



*Series of Regulatory Choices*

*May 2010*

*No. 2*

## **Feed-In Tariffs and Renewable Resource Policy Tradeoffs**

*By: Cynthia Boland, Esq.*



*DEFG's Series of Regulatory Choices explores the federal, state and local regulatory decisions that expand the choices available to energy consumers as they construct and inhabit buildings, purchase and maintain energy-consuming devices, purchase energy, or manage their consumption of energy. Greater choice increases efficiency.*

**◀ All agencies make a series of choices ▶**

## Executive Summary

To achieve environmental and economic development goals, U.S. policy makers are currently considering new ways to accelerate renewable energy market growth. Among the emerging policy mechanisms is the feed-in tariff (FiT). While the FiT increases consumer choice, it has tradeoffs. Enormous public and private sector investments are required for energy resources, and FiTs serve as a mechanism for various constituents (local, state and federal governments, and the private sector) to help people assume and offset the risk of those investments. It is critical that policy makers consider the overall cost of any renewable energy program as well as the different policy priorities and objectives for instituting renewable energy policies. One common goal is to reduce carbon emissions, with a second being to promote economic development and technological innovation.

## Introduction

There is growing support for development of renewable power generation through the use of FiT, a policy mechanism that requires utilities to pay a premium rate for renewable sources of energy. The FiT has succeeded in promoting renewable energy in Europe over the last two decades, and is presently being considered as a policy measure in the U.S. at the local, state and federal levels. FiT is carried out as contract between a renewable energy producer and a utility for a guaranteed payment for electricity that is fed into the grid. The policy typically includes three fundamental provisions: (1) a specified rate for electricity (paid by the utility to the producer) sufficient to cover generation costs plus a reasonable return on investment; (2) a “long-term” contract (generally 15-25 years) between the producer and the utility; and (3) guaranteed access to the grid.

The following pages will include an in-depth discussion on the provisions and considerations around FiT policy, the success of the FiT program in Germany, and various issues and potential difficulties associated with implementation of FiT policy in the U.S.

## The Key Provisions of the FiT Policy

Proponents of the FiT policy stress the importance of the specified rate or the “feed-in tariff,” which is how much the renewable generator would be paid by the utility. Germany’s first FiT policy, the *Stromeinspeisungsgesetz*, (translated, the law on “feeding-in” electricity) is an example of a successful policy that provided both a specified payment price and grid access. (See discussion, *infra*, regarding Germany’s FiT policy successes.)<sup>1</sup>

Currently, there are two leading methodologies for setting the payment received by renewable energy (RE) producers through a FiT: (1) the payment is based on the levelized cost of RE generation; and (2) the payment is based on the value of RE generation to the utility and/or society.<sup>2</sup> The levelized cost design has been widely utilized in the most successful

<sup>1</sup> See [Paul Gipe, \*Model Advanced Renewable Tariff Legislation: Designing Model Legislation for a System of Feed-in Tariffs\*](#) (September 18, 2008; edited September 15, 2009). (Under the World Future Council's summary of the essential elements of a feed-in tariff policy, “price” includes the technologies governed, priority of purchase, how to determine the right price, and how to pay for it, and “access” includes connection to the grid, grid reinforcement, how the cost of interconnection is split between the utility and the developer, and transparency.)

<sup>2</sup> [Cory et al., \*Feed-in Tariff Policy: Design, Implementation, and RPS Policy Interactions\* \(National Renewable Energy Laboratory, Mar. 2009\)](#), at p. 2-3. (The value-based approach can be contrived in a number ways, either according to the utility’s avoided costs or by internalizing the external costs (e.g., the value of climate mitigation, health and air quality impacts and/or effects on the energy security) of conventional electricity generation. There are complications with the value-based approach. Quantification of the costs likely leads to administrative complexity. Additionally, the potential for not matching the actual renewable energy generation costs may result in payments that are either insufficient and do not stimulate market growth, or are higher than actual generation costs and thus lead to cost-inefficiency or windfalls. Many U.S. states currently use value-based cost methodologies to support renewable projects, yet “[v]alue-based FIT policies, whether tied to avoided costs or to external social and environmental costs, have so far been unsuccessful at driving rapid growth in renewable energy.”)

