

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Investigation regarding feed-in tariffs.)
_____)

Docket No. 09-11004

At a general session of the Public Utilities
Commission of Nevada, held at its offices
on May 12, 2010.

PRESENT: Chairman Sam A. Thompson
 Commissioner Rebecca D. Wagner
 Commissioner Alaina Burtenshaw
 Assistant Commission Secretary Nancy Krassner

ORDER

I. Introduction

On November 19, 2009, the Commission voted to open an investigation regarding feed-in tariffs (“FITs”).

II. Summary

The Commission approves the Presiding Officer’s Report attached hereto as Attachment 1. The Commission will not adopt a FIT at this time.

III. Procedural History

- On November 19, 2009, the Commission voted to open an investigation regarding FITs. The matter has been designated Docket No. 09-11004.
- This investigation is being conducted by the Commission pursuant to Chapters 233B, 703, and 704 of the Nevada Revised Statutes (“NRS”) and the Nevada Administrative Code (“NAC”).
- On January 15, 2010, the Commission issued a Notice of Investigation and Request for Comments and Proposed Regulations.
- On February 16, 2010, David von Seggern and Vote Solar filed comments.
- On February 17, 2010, Black Rock Solar, Inc., the Office of the Attorney General’s Bureau of Consumer Protection (“BCP”), the Electric Auto Association of Northern Nevada (“EAANN”), NV Energy, the Regulatory Operations Staff (“Staff”) of the Commission, the Solar Alliance, Solar Wind Works, and Western Resource Advocates (“WRA”) filed comments.
- On February 24, 2010, the BCP, the EAANN, NV Energy, Staff, and WRA filed reply comments.
- On February 25, 2010, the Solar Alliance filed reply comments.
- On March 2, 2010, the Commission issued a Notice of Workshop.

DOCUMENT REVIEW AND APPROVAL ROUTING

DRAFTED BY: Annal Penrose-Lutz

FINAL DRAFT ON 5/12/10 AT 11:00 a.m.

REVIEWED & APPROVED BY: _____ DMSB

ADMIN / ASST (_____) _____

COSM / COUNSEL DSN _____ 05/12/10

SECRETARY / ASST SEC. _____

OTHER (_____) _____

- On March 29, 2010, the Commission held a workshop at which the BCP, EAANN, Great Basin Resource Watch, the Nevada State Office of Energy, NV Energy, the Solar Alliance, Staff, SunEdison, Vote Solar, and WRA, participated.
- On April 7, 2010, the Commission reconvened the workshop. The BCP, Great Basin Resource Watch, NV Energy, the Solar Alliance, Solar World California, Inc., Staff, and WRA participated.

IV. Commission Discussion and Findings

1. The Presiding Officer has issued a Report on FITs as a result of the information gathered in this Investigation.
2. Based on the information in the Report, the Commission finds the decision to adopt a FIT should be made by the Nevada Legislature and not the Commission.
3. The Commission finds that the Report should be approved, and the following recommendations from the Report should be conveyed to the Nevada Legislature:
 - a. The Nevada Legislature should not replace existing policies and programs (the Renewable Portfolio Standard (“RPS”) and the Solar Energy Incentive Program (“Solar Program”)) with a FIT. If a FIT is considered, it should complement these policies and programs. Renewable developers value consistency and predictability. Even modest changes to existing programs can have a negative effect on the industry by creating uncertainty.
 - b. Before adopting a FIT, the Nevada Legislature should clearly delineate the goals of the policy to avoid overlapping and duplicating existing programs. Identify any market segment that is not being served by the existing programs or policies and then consider modifications to those policies and programs. If an existing policy or program cannot be modified to achieve the goals of the Legislature, then a FIT could be considered. For example, a FIT could be used to stimulate a specific technology like combined heat and power.
 - c. Before adopting a FIT, the Nevada Legislature should consider the impacts on electric rates. The RPS and the Solar Program, among others, are funded by ratepayers. Given the current economic climate, adding ratepayer funded programs should be weighed carefully to ensure that rate impacts are balanced with the benefits.
 - d. Before adopting a FIT, the Nevada Legislature should consider the impacts on the electric utilities’ transmission and distribution systems, including evaluating studies that provide analysis of how much the transmission and distribution systems can absorb without costly upgrades. For example, an understanding of how much distributed generation can be integrated onto the distribution system will help set the parameters for modifying existing policies and programs or establishing a FIT.

4. The Commission may correct any errors that may have occurred in the drafting or issuance of this Order without further proceedings.

By the Commission




SAM A. THOMPSON, Chairman



REBECCA D. WAGNER,
Commissioner and Presiding Officer


ALAINA BURTENSHAW, Commissioner

Attest:

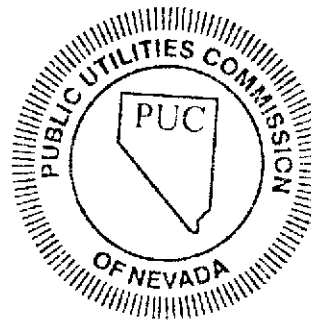


NANCY KRASSNER,
Assistant Commission Secretary

Dated: Carson City, Nevada

5/14/10

(SEAL)



Attachment 1

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA

Investigation regarding feed-in tariffs.)
_____)

Docket No. 09-11004

REPORT

I. INTRODUCTION

Pursuant to a request by State Senator Mike Schneider, Chairman of the Production and Use of Energy Committee, the Public Utilities Commission of Nevada (“Commission”) opened a docket in order to investigate the use of a feed-in tariff (“FIT”) in Nevada. The Presiding Officer requested and received initial comments and reply comments from interested parties and conducted two workshops. The results of the investigation are detailed in this Report.

