FEED-IN TARIFFS

An issue paper of the National Rural Electric Cooperative Association

What are Feed-In Tariffs?

- Feed-in tariffs, also called "renewable energy payments" or REPs, are a policy tool used to promote renewable resources.
- Feed-in tariffs generally require utilities to sign long-term wholesale contracts with renewable energy generators agreeing to purchase power at rates established by state regulators.
- The rates are established at the level required to ensure the generators a rate of return adequate to attract investment. Some describe the rates as incorporating the societal benefits of renewable resources in addition to the energy and capacity value of the power. As an example, one proposal would pay wind projects between $.15 and $.23/kWh, small hydro projects between $.12 and $.35/kWh, photovoltaic projects between $.46 and .98/kWh and so-on depending on the need of the project.
- Some feed-in tariff proposals provide for some generator or tax-payer funding for the costs utilities incur in complying with the feed-in tariff obligations.
- Feed-in tariffs may also be accompanied by other policies that grant renewable resources priority access to transmission capacity and grant renewable resources priority rights to be dispatched.

Why are Advocates Promoting Feed-In Tariffs?

- Feed-in tariffs facilitate investment in renewable generation by giving renewable energy generators a guaranteed long-term wholesale purchaser for their generation at a favorable rate.
- Because feed-in tariffs provide for payments proportional to the needs of different renewable energy projects, feed-in tariffs can promote less economic forms of renewable resources such as community-sized wind projects that advocates argue provide greater societal benefits than the utility-scale projects that gain the most from other renewable energy policies such as the federal production-tax credit.
- Because feed-in tariffs promote renewable energy, feed-in tariffs are given credit for the whole range of potential benefits that can come from renewable energy development, including domestic "green jobs" and reductions in CO2 and other power-plant emissions.

Why are Utilities Concerned About Feed-In Tariffs?

- Feed-in tariffs will raise the cost of power for retail consumers by requiring utilities to pay far more for certain favored resources then their "avoided cost" -- the cost the utilities would incur to purchase the power elsewhere. For example, a feed-in tariff could require a utility to purchase wind from a back-yard wind generator at 23 cents/kWh at an hour when the utility

could otherwise have acquired power from an existing coal or hydro resource for 2 cents/kWh.

- Feed-in tariffs require utilities to purchase each category of renewable resource at a price that makes that category of resource viable, thus imposing more cost on consumers than policies that permit utilities to acquire the lowest cost renewable resources available. For example, a feed-in tariff could require a utility to purchase solar energy at 96 cents/kWh when the utility could instead have acquired power from a utility-scale wind farm with equivalent environmental attributes for 8 cents/kWh.

- Feed-in tariffs do not give developers any incentive to locate renewable generation efficiently where transmission capacity is available or planned. That will make it difficult for utilities to engage in efficient regional transmission planning and will raise the cost of transmission for consumers.

- Feed-in tariffs encourage investments in renewable generation in isolation from utility resource planning, leading to an inefficient resource mix that is not cost-effective for consumers and that may not provide adequate system reliability.

- Feed-in tariffs could require utilities to purchase far more generation than they need to meet their own needs. In addition to the high cost of the power, the utility could also bear the costs for:

    - Upgrading the local distribution or transmission system to integrate the generation reliably;
    - Upgrading the regional transmission system to wheel the power to other wholesale purchasers;
    - Congestion charges associated with wheeling the power across an under-built transmission system;
    - Acquiring the reserves, ramping resources, reactive power resources, and other dispatchable generation required to integrate high levels of variable generation reliably; and
    - Selling the generation in a market that could be saturated with renewable resources, especially during the minimum load periods when wind is strongest.

- For example, Big Flat Electric Cooperative serves about 1,771 consumers spread across more than 8600 square miles of windy territory in north-central Montana. Even one community wind farm would far outstrip both the co-op's 5 MW peak demand and the capacity of the regional transmission system. In response to the feed-in tariff, the co-op would have to replace its low-cost hydro power with high-cost wind energy, pay for upgrades for transmission to integrate the wind into its own system, pay for upgrades to the regional transmission system to move the power across three or more states to the nearest large population center, pay for the ancillary services required to support that transmission service, and lose money on every kWh of high-priced power it had to resell into the market. The economic impact on the co-op's 1,771 rural consumers would be devastating.

- Policies associated with feed-in tariffs that give renewable resources priority access to transmission facilities would further increase costs to consumers by displacing the low-cost energy those facilities had been carrying to consumers and forcing consumers either to acquire higher cost resources over those transmission paths that are still available or pay to build new transmission capacity to replace the capacity taken by the priority renewable resources.

- Policies intended to reduce the cost of feed-in tariffs for utility consumers, such as a tax-based reimbursement fund, are unlikely to cover the full direct financial cost of the feed-in tariff and will not address the indirect operational, reliability, and cost challenges caused by feed-in tariffs.

How do Feed-In Tariffs Differ from PURPA § 210?

Both feed-in tariffs and PURPA § 210 require utilities to interconnect with and to enter into long-term wholesale contracts for the output of renewable resources. PURPA, however, included several consumer protections not available under feed-in tariff policies:

- Whereas PURPA capped the wholesale price that a utility had to pay for energy at the "incremental cost to the utility of alternative energy sources," feed-in tariffs set the price at the level required by the renewable energy project to make a reasonable rate of return, which will be much higher than avoided cost in almost all cases. States may attempt to overcome the avoided cost ceiling by compensating the generator through other methods, such as renewable energy credits or tax credits.