European FiT policies and proven to be effective. With the levelized cost design, the payment is based on the cost of generation, plus a stipulated return determined by the policy makers and/or program administrators.<sup>3</sup>

The levelized approach is further segmented into two different payment designs – the “fixed-price” and the “premium-price” options. With the fixed-price design, the total FiT payment remains independent from the market price and is predetermined for a fixed period of time, thus creating stable and favorable conditions for investors. The premium-price option involves a payment for the total amount of electricity produced and a FiT premium payment on top of the spot-market electricity price, which can be variable (as a function of the spot-market electricity price) or non-variable (a fixed, predetermined premium). Though the non-variable design is less complicated, problems can arise if there are extreme fluctuations in the spot-market electricity price, i.e., when dealing with high spot-market prices, the producer receives a windfall profit, and when dealing with low spot-market prices, the investor return would be at risk.<sup>4</sup>

To manage issues of over and under compensation, premium-price payment designs more in proportion to actual generation costs have already been introduced. Spain for instance introduced a variable premium-price design with both a price cap and floor, which allows for the monitoring of electricity prices hour-by-hour and the ability to make adjustments real time (i.e., lowering the premium as electricity prices increase and vice versa).<sup>5</sup> The Netherlands, on the other hand, utilizes the “spot-market gap” model. Similar to the fixed-price FiT, there is a predetermined minimum total payment, but rather than paying the total amount through a FiT payment, there are two revenue streams – the prevailing spot-market price of electricity and the variable FiT payment that covers the real-time difference between a minimum total payment guarantee and the spot-market price. Both the Spanish and Dutch designs are similar in that, if the market price rises above the guaranteed price, the FiT premium drops to zero.<sup>6</sup>

RE producers are therefore generally guaranteed a specified rate for every kilowatt-hour (kWh) produced as well as a reasonable rate of return under a FiT policy. Other key design features of the FiT are guaranteed grid access and the long-term purchase contract, which allows investors to recover their investment. “Long-term” commitments (15-25 years) have been highlighted as essential to stimulating investment in RE. Investors focus their capital on investment opportunities where there is an evident confluence of market drivers and regulatory policy support in place – “regulatory regimes that have transparency, certainty and longevity embedded in them.”<sup>7</sup>

Additionally, it appears that FiT programs can be designed to foster innovation, achieve social goals, and encourage a diversity of dispersed renewable generators. Solar on rooftops, for instance, can be rewarded as the location increases a building’s efficiency, turns shelter into power generation, and preserves open space. FiT rates can also be slightly higher for smaller projects to encourage development, e.g., there could be a higher payment to encourage development of a wind power project in an area with lower speeds but greater transmission capacity.<sup>8</sup>

## Germany – The Benchmark for Effective FiT Policy

Germany continues to lead the way as the benchmark for effective FiT policy. The first true feed-in law in Germany was the Stromeinspeisungsgesetz (StrEG) in 1990, requiring utilities to purchase electricity from renewable energy producers at a percentage of the prevailing retail price of electricity with a project cap of 5 MW.<sup>9</sup> The innovative bill required utilities to connect renewable energy generators to the grid and then buy the electricity produced at a rate of between

---

<sup>3</sup> *Id.*, at p. 2-3.

<sup>4</sup> *Id.*, at p. 4-5.

<sup>5</sup> *Id.*, at p. 5.

<sup>6</sup> *Id.*, at p. 5-6.

<sup>7</sup> [Fulton, et al., \*Creating Jobs & Growth: the German Green Experience\* \(Deutsche Bank Climate Change Advisors, Sept. 2009\).](#)

<sup>8</sup> [Farrell, \*Feed-in Tariffs in America: Driving the Economy with Renewable Energy Policy that Works\* \(Heinrich Boll Stiftung, The Green Political Foundation, Apr. 2009\),](#) at p. 18.