II. SUMMARY

FITs are financial mechanisms used to spur the development of renewable energy. Several European countries, the Canadian province of Ontario, as well as several states and municipalities have adopted FITs or are considering them. For example, Germany has experienced a great deal of success with FITs. Based on this investigation, the Presiding Officer concludes that the decision to enact a FIT should be left to the Nevada Legislature. Should the Legislature choose to pursue a FIT, careful consideration should be given to the goals of the policy as well as the existing renewable energy policies and programs like the Renewable Portfolio Standard (“RPS”), the Solar Energy Incentive Program (“Solar Program”), net metering provisions and third party ownership. A FIT should not replace these policies and programs, but rather complement them. Careful consideration should be given to ratepayer impacts as well as effects of additional renewable energy systems on the transmission and distribution systems.

III. BACKGROUND

Generally, a FIT is a policy mechanism that requires a utility to pay a specific, premium rate for renewable energy. The rate may differ between types of generation and system sizes depending upon the intended goal of the program.

A. Spain

Spain created its FIT program in 1997 to promote energy diversification, although it only boosted the wind industry. Program modifications in 2007 unintentionally paired high incentive levels with inexpensive solar panels,¹ creating an artificial solar market. Developers experienced a windfall of profits enabled by a loophole allowing numerous smaller projects² to be linked together to benefit from both economies of scale and the higher tariff rates given to smaller facilities, and the certainty provided by the tariff. In 2008, the program was modified again. In 2009 it was temporarily suspended to curtail runaway expenses. Yearly capacity was capped at 500 megawatts (“MW”) and rates cut by 25 percent. This effectively tightened the market but

also dramatically reduced solar installations from 2,250 MW in 2008³ to 125 MW in 2009,⁴ and elevated the unemployment rate once developers left the less profitable market. Currently, the FIT contracts are for 25 years. The tariff rates now vary by type of renewable energy and capacity, and pursuant to new revisions, tariff rates are reviewed every four years. The FIT is Spain's main financial mechanism used to promote solar generation.⁵

B. Germany

Created in 1990 as a mechanism to advance hydro-electric and wind power for the purpose of greenhouse gas ("GHG") emission reduction, the FIT program became more robust after revisions in 2000 and particularly solar friendly after a 2004 amendment created different tariff rates for different solar installations.⁶ Germany's FIT contracts are for 20 years. Tariff rates vary by type of renewable and are reviewed every four years. Rates are based on a levelized cost of generation plus a rate of return,⁷ and drop annually by a fixed degression rate.⁸ Grid access is legally guaranteed with no project size restrictions or program capacity caps. Currently the FIT is Germany's largest financial mechanism used to promote solar generation.⁹

C. Ontario

In the next 20 years it is expected that due to a combination of population growth and old plant retirements, at least 80 percent of Ontario's current generating facilities will be replaced.¹⁰ Ontario's first program, the Renewable Energy Standard Offer Program ("RESOP"), introduced in 2006, offered small (under 10 MW) renewable projects the ability to sell their electricity to the distribution system at a fixed price under a long term contract. In 2009, the RESOP was replaced with the current FIT program. FIT contracts are for 20 years, with the exception of 40-year contracts for hydro-electric systems, and tariff rates are reviewed every two years regardless of contract type. Access to the grid is guaranteed with no project or annual capacity caps. Ontario's MicroFIT program was designed specifically to encourage the installation of systems of 10 kilowatts ("kW") or less.¹¹ For installations greater than 10 kW, a minimum percent of goods and services are required to come from Ontario. To encourage Aboriginal and community participation, "price adders"¹² are added to their tariff rates. FIT applications are prioritized by ability to become operational most quickly and there are time limits for establishing commercial operation. Applicants will not be penalized for non-generation for up to two years, at which time the contract can be terminated by the utility.

D. United States

While FIT policies have been used for many years in Europe, they are in their infancy stage in the United States. Many states, utilities, and commissions have either adopted FITs or are in the process of evaluating them. Due to the lack of meaningful experience in the United States, it is difficult to determine which FIT designs will be the most effective in achieving the policy goals. Listed in Table 1 are some FIT policies currently adopted as well as legislation proposed in some states. It is important to note that this is not a comprehensive list because of the ever changing policy goals of individual states and jurisdictions.

