

*✓ Gen Hoke sent by JJ
✓ To AV. for Int. Parties Rev*



VULCAN POWER COMPANY

1183 NW Wall Street, Suite G Bend, OR 97701 (541) 317-1984

Fax Transmittal Coversheet

CONFIDENTIAL

Vulcan Fax: (541) 317-2879

To: Hearings Officer, Case No. GNR-E-02-01

Fax Number: (208) 334-3762

Organization: Idaho Public Utility Commission

From: Steve Munson

of Pages Including Cover: _____

Date: 3-15-02

Time: 3:55 PST

Message:

Attached are the Comments of Vulcan Power Company regarding Case No. GNR-E-02-01.
Thank you.

Cordially,

Steve Munson
Steve Munson

By Telefax (208) 334-3762
Postal Service

March 15, 2002

Idaho Public Utilities Commission
PO Box 83720
Boise, Idaho 83720-0074

RE: CASE NO. GNR-E-02-01 IN THE MATTER OF THE INVESTIGATION OF THE CONTINUED REASONABLENESS OF CURRENT SIZE LIMITATIONS FOR PURPA QF PUBLISHED RATE ELIGIBILITY (IE 1MW) AND RESTRICTIONS ON CONTRACT LENGTH (ie 5 years) and Request For Green Power Hearings

Dear Commissioners:

Vulcan Power Company is a geothermal baseload power developer which owns a multimillion dollar investment in an Idaho geothermal project rated above 100 MW. We have held the property for years with the intent of developing its many benefits for Idaho power customers. Our efforts have been blocked by one thing, the lack of a renewable energy power market of scale to support our proposed 30 MW stand alone project phases.

Indeed our ongoing Idaho power marketing efforts of the past five years have consistently been blocked by self interested Idaho electric utility opposition to projects of our type. The Idaho utilities will not buy the power, will not even negotiate on a level playing field basis, and continue to insist on building fossil and other generation which brings major environmental and economic risks of their own to Idaho.

The 1 MW size restriction is unduly burdensome and results in higher prices for renewable power than would result from economies of scale of larger projects. We recommend that the size be increased to at least 30 MW in Idaho with the ability to develop multiple projects of at least 30 MW at or near a given site location and green power hearings are recommended.

The 5 year time length is unduly burdensome and results in higher prices from renewable energy than would result from longer contract terms. We recommend that such project contract term be extended to at least 12 years and preferably longer and hearings are needed.

GREEN POWER BENEFITS

You probably know, electric utility customers have routinely stated preference for clean "green power generation, particularly at remote sites which provide local jobs and other benefits. Renewables and especially geothermal baseload power bring substantial benefits to Idaho including acting as a hedge against over reliance on imported gas fuel and against power plant gas fuel interruptions of the type encountered in the past. Indigenous renewables also will stop billions of dollars of gas dollar drain from Idaho.

We have quantified the estimated economic and environmental benefits of 100 MW of new geothermal power in Idaho. The analysis is attached for your review. Idaho benefits from 100 MW of Idaho geothermal are estimated to exceed \$ 1.9 billion over the project life, compared to natural gas fired generation based upon the assumptions used.

While other renewables may not fully match the benefits of baseload geothermal they clearly also can add much to benefit Idaho. We respectfully request the Commission open a formal hearings docket to consider how it may best advance the development of a thriving renewables industry in Idaho to diversify the sources of power and reduce reliance on foreign fuel sources which pollute Idaho ecosystems.

REQUEST FOR GREEN POWER HEARINGS

Progressive Idaho leadership elements have stated a desire to further local green power sources. We agree that there is a win-win for the state, its citizens and developers. In the long run such a diversified power policy will also benefit the utility and its grid.

An Idaho US Senator keynoted the 2001 kickoff of the Idaho Geothermal Working Group sponsored by the US Department of Energy. Geothermal Day in Idaho was established by the Governor. An infrastructure of private-public cooperation is in place and can do much to fill any renewables marketing program the PUC may develop. I was honored to be asked to head up the power marketing sector of our Working Group.

