

Feed-in Tariffs in Oregon and Vermont

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NARUC Energy Resources and the Environment Committee

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The Regulatory Assistance Project

China EU India United States



About the Regulatory Assistance Project

- RAP is a nonprofit organization providing technical and policy assistance to government officials on energy and environmental issues.
- RAP also provides educational assistance to other stakeholders, including consumer and environmental groups, utilities and business associations.
- RAP principals and senior associates all have extensive regulatory experience.
- We are funded by foundations and federal agencies.
- We have worked in nearly every state and many nations throughout the world.



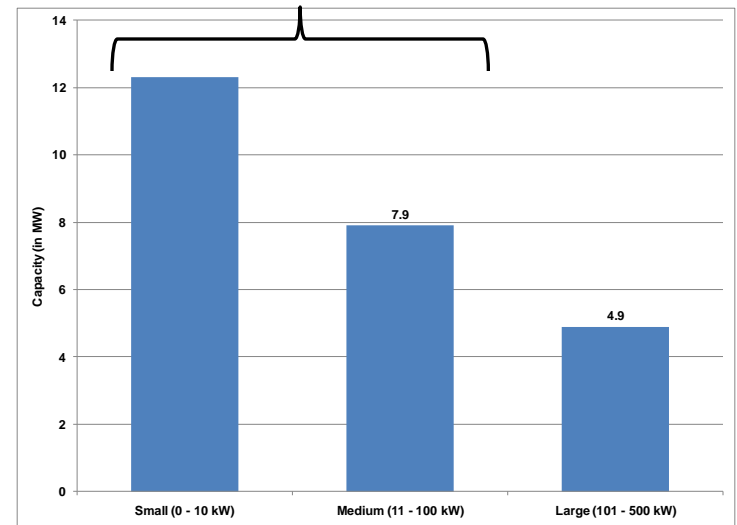
Oregon FIT Law

- HB 3039 (2009), amended by HB 3690 (2010), required the PUC to establish pilot programs to demonstrate the effectiveness of volumetric incentive rates for new solar PV systems installed in Oregon by retail customers of electric companies (serve 75% of the load in the state)
 - Pilot ends when 25 MW of systems are installed or 3/31/15
 - 500 kW cap on individual system size
 - Customer gets fixed rate for 15 years
 - PUC can limit system capacity so rate impact by customer class $\leq 0.25\%$ of annual revenue requirement
 - Renewable energy credits transfer to utilities toward RPS compliance



Oregon FIT Law *(cont.)*

- Smaller-scale systems targeted for 75% of participation
 - PUC reserved 1/2 of capacity for systems up to 10 kW
 - 1/3 of capacity reserved for systems between 11 kW and 100 kW
- Participants cannot get state energy tax credits or grants
- PUC reports to Legislature on: 1) efficacy of FITs vs. state tax credits/grants for promoting solar PV and reducing system costs and 2) FIT program costs





Standard Offer for Smaller-Scale Systems

- Systems ≤ 100 kW qualify for “cost-based” rates designed to cover installed cost, interconnection costs, financing costs, taxes, liability insurance and a small profit margin
 - \$0.55/kWh to \$0.65/kWh for systems ≤ 10 kW, based on location
 - \$0.55/kWh for all systems between 10 kW and 100 kW
 - May vary by location in the future
- 1/4 of pilot capacity is rationed each year for enrollment
 - For small and large systems
 - Except for initial round (7/1/10), new enrollment periods begin Oct. 1st and April 1st each year – yearly ration is divided into these two periods
 - Standard offer rates for new contracts are reviewed every 6 months
 - Rates will be reduced or increased depending on how much and how quickly allotted capacity was reserved in the last round
- Systems must be installed by Energy Trust of Oregon trade allies in good standing



Standard Offer for Smaller-Scale Systems *(cont.)*

- “Net metering” volumetric incentive rates for systems ≤ 100 kW
 - No net sale within a month
 - FIT rates apply up to customer’s energy usage
 - Incentive payment = FIT rate minus customer’s kWh rate for energy and delivery (excl. adjustments), *but customer always gets full FIT benefit*
 - Net excess generation rolls over to next billing cycle for 12 months only
- *Oregon Department of Justice*: Net metering transactions are retail transactions not subject to FERC regulation. *MidAmerican Energy Company*, 94 FERC 61,240 (2001 WL 306484)
 - Customer is eligible to receive incentive rate for energy generated that does not exceed the amount of energy used.
 - Generator’s output is netted against usage over a “reasonable” time period. *Sun Edison, LLC*, 129 FERC 61,146 (2009 WL 3932884)



Capacity Reservations for Smaller-Scale Systems

- FIT rates available on a first come, first served basis (time-stamped)
- Project must be completed within 12 months of reservation date
- On-line capacity reservation application
 - Deposit of \$20 per kW, refundable unless customer cancels or reservation expires (if interconnection application is not filed within 2 months or system is not installed within 12 months)
- Interconnection application and fees
- First enrollment period opened July 1, 2010
 - Allocations: PGE - 1 MW, PacifiCorp - 0.7 MW, Idaho Power - 0.2 MW
 - PGE and PacifiCorp ran out of allotments within 15 minutes; Idaho Power ran out in 2 hours
 - 118 projects for PGE, 75 projects for PacifiCorp – nearly all ≤ 10 kW
- Enrollment period beginning Oct. 1, 2010
 - Rebuttable presumption of 10% reduction in FIT rates (maybe steeper cut)
 - Twice as much capacity will be allocated for enrollment