Table 1. State/ Utilities Offering a Production Based Incentive Program¹³

State/Utility (Program Name)	Key Facts	Introduced/ Adopted	Qualifying Renewables	Facility Size Max.	Program Cap
California: Sacramento Municipal Utility District (SMUD), (FIT)	Tariff rates vary by time of day, season, length of contract. Combined heat and power ("CHP") rates increase each year through the contract period, rates for other renewables are locked in by initial contract year price.	Adopted Sept. 2009	CHP, Solar Thermal, Photovoltaics ("PV"), Landfill Gas, Biomass, Geothermal, Municipal Solid Waste ("MSW"), Small Hydro, Biodiesel	5 MW	100 MW
Hawaii IOUs: HECO, MECO, HELCO (FIT)	Fixed rate over 20 year contract. Rate will be set by the state commission.	Adopted Sept. 2009	Solar Thermal, PV, Wind, Hydro	Varies by technology and island*	5 percent of each island's peak
Indiana (AB 1190)	Separate rates for projects qualifying for federal subsidies and those that do not. Wind tariffs based on wind site intensity	Introduced Jan. 2010	Wind, Solar, Hydro, Geothermal, Biogas	10 MW for PV, none for other types	
Oregon (Pilot Solar FIT)	Pilot program, 75percent of the total program capacity must be small scale systems**	Adopted in 2009, PUC to set the rates by July 2010	Solar PV	500 kW	25 MW
Vermont (Standard Offering for SPEED Resources)	Long term contracts with a premium paid per kWh	Enacted May 2009	PV, Landfill gas, Wind, Biomass, Hydro, MSW*	2.2 MW	50 MW
Washington State (HB 2536)	Tariffs based on average cost of generation plus a 10percent rate of return with 20 year contracts	Introduced Jan 2010	Wind, Solar, Geothermal, Hydro, Wave, Biomass, Biogas	2 MW	5 percent of 2007 peak load
Wisconsin (AB 649)	Tariffs based on cost of generation plus a reasonable rate of return plus federal and state incentives, to be set by the state commission	Introduced Jan. 2010	Wind, Solar, PV, Biogas, "other renewables as defined"	The state commission to set project and program caps	
Tennessee Valley Authority ("TVA")	TVA will purchase 100 percent of the output from qualifying facilities at retail prices in addition to a premium per kWh. An incentive of \$1000 for new participants to offset start up costs.	Adopted 2009	PV, Landfill gas, Wind, Biomass, MSW, Small Hydro***	500 watt min, 1 MW max	200 MW

*Projects can be up to 5 MW in Oahu, 2.72 MW for the islands of Maui and Hawaii.

**"Small scale systems" means 10 kW or less for residential participants and between 10 kW and 100 kW for small commercial participants.

***Premium/tariff is highest for Solar PV facilities

IV. PARTIES COMMENTS

A. Black Rock Solar

Black Rock Solar stated that a FIT would allow homeowners and developers alike to overcome the primary hurdle – financing. A FIT accomplishes this by creating a market and a right to sell at a market determined price, in conjunction with a utility’s obligation to purchase. The price should be determined by market forces, with some Commission examination.¹⁴

B. Bureau of Consumer Protection (“BCP”)

The BCP stated that a FIT policy should be considered in conjunction with the existing renewable energy development programs and take into account electric service affordability. Nevada’s RPS, with its biannual percentage increase, already significantly promotes renewable energy development. NV Energy’s competitive bidding process has resulted in hundreds of megawatts of renewable projects being proposed. In its current integrated resource plan, NPC has requested approval of approximately 330 MW of geothermal capacity, 230 MW of solar capacity, and 150 MW of wind capacity. The BCP stated that distributed generation is promoted through the Solar Program, net metering provisions, and the opportunity to obtain financing through third party ownership. The BCP stated that the RPS and Solar Program are consumer financed programs and, in light of the current recession, consideration should be given to the ratepayers’ ability to subsidize another renewable energy development program.¹⁵

The BCP suggested that any gap in Nevada’s renewable energy development could be addressed by modifying existing programs. For example, the net metering cap could be increased from 1 MW to 2 MW. Additionally, the utilities could be required to acquire distributed generation created portfolio energy credits and at an established price.¹⁶

C. Electric Car Association of Northern Nevada (“EAANN”)

The EAANN stated that Nevada should develop a properly designed FIT policy to stabilize long-term energy policy and promote economic diversification.¹⁷ A properly designed FIT should include the following:

- Allow all entities, including the utility, to participate.
- Guaranteed grid access.
- Price:
 - Differentiate price by both technology and size,
 - Be based upon the cost of generation plus a reasonable rate of return,
 - Be indexed for inflation.
- Offer long-term contracts (15 to 20 years).
- Ideally not have an overall capacity cap, but have a project cap at 20 MW.¹⁸

EAANN stated that legal constraints to FIT implementation are not insurmountable. For example, the avoided cost cap imposed by PURPA can be supplemented with payments for portfolio energy credits or a system benefits charge.^{19, 20}

EAANN stated that it is acceptable to prohibit a renewable energy generator from participating in both an incentive program and the FIT program.²¹ While EAANN stated that it understands the needs for commercial to utility scale projects, EAANN's primary interest is small scale projects including community-owned projects.²²

EAANN cited a German study which concluded a FIT added approximately 5 percent to the price of electricity for ratepayers. However, this price impact would be overstated for Nevada, which has a greater solar resource and lower equipment costs.

