

The Honorable Assemblymember Felipe Fuentes  
Chair, Assembly Utilities and Commerce Committee  
State Capitol, Sacramento, CA 95814

1 July 2009

Subject: **AB 1106 - support if amended**

Dear Assemblymember Fuentes,

We believe that AB1106 can be positioned to make the RPS achievable and deliver tremendous benefits to the State of California by getting cost-effective renewable energy online and driving massive green job growth. There is no doubt that AB1106 represents California's best opportunity to get on a path to a truly sustainable energy future. Such an outcome, however, will only be assured if AB1106 is amended further.

As you are aware, Feed-In Tariffs (FITs) are the most effective policy mechanism in the world for bringing renewable energy online, for creating green jobs, and for promoting broad private sector participation in the renewable energy industry. California needs such a mechanism as soon as possible to have any hope of reaching a 33% RPS by 2020. Historical experience with California's RPS program shows that a new mechanism is needed to actually bring large volumes of renewable energy online. Fortunately, there is abundant empirical evidence and extensive research that clearly show FITs can bring renewables online more quickly and cost-effectively than any other policy mechanism. And the Wholesale Distributed Generation (WDG) market segment, which is targeted by the FIT, has enough potential on its own to meet the entire 33% RPS requirement by 2020.

While people are increasingly familiar with the effectiveness of FITs, many will be surprised that a well-designed FIT for California will actually save money for California's ratepayers. A recent analysis shows that the 33% RPS can be achieved under a comprehensive WDG FIT while ratepayers will pay less for energy in 2020 than they would have without the FIT. Further, when additional factors such as Parasitic Costs, the Merit Order Effect, and the Substitution Effect are considered, the ratepayer savings begin immediately. This analysis is detailed in comments submitted by RightCycle and the FIT Coalition to the California Energy Commission in mid-June. Those comments are provided along with this letter for your convenience.

In contrast to the cost-effective FIT approach, the CPUC has found that achieving the 33% RPS with large scale central generation would cost ratepayers at least \$12B in additional transmission lines alone. The CPUC findings also emphasize that these transmission lines would take far too long to build. Other existing policies were found to be similarly disappointing and ineffective in achieving the 33% RPS.

FITs that unleash the tremendous potential of WDG are the only viable policy mechanism for making the RPS real; and for doing so with cost-effective renewables. In early-2009, the CPUC found that there are between 5GW and 15GW of WDG solar PV deployments that can be made in California without significant transmission or distribution investment. Hence, a comprehensive FIT can begin delivering "shovel ready" projects immediately. Gainesville, Florida serves as an excellent example: A recently implemented WDG FIT in Gainesville will bring more solar PV online this year, in the City of Gainesville alone, than the entire State of Florida has brought online in its entire history!

In order to assure that AB1106 provides a FIT that actually makes California's RPS mandates real, we believe the following amendments are needed:

- The FIT should have an annual program cap of 2% of delivered electricity, by utility. This assures that California will be on a path to achieving the 33% RPS mandate by 2020. At the same time, applying the 2% cap to each utility independently will assure that small utilities have appropriately small FIT requirements.
- The FIT should apply to investor-owned utilities and local publicly-owned utilities. The potential for WDG applies equally in areas served by local publicly-owned utilities.
- The FIT policy should be phased in beginning with solar PV going into effect on 1 July 2010. California cannot afford to wait an extra year for the green jobs, ratepayer savings, and GHG emissions reductions that the FIT will deliver. The CEC has already performed much of the pricing and program design for solar under its RETI proceeding and the CPUC proceeding on FITs is already underway. Other technologies can be phased in by July 2011.
- The FIT should address interconnection barriers by requiring utilities to either pay for system upgrades associated with new FIT facilities or publish lists of circuits and available capacities for accommodating additional generation without major upgrades. Additionally, utilities should be required to share distribution upgrade plans to identify the distribution circuits and target capacities for accommodating generation within 5-years. If developers are expected to pay, then existing barriers to WDG development must be removed by providing visibility into expected costs of interconnection.
- The legislation should require the CPUC and/or CEC to design a single standard must-take FIT contract to be used by IOUs. There is little reason to have each utility create a separate must-take contract. POUs should be required to adopt a similar standard.
- The upper limit on tariff rates should include an inflation adjustment such that the 30 cents per kWh can change over time. Also, the limit based on a "percentage over the average costs" should be removed, as this is redundant, complicated, and unnecessary.
- The FIT should provide a 20-year contract duration as an option for all project developers, regardless of Tier. 20-year contracts are the standard for renewable energy projects.
- The legislation should instruct the commission to set a 2-year time limit for FIT projects to be deployed. Developers should not be allowed to reserve capacity indefinitely nor otherwise game the system in ways that create barriers and reduce program effectiveness.

