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Energy Commission Docket Unit

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1516 Ninth Street, MS-4

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My name is Kevin Davies -Director of Operations –Siliken Renewable Energy, Carlsbad CA

I am currently a resident of Carlsbad employed by Siliken Renewable Energy, headquartered in Carlsbad. I did speak at the public hearing and would like to add a couple of additional comments.

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I am an engineer having spent over 35 years in a variety of industries in the UK and USA. My work has taken me to many countries and I have worked in the nuclear industry, oil industry, automotive and I have spent the last 15 years in the solar business. Our business in Carlsbad and our PV manufacturing facility in San Diego employ 70 people more than it did only six months ago. I have seen renewable energy go from garage built solutions prepared and installed by granola people to a sustainable worldwide business with many companies traded on the stock market and companies changing hands for \$100's of millions. The business is not only sustainable but manufacturing costs have fallen off a cliff, yes in part due to the downturn in the economy but in large part due to the economy of scale in the manufacturing facilities, and even more importantly the world wide realization that renewable energy is not just nice to have, but is increasingly essential if we are to reduce the damage that we have done to the planet. It has taken only 50 years to do most of this damage and the earth may never recover but we should all try and reduce the impact on the environment and according to the best science, we have about 10 years to turn things around. My personal view is that we are already beyond the point of no return in many areas because decisions made now will have an effect of extending the problem for decades to come. This new fossil fuel power plant has a design life of at least 30 years so this is just more of the same.

PV may get some subsidies but it is making great strides to reach Grid parity. The progress of renewable generation is accelerating into the future but it is vulnerable to the decisions made in every town hall meeting around the world. Every new fossil fuel power plant added to the grid displaces an opportunity to fill the capacity with renewable energy and it fills the transmission lines that are already stressed. Yes, we need a balanced mix on the grid that gives us flexibility but renewable energy needs to be able to get a foot in the door and make its contribution. Every new fossil fuel generation facility that is added to the grid is a hindrance to achieving renewable energy goals in the state of California it reduces the demand for generation, reduces incentives, reduces renewable inertia, and investors begin to question the states commitment to renewable energy and investment in new renewable businesses is stalled.

Distributed generation should be the policy with new generation at or near the loads, why is this not the policy and the practice?

The environmental footprint of a new generation plant using this design has an environmental impact that has far reaching consequences that extend beyond the impact of the power plant itself. Gas is fracked from beneath the ground at sites in Canada, Mexico among other many other locations including under our oceans. This fossil fuel is carried over great distances, pumped, pushed, and many facilities and equipment have to be maintained along these routes. I hope the environmental analysis that has been carried out has taken the whole impact of this new facility including the activities at the source of the fuel and methods of transportation. I am not sure if the environmental analysis has included that NRG are planning to extend the design life of the existing plant if this new plant is built. I am not sure if the analysis has taken into consideration the cocktail of pollutants that are mixed with those of the volume of traffic now and in the future from the I-5. Has the environmental impact of the concrete and steel also been considered? The raw materials and energy used to build this structure are huge. Both concrete and steel are high energy products that are strip mined, I hope this has been calculated into the environmental impact including the processing and transportation of these raw materials.

Example of pollution from just one web site article: HOUSTON -- Last week the Pennsylvania Department of Environmental Protection shut down some operations of natural gas driller **Cabot Oil & Gas** after 8,000 gallons of toxic chemicals were spilled on the ground and into a creek in Susquehanna County.

The decision you make affects all of us not just the local community but the whole world, and even the local objectors to the project whose selfish motives are "Not In My Backyard" are often not seeing the bigger picture and the far reaching consequences.

One way to achieve grid parity in my business and a serious suggestion is to have the operators of fossil fuel power plants to pay for the pollution. It is easy science and math, we simply ask the power generators using all forms of fossil fuels in our state to pay directly for the cost of offsetting their pollution. We can measure the toxic fumes, particles and yes green house gases being discharged in their smoke stacks. The cost of planting trees and carrying out mitigation is not too difficult to calculate. They should be required to be directly responsible for their pollution. They should be expected to quite literally rebuild forests and other corrective actions around the world equal to their pollution. We really know how many pollutants are discharged from a barrel of oil or from every cubic meter of natural gas and we know what can be, and needs to be repaired around the world. Do not add modest taxes or allow REC's to ease the fossil fuel industry conscience, make people accountable even the renewable energy providers should be made to balance their environmental impact.