<sup>9</sup> See Stromeinspeisungsgesetz (StrEG) or [Act on the Sale of Electricity to the Grid](#) (unofficial translation); see also [Cornfeld and Sauer, \*Issue Brief: Feed-in Tariffs\* \(Environmental and Energy Study Institute, Mar. 2010\),](#) at p. 3.

65% and 90% of the average tariff charged per unit to end users. While the policy did not stimulate the generation of solar photovoltaics (a more expensive technology), it did spur significant wind power development between 1991 and 1999, leading to the deployment of nearly one third of the global capacity at the time.<sup>10</sup>

Germany reworked its FiT policy in 2000, passing the *Renewable Energy Sources Act* (the *Erneuerbare-Energien-Gesetz* or EEG).<sup>11</sup> The EEG was the first “modern” nuanced FiT system, which included a differentiation in tariff rate depending on the renewable energy type, size and site as well as an extended range of technologies.<sup>12</sup> The StrEG’s (original policy) percentage-based rates were also replaced with specified rates over fixed periods – twenty years from the start of the operation of each new qualifying plant. The new law took into account the high costs of solar PV systems, thus determining that solar generators would be paid the highest reimbursement. Numerous studies had been performed to identify the break even and profitability rates, and the use of state-of-the-art technology. Further, the new law provided that adjustments in the different rates could be proposed every two years to keep pace with rapid technological progress and continuously evolving market developments.<sup>13</sup> FiT policy proponents underscore that the nuanced FIT price system helps to create a vibrant RE market at low cost.<sup>14</sup>

By amendment to the EEG in 2004, Germany committed to increase the share of renewable energy in the country’s total electricity supply to 12.5% by 2010, and a further 20% by 2020. Moreover, in an effort to encourage technological innovation and cost cutting in the RE sector, the amendment set the annual digression rates at a fairly high bar (the rate at which the guaranteed tariff would reduce each year), ranging from 1% to 6.5% annually depending on the technology.<sup>15</sup>

Germany’s FIT policy is indeed a compelling model for other countries currently developing policies to spur investment in RE.<sup>16</sup> Since passing the EEG in 2000, Germany’s success statistics are staggering: 278,000 new jobs have been created in a booming RE sector, with renewable energy supply more than doubling, jumping from 6.3% of total electricity supply in 2000 to 14% in 2007 (meeting its 2010 target of 12.5% renewable electricity three years ahead of schedule).<sup>17</sup>

Relative to the success statistics, the cost passed on to German rate payers is considered modest, with the percentage of the residential electricity rate calculated to be attributable to the EEG (FIT policy) rising from approximately 3% to 4% between 2004 and 2006.<sup>18</sup> “While every German consumer pays out of pocket for renewable energy development on their utility bill, many studies have shown that the benefits to both German consumers and German citizens as a whole outweigh the monetary costs. In fact, proponents point out that the monetary benefits of offsetting conventional generation from plants on the margin, the so-called merit-order effect, alone outweigh the full cost of the tariffs,

---

<sup>10</sup> See [e-Parliament Report, Success Story: Feed-in Tariffs Support Renewable Energy in Germany](#).

<sup>11</sup> See [Renewable Energy Sources Act](#).

<sup>12</sup> Since each RE energy project is different, the payment levels can be differentiated based on project-specific factors, i.e., technology (wind, solar, geothermal, etc.) or fuel (biomass and biogas) type, the size of the project (to account for economies of scale), the quality of the resource at a particular site (to encourage deployment of projects in lesser-quality sites and deter windfall profits at high-quality sites), and the specific location of the project. (Cory et al., *supra*, at p. 7). Additionally, because costs to generate electricity differ for solar, wind and biomass, FIT payments can be adjusted accordingly to encourage the development of diverse technologies and industries. (Farrell, *supra*, at p. 18).

<sup>13</sup> e-Parliament report, *supra*.

