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## **Which Way to Energy? Kirkwood Power Plant Challenges and Choices**

### **Overview**

The current oil spill crisis in the Gulf brings to the forefront the necessity to change the way we make energy choices in our country. In light of our powerhouse fire and ownership transition, we have the opportunity to seize the moment and make a model green community.

Kirkwood Meadows Public Utility District (KMPUD), Kirkwood, CA is expediting purchase of Tier 2 diesel engines rather than choose the cleaner, more cost effective long term solution of the hybrid bi-fuel plant, using 90% natural gas and 10% diesel.

KMPUD, along with Kirkwood Mountain Resort (KMR) dismissed natural gas because it would take too long, and they claimed the initial capitol cost is higher. Not only is a Hybrid bi-fuel power plant less expensive initially (\$11.25M compared to \$12M), but natural gas costs 25% less per gallon than diesel.

So, why rush? There is concern over the short-term additional cost of permitting the temporary diesel engines. While no one wants to live on temporary power or incur extra cost, SMART Energy says is not a big deal compared to building a diesel power plant we have to live with for another 40 years. Once January 2011 rolls around, the temporary engines will have to have extra pollution controls installed, which will cost more. They are permissible, and the cost is bearable, when you consider the long-term impacts of the decision.

This is a classic case of commercial interests demanding a quick, expedient solution that is cheaper in the short term at the expense of the community's long-term interests and at the expense of the air quality and health of the environment.

### **Background**

#### ***Ownership in transition***

The electricity generation and propane distribution business is owned by Kirkwood Mountain Resort's subsidiary Mountain Utility (MU), but in escrow sale to Kirkwood Meadows Public Utility District (KMPUD). Expected closing sale by Fall 2010.

MU also operates a Propane Gas Distribution System to homes/resort  
All power is distributed through an underground network.

Nearly all energy generation is fossil fuel. One solar residential customer and one geothermal residential customer.

Diesel (and propane for home heating) is delivered by trucks, and stored in above ground storage tanks.

### ***Who is Served?***

Electrical service built in 1972 to provide power to Kirkwood Ski Resort and residents in Kirkwood Meadows Community

- Approx 600 utility customers
- Approx 100 live at Kirkwood year round
- Approx 500 live part time

### ***The Demand for electricity***

Our best available information is that Kirkwood Mountain Resort (KMR) lifts require about 33% of the annual load. The lifts demand large power surges. Engineers like diesel for its responsiveness to these demands. In fact, natural gas engines can service lifts, if modified at an extra cost. A good compromise is bi-fuel engines, which can be flexible to two fuels: diesel and natural gas.

### ***Grid Effort is nearly 2 years and millions in the making***

Grid connection is in review process. If approved, it will take 2-5 years to connect. Administrative Draft of EIR/EIS available with US Forest Service as of June 8<sup>th</sup>...

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We asked about the draft and Rodman said it was not public yet, maybe by August. This would involve an underground line along Route 88 and then overhead through the forest to connect up with a PG&E line at Salt Springs Reservoir, 23 miles from Kirkwood. Cost would be \$35M + for capitol costs. Some believe this is a too low... more like 50M (new diesel power plant started at 5-8 M, now at 12M)

Grid Connection is uncertain. Likely won't become more clear until Fall 2010.

### ***Confusing Laws/CA Policy***

SB 1368, signed by the Governor indicates that there can be no more than 1100 pounds of CO2 emission per megawatt-hour (MWh) of power. By this measurement, the only fossil fuel that Kirkwood would be permitted is natural gas.

The confusing part is that the regulating agencies, CEC and CPUC, do not write the regulations for power plants under 10 Megawatts. So, because of this gap, between the law and regulation, at the moment, Kirkwood flies under the radar. Kirkwood can continue to operate polluting diesel engines, because the law is not enforced.

Smaller power plants are, according to Attorney, Lisa DeCarlo at CEC, supposed to be self-policing, but they do not.

There is a question whether GBUAPCD permitted the diesel engines, taking into account current California law and other circumstances listed below.

## **Events and Recent Actions**

### ***Power supply interrupted***

The former 5.4 MW all diesel power plants burned to ground January 1<sup>st</sup>, 2010. Fire caused by a leaky gas valve inside diesel generator 7 that sprayed gas into a super hot filter compartment which ignited a particulate filter and then caught a building joist on fire above it. Fire Investigation by: Vernon Brown and Associates (note: Fires at the powerhouse have been an on-going problem for years, per residents with whom we spoke.)

Since January, power is being supplied by temporary portable diesel engines. According to Ted Schade, GBUAPCD Air Pollution Control Officer, these temporary engines are permissible past January 2011, at a cost.

### ***KMPUD declares itself the CEQA Agency***

Due to the emergency situation after the fire, KMPUD declared itself the CEQA agency and dispensed with the need for an EIR.

