

Feed-In Tariffs

Presentation to the Nevada Production and Use of
Energy Committee

November 3, 2009



Sara Birmingham
Director of Western Policy
The Solar Alliance

EXHIBIT M - ENERGY
Document consists of 14 pages.
Entire exhibit provided.
Meeting Date: 11-03-09

Who We Are

- An Alliance of PV manufacturers, systems integrators and financiers
- Working with states to adopt cost-effective solar policies and programs



The **Solar**
Alliance

Today's Discussion

- Overview of incentive options available
- What is a Feed-In Tariff?
- Examples of existing US Feed-In Tariff programs
- Items to Consider

Incentive Program options



- The Solar Alliance supports all market mechanisms
 - Feed-In Tariffs (FIT)
 - Incentive offered in conjunction with net metering (typically for on-site load), i.e. the California Solar Initiative
 - Renewable Portfolio Standards (RPS) – minimum renewable procurement standards set by the State for Utilities
 - Tax credits

* Note that these are not mutually exclusive

What is a Feed-In Tariff?

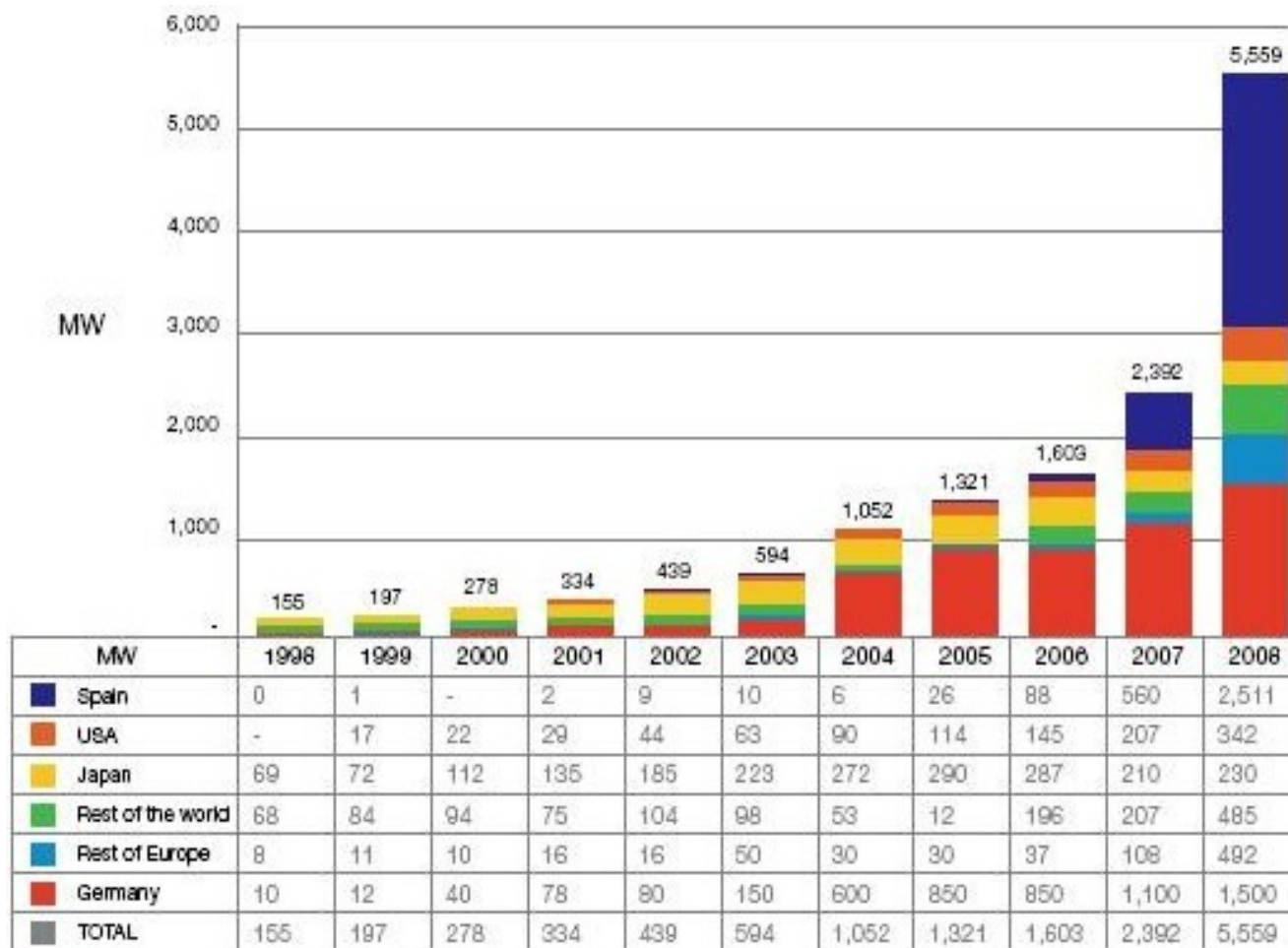
Feed-in Tariff (FIT): A renewable energy policy that typically offers a guarantee of:

- 1. Payments** to project owners for the total amount of renewable electricity they produce;
 - 2. Access to the grid;** and
 - 3. Stable, long-term contracts** (15-20 years)
- **This revenue may pay for:**
 - Electricity sales, or
 - Electricity sales + RECs

Feed-In Tariffs

- Rationale
 - Accommodates systems that exceed on-site needs
 - Accommodates installations where there is no on-site load
 - Streamlines procurement for distributed resources
- Feed-In Tariffs:
 - Can be a vehicle for a state to meet its RPS Requirements
 - Can differ widely in details and can produce successful, cost-effective programs or something less so
 - Are typically administratively set

Feed-In Tariff Programs can be very effective in adding capacity



Source: EPIA Global Market Outlook

The Devil is in the details....

- What is your objective?
 - You will have different outcomes depending on the goal and structure (Is the goal lots of MWs fast? Is the goal to build sustainable industry with local jobs?)
- Setting the price is the difficult issue.
 - if set too low, little new RE development;
 - if too high, surplus profits to developers which can lead to very quick subscription or upward pressure on electricity rates
- Pricing Approaches:
 - Cost based (cost of generation plus a rate of return)
 - Value based (value of the generation)
 - Market approaches (although most do not typically consider this a true feed-in tariff)

US Feed-In Tariff Programs

- States/utilities that have implemented a Feed-In Tariff:
 - California
 - Vermont
 - Gainesville
- States/utilities that are in the process of developing a Feed-In Tariff:
 - Oregon
 - Hawaii
 - SMUD (municipal utility)

- California has a Feed-In Tariff available (AB 1969)
 - Price based upon a “Market Priced Referent” that is adjusted for Time of Delivery (solar ~\$0.13/kWh)
 - Available for systems < 1.5 MW
 - Multiple technologies
 - While available for previous 2 years, there have not been any PV projects participate
- CPUC currently evaluating expanding the Program
 - Looking to CPUC suggested a Reverse Auction pricing mechanism and increase to 10 MW
 - Many different parties filed comments on issues, including pricing
- In 2009, legislation passed to expand AB 1969 to 3 MW and include environmental compliance costs

Gainesville, FL

- Gainesville Regional Utility established a feed-in tariff
- PV only
- \$0.26/kWh – replaces both rebate and net metering
- 20 years
- Annual cap = 4 MW
- Have received enough applications to reach their annual target of through 2016. Not accepting applications.

Vermont

- Max System Size: 2.2 MW
- Power purchase contracts of 10-20 years for other renewable technologies, and up to 25 years for solar projects.
- Overall program limit of 50 megawatts (includes utility systems)
- Multiple technologies (solar, wind, anaerobic digesters)
- Solar systems: 30 cents per kWh
- First day of program, 4 x overall program limit received (200 MW), no longer accepting applications

Recap

- Feed-In Tariffs are one of the policy mechanisms to promote renewables
- They can be very effective in getting projects built very quickly
- The details of any specific program should be based upon the goals, market and political climate of each state
- Feed-In Tariff best practices include:
 - frequent market evaluation and
 - being designed to decline over time (by milestone dates or capacity goals)

Questions?



Contact info:

Sara Birmingham

sara@solaralliance.org

415-385-7240

www.solaralliance.org