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CALIFORNIA ENERGY COMMISSION
DOCKETS OFFICE MS-4
RE: DOCKET NO. 09-IEP-1G/03=RPS-1078
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

Subject: Joint IEPR and Renewables Committee Workshop: Electricity System Implications of 33 Percent Renewables

Questions for Stakeholder Roundtable and Public Comment

The committees invite stakeholders and the public to address the following questions on the matter of electricity system implications of 33 percent renewable energy. What are the potential electricity integration issues that need to be addressed in order to achieve the 33 percent renewables goal by 2020? Are any of these issues not being addressed by ongoing studies or in identified policy development proceedings?

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10. What impact will related policies, especially energy efficiency and combined heat and power goals in the California Air Resources Board AB32 scoping order, have on the amount of renewable energy needed to achieve 33 percent by 2020?

11. What impact will related policies have on the electricity system implications of 33 percent renewable energy by 2020? For example, how would policies supporting the use of energy storage systems (e.g., pumped hydro, compressed air, etc.), geothermal generation, or biomass generation affect the electricity system implications of 33 percent renewable energy by 2020? What level of penetration would be needed?

12. What impact will the exhaustion of above-market funding from the CPUC for two of the IOUs have on California's ability to meet the 33% RPS goal? What other uncertainties need to be considered?

It appears a great deal of work and study has already gone into addressing and identifying policy development proceedings. For example:

Black & Veatch was hired as the primary technical and economic consultant to support Phase 1 of RETI, which was completed in January 2009. The ultimate goal of RETI's work is (was) to identify major upgrades to California's electric transmission system needed to access competitive renewable energy zones (CREZs) sufficient to meet the state's energy targets. The purpose of Phase 1 of was to identify those CREZs that can be developed in the most cost effective and environmentally benign manner. As a result of the Phase 1 study, 29 California CREZs capable of delivering total annual energy of approximately 200,000 gigawatt-hours per year (GWh/yr) were identified. In addition, about 70,000 GWh/yr of smaller-scale non-CREZ resources were modeled in California

PG&E along with the Brattle group jointly developed a Renewable Integration Calculator to understand the operational impacts of higher levels of intermittent resources. Evidently PG&E believed the vagaries connected with this much renewable energy necessitated the need for more exotic forecasting tools.

The CPUC has already prepared a 33% RPS Implementation Analysis which has outlined the Resources Needed, Evaluated the Portfolio Options, Evaluated the Current Practice with and without Process Reform, and Evaluated the Costs associated with the risks.

CAISO has already outlined the requirements for achieving 33% Renewables, Has developed study-case scenarios, has attempted to identify wind and solar sites, and is or has already analyzed the impacts of 33% renewable energy.

The CEC has studied the subject relentlessly. It appears questions 9 through 12 have already been answered.

However, has any entity ever really considered the reasons why the California RPS program is languishing? Has any entity bothered to determine why projects that go through the grueling approval process don't get built? Has any entity considered the investor's point of view regarding return-on-investment? Has any entity ever really considered the actual costs connected with renewable energy generation? Based upon the present structure, its evident the answer to the question is NO1 The cost of natural gas may be used as a basis to the MPR (Market Price Referent), but if California wants a truly robust renewable system, the actual costs of all renewable energy technologies must be ascertained and remunerated. If the MPR is to be the technique used for determining renewable energy remuneration, the policy clearly must be revised to provide a factual price consistent with the costs associated with its generation. However the biggest obstacle facing the IPP (Independent Power Producer) in obtaining project finance is insufficient revenue.

Contrast the practices of the European Community with those presently in existence in California specifically and probably throughout the entire United States. In California, the MPR structure attempts to establish remuneration based primarily upon the price of natural gas while completely overlooking the factual costs associated with renewable energy production. To date with the exception of the price paid for solar energy, any price addition to the MPR has been a rarity. As a point of fact, many rate payers have been erroneously led to believe that renewable energy is less expensive than fossil fueled energy. The State of California has retarded the development of renewable energy by too severely constricting remuneration.

As a guide to what is required to stimulate the construction of new reliable facility construction, why not utilize the practices adopted in successful programs. Using biomass energy as an example; while it appears everyone recognizes not only the reliability of the generation, they also acknowledge the societal benefits associated in utilizing a waste as fuel, no one in a position of responsibility has yet been willing to make the decisions necessary to assist the industry in meeting the challenges of finance, or even of permitting. The State of California must be made to recognize what Europe and every other successful, robust renewable energy program has come to acknowledge: "If a successful, robust renewable energy program is wanted, the price must be paid".

In addition to raising the price of renewable generation, it may be possible to increase the revenues needed to stimulate new renewable construction through revenue sources such as TRECS, and GHGs. If the generator can benefit from the sale of RECs, the revenue from this commodity could be utilized to enhance renewable power remuneration. The same analysis could be applied to GHGs, however it must be recognized that the GHG issue as being presently discussed are just added revenues paid because of the added generation costs due to greenhouse gas emissions reduction.

Clearly, the biggest obstacle facing the IPP in obtaining project finance is insufficient revenue. There has to be more revenue potential in order to attract the investment necessary to build the required generation. At present the MPR has been undergoing a review, however the subject of adequate compensation for renewable energy (outside of perhaps solar) is being ignored by both the CEC the CPUC and the Legislature.

These comments do not negate the other issues that also retard the production of renewable energy such as the lack of sufficient transmission etc. The comments herein are presented to explain the major deterrents to renewable energy facility construction encountered by the independent power producers (IPPs) and potential measures that could be undertaken to mitigate these deterrents. The projects must be made financeable. It must be understood that in today's market there are many investment opportunities that are more risk averse and that present a far better investment return then does renewable energy with the present remuneration structure. Obviously deep pocket developers (the IOUs, FPL, PPL, etc.) don't have the same financing problems as do the smaller IPPs, their situations are not representative of the problems faced by the IPPs, yet the assumptions used in the MPR reflect their position, not the position of the IPPs.

Sincerely,

Joseph Langenberg