### ***Plan for a new Power Plant***

Kirkwood Meadows Public Utility District was granted a conditional permit to construct a new power plant using 6, Tier 2 diesel generators. (Great Basin Unified Air Pollution Control District Case #ATC 1552-00-1- for KMPUD Powerhouse)

- Decision initially based on NO natural gas pipeline, therefore diesel-fired IC engines with air pollution controls were determined to be Best Available Control Technology (BACT) by the GBUAPCD.
- The staff report added that there was no example that natural gas engines would be technically feasible at altitude in a remote islanded prime power plant.

The KMPUD Board voted to build a \$12M replacement power plant, all Tier 2 diesels.

### ***Why would you spend \$12M for a Back-up power plant?***

Uncertainty over grid interconnection makes a decision on power plant nearly impossible. We would build completely different power plants based on whether the power plant is to be a back-up or the sole prime source of power.

If we were certain of grid connection, KMR could bring in temporary power if grid connection was lost, and the homeowners could fend for themselves as other communities do, or back-up to the KMPUD Plant.

In the event the grid effort is abandoned and we are going to build a prime power plant, let's build something cleaner than an all-diesel power plant. A very good option is a Hybrid Bi-Fuel plant (90% natural gas/10% diesel).

We must take the time we need to make the Grid decision FIRST.

### ***Concerned Citizens Led by Kirkwood SMART Energy is Questioning the Dismissal of Cleaner Alternative of: A Hybrid Bi-Fuel Plant***

#### ***Two Videos:***

- ***"Which Way to Energy?" (10 minutes)***
- ***Hybrid Bi-fuel Presentation-KMPUD meeting (25 minutes)***

Available on <http://kirkwoodmeadows.wordpress.com>

Raejean Fellows, representing non-profit Kirkwood SMART Energy, requests information and consideration for a Bi-Fuel Natural Gas/Diesel Power Plant. Told it can't be done. KMPUD says generators won't work at high altitude, LNG supplier too far away, concerns about safety, too expensive. They do not provide docs to back up response, so Fellows travels to Jackson Hole, WY to tour Lower Valley Energy Co-op. They have safely trucked, stored, and distributed Natural Gas to Afton and Jackson for over 10 years. \* They have similar winter conditions as Kirkwood. Temps in winter drop into the -20's and more... snow gets up to 5 feet, altitude is 6,100ft. Afton's NG facility is very much like Kirkwood with approximately 600 customers.

Fellow's consults with Clean Energy, large transporter and liquefier of Natural Gas. Clean Energy says it can be done... that the BACT report was based on 2004 information regarding LNG availability and transportation issues. Today LNG is very available and is transported easily. LNG is also more cost effective, long term, than diesel. In fact, 20% of the natural gas used in the U.S. is trucked as LNG.

Fellows goes before KMPUD Board Meeting June 10, 2010, gives a 25-minute presentation stating that not only can natural gas get to Kirkwood and be stored safely, but that Natural Gas engines are reliable at altitude for our application, and requests the KMPUD looks at this alternative further.

Dave Likins, CEO of KMR, declares that he refuses to proceed with the Sale of the MU to KMPUD, if they do not order the 5 diesel engines he has approved.

\*LV Energy does not generate electricity.

Under pressure from KMR, the Public Utility dismisses the recommendation to consider the Natural Gas alternative and unanimously votes to continue with current plan to rebuild with Tier 2 generators.

Kirkwood SMART Energy submits petition/comments and calls for a hearing challenging the Tier 2 diesel permit granted by GBUAPCD. KMPUD attempts to rally the community on July 4<sup>th</sup> towards a quick power plant build. At the same meeting, Dave Likins, CEO Kirkwood Mountain Resort, tells the approximately 70 attendees that temporary power will not be reliable and your homes will be destroyed. As a result of the misinformation from KMPUD and threats from Likins, letters are written to GBUAPCD supporting the all diesel power plant permit.

***Hearing Date: Friday, July 16<sup>th</sup>, 2010, 10:30 am, Markleeville, CA.***

## **In Closing**

We must be prepared to make some short-term sacrifices in order to do the right thing. Natural gas solution or not, there is a cleaner way than all Tier 2 diesel engines. May our community find its way together to choose the SMART way to energy. We must reduce reliance on foreign oil, clean up our environment, and create a sustainable community for our children.

### **Entities/Stakeholders/Definitions and Terms:**

MU – Mountain Utilities LLC, Wayne Amer  
KMR – Kirkwood Mountain Resort, CEO Dave Likins  
KMPUD- Kirkwood Meadows Public Utility District, Manager, Tom Henie  
GBUAPCD – Great Basin Unified Air Pollution Control District, Ted Schade and Duane Ono, Pollution Control Officers  
KSE – Kirkwood SMART Energy, Non-Profit, grass roots community organization, headed up by Raejean Fellows and Kathleen Newell  
CEQA- California Environmental Quality Act  
IOU- Investor Owned Utility  
POU – Publically Owned Utility  
CPUC- California Public Utility Commission, Regulates IOU's  
CEC – California Energy Commission, Lisa De Carlo, Counsel, regulates POU's  
NG – Natural Gas  
LNG – Liquefied Natural Gas  
Bio-LNG – renewable NG—i.e., methane extracted from landfills  
BACT – Best Available Control Technology