December 8, 2008

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 09-IEP-1G and No. 03-RPS-1078
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: 2009 IEPR – Feed-In Tariff;
Docket No. 09-IEP-1G and No. 03-RPS-1078

The writer wishes to thank the Commission for allowing him to present his comments at the December 1, 2008 Workshop. A good deal of progress has been made in bringing the advantages of "Feed-In-Tariffs" to the attention of the Stakeholders and the relevant Commissions. In this workshop the emphasis is placed on enlarging the size of the Feed-In-Tariff. A good many of the attendees opted to increase the size of generation and to eliminate any cap to the amount of renewable energy permitted. The writer wishes to re-iterate his comment made during the workshop, that the Feed-In-Tariff process be designed to allow for generation of any size to receive the benefits of this procurement technique. The benefits of this process to both the power developers, the buyers of power and the regulating commissions include:

1. Availability of a guaranteed price,
2. Long term revenue stream without the cost of a solicitation.
3. Market access is enhanced by feed in tariffs, as project timing is not constrained by solicitations.
4. Quantities may be uncapped
5. Interconnection is typically guaranteed
6. Feed in tariffs reduce transaction costs for both buyer and seller
7. Feed in tariffs are more transparent to administer than the current system
8. Feed in tariffs may increase the ability of smaller projects or developers to participate
9. Policy makers can target feed in tariffs to encourage specific types of projects and technologies

Therefore if the Feed-In-Tariff process can produce these apparent benefits, why should the process cap at 20 MW? Renewable energy development need not be and is not limited to project size. At the moment there is a large disparity between the amount of generation required and the amount of generation constructed and under construction to meet the goals and objectives for 2010. In the June 30, 2008 Workshop the CPUC speaker stated that "although the responses to the RPS solicitations are robust and increasing, project development has been slow". The speaker acknowledged that at present only 14 contracts for ~ 400MW have come on line and RPS generation has not kept pace with overall load growth. The speaker further stated that "if the RPS target is to be met more than 3,000 additional MW of generation would be needed". Obviously if the current procurement system was producing satisfactory results there would be no reason to introduce the Feed-In-Tariff concept. The open cap for Feed-In-Tariffs would make the procurement process immeasurably easier for projects of all sizes to implement and quicker to adjudicate.

The second part of the writer's comments stated that the Feed-In-Tariff alone may not be the answer to increased generation development. Mr. Rickerson has quite expertly outlined the systems presently used by the German and Spanish programs. Overall their programs appear to be very successful. Renewable energy goals are being met, the generators appear to be satisfied with the payment rate and are developing projects, investors are providing finance for renewable programs which is the best indicator of the financial community's willingness to fund and the rate payers are willing to pay for the cost for renewable energy. Evidently these programs are doing something right. They are in stark contrast to the California RPS program. The lack of renewable generation produced to date is evidence that change is necessary if the program is to have any chance of meeting the goals already set. It may be necessary for California to factually review the price paid for renewable energy in order to obtain the amount of development necessary to meet its goals and objectives. It is already acknowledged that the 20% goal for renewable energy by the year 2010 has no chance of being fulfilled, and without a change the outlook for 2020 also appears quite bleak.

The primary policy goals and objectives driving renewable energy development in California are "reducing greenhouse gas emissions" and "managing cost and risk to ratepayers". In order to achieve the quantitative goals and objectives established, new renewable generation facilities are required. In order to obtain the facilities a necessary degree of financial security has to be established for both the generator and the investor. The present system of procurement is an arduous time and money consuming task with very little initial certainty of even making a short-list. Certainly this is not the inducement needed to obtain finance. In many cases, after the negotiation and Commission approvals have been obtained, monetary conditions

may have changed requiring a renegotiation. Even after all of this time, money and effort have been expended there is no evidence that new development is being obtained. The Feed-In-Tariff process streamlines procurement, establishes demand for product, determines a price and conditions for remuneration while minimizing the solicitation ordeal and transparency is virtually assured. This allows the generator and his investor to discuss financing early on in the procurement process and the details of finance may have already been established before project approval thus enhancing the possibility of project completion and the production of renewable energy. The Feed-In-Tariff process is far less odious and far more efficacious than the present procurement process currently being utilized. There is no limit to project size under the present procurement system, why should project size limitations be imposed on Feed-In-Tariffs?

Proper design is critical to the success of a Feed-In-Tariff. Tariff rates should have the necessary flexibility to respond to market conditions. There are a variety of design issues that may be applied differentially across different groups of generators to accomplish specific policy objectives or address fundamental differences in resource, cost, and quality such that resources that may fail to be successful under a single feed in price approach could be encouraged with incentives, thus resulting in a more diversified resource mix and generation profile. Examples of categories that could be used to establish different tariff prices include: (Resources, i.e. wind, solar, biomass etc.), (Application type. i.e. roof-mounted vs building integrated), (Project size, to reflect scale economies), (Resource quality, reliable vs as-generated) etc.