EAANN stated that in a European-style FIT, the contract is a must take obligation for the utility. In the U.S., the contracts tend to mirror bilateral negotiated purchased power agreements, which contain guarantees for both parties.²³

D. Great Basin Resource Watch

Great Basin Resource Watch stated that a FIT could reduce environmental concerns related to renewable generation development by encouraging development in urban areas. Further, a FIT could encourage the development of small to intermediate sized projects by allowing more people to participate. Great Basin Resource Watch stated that the price offered in a FIT should be administratively determined as the average customer does not have a chance of being selected in a competitive bidding process.²⁴

E. NV Energy

NV Energy stated that Nevada should evaluate the need for and the purpose of a FIT. Currently, Nevada promotes small scale renewable development through the incentive programs and supports the development of medium to utility scale projects through the RPS.²⁵ Prior to the adoption of a FIT, impacts of the modifications to the incentive programs upon renewable generation deployment should be evaluated.²⁶

NV Energy stated the following should be considered in the development of any FIT policy:

- Ratepayer impacts;
- Limits on system size to protect the distribution system reliability and minimize the rate effect of the subsidies inherent in net metering;
- Pricing:
 - Establish price based upon cost of generation differentiated by technology and by size, with additional price schedules for entities ineligible for federal tax incentives;
 - Due to renewable energy project long-lead times, developers need the clarity provided by the establishment of a pricing scheme time frames;

- Any new policy should have provisions included to prevent contract payments from growing substantially above the market price over the contract term, based upon lessons learned from prior experience with the provisions of the Public Utility Regulatory Policy Act of 1978 (“ PURPA”) including the risk of long-term contracts that are borne by the ratepayer;
- Allow for utility participation on the same economic terms as other potential participants.²⁷

NV Energy agreed with Staff that the Solar Program addressed the primary barrier to small-scale development – the upfront cost. NV Energy stated that a FIT is not needed for RPS compliance. NV Energy stated it has contracted for nearly 300 MW of solar generation through a competitive bidding process. NV Energy stated that over the past five years the PV bid price has declined from 25 - 30 cents per kWh to 14 cents per kWh, which demonstrates the competitive market is working for the benefit of ratepayers.²⁸

F. Solar Alliance

The Solar Alliance stated that prior to establishing a FIT policy it is essential to establish clear goals for the policy, such as job creation, economic development, or establishing a sustainable market. A FIT should complement the existing programs²⁹ and could fill any gap left by existing programs.³⁰

The Solar Alliance stated that a number of issues should be considered in framing the appropriate FIT structure, including the applicable market segments, value of the tariff, contract duration, pricing mechanism, and overall budget. The Solar Alliance stated that the following recommendations appropriately address these market structure issues and promote long-term price certainty and process transparency, which are necessary for long-term business planning:³¹

- All customer segments should be able to participate but any particular project’s capacity should be capped at 20 MW. Further, regardless of whether regulated by the Commission, all electric utilities operating in the State should offer a FIT.
- The FIT should contain a “must take” obligation for the utility.
- The price should:
 - Be differentiated by both technology and size.
 - Decline with increased participation.
 - Based upon market penetration, be subject to periodic review at least every three years.
- Goals should be reevaluated when the price is being reevaluated.
- Contract term should be 20 years.
- Third party ownership should be permitted.
- Pricing of portfolio energy credits should occur separately from the energy being generated.

The Solar Alliance stated that establishing the proper price would be critical because if it is too low, it stifles development and if too high, it over-heats the market. Creating a FIT also requires navigating federal and state jurisdictional issues.³² The Solar Alliance recommended

the FIT price for solar generation up to 3 MW be administratively determined by the Commission because projects at or below this cap are unable to meaningfully participate in competitive bidding with larger-scale projects.³³

G. Solar Wind Works

Solar Wind Works stated that Nevada should implement a FIT. A utility's contract issued under the FIT should be for a term of 20 years. The price for the energy produced should be differentiated by technology and set to recover the actual cost of energy production plus a reasonable return on investment of 6 to 10 percent.³⁴

H. Solar World

Solar World stated that adoption of a FIT policy in Nevada should be driven by the goals of the policy, including increasing green energy or creating jobs.³⁵ The predictability of a FIT may promote smaller scale project development, which tends to use more local labor than large-scale project developers.³⁶ Solar World stated that 75 percent of solar industry jobs are associated with system installation, which tends to be local work force.³⁷

Solar World stated that current Nevada renewable development program design fails to address the 100 kilowatt to 3 MW capacity project market, which prevents participants from obtaining economies of scale. Solar projects begin experiencing economy of scale benefits with projects ranging from 500 kW to 1 MW of capacity.³⁸ Net metering does not address this issue as the energy requirements of potential participant's, such as parking garages, are too small to justify the potential generating capacity that could be installed.³⁹

Solar World stated that a FIT pricing provision should be performance based and the price set administratively.⁴⁰ As certain amounts of capacity are contracted for and/or installed, the price paid to subsequently contracted projects should decline. Periodic price modifications encourage development of a long-term market by preventing the market from overheating.⁴¹ Development of a market improves financing availability.⁴²

Solar World stated that improvements in credit markets have increased the availability of financing for large commercial and utility scale projects. A FIT could increase financing availability for smaller projects that continue to have difficulties.⁴³

I. Regulatory Operations Staff ("Staff")

Staff stated that adoption of any FIT policy in Nevada should be driven by the goals to be achieved by the policy, whether compliance with the RPS, development of solar renewable generation, or economic development.⁴⁴ Electric service affordability must also be considered.⁴⁵ Further, any FIT policy should avoid overlapping and duplicating existing state renewable energy generation development programs.⁴⁶

Staff stated that mandating a utility to acquire renewable resources exceeding that required for RPS compliance will increase electric rates, as renewable energy tends to be more

expensive than fossil fuel.⁴⁷ Further, due to the forecast of low to no load growth for the foreseeable future, additional renewable generation will not displace fossil fuel generation capacity but only add to the capacity available to meet customer requirements. As a result, the benefits to fuel savings will be limited, which will be less than the price paid under the FIT.⁴⁸

