

Frequently Asked Questions regarding Feed-in Tariffs in California

Summary 8/3/09

Sierra Club California, Energy-Climate Committee

1. What are best practices for an effective Feed-in Tariff program (FiT)?

Based on years of experience in nations such as Germany, Denmark and Spain, and independent research, a well-constructed FiT program contains the following:

- a. **Payment rates are based upon the costs of each renewable technology plus a reasonable profit.** Most of the infrastructure in the US electric system was built on this principle of “cost plus fair profit”. This has already worked to build everything from coal and nuclear plants, to transmission wires and ‘smart’ meters; let’s apply the same highly successful payment formula to renewable energy.
- b. **Payment rates should be set for each technology and project size.**
- c. **Contracts are long term – typically 20 years or more.**
- d. **Contracts are standardized and “must take.”**
- e. **The tariffs apply to all utilities** – both investor owned utilities (IOUs) and public owned utilities (POUs).
- f. **FiTs are periodically adjusted for new contracts up or down based on changing cost and market conditions.**
- g. **Government sets the required price and contract terms (e.g. via Feed-in Tariff programs) for renewables.** This removes an important barrier created by utilities that may not have an interest in developing or paying for renewables.

2. Why are FiTs needed?

The state is failing to meet its renewables goals using current methods. Current law requires the state to have 20% of its electricity generated by renewables by 2010, yet this legal requirement will not be met until 2013 at the earliest. Currently, we are at 12% and this has been constant for the last 7 years. Traditional contracting and pricing methods used for decades for contracting of new electrical generation don’t currently apply to renewables and utilities have not adapted their contracting methods to be successful in bringing on renewables. The most important problem is that many renewables currently cost more than conventional generation and the utilities have been unwilling to pay what their cost plus a reasonable profit. No one is going to want to finance or build a renewables plant that will lose money. FiTs address these problems.

3. Do FiTs work?

FiTs have proven to be highly successful. More than 18 countries have adopted feed-in tariffs. A European Union Commission analysis finds that feed-in tariffs achieve greater growth in renewable energy, at a lower cost, than other policy approaches.

Using FiTs, in just seven years from 2000 to 2007, Germany’s share of electricity from renewable energy more than doubled, from 6.3% to 14.2%, making Germany the world leader in installed capacity for both photovoltaic solar and wind. Germany installed 10 times more wind in 2008 than California.

During 2007, using FiTs, Spain’s wind-capacity additions set a European record with 3,522 MW installed in a single year, and Spain’s photovoltaic market grew by over 300%.

On March 1, Gainesville FL implemented the first feed-in tariffs in the U.S. for photovoltaic solar. On March 10 its web site reported: “We have already received enough completed applications to reach our 2009 and 2010 target of 4 megawatts each.” In less than 10 days, Gainesville achieved its goal for 2009 and 2010!

4. How can Feed-in Tariffs be less expensive than competitive pricing?

Under a FiT program, renewable electricity costs can be kept as low as possible through the following:

- A transparent tariff reduces risk of the unknown for the project revenue stream.
- Long-term contracts allow capital cost to be amortized over 20 years or more, reducing annual cost and thus rate impact.
- A standard, must-take contract reduces legal and administrative expenses, time delays, deal closure risk and all financing rates.
- All the above reduces the risk to investors and enables them to offer much lower interest rates. The financing cost component on generation projects can account for a large portion of total project costs. Savings of 10-30% of project costs can be realized through lower interest rates, which can lower ratepayer impacts.

If the renewable generator has to engage in a competitive bid process, the additional legal expenses, increased financing costs, and higher costs for equipment and labor, all add to the costs that ratepayers must bear. California utilities have used the so-called “competitive” approach to renewables for years and it has failed to bring on significant additional renewables on-line in part due to the reasons stated above.

5. Will FiTs increase ratepayer’s costs of electricity?

Utilities and political opponents of renewables often make a big issue about how much renewables cost. However, the cost to the customer is usually relatively small. Based on analysis by the German government, the cost of the German renewable feed-in tariff program was \$3.82 per household per month in 2007.

A 2007 study by the Lawrence Berkeley National Laboratory analyzed 28 state-level studies to project the impact of increased renewables on electricity rates. It concluded that the median bill impact would add only 38 cents per month. Some of the studies even predicted rate decreases.

It is not fair to compare the cost of new renewables to cheap gas-fired generation from plants built 30 years ago. Modern plants are far more expensive, and over the long term fuel prices are likely to increase. According to the CPUC, a natural gas-fired peaker generation plant built today would provide electricity for 30 to 60 cents per kilowatt-hour. At these prices, solar and other renewables can be competitive. Further, electricity rates are going up -- with or without renewables. As existing old conventional power plants have to be replaced at much higher costs, undergo extensive maintenance, are retrofitted to reduce pollution or sequester carbon and as fossil fuel prices increase, conventionally produced power prices will continue to rise. For example, a few years back California regulators approved rate increases of over \$1.5 billion to repair two aging nuclear plants owned by the state’s utility companies. This is more than the original cost of the plants. Over time conventional power costs have skyrocketed. Renewables offer a cost-effective alternative in which, in most cases, the cost of fuel is free and there is essentially no pollution or carbon emissions produced.

Renewables could actually result in lower electricity bills even in the short term than would otherwise occur with new conventional power generation.

6. How important is speeding up installation of renewables in California?

The example we set of action or inaction can have huge impact on the pace at which the world moves away from fossil fuels and toward renewables and a cooler planet.