In summary, we support AB1106, with amendments as outlined above, and we look forward to working with you to bring this groundbreaking legislation into law.

Sincerely,

Ted Ko  
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cc: Ed Randolph  
Nina Kapoor

Attachment A: Letter submitted to the CEC workshop on FITs held May 28<sup>th</sup>, 2009

11 June 2009  
 California Energy Commission  
 1516 Ninth Street, Sacramento, CA

RE: Docket No. 09-IEP-1G/03-RPS-1078  
*Joint IEPR and Renewables Committee Workshop 'Exploring Feed-in Tariffs for Renewable Energy Projects over 20 MW*

Dear Commissioners,

RightCycle and the FIT Coalition jointly commend the CEC on its tremendous efforts to enact a comprehensive FIT in California, and we are pleased to provide analysis regarding the net savings that ratepayers will experience from the implementation of a comprehensive FIT program in California.

Below, we describe four major methods by which the FIT program will reduce costs in energy production and thus provide savings to ratepayers. These factors more than offset any price premiums that could exist in early FIT rates. As the analysis clearly shows, the worst-case scenario is that the program would take a few years to yield a net savings to ratepayers. When considering all four methods below, it is reasonable to assume that a comprehensive FIT provides net savings to ratepayers from its initial year of operation.

***Baseline Scenario***

If only considering FIT rates and avoided costs that follow very conservative schedules over time, the FIT is anticipated to result in a net annual savings, versus a business-as-usual scenario, within several years. This baseline is a worst-case scenario that has been modeled as shown in Table 1 below.

The key worst-case assumption is that 100% of the FIT program is fulfilled with solar PV, the most expensive eligible renewable energy source, which is priced at \$0.22/kWh starting in 2010 with a 5% annual degression through 2020. The business-as-usual cost of electricity is assumed to be the avoided cost of \$0.15/kWh in 2010 with a 2.5% annual escalation (the starting avoided cost is derived from the 2008 MPR/TOD schedules for a 20-year, 2010-online, solar generation profile).

The model for this analysis is available at the FIT Coalition website: [www.fitcoalition.com](http://www.fitcoalition.com).

The following table shows the net savings to the ratepayer from the FIT. As shown, within 10 years, the FIT satisfies the entire 21% gap in achieving California's anticipated 33%-by-2020 RPS mandate, which requires 2% annual increments in renewable energy generation, while yielding a net savings of more than \$1.5 billion to California ratepayers in 2020.

*Table 1: Baseline Scenario with 5% annual FIT Rate degression and 2.5% annual avoided cost escalation*

	Total CA Energy	FIT Rate	FIT RPS	FIT Quantity	Avoided Cost	Net Cost	Rates	Rates	Rate Impact
Year	(GWh)	(\$/kWh)	(% total)	(GWh)	(\$/kWh)	(\$mil)	w/o FIT	w/ FIT	w/ FIT
2010	272,357	0.22	1%	2,724	0.15	191	0.137	0.138	0.51%
2011	275,944	0.21	3%	8,278	0.15	487	0.138	0.140	1.28%
2012	279,530	0.20	5%	13,977	0.16	689	0.139	0.142	1.77%
2013	283,116	0.19	7%	19,818	0.16	792	0.141	0.143	1.99%
2014	286,703	0.18	9%	25,803	0.17	794	0.142	0.145	1.95%

2015	290,289	0.17	11%	31,932	0.17	690	0.143	0.145	1.66%
2016	293,875	0.16	13%	38,204	0.17	478	0.144	0.146	1.13%
2017	297,461	0.15	15%	44,619	0.18	153	0.145	0.146	0.35%
2018	301,048	0.15	17%	51,178	0.18	(287)	0.147	0.146	-0.65%
2019	304,634	0.14	19%	57,880	0.19	(847)	0.148	0.145	-1.88%
2020	308,220	0.13	21%	64,726	0.19	(1,531)	0.149	0.144	-3.33%