Staff stated that a FIT would provide limited solar generation development benefit. Large scale project developers have built in Nevada and several new projects are on the immediate horizon. Small scale project development, particularly residential projects, require no further incentive beyond the existing rebate program, which defrays high initial capital costs.⁴⁹ As to economic development, Staff stated that smaller scale projects provide greater potential for economic benefits because more local labor is required, which generates a multiplier effect (i.e., increased property taxes, sales taxes, higher income thus greater consumption). However, any job loss associated with reduced consumption caused by renewable energy related electric rate increases dampens this positive economic impact.⁵⁰

As to RPS compliance, Staff stated that NV Energy minimizes RPS compliance costs by using a competitive bidding process, which potentially excludes smaller projects and associated economic benefits.⁵¹ Additionally, NV Energy has agreed to reinstitute a portfolio energy credit only competitive bidding process.⁵² NV Energy offers the winning portfolio credit bid price to all entities willing to sell them portfolio energy credits.⁵³ If a FIT were implemented, to the extent either Nevada Power Company ("NPC") or Sierra Pacific Power Company ("SPPC") relied upon a contracted project for RPS compliance the contract should include a provision indemnifying the utilities from any RPS non-compliance penalty associated with the renewable generator's non-performance.⁵⁴

Staff stated that in addition to the cost of large-scale projects, there might be costs associated with constructing the transmission facilities needed to serve them. Similarly, renewable systems connected to the distribution system could require significant distribution system upgrades.⁵⁵

J. Sun Edison

Sun Edison stated that Nevada does not have a program that promotes deployment of commercial size projects. Sun Edison stated that including a commercial category in the Solar Program would necessitate an increase in the budget. Including commercial customers would allow them to share the same benefits currently offered to smaller customers, including the ability to manage energy costs.⁵⁶

Sun Edison stated that Southern California Edison ("SCE") and Pacific Gas and Electric ("PG&E") addressed the issue of incenting the commercial sector through a standard offer contract. SCE has focused on 1 to 2 MW rooftop systems. PG&E has focused on ground mounted systems of 1 to 20 MW located near substations.⁵⁷

K. Mr. von Seggern

Mr. von Seggern stated that a FIT is the “surest means to jumpstart the green industry in Nevada” as it enables participants to earn an income from power generation. If implemented, the entire process must be transparent and understandable to the average homeowner.⁵⁸

L. Vote Solar

Vote Solar stated that Nevada has a suite of policies promoting renewable energy development. However, the policies fail to incentivize commercial size distributed generation systems. Vote Solar stated that, while a FIT is one method of filling this gap, it may not be the appropriate policy choice.⁵⁹ In fact, most FITs in the United States are pilot programs.⁶⁰ The gap is the market segment between the Solar Program cap of 100 kW and the wholesale sized projects deployed in response to the RPS of 20 MW. Projects in this range would build an industry in this State.⁶¹ Vote Solar stated that one way to address the gap is to modify the Solar Program by adding a commercial category, with a commensurate increase in the budget, and eliminate both the category capacity caps and program year.⁶²

Vote Solar noted that Colorado recently addressed the issue of incenting the commercial sector by establishing in its RPS a 3 percent distributed generation requirement.⁶³

Vote Solar stated that a properly designed FIT should include the following:⁶⁴

- Market based pricing, including recognition of other potential benefits like proximity to existing transmission or distribution facilities. However, federal and state jurisdictional pricing issues need to be considered.
- Payment based upon performance.
- Capacity cap or budget amount established that are adequate for the stated goal.
- Projects selected based upon value to ratepayers.
- To ensure actual construction, a deployment security required in conjunction with a reasonable short development time frame.

M. Western Resource Advocates (“WRA”)

WRA stated that while FITs have been instrumental in rapid development of renewable energy in Europe, it is important to consider the political and institutional constraints that affect US energy policy. WRA stated that any FIT should be limited to market segments where existing policies have been ineffectual in incenting significant renewable energy development.⁶⁵ Nevada’s major existing renewable energy development policies are: RPS, which increases incrementally to 25 percent of energy sales by 2025; net metering, which is currently capped at a project size of 1 MW; rebates for solar, wind, and hydro-electric projects; property tax exemptions; and integrated resource planning.⁶⁶ WRA was unable to identify any market segment where development has been problematic.⁶⁷ WRA agreed with Staff that prior to adopting a FIT policy, clear goals should be delineated and care taken to prevent overlapping existing programs as failure to do so could result in excessive cost to ratepayers.⁶⁸

WRA stated that a FIT could be designed to provide local service or development of resources for export. The local service model encourages development of particular market

segments with the energy serving local customers. The goal of the export model is to increase renewable development in the state to a level necessary to attract renewable energy equipment manufacturing operations. The attracted firms would export equipment and technical services. However, a FIT may be only one of several incentives required to achieve this goal. If the export model is the objective, more targeted methods exist. The potential for overpayment for renewable energy contracted pursuant to a FIT reduces its viability as an industrial development tool.⁶⁹

WRA stated that FITs promote renewable energy development by providing the seller with a known price for a fixed period of time and a market, which improves a developer's ability to obtain financing.⁷⁰ While a FIT may be designed in a variety of ways, the following major elements should be considered:

- Eligible type of resource type and size.
- Cap on total capacity eligible.
- Basis for price (e.g., generation cost, generation cost by technology, utility avoided cost).
- Price structure (e.g. fixed, seasonal, time of day, premium – e.g., environmental adder).
- Contract duration.
- Offering price adjustments (e.g., inflation, reduced for projects with later start dates).⁷¹

V. LEGAL ISSUES

The recent interest in FITs in the United States has led to concern over legal issues surrounding the adoption of such policy. Specifically, the challenge is navigating between the federal policies of PURPA and the Federal Power Act (“FPA”).