<sup>14</sup> See e.g., Farrell, *supra*, at p. 19-20, and Fig. 9 illustrating a FIT price system.

<sup>15</sup> e-Parliament report, *supra*.

<sup>16</sup> Denmark has also experienced great success in RE generation under a FIT policy. By 2008, Denmark was getting 28% of electricity from renewable sources (21% from wind), more than nearly every other country, and employing 21,000 people in the domestic wind industry. (Cornfeld and Sauer, *supra*, at p. 3; see also [Danish Energy Agency, Key Figures 2008](#)). Both the Danish and German policies have furthermore resulted in large-scale local ownership of wind turbines, with nearly half in Germany and over 80% in the Netherlands owned by residents of the region. (Farrell, *supra*, at p. 4).

<sup>17</sup> Fulton, et al. (Sept. 2009), *supra*.

<sup>18</sup> *Id.*

including payments towards Germany's massive development of solar PV."<sup>19</sup> Germany did in fact experience a solar power boom over the last decade, emerging as the world leader in solar power generation despite not being a particularly sunny place.<sup>20</sup> The EEG was fundamental to this boom as it made grid connection mandatory and set a minimum price for electricity sent to the grid.<sup>21</sup>

European countries with the most robust FiT policies, most notably Germany and Denmark, have certainly seen much more growth in their RE sectors than have countries with renewable portfolio standards systems (the foremost program in the U.S.). A 2008 study by the Commission of the European Communities concluded that "well-adapted feed-in tariff regimes are generally the most efficient and effective support schemes for promoting renewable electricity."<sup>22</sup> Denmark, for instance, has recently experienced stagnation following major policy shifts.<sup>23</sup> By 2003, Denmark had phased out the FiT policy to introduce an American-style renewable portfolio standard with tradable credits, and under the new policy, additions to wind power capacity have declined precipitously in recent years.<sup>24</sup>

## The Renewable Energy Policy Framework in the U.S.

Due to an array of factors, a one size fits all approach would be fundamentally difficult to implement in the U.S. By comparison to the German FiT, the U.S. renewable policy framework and payment system is highly complex and disaggregated at the state and local levels. Moreover, divergent regulatory structure and interconnect capabilities, and natural resource abundance or lack thereof are each state specific, resulting in a wide range of electricity prices. Unlike Europe, where there are a limited number of national operators in the electricity sector, the U.S. power industry is fragmented into hundreds of players from small municipal cooperatives and community-based wind farms to investor owned utility holding companies operating across multiple jurisdictions.<sup>25</sup>

The earliest federal effort to promote renewable energy production occurred during the Carter Administration with the passing of the Public Utilities Regulatory Policy Act (PURPA) of 1978. The Act imposed an obligation on retail utilities to buy capacity and energy from certified "qualifying facilities" (Federal Energy Regulatory Commission (FERC) rules limit this certification to a subset of RE technologies and project sizes), and charged state utility commissions with administering that obligation.<sup>26</sup>

Under PURPA, utilities are required to buy power from two types of independent power producers – small power producers using renewable energy sources and co-generators. Upon receiving FERC certification as a "qualifying facility,"

---

<sup>19</sup> [Paul Gipe Article re: National Renewable Energy Laboratory Article, Feed-in Tariffs Legal in US When Certain Conditions Met \(Energy World.com, Feb.9, 2010\).](#)

<sup>20</sup> See [Stephan Leder, Why Germany? Why Solar? A Political Economic Analysis \(EcoAlign, Project Energy Code, Series Issue 4, Apr. 2010\)](#), at p. 8-14.

<sup>21</sup> *Id.*

<sup>22</sup> [Commission of the European Communities, Commission Staff Working Document: The Support of Electricity from Renewable Energy Sources \(Jan. 23, 2008\)](#), at 3.