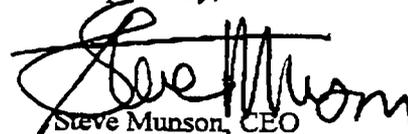
We believe the PUC offers a great forum to set new policy. For example, in New Mexico the PUC is dealing with the RPS, much as we hope your Commission will do. Attached is copy of the proposed 10 % RPS rule at the PUC, which a coalition of consumer public interest groups believe will likely be implement by the PUC there to replace an earlier 5% RPS derailed by dereg delays.

Adjoining Nevada has 190 MW of existing reliable geothermal plants. Those plants have worked for over a decade and were implemented solely by progressive action a decade ago by the Nevada PUC. The Nevada state legislature recently passed a 15 % renewable portfolio standard because it worked so well. The PUC is an excellent forum for power policy. We asked you consider widening the scope of your current evaluation.

Our projects are in Idaho for the long haul. We have recently formed a business arrangement to advance clean power in Idaho. An office and staff of experienced respected Idaho resource developers will be announced soon in Boise developing rural sites. In short, we plan to stay in Idaho and participate in what we hope will be green power hearings designed to address the lack of an Idaho green power market.

We look forward to further discussion and formal hearing process under direction of the Commission. If the Commission or staff have questions raised by this request, please do not hesitate to contact us. Thank you for the opportunity to address the Commission on green power for Idaho.

Respectfully,



Steve Munson, CEO
Vulcan Power Company
(541) 317-1984

cc: Avista, Pacificorp, UPL, IPC, Others

IDAHO GEOTHERMAL BENEFITS OF 100 MW OF NEW GEOTHERMAL POWER

Estimated Operational Economic Benefit Analysis (100 MW Average Annual Output)

Annual and Project Benefits Times 1.75 Economic Multiplier [1]		
Plant Benefit Category	1 st Year Benefit (Cost x 1.75)	30 Year Benefit (Cost x 1.75)
Project Employment [2]	\$ 2,683,000	\$ 80,490,000
Idaho Energy Royalties	\$ 2,225,000	\$ 66,750,000
Property Taxes	\$ 5,100,000	\$ 153,000,000
Gas Dollar Drain [3]	\$ 17,150,000	\$ 514,500,000
Operating Overhead	\$ 3,600,000	\$ 108,000,000
Other Operating Expenses	\$ 11,100,000	\$ 333,000,000
Clean Air Benefit [4]	\$ 13,300,000	\$ 399,000,000
Plant Operating Benefits:	\$ 55,158,000	\$ 1,654,740,000
Plus: Idaho Offices	\$ 4,375,000	\$ 131,250,000
Plus: One Time Capital Expenditures [5]	\$ 150,000,000	\$ 150,000,000
TOTAL IDAHO BENEFITS:	\$ 209,533,000	\$ 1,935,990,000
Plus: Baseload Renewable Benefit [6]	\$ 17,520,000	\$ 525,000,000

NOTES

- [1] Substantial power plant operating costs are NOT included in this analysis including plant parts and turbine work-over costs purchased from outside Idaho.
- [2] Estimated project staff per 100 MW includes 1 project manager, 1 project accountant, plus a total of 7 plant operators, 7 assistant operators, 1 wellfield manager, 1 assistant wellfield manager, 2 power plant mechanics, 2 instrument techs and 3 laborers. Project staff at average \$61,000/year.
- [3] Dollar drain calculations are a placeholder based on values for Oregon-Canada exports and imports which indicate a negative trade imbalance for Oregon of \$870 Million. The data indicates that \$0.39 of every dollar from the Oregon economy sent to Canada to purchase natural gas fuel stays in Canada. The above values assume 30 year average gas prices of \$4.00/Mcf, 7,200 btu/kwh gas plants, and a 1.75 multiplier. Gas Dollar Drain values for Idaho are believed to be very similar.
- [4] The Clean Air Benefit consists of dollars saved by avoiding the CO₂, SO₂ and NO_x emissions from equivalent amounts of new gas-fired power. Monetization of the pollutants come from values established by the Oregon Public Utility Commission and estimated emission amounts are from the Northwest Power Planning Council.
- [5] See the Estimated Capital Cost Benefits Analysis on the following page.
- [6] Estimated value of capacity for new renewable baseload plant with 95% availability compared to non-baseload, as-available forms of power. The capacity estimate value is based upon future new gas plant capacity price of \$0.02 per kwh.

