



Renewable energy feed-in tariffs: potential opportunities for Iowa's farmers

Abstract: Policy makers seeking a new tool to encourage investment in alternative energy sources may consider feed-in tariffs as incentives to promote adoption of solar and wind power options in Iowa.

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Are renewable energy incentive rates, such as feed-in tariffs (FITs), a viable policy option that could help farmers, landowners, small businesses and homeowners develop and own renewable energy technologies such as solar and wind in Iowa?

FIT incentive rates are a flexible and highly effective policy tool that can be used to encourage the development of additional distributed and smaller-scale renewable energy projects on Iowa farms, businesses, and homes. FIT incentive rates are legal (not preempted by federal law), can be designed with minimal or no electric rate impact, and are a proven policy to encourage new solar panels, wind turbines, and other renewable energy technology.



P O L I C Y

Background

Renewable energy already is generating significant benefits to Iowa's economy and environment. In the past decade, there has been a huge increase in the renewable energy technologies installed in both urban and rural Iowa, but the state has only begun to tap the enormous potential for renewable energy.

With more than 90 percent of Iowa's landscape in production agriculture, the bulk of Iowa's renewable energy resources are located on, or can be best accessed from, Iowa farms. Adding substantially more distributed renewable energy such as solar photovoltaic (PV) panels and wind turbines of varying sizes will bring many benefits to Iowa such as growth in farmer income, more jobs and local economic development, and benefits to the local utility grid. While Iowa leads the nation in utility-scale wind development, the state lags behind in the installation of solar PV, small-scale and community-scale wind projects, and other sorts of renewable energy technology appropriate for Iowa farms, rural landowners and businesses.

The project leaders produced a white paper that describes a promising policy tool to help bring many more renewable energy projects online in Iowa. Known as feed-in tariffs, FITs offer an incentive price or incentive rate paid for each kilowatt-hour of renewable energy delivered to the grid, for a set period of time. FIT incentive rates provide a price that fairly compensates for the renewable energy delivered to the grid and accounts for its many benefits. This policy frequently is used globally and in other parts of the United States, but by only one utility company in Iowa.

Project objectives were to:

- Conduct policy research on feed-in tariff policies and on the benefits of increasing the amount of distributed renewable energy in Iowa, with an eye to how this would impact Iowa utilities and Iowa farms;



Renewable energy project in the Kalona (IA) area that benefits from the local utility's feed-in tariff

- Write a white paper on the research findings; and
- Conduct outreach on the research and findings to key stakeholders, including utilities, farmers, and policy makers.

Approach and methods

The investigators worked with two experts with utility backgrounds to conduct the research. Dave Ryan is a former utility engineer with a strong background in distributed renewable energy. Sarah Else is a former employee of Alliant Energy, where she spearheaded a number of renewable energy initiatives. These two conducted and provided research as well as advice and information, in addition to the work done by the three investigators. Baer conducted

primary and secondary policy and legal research on U.S. and global FIT incentive rate programs as well as Federal Energy Regulatory Commission orders on FITs issued during the grant period. Heide and Dana provided additional research on the economic viability of solar and wind projects under different policy scenarios, background research on FITs and on distributed renewable energy, and case studies on existing farmer renewable energy projects and utility FIT programs.

Results and discussion

Key findings on the potential role for FITs in Iowa:

FITs are a necessary policy tool, given the lack of an effective free market. Most farmers, small businesses, homeowners, and others interested in developing a renewable energy project run into the same basic problem. The only buyer for their renewable energy, the local monopoly utility, offers a price that is too low and too skewed to make most projects work. Without effective markets available, there is a critical role for public policy to ensure renewable energy projects get a fair price.

FIT incentive rates are legal and can be created without risk of federal preemption. While utilities and other opponents to FITs often have voiced concerns that federal law preempts FIT incentive rates, it now is clear that utilities can offer FIT incentive rates voluntarily, and indeed, many utilities in the United States are doing so. States can require more comprehensive FITs with legislation.

FIT incentive rates can be established with little to no rate impact. There are many options for creating FIT incentive rate programs. If utilities or policymakers are concerned about potential rate impacts, there are proven ways to create FIT programs without a rate impact or with a very minimal rate impact.