There are two legal routes available for a FIT to be adopted in most of the United States including Nevada, assuming that the FIT is the result of a legal mandate by statute or by state commission direction pursuant to a statute.⁷² The first legal route for the design of a FIT relies on the requirements of PURPA. A state may choose to shape its state-level FIT requirements to work within the constraints of PURPA, and thereby exempt FIT sellers from the requirements of the FPA.⁷³ The FPA gives the Federal Energy Regulatory Commission (“FERC”) the exclusive authority to regulate the sale of electric energy at wholesale in interstate commerce.⁷⁴ The second legal route is for a state to rely on a state statutory mandate independent of PURPA, and thereby require sellers to comply with the FPA. This means that FERC would have to approve any contract that a seller and utility entered into pursuant to a FIT. This effect would essentially defeat the purpose of a FIT. For that reason, the FPA route is not discussed further here as a legal option for use with a FIT.

The PURPA route is most feasible for use with a FIT because, assuming the FIT is successfully designed to comply with the restrictions of PURPA, it simplifies the process for sellers. Sellers do not have to ask FERC to approve the pricing of wholesale energy from the sellers to the utility if the FIT is specifically structured to work within the constraints of PURPA.⁷⁵ Taking the PURPA path also makes the task of designing the FIT less complicated than it might otherwise be, but it would still require the gathering of information and the time to consider the many options available for a FIT.

In order to comply with PURPA, sellers pursuant to a FIT would be required to have their generation system certified by FERC as qualifying facilities (“QF”). FERC limits the types and sizes of generation that are eligible to be certified as QFs. Regardless of how a state’s FIT is designed, FERC still makes the determination regarding whether a specific power production facility qualifies as a QF.⁷⁶

QFs must sell energy at a price set by the state commission, or negotiated with the utility.⁷⁷ Negotiating a price with the utility would defeat the purpose of a FIT in that it would effectively nullify the “must take” aspect of a typical FIT; that option is not discussed further here. If a state commission sets the price, it may not be more than the incremental cost of alternative energy, or the utility’s “avoided cost.”⁷⁸ Because the utilities’ avoided cost in Nevada, and in many states, is likely to be much lower than the price necessary to attract participation by sellers in a FIT, the FIT price would have to be based on an avoided cost payment plus some kind of supplemental payment. There are three methods of supplementing avoided cost payments that have been determined by FERC to avoid its PURPA jurisdiction: 1) assigning renewable energy credits (“RECs”), 2) making cash grants or paying production-based incentives, or 3) establishing a purchase price that exceeds avoided cost but granting the purchasing utility a tax credit equal to the excess.⁷⁹

There are challenges associated with each method of supplementing avoided cost payments. RECs offer one way to compensate sellers in addition to the avoided cost payment. Where there is a market and RECs have financial value, if they are awarded to renewable generators for each unit of energy produced, the renewable generators are then able to sell the RECs bundled with the energy or separately. In Nevada, and elsewhere, one challenge inherent in using RECs as the supplement to avoided cost payments is the variability of the price of RECs. If a market exists to indicate what the price of a REC should be, that price will fluctuate with time, leaving renewable generators without a guarantee that their projects will remain financially viable over time.⁸⁰

FERC allows a state to set a PURPA purchase price above avoided cost if the state then grants the purchasing utility a tax credit equal to the difference.⁸¹ This option is not available in Nevada as there is no state income tax.

Other options include loans, subsidies or tax credits granted to particular facilities on environmental or other policy grounds.⁸² For example, the Nevada Legislature could authorize a “system benefits charge” to be implemented by the Commission to charge ratepayers for the difference between the avoided cost and the supplemental payment required.

VI. DISCUSSION

Many of the participants in the Investigation noted that prior to considering a FIT, clear policy goals should be delineated. Renewable energy policy goals include RPS compliance, job creation, economic development and GHG emission reduction to name a few. As noted by many of the participants, if a FIT is considered for Nevada, it should be done in conjunction with the existing policies and programs to avoid overlap and duplication.

Another primary concern raised by participants is the impact of any new renewable energy policy on electric rates. Rate impacts need to be weighed against the potential benefits of the new policy. Similarly, NV Energy expressed concerns about the impact of a FIT on the reliability of the transmission and distribution systems.

The participants identified a gap in policies and programs where there is a lack of incentives for renewable energy systems that are too large for the Solar Program and too small for the RPS. This gap has hindered the meaningful development of facilities for the commercial sector. The existing Solar Program specifically excludes the commercial sector by limiting the small business category to companies with 500 employees or less. The net metering provisions are also limiting as they cap individual projects at 1 MW. While the RPS has been successful in stimulating growth in large, utility-scale projects, it has not provided stimulation in small to medium sized projects.

Taking the foregoing issues into consideration, the participants provided suggestions for designing a FIT. Generally, the participants agreed that if a FIT were to be adopted in Nevada, it should be carefully designed with consideration given to the types and sizes of projects, capacity and program caps, pricing mechanisms, contract terms, must take obligations, and the legal implications of PURPA and the FPA.

