project to export liquefied natural gas (LNG) from Peru's Camisea natural gas project to Mexico and the US until the first quarter 2004, newspaper Gestion quoted Hunt Peru's CEO Carlos del Solar as saying. Hunt had planned to finalize the agreements by year-end.

In September, Hunt signed a memorandum of understanding (MOU) with Tractebel to sell 2.7 million tonnes of LNG to be received at Tractebel's proposed US\$500mn re-gasification terminal at the port of Lazaro Cardenas in Mexico's Michoacan state.

On the supply side, Hunt signed a letter of agreement with Argentine company Pluspetrol to

purchase excess natural gas from the Camisea fields to be used in its proposed LNG liquefaction plant. Hunt's operating company for the LNG project, the Peru LNG Company, also plans to call for bids to build its liquefaction plant at Pampa Melchorita, 169km south of Lima, in 1Q04, del Solar said.

The plant will produce some 4.4 million tonnes of LNG a year. First LNG delivery is scheduled for late 2007 or early 2008 depending on when final financing commitments are obtained.

3. Russia Sakhalin Island

Within the debate about importing LNG for the California market, there has been little discussion about the upstream impacts of natural gas extraction. Sakhalin Island, Russia, is one of the fastest growing gas producing regions in the world. There are two major consortia drilling off the shores of Sakhalin: one led by ExxonMobil, (Sakhalin I) the other by Royal Dutch Shell (Sakhalin II). Each of these projects are now operational, with large offshore drilling platforms. The Sakhalin II project is now seeking funding for Phase 2, which involves running a pipeline down the length of the island to a gasification terminal at the southern tip. From here, the LNG will be loaded onto large tankers, and shipped to markets abroad. Known prospective LNG import terminals for Sakhalin gas for the California market are the Costa Azul project, and the Long Beach Harbor project.

Included in this packet are some recent analyses of the Sakhalin II project, sponsored by Shell (Operating as Sakhalin Energy Investment Company.) We believe that many of the practices currently employed would be considered unacceptable in the United States, especially in California. We submit this data with the faith that Commissioners will take into account these impacts as they consider California's energy future.

Below is a summary of available documents on the ecological impacts of drilling on Sakhalin

a. Analysis of Seismic Risks: An independent report released March 2, 2004, by five Russian, Japanese and U.S. environmental organizations exposes deep cracks in the seismic risk analysis conducted by Shell/SEIC for Sakhalin II. The report documents that Sakhalin II seismic examinations present incomplete, inaccurate and contradictory information, understates seismic risks, fail to provide documentation of site-specific risks at individual fault crossings, and base their findings on hazards to people, but not to the environment.

b. Wild Salmon Center letter to Shell/SEIC regarding the Center's review of the company's River Crossing Field Survey Reports. The review found:

- Contractors recommend 24 aerial crossings of watercourses, yet Shell/SEIC proposes to implement none;
- Most of these recommendations were lost through translation errors, including through omissions and contradictory translations;
- The EIA fails to identify at least 27 salmon spawning watercourses among the 183 watercourse crossing surveyed by Shell/SEIC;
- Winter construction of watercourse crossings, proposed as a mitigation measure, threatens wild salmon embryos;

- There is no correspondence between Shell/SEIC's system of watercourse classification and project design.

c. Summary of Expert Report on Sakhalin II EIA With Respect to Wildlife Species with Close

Connection to Japan: This report concludes:

- The methodology used for the collection, analysis and interpretation of the data for the Sakhalin II EIA is grossly flawed.
- Even allowing for the inadequacy of Japanese Environmental Impact Assessment Law requirements, there are glaring deficiencies in the EIA, such as a lack of consideration of the impact of the development on the overall ecology.
- The Sakhalin II EIA makes no assessment of international or cross-border impacts in spite of the presence in the area of migratory animals which are known to frequently move between the different territorial jurisdictions.

d. Industrial Accident Exposed: February 24, 2004 letter by Sakhalin Environment Watch to EBRD President Jean Lemierre regarding a industrial accident on the Sakhalin II project LNG site, December 22, 2003. The letter raises questions about structural feasibility, quality control and safety elements of the Sakhalin II project, and about the reliability of contractors to implement the Bank's required project standards and safeguards. See also January 15, 2004, newspaper article in Svobodniy Sakhalin.

e. Preliminary Evaluation of Conformity Sakhalin II, Phase 2 and the Environmental Standards of the World Bank (WB) and International Finance Corporation (IFC), January 2004, Pacific Environment. The evaluation reveals that many aspects of the Sakhalin II project clearly contravene identified WB/IFC environmental policies. Fundamental flaws in the project and its EIA include, *inter alia*,:

- Complete omission of any evaluation of certain critical environmental risks and impacts;
- Evaluation based on incomplete, inaccurate or distorted information;

- Premature conclusions of risks and impacts made prior to the collection and assimilation of primary data and research necessary to conduct an evaluation;
- Deferment of evaluation of some critical risks and impacts to processes that will occur later and that are outside the scope of this EIA;
- Failure to apply generally accepted EIA methodology;
- Reliance on conjecture rather than analysis to reach many conclusions.

Respectfully,

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Ratepayers for Affordable Clean Energy

Environmental and societal impacts: The following March 16, 2004 press release prepared by Amazon Watch documents in more detail the damage caused by the Camisea Gas Project.

Sierra Club Votes to Oppose LNG on California Coast

“Resolution:

Sierra Club California opposes any new coastal onshore and offshore liquid natural gas infrastructure in California. Instead, the Sierra Club supports conservation and renewable energy.”

The Conservation policymaking body of Sierra Club California in San Luis Obispo passed the above policy on March 14, 2004. The vote was 37 in favor, 5 opposed and 2 abstentions.

The arguments against a new LNG infrastructure are quite simple:

1. We don't need it.

Americans are 5% of the world's population and we use 25% of the world's energy. We need to conserve and stop wasting. We need renewable energy.

2. It hurts what's left of our destroyed coastline.

Terminals are proposed in natural areas away from people. There are hardly any areas of the coast left. We don't want anymore industrialization of our coast.

3. They are dangerous.

The tankers, the pipes, the LNG tanks, the propane and butane tanks, the diesel trucks...

4. LNG comes mainly from third world dictatorships.

No more foreign fossil fuel dependence on unstable regimes.

5. Gas drilling rapes the wild places of other countries.

6. Fossil fuels cause global warming. Conservation and solar do not.

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