FIT Coalition

RightCycle
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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.

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

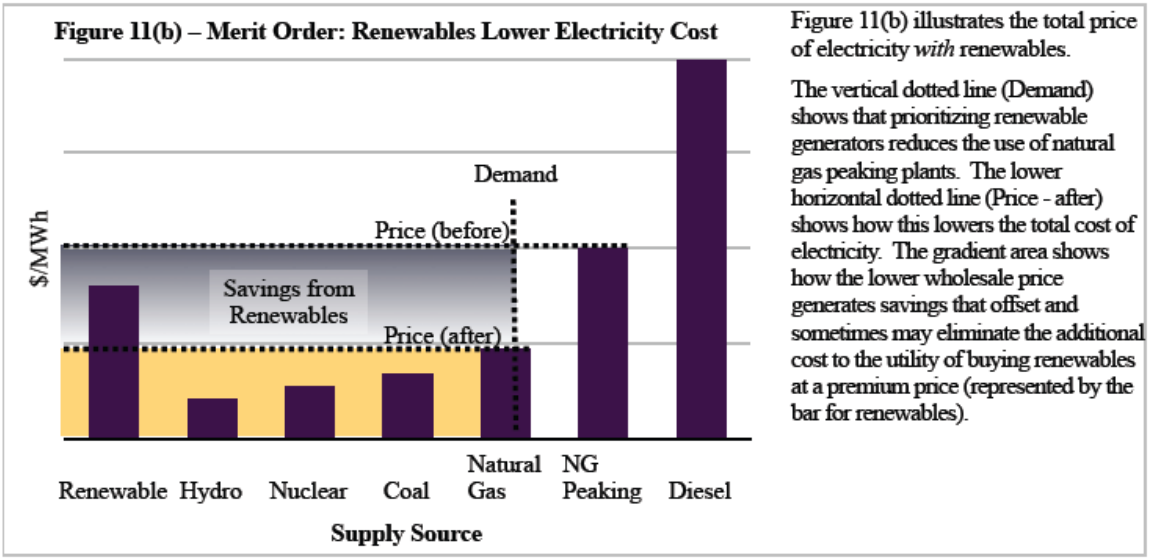
Note that the worst-case annual net cost of the FIT Program peaks in 2014 at $794 million, which translates into a rate impact of less than 2%. After 2014 the worst-case net cost decreases and then becomes a net savings to ratepayers in 2018. Given that this is a worst-case analysis, California ratepayers 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.

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

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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