Level the playing field and let the best technology win.

On a micro scale, over 20 years ago I worked for a progressive heavy engineering company in England who calculated their energy consumption and their responsibility for CO2 from a typical power plant to support their own business including every employee vehicle etc. They purchased land and with professional help planted acres of trees to more than offset their environmental impact. They were the

first company to have company cars with catalytic exhausts. No plastic packaging material were allowed in or out of the factory, rare species of wild flowers were planted in the company gardens, grass was allowed to grow unchecked with the exception of 3 feet from the driveway. They achieved equilibrium a perfect balance. They continue their management of their woodlands. I describe this example because I was proud to work for this company, make me proud of my state.

Legislate to make all the people of the state to be even better stewards of their environment make people responsible for their actions and pay proper compensation for the damage. Will it make electricity and energy more expensive a resounding yes no question about it, but for the first time we will be paying for the true cost of energy.

Ask the children what they want, it's their future. We teach good environmental practices in our schools, do we practice what we teach.

How much more effort can we put into the reduction of electrical use in the state, are we doing enough? Educate the public on reducing consumption, more energy audits, reduce waste, become more efficient, set higher goals for the state wide reduction. Energy Tomorrow.org are running TV advertising encouraging more oil and gas more consumption on the grounds that it will build our economy when the opposite is true if we can improve productivity reduce consumption and the amount of energy used to produce our products only then do we become more competitive. If our products, food, and services are created with less energy we win and we are more competitive in the world. Why do we even allow skewed information like this to get onto our TV's. There is a difference between free speech and deception.

Make more with less. Less is better.

Please do not allow the expansion of this gas fired power station in this beautiful area. I recognize the need to be able to have instant capacity available. If you have to build extra capacity please consider brown field sites in the state that are already soiled. Some military sites are often out of public view and have large areas of already contaminated soils from years of jet engine and rocket fuel development. Aerojet in Rancho Cordova also have huge areas of embarrassing land and own half of Rancho Cordova. I know they are putting a small solar system on this land so they can call it dark green but it may be a candidate for a future gas fired power station or better still a nuclear power station using current technology.

*France is the world's largest net exporter of electricity due to its very low cost of generation, and gains over EUR 3 billion per year from this.*

If we are not adopting a policy of distributed generation and we are not prepared to continue to encourage renewable generation then I would rather see the addition of clean burning nuclear power stations. I firmly believe we have no choice but to start building nuclear plants as soon as possible to replace existing gas and oil burning plants. We cannot and should not continue to build fossil fuel power plants.

In the not too distant future we cannot be dependent on fossil fuels, they are not going to solve the bigger picture problem, they are limited over the long term. The state of California has the people power, and the technology to solve the world's energy problems. Build the Taurus now, take the initiative, we can fix the energy demand problem in the long term by building the clean nuclear fusion reactor. California should be the home of the first commercial nuclear fusion reactor. The experimental machines in South Korea and in France and the even the NIF in the US are showing positive signs and are achieving some success and could be viable options worthy of investment. Be pro active, find the money and let's take a calculated leap of faith and build a modest size nuclear fusion plant. Take the best knowledge and experience we have acquired in the development so far, fuel from the moon and make it happen.

*Fusion reactors have been getting a lot of press recently because they offer some major advantages over other power sources. They will use abundant sources of fuel, they will not leak radiation above normal background levels and they will produce less radioactive waste than current reactors*

*Nobody has put the technology into practice yet, but working reactors aren't actually that far off. Fusion reactors are now in experimental stages at several laboratories in the United States and around the world.*

It may take 25 years but it is safer, cleaner, a no waste solution, and "You Can Build It In My Backyard".

*H. L. Davis  
2/19/10*