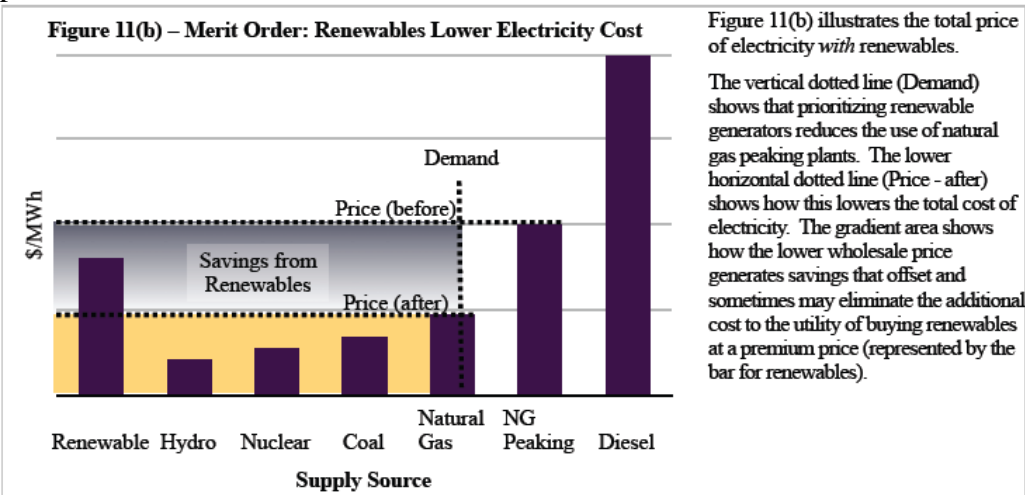
Data source: CPUC E3 GHG Calculator, [http://www.ethree.com/CPUC\\_GHG\\_Model.html](http://www.ethree.com/CPUC_GHG_Model.html)

Note that the worst-case annual net cost of the FIT Program peaks in 2014 at \$794 million, which translates into a rate impact of less than 2%. After 2014 the worst-case net cost decreases and then becomes a net savings to ratepayers in 2018. Given that this is a worst-case analysis, California ratepayers will save at least \$1.5 billion in 2020; and the savings could be an order of magnitude greater when considering the additional factors below.

### Additional Factors

Several additional factors are expected to contribute to the net savings yielded from a comprehensive FIT program, as follows:

**Merit Order Effect:** As described in the paper, "Feed-in tariffs in America" by the New Rules Project, renewable energy sources can save far more money than the TOD-adjusted MPR when these sources reduce peak demand on traditional sources. By preempting demand for the highest priced energy increments, fixed-price renewable energy causes a significant savings because a lower peak price will be applied to the full volume of variably-priced energy delivered/priced at peak periods. See the figure below for a graphical illustration of the merit order effect, and note that in Germany, the merit order savings alone exceed any mischaracterized "premium" that is paid under the feed-in tariff.



More details can be found in the "Feed-In Tariffs in America" paper that is available at the FIT Coalition website: [www.fitcoalition.com](http://www.fitcoalition.com).

**Substitution Effect:** In preempting the use of natural gas to generate electricity, the FIT Program will reduce the overall demand for natural gas, driving the price of natural gas downward. The substitution effect from a comprehensive FIT in California was quantified to be worth between 1 and 2 cents/kWh in the UC Berkeley memo to the CEC dated 10 December 2008. This 1 to 2 cents reduces the effective price for each kWh delivered by renewables under the FIT. The substitution effect is therefore a significant second order effect that persuasively argues for scaling up the FIT program quickly.

The official memo is titled “FIT Policy Memo to CEC” and is available at this FIT Coalition webpage: [www.fitcoalition.com/fit-documents](http://www.fitcoalition.com/fit-documents)

*Elimination of Parasitic Costs:* A comprehensive FIT program removes two types of purely parasitic costs that are rampant in California’s current RPS system. The elimination of these parasitic costs not only saves money directly, but also reduces risks, which in the end also saves money through lower costs of capital and other favorable effects. Since all savings are eventually reflected in rates, preempting parasitics will provide additional net savings to ratepayers. There are two types of parasitics that are eliminated by a comprehensive FIT program, as follows:

- Parasitic Transaction Costs (PTCs) include the proposing, negotiating, and contracting of projects. PTCs under the current RPS system can easily exceed \$1 million even for small projects. Since a comprehensive FIT program predefines and pre-approves projects that follow the FIT guidelines, the PTCs are completely preempted.
- Parasitic Transaction Time (PTT) is the time between project proposal and CPUC approval. The fastest PTT in the 7-year history of the RPS program is 1.5 years. PTT introduces significant carrying cost that can break the back of smaller project developers. Since a comprehensive FIT program predefines and pre-approves projects that follow the FIT guidelines, the PTT is completely preempted.

It is highly informative to study the methods used by countries that have been successful in bringing renewables online. All successful markets have been driven by comprehensive FITs, and Germany provides a prime example. It is worth noting that Germany’s FIT program uses a standard must-take contract that is only 4 pages in length. One wonders what terms must exist in the “standard contracts” that California utilities are touting. Unfortunately, experience causes one to always ask what creative barriers have the utilities crafted into 100 pages of legalese?

### ***Summary***

In summary, there are at least four major methods in which a well-designed comprehensive FIT program will provide net savings to California ratepayers. Combined with the reality that California needs such a program to have any hope of meeting its RPS targets, it is clear that California should implement the recommended large-scale, comprehensive FIT program as quickly as possible.

Best Regards,

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