A most important deign consideration is the approach used to establish the price level set for the tariff. The philosophy behind using a competitive benchmark, which is a variation on the cost based approach, is a desire for the most cost-effective renewables, paying not what the output is worth or what the generation costs, but rather the least cost to secure the desired resources. It also acknowledges the inherent difficulty in making accurate administrative determinations of cost or sufficient return to motivate investors. Getting the price right can be challenging, if the tariff is set too low to provide adequate returns to eligible projects, it may have little effect on stimulating development of new renewable energy generation. In the process of establishing prices for Feed-In-Tariff implementation, the tradeoff between the policy effectiveness at increasing quantity of renewable energy and its ratepayer impact can be managed through determining how aggressive or conservative the price is set for each technology.

As an example, using one of the more successful systems as a guide, in Germany a feed in tariff was established which featured 20 year fixed price payments targeting specific technology types. Payments were based upon the estimated generation cost by technology type plus a reasonable profit and technologies were differentiated by size.

Lessons learned from Germany and Spain:

- Long-term, generation-cost-based payments can rapidly grow renewable energy markets and achieve national targets
- Technology-specific tariffs create diversity when set at the appropriate levels.
- Investor security is determined both by price certainty and policy certainty**.**
- Incentives may not put downward pressure on renewable energy prices**.**
- Implementing support for emerging resources is challenging.
- Setting the correct price for biomass can be challenging. (In both the Spanish and German cases, the biomass markets initially did not respond as projected, therefore the feed-in tariffs for biomass were increased and were further differentiated by fuel and/or conversion technology.)
- Feed-in tariffs can suppress wholesale market prices.
- Long-term payments have been used successfully in Germany and Spain.

Tariff differentiation may be utilized to target technology type, project size, resource quality, initial operation date, and maybe location. Other choices could include Time-Of-Day (TOD). The most basic type of differentiation type is by resource type and most of the existing European types specify different rates for different resources (i.e. wind, solar, biomass, hydro). Within each technology some policies further differentiate by fuel and/or application type. In Germany for example there are adders within the biomass feed in tariffs for systems that use agricultural waste products. As a suggestion there could be adders for the technology related to the use of waste (i.e. whether biogas or thermal etc.). Another consideration could be the quality of the energy, whether as-generated, reliable, dispatchable.

To encourage generation closer to existing transmission and load centers, the tariff structure could be structured to provide incentives for facilities that do not require significant added transmission investment. Another alternative might be to rank tariff applications according to a project's proximity to load. Encouraging new generation closer to existing transmission

could delay significant near term investment in expanding transmission infrastructure. Also a higher tariff rate could be set to encourage the use of transmission built to access renewable zones.

California has a Renewables Portfolio Standard for investor-owned utilities, energy service providers, and community choice aggregators to serve 20 percent of retail sales with renewable energy by 2010. In addition, state law requires each governing body of a local publicly owned electric utility to implement and enforce a Renewables Portfolio Standard that recognizes the intent of the Legislature to encourage renewable resources, while considering the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement. At present it is generally acknowledged that there is no chance of meeting the present goal of 20% renewable energy by 2010 and based upon present projections the prospects of attaining a 33% renewable goal by 2020 is equally bleak. Both the California Energy Commission and the California Public Utilities Commission are seeking answers to why the RPS program is languishing.

As explained above, the present system of procurement is an arduous, odious undertaking. The IOUs maintain that the present system is competitive. Assuming for the moment this statement is true, it is not however producing the desired result of new renewable energy facility construction. The statement by the CPUC speaker at the June 30, 2008 Workshop that "although the responses to the RPS solicitations are robust and increasing, project development has been slow" is analogous to saying that the surgeon performing an operation on a patient did an outstanding job, the incisions were masterful, the sutures a work of art, the surgical techniques applauded, but the patient died. The lack of progress in moving projects from "approved" status to "construction and completion" resulting in needed new renewable generation clearly exhibits that "**SOMETHING IS WRONG"**. To undertake the onerous and costly process of the present "competitive" procurement system, to obtain project approval and then not proceed to project completion is certainly not the reason any project developer enters into the procurement process. There is just too much time, money and trouble invested to not pursue project completion at this point. Even obtaining project approval alone used to be worth a considerable amount of money. Should the project sponsor wish only to market that aspect of the project, normally a buyer was readily available to purchase the project and continue with facility development. Evidently, this is not the case today. If the RPS process is to flourish, renewable energy facilities must be built. Lack of transmission has been a whipping boy, but it seems highly unlikely that it is completely responsible for the dearth of new facility completion. As an option, approve projects that are not burdened by a lack of transmission. In addition, it may be necessary to examine the entire RPS program and compare it in total, particularly with respect to the price paid for renewable energy with the more successful programs flourishing today. The writer thanks the Commission for the opportunity to present his comments and hopes it has added some clarity to the process.

Sincerely,

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