VII. CONCLUSION

The Presiding Officer concludes that while FITs have proven successful at installing new renewable generation in Europe, there is little experience with them in the United States. As such, the decision to implement a FIT policy in Nevada should be carefully considered in light of the existing policies, ratepayer impacts, and transmission and distribution system impacts. For more than a decade, a variety of policies and programs designed to promote the development of renewable resources have been adopted in Nevada. The decision to pursue another renewable energy policy should be left to the Nevada Legislature.

The Presiding Officer agrees with the participants that a gap exists for solar projects that are too large for the Solar Program and too small to participate in the RPS. The Presiding Officer concludes that this gap could be addressed either by the adoption of a FIT or through a modification to existing programs.

VIII. RECOMMENDATIONS

Based on the foregoing, the Presiding Officer recommends that the Commission find that the decision to adopt a FIT should be made by the Nevada Legislature and not the Commission.

By the means of this Report, the Presiding Officer recommends that the Commission make the following recommendations to the Nevada Legislature:

- a. The Nevada Legislature should not replace existing policies and programs (the RPS, the Solar Program, and net metering) with a FIT. If a FIT is considered, it should complement these policies and programs. Renewable developers value consistency and predictability. Even modest changes to existing programs can have a negative effect on the industry by creating uncertainty.
- b. Before adopting a FIT, clearly delineate the goals of the policy to avoid overlapping and duplicating existing programs. Identify any market segment that is not being served by the existing programs or policies and then consider modifications to those policies and programs. If an existing policy or program cannot be modified to achieve the goals of the Legislature, then a FIT could be considered. For example, a FIT could be used to stimulate a specific technology like combined heat and power.
- c. Before adopting a FIT, the Nevada Legislature should consider the impacts on electric rates. The RPS and the Solar Program, among others, are funded by ratepayers. Given the current economic climate, adding ratepayer funded programs should be weighed carefully to ensure that rate impacts are balanced with the benefits.
- d. Before adopting a FIT, the Nevada Legislature should consider the impacts on the electric utilities' transmission and distribution systems. Evaluate studies that provide analysis of how much the transmission and distribution systems can absorb without costly upgrades. For example, an understanding of how much distributed generation can be integrated onto the distribution system will help set the parameters for modifying existing policies and programs or establishing a FIT.
- e. The Nevada Legislature should address the issue of the gap that exists for solar projects that are too large for the Solar Program and too small for the RPS. Currently, there is a lack of incentives for this sector.
- f. If the Nevada Legislature decides to adopt a FIT, it should give the Commission the authority to implement the policy based on clearly delineated goals. For example, the Legislature could identify parameters like the type of resource and the size of projects and an overall program capacity cap. The Commission should have the authority to design the pricing mechanisms and to administratively set rates. Due to fluctuations in market prices, the Commission needs flexibility in setting the FIT rate to ensure ratepayers are protected and the program achieves its desired goals.
- g. The Nevada Legislature should be mindful of the limitations created by PURPA and the FPA.

¹ Tariff rates were set when solar panel prices were escalated due to a silicon shortage. When the shortage ended and prices dropped dramatically, the FIT tariff rates remained the same created an unexpectedly high profit margin.

² Originally, projects less than 10 MW received \$0.64 USD and projects between 10 and 50 MW received \$0.35 USD.

³ *US Solar Industry Year in Review 2008*, Solar Energy Industries Association (2009), http://www.seia.org/galleries/pdf/2008_Year_in_Review-small.pdf.

⁴ Juan Montes, *Spain Sees 125 MW in Photovoltaic Solar Plants Built in 2009*, NASDAQ, Oct. 10, 2010. <http://www.nasdaq.com/aspx/stock-market-news>

[story.aspx?storyid=200910011050dowjonesdjonline000570&title=spain-sees-125-mw-in-photovoltaic-solar-plants-built-in-2009](http://www.nasdaq.com/aspx/stock-market-news/story.aspx?storyid=200910011050dowjonesdjonline000570&title=spain-sees-125-mw-in-photovoltaic-solar-plants-built-in-2009).

⁵ Spain has several government funded grant programs for research and development (“R&D”) for renewable and energy efficient technology but the FIT is the only incentive program aimed at quickly putting the steel in the ground.

⁶ There are five separate solar categories: residential rooftops, medium sized agriculturally owned rooftops, medium sized community rooftops, large commercial rooftops and open space projects.

⁷ Incentive levels for new rooftop solar systems are expected to be cut by 16 percent by July due to dramatic decreases in solar panel prices.

⁸ Rate degression allows the market to keep pace with decreased installation costs and encourage technological advancement.

⁹ Germany also has the 1999 100,000 Solar Roofs Program (HTDP) aimed at increasing solar photovoltaic (“PV”) electricity by subsidizing the installation of new solar panels. Kate Gordon, Et Al., *Out of the Running, How Germany, Spain and China are seizing the Energy opportunity and Why the United States Risks Getting Left Behind* (2010). http://www.americanprogress.org/issues/2010/03/pdf/out_of_running.pdf.

¹⁰ There will be a need to replace nuclear facilities nearing the end of their service lives and a desire to replace existing coal plants. Fifty-eight percent of Ontario’s current energy portfolio comes from nuclear and coal power. Ontario Power Authority, *Renewable and Clean Energy for Ontario* (2010).

<http://www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6579&SiteNodeID=120>.