FITs are a proven policy that will succeed in bringing more renewable energy on-line. FIT incentive rates are the most popular renewable energy policy globally. More megawatts of clean energy, like wind and solar, were developed using FIT incentive rates than any other policy. The recently created U.S. FIT incentive rate programs have been very successful.

The distributed renewable energy that successful FIT policies deliver will provide many benefits to Iowa. In addition to clean electricity, distributed renewable energy



Solar panels on buildings in the Kalona (IA) area supported by the feed-in tariff program.

will generate jobs, local economic development, a cleaner environmental, and benefits to Iowa's electric grid.

Conclusions

Three policy recommendations were generated for Iowa utilities, state policy makers, and federal policy makers. Three related sets of actions are needed for more FIT incentive rates to be offered across Iowa.

Iowa utilities should begin offering FIT incentive rates now. One utility in Iowa, and many utilities around the United States, are voluntarily offering FIT incentive rates. FIT programs can be structured to target specific technologies, minimize rate impacts, and address any other concerns that the utility and its regulators or governing body may have.

Iowa policy makers should institute a comprehensive FIT policy. The state legislature should follow the guidelines set out by federal regulators to establish a FIT program statewide. Under such a program, the legislature should identify long-term energy requirements for Iowa utilities and require utilities to procure that energy using appropriate FIT incentive rates.

Federal policy makers should provide further authority and flexibility to states to adopt the best type of FIT programs in each state. Two research and analysis tasks would further this work. First would be a comprehensive study that quantifies the full value of electricity supplied to the grid from distributed renewable energy technologies such as wind, solar and biomass. The second would be to conduct an analysis on different potential incentive rates using various publicly available models, such as the Cost of Renewable Energy Spreadsheet Tool.

Impact of results

The research and report can help educate farmers, utilities, and policy makers on the potential use of FIT incentive rates and the benefits provided by more distributed renewable energy. Questions and concerns have been raised in recent years about FIT incentive rates such as: are they legal or preempted by federal law; will they result in a large rate increase for utility customers; are they effective; are they in use anywhere in the United States; how to set the rate; and how to design other elements of a FIT incentive rate program. Many of these questions are answered in the white paper prepared for the project. <http://www.leopold.iastate.edu/sites/default/files/pubs-and-papers/2012-02-renewable-energy-incentive-rates-potential-opportunities-iowa-farmers.pdf>

Iowans can start by working with their local utility to encourage that utility to offer a FIT incentive rate program. Many U.S. utilities have voluntarily initiated such incentive rate programs and these programs have been very successful to date. Iowans also can contact their local legislators to encourage the legislature to implement the necessary policies to create a statewide FIT incentive rate program.

Education and outreach

Baer and Heide conducted outreach to Iowa policy makers, including members of the Iowa legislature, Iowa Utilities Board, and Office of Consumer Advocate, on the benefits of distributed renewable energy and background on feed-in tariff policies (Note: No Leopold Center funds were used for lobbying purposes. All outreach activities using Leopold Center funds were educational only and not focused on lobbying related to specific legislation.) Heide and the Iowa Farmers Union conducted outreach to key stakeholders, including the Iowa Farm Bureau and several labor unions.

Heide also made a number of presentations related to distributed renewable energy and feed-in tariffs:

- Presentation at a Practical Farmers of Iowa field day at Francis Thicke's farm with an audience of over 80.
- Presentation to an ISU Extension wind meeting in Le Mars with an audience of 240.
- Presentation to the Windustry conference with over 200 in audience.
- Iowa Farmers Union hosted a meeting on feed-in tariffs with the Heinrich Böll Foundation with 20 policy and media leaders attending.
- Presentation to a wind/transmission forum hosted by the Energy Future Coalition (and co-hosted by the Iowa Environmental Council).
- Presentation to the National Farmers Union policy session, after which NFU passed a resolution supporting feed-in tariffs.
- National television interview on MSNBC.
- Placed op-eds in the *Cedar Rapids Gazette* and *Iowa Farmer Today*

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