<sup>23</sup> Denmark launched a FIT program for wind power through the *Promotion of Renewable Energy Act* in 1993. The payments for wind power were set at 85% of the utility's distribution and production costs. Wind projects moreover received a refund of the Danish carbon tax and a partial refund on the energy tax, which effectively doubled the payment to wind projects for the first five years of the project. In 1998, though there were some amendments to the program, the support level basically stayed the same. The costs were largely borne by the utilities, who received a payment to offset their costs. The turbine operators however were responsible for the initial grid connection. Significant growth in wind production took place over the next decade, but halted in 2004 when the FIT policy was abandoned. Wind power had grown from 500 MW to over 3,000 MW from 1993 to 2004. Denmark currently derives 21% of its electricity from wind. (Cornfeld and Sauer, *supra*, at p. 3; Farrell, *supra*, at p. 8-9).

<sup>24</sup> Farrell, *supra*, at p. 9-10, Fig.3; Cory et al., *supra*, at p. 8. (RPS mandates prescribe how much customer demand must be met with renewables, and thus focus on the quantity, leaving the price up to the bidder.)

<sup>25</sup> See [Fulton, et al., Paying for Renewable Energy: TLC at the Right Price \(Deutsche Bank Climate Change Advisors, Dec. 2009\)](#).

<sup>26</sup> See [Hempling, et al., Renewable Energy Prices in State-Level Feed-In Tariffs: Federal Law Constraints and Possible Solutions \(National Renewable Energy Laboratory, Jan. 2010\)](#), at vi and p. 5.

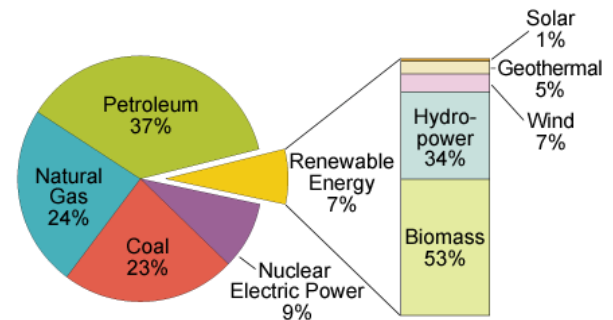
these sellers are deemed exempt from most price regulation under the Federal Power Act (FPA),<sup>27</sup> but pricing is still constrained as the price must either be reached through negotiation between the seller and utility, or established/approved by the state commission. These prices also cannot exceed the utility's "avoided cost" – the amount that a utility would otherwise have to spend to generate or procure power. PURPA therefore offered certain RE producers and cogenerators a way to require utilities to purchase their output.<sup>28</sup>

Building on PURPA, varied programs promoting diversification of the nation's energy portfolio have since been implemented. The policy approach has trended toward a patchwork of market mechanisms, including tax credits, loan guarantees, state-level renewable portfolio standards, net-metering,<sup>29</sup> and limited FiT policies. Renewable portfolio standards (RPS) are the most common state-level program (found in thirty-five states) and thus represent the core of the RE policy structure.<sup>30</sup> The RPS program establishes a target level for RE and requires retail utilities to obtain a certain percentage of their electricity needs from renewable sources.<sup>31</sup> As this program prescribes how much customer demand must be met with renewable energy, the primary focus is thus on quantity, leaving the price up to the bidder. Renewable suppliers therefore sell their energy at market prices, without the usual price support a FiT provides. In addition, the RPS program typically includes the opportunity to buy credits from suppliers of renewable energy in a tradable credit scheme.

Although progress has been made in RE generation under the RPS program, the gains are considered modest in comparison to scenarios recommended by experts and industry organizations for RE market growth, RE job creation and climate protection.<sup>32</sup> The nation's sources of energy consumption in 2008 are charted to the right, with renewable sources contributing only 7% of the nation's total energy supply.<sup>33</sup> To meet increasingly aggressive goals, U.S. policy makers are looking at new ways to accelerate RE market growth and among the emerging policy mechanisms is the FiT.

#### Renewable Energy Plays a Role in the Nation's Energy Supply, 2008

Total = 99.305 Quadrillion Btu      Total = 7.301 Quadrillion Btu



Note: Sum of components may not equal 100% due to independent rounding.