- Whereas PURPA caps the size of qualifying renewable energy facilities at 80 MW, there may not be a cap for feed-in tariffs.

- Whereas EPAct'05 amended PURPA to allow utilities to apply to the Federal Energy Regulatory Commission for an exemption from PURPA's mandatory purchase obligation if QFs could sell their power into a competitive wholesale market, feed-in tariffs are premised on the idea that the market price for power is too low to support renewable resources.

- Whereas PURPA effectively caps the amount of generation that a utility had to purchase from QFs (avoided cost drops to 0 when QFs offer more energy than a utility's consumers can use), feed-in tariffs may impose no limit on the total energy a utility could be required to purchase.

- Whereas PURPA allows utilities to charge QFs for the costs of interconnection and the cost of providing service, feed-in tariffs may bar utilities from charging generators the costs the utilities incur in providing them service.

How do Feed-In Tariffs Differ from Net Metering?

Both feed-in tariffs and net metering are designed to require utilities to interconnect with and purchase the output from certain generators at a rate that exceeds most utilities' avoided cost. Net metering laws, however, generally include several limits not imposed by feed-in tariffs:

- Net metering rules require utilities to give consumers credit against their energy usage for energy their generators export to the system over the course of a billing period or longer period. This effectively compensates consumers at the retail rate for their generation up to the point where the generation completely offsets usage during the credit period. For net-excess generation (NEG) beyond that point, most states credit the remaining NEG to the utility or require payment at avoided cost. Feed-in tariffs require payment for all generation at the level required to provide the investor a reasonable rate of return. That level is almost always going to be higher than the payment under net metering.

- Most states limit the size of the generators entitled to net metering. Limits range widely from 10 kW to several MW. Even at the higher end, the limits reduce consumers' maximum exposure to high power costs. Feed-in tariffs may not impose limits on the size of eligible generators, requiring other consumers to subsidize even large projects operated by sophisticated developers.

- Most states limit the number of generators or amount of generation capacity entitled to net metering. The limits reduce consumers' maximum exposure to high power costs. Feed-in tariffs may not impose such limits, requiring other consumers to subsidize even large numbers of projects producing significant amounts of energy, even if that exceeds the total demands of the purchasing utility.

Are Feed-In Tariffs Consistent with Federal Law?

Feed-in tariffs require utilities to purchase power at wholesale at rates set by state or local regulators. Yet, the rates, terms, and conditions of wholesale sales of electricity are today subject to one of two federal laws.

- If the generator is a Qualifying Facility (QF) the rates at which it may sell at wholesale are subject to PURPA.
    - PURPA requires utilities to purchase power from QFs at their avoided cost. The avoided cost rate is established by states for those utilities that are subject to state rate regulation while non-state rate regulated utilities establish their own avoided cost.
    - As noted above, PURPA does not permit states to require state-regulated utilities to pay more than avoided cost nor does it permit states to establish avoided cost rates for non-state rate regulated utilities.
    - In October 2010, FERC clarified that states with renewable portfolio standards (RPS) may require utilities which must comply with the RPS to apply a multi-tier avoided cost calculation. Under such a calculation, utilities could only base avoided costs paid under a feed-in tariff on generation sources that would be eligible to meet the RPS in the same way as the generator seeking to sell under the feed-in tariff.

However, this calculation would only apply if the state has a RPS and the purchasing utility needs the output from the generator seeking to sell under the feed-in-tariff to meet its RPS requirements.

- If the generator is not a Qualifying Facility, its sale of wholesale power in interstate commerce makes it a Public Utility subject to regulation by the Federal Energy Regulatory Commission (FERC) pursuant to the Federal Power Act (FPA).
    - The FPA requires FERC to ensure that the rates, terms, and conditions of wholesale sales are just and reasonable and not unduly discriminatory or preferential.
    - The FPA preempts any State effort to regulate rates for wholesale sales by Public Utilities.
- The National Regulatory Research Institute (NRRI) has published several papers calling into question the legality of Feed-In Tariffs under Federal law and presenting options for States and the FERC to "get around" PURPA and the Federal Power Act.
- The Waxman-Markey bill (H.R. 2454) included a provision to permit States to establish Feed-In Tariffs notwithstanding PURPA and the FPA.

How Can We Gain the Benefits Of Renewable Resources Without the Disadvantages of Feed-In Tariffs?

- Adopt policies that support renewable technologies without shifting costs between consumers:
    - Provide tax credits and other government funding for consumers that install renewable generation;
    - Support long-term extensions of the production tax credit and clean renewable energy bond programs;
    - Support expansion of the transmission grid to move renewable resources from the remote areas where they are most plentiful to population centers;
    - Appropriate funds for research, development, and demonstration projects aimed at lowering the costs of DG; and,
    - Remove federal regulatory burdens on consumers who generate their own power.

- Implement net billing programs for small renewable generators. Such programs typically:
    - Permit interconnection of customer generation to the grid;
    - Permit consumers to use their generation to reduce their consumption of utility power;
    - Ensure appropriate compensation to consumers for their net excess generation at reasonable rates;
    - Ensure consumer generators pay an appropriate share of system costs, protecting other consumers from cross-subsidies.

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