Competitive Bidding for Large FIT Projects

- Annual RFPs for projects >100 kW and ≤ 500 kW
 - 1st RFP issued by each utility on July 1st
 - Responses due Aug. 12th, capacity reservations secured Sept. 2nd
- Selection of systems based solely on bid volumetric incentive rate
 - Bid cap is \$0.55/kWh, tiebreakers if oversubscribed
- *Oregon Department of Justice*: States can order utilities to purchase renewable energy, but cannot specify rate paid. *Southern California Edison and San Diego Gas & Electric Company*, 71 FERC 61,269 (1995 WL 327268)
 - Energy price is set by market and subject to FERC jurisdiction
- Requests for FERC declaratory rulings on CPUC order requiring utilities to buy renewable energy from generators at CPUC-set rates (Docket Nos. EL10-64 & EL10-66)



Vermont FIT Program

- Vermont Energy Act of 2009 (Act 45)
 - First statewide FIT program in the U.S.
 - Obligations apply to all electric distribution utilities (except one)
 - A single program facilitator contracts with all project owners and distributes the power and costs to each distribution utility in proportion to its *pro rata* share of total state retail energy sales for previous year
 - “Cost-based” rates using pricing model approved by Vermont PSB
 - Reflect tax credits and other incentives provided by government and other sources (excluding renewable energy credits)
 - Consider that project costs may vary by project size and technology
 - Include average interconnection costs
 - Include a return on equity (ROE) not less than the highest ROE for a Vermont investor-owned electric utility on the FIT effective date – unless insufficient for rapid development of systems or above the level required by investors

Vermont FIT Program *(cont.)*

- Standard offer contract program began 10/09
- 2.2 MW cap per project, 50 MW cap overall
- No technology can occupy >25% of application queue
 - Queue for solar and biomass filled immediately; 50 MW filled soon after
- Solar rates do not change over contract term; for other resources, an inflation adjustment is built in for a portion of generic project costs
- First-year prices (per kWh) for 2010 contracts
 - Solar - \$0.24
 - Small wind - \$0.2083
 - Large wind - \$0.1125
 - Hydro - \$0.1188
 - Farm methane - \$0.1359
 - Landfill gas - \$0.0869
 - Solid agricultural and $\geq 50\%$ -efficient woody biomass - \$0.1208
- Must re-set prices at least every 2 years for new contracts





Vermont FIT Program *(cont.)*

- Projects *can* get state tax credits but currently are not getting state grants (grants administered by independent board)
- 25-year contracts for solar, 15 years for landfill gas, 20 years for all other resources
- Application requires documentation of site control plus \$200 administrative fee and \$10/kW refundable deposit within 5 business days from notice of project acceptance
- Renewable energy certificates transfer to utility (except for farm methane)
- About 45 MW under contract so far (44 projects)



Strategies to Improve Ratepayer Value

- Base standard-offer FIT rates on cost and performance of more cost-effective projects – e.g., 25th percentile (Oregon)
- For larger systems, use auctions or RFPs to identify FIT rates needed to achieve targeted investments and identify best deals for ratepayers
- Phase-in implementation – e.g., enrollment – to discover standard offer rates needed to achieve targeted investments and to limit cost impacts
- Use project caps if you want diversity in project type and size
- Raise the bar on applications to protect against speculation and frivolous applications that occupy space in the queue
- Transfer renewable energy credits to utility for RPS compliance or sale
- Require utilities to identify locations where customer-side resources could defer distribution system upgrades and price accordingly



For More Information

➤ Oregon

– Laws

<http://www.leg.state.or.us/09reg/measpdf/hb3000.dir/hb3039.en.pdf>

<http://www.leg.state.or.us/10ss1/measpdf/hb3600.dir/hb3690.en.pdf>

– Policies and rates

<http://apps.puc.state.or.us/edockets/orders.asp?ordernumber=10-198>

– Rules

<http://apps.puc.state.or.us/edockets/orders.asp?ordernumber=10-200>

➤ Vermont

– Legislation

<http://www.leg.state.vt.us/DOCS/2010/ACTS/ACT045.PDF>

– Vermont Public Service Board proceeding on FIT tariffs:

<http://psb.vermont.gov/docketsandprojects/electric/7523>

- NARUC, *Feed-in Tariffs: Frequently Asked Questions for State Utility Commissions*, June 2010, www.naruc.org
- National Regulatory Research Institute, *What Is an Effective Feed-In Tariff for Your State? A Design Guide*, April 2010, http://www.nrri.org/pubs/multi-utility/NRRI_FIT_design_april10-07.pdf
- Scott Hempling, C. Elefant, K. Cory and K. Porter, *Renewable Energy Prices in State-Level Feed-in Tariffs: Federal Law Constraints and Possible Solutions*, National Renewable Energy Laboratory, January 2010, <http://www.nrel.gov/docs/fy10osti/47408.pdf>



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RAP is committed to fostering regulatory policies for the electric industry that encourage economic efficiency, protect environmental quality, assure system reliability, and allocate system benefits fairly to all customers.