Source: EIA, *Renewable Energy Consumption and Electricity 2008 Statistics*, Table 1: U.S. Energy Consumption by Energy Source, 2004-2008 (July 2009).

<sup>27</sup> *Id.*, at vii. ("Since 1935, the Federal Power Act has placed in FERC ... the exclusive authority to regulate 'the sale of electric energy at wholesale in interstate commerce' ... It is unlawful to make a sale at wholesale without a contract and without FERC approval of the wholesale contract.").

<sup>28</sup> *Id.* at vi and p. 5.

<sup>29</sup> Net-metering is generally a consumer-based RE incentive. For example, under net-metering, a homeowner uses power produced by a RE facility (e.g., wind, solar or home fuels) to offset domestic use and gets paid wholesale rates for excess power. Under a FiT, the homeowner sells all their power to the grid for a premium price, but buys their power for domestic use from the grid at retail prices. While the two policies may just appear to be differing accounting measures with the same impact on RE generation, the policies can actually have a very different impact. For instance, the home owner's decision regarding the size of the RE facility to install is affected by the different policy benefits – under net-metering, the homeowner will likely size the project according to the energy needs of the home because excess power is purchased at lower wholesale rates, while, under a FiT, the producer is paid a premium for every kilowatt-hour generated, so the project is an investment and thus can be sized to maximize the rate of return. See Farrell, *supra*, at p. 6.

<sup>30</sup> Fulton, et al. (Dec. 2009), *supra*.

<sup>31</sup> *Id.*

<sup>32</sup> See [Rickerson, et al., Feed-in Tariffs and Renewable Energy in the USA – a Policy Update \(May 2008\)](#).

<sup>33</sup> See [Department of Energy, Energy in Brief](#).

## *The Proposed Federal Level FiT in the United States*

At the federal level, Representative Jay Inslee (D-Wash.) introduced a FiT proposal in 2008 – the *Renewable Energy Jobs and Security Act*.<sup>34</sup> Congressman Inslee’s proposal essentially provides that RE energy developments of less than twenty megawatts would be given priority access to the grid and could also sign twenty-year contracts with utilities that guarantee a 10% rate of return investment. The rates would be differentiated on the basis of energy technology, the size of the system, and the year the system was placed in service. Further, under Inslee’s proposal, the FERC would set standards for interconnection and transmission of power from new RE generators (20 MW or less), and then both the FERC and the states would be responsible for implementing these standards within their own respective areas of jurisdiction when RE facility owners request interconnection.<sup>35</sup>

Critiquing the U.S. current framework, Inslee expressed, “[t]he renewable-energy standard is good, and I’m a firm backer, but it has a weakness ... [i]t’s really only an incentive for the next-closest-to-competitive technology, frankly, which is wind right now.”<sup>36</sup> And in support of the FIT proposal, Inslee noted, “[w]e have some brilliant Americans with brilliant business plans with brilliant technologies, but they don’t have financing ... [t]he charm of the feed-in tariff is solid, take-it-to-the-bank security and confidence for the investing community.”<sup>37</sup>

## *Implementing FiTs on the State and Municipal Level in the United States*

On both the state and municipal level, there is currently momentum behind FiT policy. The states of Vermont and Washington have already implemented FiTs, as have the cities of Sacramento, California, and Gainesville, Florida. FiT legislation is also under consideration on the state level in Indiana, Hawaii, Wisconsin and Maine. In addition, California is attempting to rework its program.