IDAHO 100 MW GEOTHERMAL POWER PLANT

Estimated Capital Cost Economic Benefit Analysis

The capital cost of each geothermal power plant and wellfield varies from site to site and plant to plant. In a general way, the first plant at a site is more expensive than succeeding plants since steamfield exploration costs and significant permitting, road upgrades and interconnect power lines to the existing transmission grid system are costs of the first plant on a steamfield. Followon power plants at a given geothermal site can be less costly per unit output than the first plant as are operating expenses also somewhat lower per unit of output.

Each plant is assumed to be a standard 30 MW plant, with 100 MW representing the output of 3.33 plants. The all-in capital costs and operating expenses of 100 MW is somewhat lower per unit output than a 30 MW plant alone.

For this analysis a substantial range of possible hypothetical Idaho capital costs is assumed for all-in 100 MW project cost including the wellfield plus the power plant, the interconnect power line and all finance charges and developer management fees. One set, not a range of power plant operations expenses are assumed, since the plant operations expenses, those not related to power plant debt service payments, are less subject to variation than project costs.

The assumed project capital cost range is from \$1.8 million per megawatt to \$2.8 million per megawatt of net output. It includes the cost of the power plant, the steamfield costs and the finance charges and management fees associated therewith. For this generalized geothermal plant analysis, the costs are split amongst major categories as follows.

100 MW GEOTHERMAL PROJECT			
<u>Capital Cost Per Megawatt</u>	<u>Wellfield Cost</u>	<u>Plant, Other Costs</u>	<u>Total Project Cost</u>
\$ 1.8 Million	\$ 65 Million	\$ 115 Million	\$ 180 Million
\$ 2.8 Million	\$ 110 Million	\$ 170 Million	\$ 280 Million

Of the \$ 65 million to \$ 110 million of wellfield costs, it is assumed about \$ 13 million to \$ 22 million, about 20 % of well drilling costs will be direct local purchase including surveying, roads, pads, site work, water supply and non-contract drilling labor. Hence Idaho drilling operations are assumed to contribute about \$ 13 million to \$ 22 million to the local economy. This is considered a conservative number because it does not include any impact from local salary expenditures of contract drilling crew management and labor while in Idaho.

Of the \$ 115 million to \$ 170 million in plant, finance charges and fees costs, it is assumed 20 % is for payments not directly impacting the local economy. The remaining 80% of Plant, steam gathering pipeline and interconnect power line related costs are assumed split evenly between material and labor, 40 % each. Of the material costs, it is assumed 20 % is local procurement. Hence capital costs which comprise an Idaho payment impacting the Idaho economy total the following amounts: \$ 9.2 million to \$ 13.6 million for Idaho project material and \$ 46 million to \$ 68 million for Idaho labor.

Summary of Capital Cost Expenditure Benefits						
<u>Capital Costs</u>	<u>Idaho Wellfield</u>	<u>Wellfield x 1.75 Mult.</u>	<u>Plant Material</u>	<u>Plant Labor</u>	<u>Plant x 1.75 Mult.</u>	<u>Capital Cost Benefits</u>
@ \$ 1.8 M/MW	\$ 13 M	\$ 22 M	\$ 9.2 M	\$ 46 M	\$ 96 M	\$ 118 M
@ \$ 2.8 M/MW	\$ 22 M	\$ 38 M	\$ 13.6 M	\$ 68 M	\$ 142 M	\$ 180 M
						Average: \$ 150 Million