The policy priorities and objectives for instituting renewable energy policies can vary between states and municipalities. The price systems under the current FiT programs in the U.S. are in fact predominantly targeted at small-scale producers. These systems typically include either program or project caps, which result in a larger number of small-scale local producers and can render an economic benefit to the municipality or state. These jurisdictions therefore consider this benefit to the local economy as a key policy motivator. In Sacramento for instance, an eligible producer can generate no more than five (5) megawatts, while in Vermont, producers can generate no more than 2.2 megawatts. In Gainesville, there is an annual program cap of four (4) megawatts (but it is notable that the entire “Sunshine State” had only two (2) megawatts worth of solar installed in March 2009 when the FiT was implemented).<sup>38</sup>

## **Issues Presented by the FIT Policy**

### *Legal*

The pricing of power on the state level raises specific legal issues with regard to federal law constraints around state decision making related to FiTs. The Federal Power Act (FPA) of 1935 granted the FERC exclusive jurisdiction to regulate wholesale power sales in interstate commerce. And the FERC has recently issued several decisions concluding that states are in fact preempted from setting wholesale power rates exceeding utility “avoided cost.” The basic argument being that a European-style FiT includes a premium payment on top of the utility’s “avoided cost” in violation of federal law.<sup>39</sup>

In January 2010, the National Renewable Energy Laboratory (NREL) issued a long anticipated analysis on how states could implement FiTs in compliance with federal law, concluding that, though FiTs can in fact be implemented in the U.S.

---

<sup>34</sup> See [Renewable Energy Jobs and Security Act, H.R. 6401](#).

<sup>35</sup> See Rickerson, et al., *supra*.

<sup>36</sup> See [Phil Taylor, RENEWABLE ENERGY: House will get another shot at feed-in tariffs](#) (Greenwire, Aug. 2009).

<sup>37</sup> *Id.*

<sup>38</sup> See [Matthew Berger, States Look to Feed-in Tariffs to Boost Renewable Energy](#) (www.solveclimate.com, Jan. 2010).

<sup>39</sup> See Hempling, et al., *supra*, see also Gipe (Energy World.com, Feb.9, 2010), *supra* (summary discussion of the Hempling report).

under existing federal law, the program must be done differently than anywhere else in the world.<sup>40</sup> The NREL report outlines two circuitous paths around issues of federal preemption: the PURPA path and the FERC path.

PURPA permits utilities to enter into a voluntary rate agreement with RE sellers, while also granting states a limited role in wholesale power markets by allowing states to set utility “avoided cost” rates for wholesale power purchased from FERC-designated “qualifying facilities.” (See discussion regarding PURPA, *supra*). The NREL proposition therefore is that FiTs can be lawful under PURPA only if the FiT is voluntarily offered by the utility, or if the tariffs are based on “avoided cost” and any additional payments to ensure a rate of return on investment are derived from incentive programs – renewable energy certificates/credits, subsidies, or utility tax credits equivalent to the amount of the additional payment (these forms of payment fall outside FERC’s jurisdiction).<sup>41</sup>

The second, or FERC, path around federal preemption holds that a FiT can be lawful under the FPA if the rate is cost-based or market-based, though this path is burdensome as it requires a form of reporting to FERC. For instance, if the tariff is cost based, each contract must be submitted by the RE producer for review and approval by FERC. Likewise, if the tariff is market-based, the RE producer must submit a “market power” report to FERC every three years.<sup>42</sup>

Though the NREL report provides paths by which FiTs can be implemented on the state level, and while these paths may be feasible, it is necessary to note that the applicable federal laws (PURPA and FPA) simply “do not apply neatly to market situations and feed-in policy proposals in 2010.”<sup>43</sup>

### *Other Challenges*

FiT opponents have a number of specific critiques around the policy being too expensive, inflexible, and both ineffective and incompatible with other policies.<sup>44</sup> A common argument holds that FiTs cost too much to the economy, with the incremental cost of the FiT being passed on to electricity consumers and thus disproportionately burdening low-income groups with higher electricity bills.<sup>45</sup> For example, FiTs can require utilities to purchase different categories of renewable resources at a price that makes each category viable. This system is deemed more costly because, while solar may be bought at 96 cents per kWh, power could have also been purchased from a utility scale wind farm with equivalent environmental attributes for 8 cents per kWh.<sup>46</sup> Proponents however argue that the diverse benefits of a FiT greatly outweigh what is typically a negligible increase in consumers’ electricity bills.<sup>47</sup>

Additionally, it has been argued that a fixed rate for electricity payments, rather than a market price, causes inflexibility and an inability to adapt to market changes. Proponents assert that more advanced or nuanced FiTs can address payment design issues. Opponents will assert that FiTs are incompatible with other policies such as RPS systems (the leading U.S. program). Proponents alternately argue that FiTs can work synergistically with RPS, and that RPS can be a demand pull while the FiT acts as a supply push.<sup>48</sup>

FiTs are also seen as burdensome to transmission system operators and utilities as their implementation would likely necessitate additional systems to tie-in RE producers and also manage capacity.<sup>49</sup> Opponents further note the likelihood

---

<sup>40</sup> Hempling, et al., *supra*.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*, at p. 46. (Rep. Inslee’s bill proposes that, through an amendment of PURPA section 113, the enforcement of a national FiT policy would occur by FERC, and the States and non-FERC-jurisdictional utilities within their own respective areas of regulatory jurisdiction. Though Rep. Inslee proposal includes potential remedies associated with barriers to FiT implementation, the possibility, timing and progress of the proposed changes remain to be seen.)

<sup>44</sup> See Fulton, et al. (Dec. 2009), *supra*.

<sup>45</sup> *Id.*

<sup>46</sup> See [Natural Rural Electric Cooperative Association, Feed-in Tariff Issues Paper \(Sept. 2009\)](#).

<sup>47</sup> Benefits can include lower carbon emissions, decreased dependence on fossil fuels, economic development, and job creation.

<sup>48</sup> Fulton, et al. (Dec. 2009), *supra*.

<sup>49</sup> *Id.*

of costs associated with necessary systems upgrades to integrate the generation reliably and to transfer the power to other wholesale purchasers, and that ultimately these costs will pass to the consumer.<sup>50</sup>

## Conclusion

The policy priorities and objectives for instituting renewable energy policies often vary drastically between various constituents at the state and local municipal levels. For example, a primary goal in one state may be to improve service reliability through technology implementation that does not require back-up capacity, while promoting economic development and technological innovation may be a goal in other locales. In addition, policy makers may only choose to implement a FiT that complements or works synergistically with the already existing policy framework. Only after evaluating the different state or municipal objectives, resources, economic constraints and other renewable energy programs, can policymakers determine the appropriate design of a FiT.

With any policy mechanism, there are trade-offs. While the FiT may provide more diverse choices as far as RE power sources and potentially solve some major climate and economical problems over the long term, there are legitimate concerns related to costs being immediately passed to consumers. It may simply be naïve however to believe that the U.S. can go forward in the constrained environment noted above with widely divergent objectives and drivers for implementation of RE policies and solutions without seeing a rise in energy prices. The question therefore may not be whether prices will rise, but will the cost provide the efficiency, jobs, security and emissions reductions that the nation needs going forward.<sup>51</sup>

## Appendix

Cynthia Boland is a Senior Associate with DEFG LLC. Prior to joining DEFG, Ms. Boland was a practicing attorney in New York City. Most recently, she handled general business and commercial matters with Leader & Berkon LLP. Prior to joining Leader & Berkon, Ms. Boland practiced securities litigation with Paul, Weiss, Rifkind, Wharton & Garrison LLP, and served as counsel to Riverkeeper, a non-profit organization dedicated to protecting the ecological integrity of the Hudson River.

DEFG's *Series of Regulatory Choices* provides general information and is not intended as legal or financial advice. Your specific circumstances may vary from those described in this document. For more information about Distributed Energy Financial Group LLC or its publications, please contact Nat Treadway, [ntreadway@defgllc.com](mailto:ntreadway@defgllc.com) or (713) 729-6244 or go to <http://www.defgllc.com>.

You may quote portions of this document with proper citation: DEFG's Series of Regulatory Choices, No. 2, ©2010 DEFG LLC.

---

<sup>50</sup> See Natural Rural Electric Cooperative Association, *supra*.

<sup>51</sup> See [The Green Economy.com](http://www.thegreeneconomy.com) (Dec. 2009).