¹¹ As of Dec. 1, 2009, the MicroFit program received applications for 187kW of solar capacity, and the FIT program received applications for 1,600 MW of solar capacity. Ontario Power Authority, *Ontario’s Feed in Tariff Program Backgrounder* (2009). <http://fit.powerauthority.on.ca/Page.asp?PageID=924&ContentID=10616>.

¹² Price adders are additional incentives aimed at leveling the playing field for groups that otherwise may be excluded by ensuring these projects are economically viable.

¹³ *Database of State Incentives for Renewables & Efficiency*, NC State University (2010). <http://www.dsireusa.org/Index.cfm?EE=0&re=1>.

¹⁴ Black Rock Solar, Inc. Initial Comments dated February 17, 2010.

¹⁵ BCP Initial Commented dated February 17, 2010 at 1-5; Transcript at 5-6.

¹⁶ Transcript at 31, 40, 68-73.

¹⁷ EAANN Initial Comments dated February 17, 2010 at 2-3; EAANN Reply Comments dated February 24, 2010 at 9-12; Transcript at 20.

¹⁸ EAANN Initial Comments dated February 17, 2010 at 3, 5-11, 18.

¹⁹ EAANN Initial Comments dated February 17, 2010 at 11-19; Transcript at 21.

²⁰ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010).

²¹ EAANN Reply Comments dated February 24, 2010 at 2.

²² Transcript at 30, 35-36.

²³ Transcript at 60-62, 64.

²⁴ Transcript at 112-114.

²⁵ NV Energy Initial Comments dated February 17, 2010 at 1-2, 5.

²⁶ Transcript at 10.

²⁷ NV Energy Comments dated February 17, 2010 at 6-10; Transcript at 10-11, 87.

²⁸ NV Energy Reply Comments dated February 14, 2010 at 3; Transcript at 10.

²⁹ Solar Alliance Initial Comments dated February 17, 2010 at 3-5; Transcript at 17.

³⁰ Transcript at 33.

³¹ Solar Alliance Initial Comments dated February 17, 2010 at 9, 11.

³² Solar Alliance Initial Comments dated February 17, 2010 at 7-10.

³³ Solar Alliance Initial Comments dated February 17, 2010 at 11.

³⁴ Solar Wind Works comments dated February 17, 2010.

³⁵ Transcript at 96.

³⁶ Transcript at 97-98, 102.

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- ³⁷ Transcript at 107.
- ³⁸ Transcript at 101-102.
- ³⁹ Transcript at 135-136.
- ⁴⁰ Transcript at 99, 118, 131
- ⁴¹ Transcript at 99, 118, 131, 138-139, 141-142.
- ⁴² Transcript at 149-150.
- ⁴³ Transcript at 149-151.
- ⁴⁴ Staff's Initial Comments dated February 17, 2010 at 2, 6.
- ⁴⁵ Staff's initial Comments dated February 17, 2010 at 6; Transcript at 6-7.
- ⁴⁶ Staff's Reply Comments dated February 14, 2010 at 2.
- ⁴⁷ Staff's Initial Comments dated February 17, 2010 at 2.
- ⁴⁸ Transcript at 31-33.
- ⁴⁹ Staff's Initial Comments dated February 17, 2010 at 2-3.
- ⁵⁰ Staff's Initial Comments dated February 17, 2010 at 4-5; Transcript at __ (4/7).
- ⁵¹ Transcript at 67-68.
- ⁵² Transcript at 74-75, 79-80.
- ⁵³ Transcript at 162.
- ⁵⁴ Transcript at 62-64.
- ⁵⁵ Transcript at 127.
- ⁵⁶ Transcript at 50-52.
- ⁵⁷ Transcript at 58.
- ⁵⁸ Mr. David von Seggern comments dated February 12, 2010.
- ⁵⁹ Vote Solar Comments dated February 16, 2010 at 1-2; Transcript at 12.
- ⁶⁰ Transcript at 44.
- ⁶¹ Vote Solar Comments dated February 16, 2010 at 2; Transcript at 34-35.
- ⁶² Transcript at 47-49.
- ⁶³ Transcript at 77-78.
- ⁶⁴ Vote Solar Comments dated February 16, 2010 at 3-11.
- ⁶⁵ Western Resource Advocates Initial Comments dated February 17, 2010 at 1, 8-9; Western Resource Advocates. Reply Comments dated February 24, 2010 at 1.
- ⁶⁶ Western Resource Advocates Initial Comments dated February 17, 2010 at 1.
- ⁶⁷ Western Resource Advocates Initial Comments dated February 17, 2010 at 9.
- ⁶⁸ Western Resource Advocates Reply Comments dated February 24, 2010 at 2; Transcript at 8.
- ⁶⁹ Western Resource Advocates Initial Comments dated February 17, 2010 at 2-3, 9.
- ⁷⁰ Western Resource Advocates Initial Comments dated February 17, 2010 at 6.
- ⁷¹ Western Resource Advocates Initial Comments dated February 17, 2010 at 4-5.
- ⁷² Another available legal route that avoids FERC jurisdiction and that is not explored in this report, is the option of allowing renewable energy sellers to make retail sales directly to customers. However, this kind of sale would not be made pursuant to a FIT.
- ⁷³ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010).
- ⁷⁴ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010).
- ⁷⁵ Some utilities have been exempted from PURPA purchase obligations. Nevada utilities have not been exempted. See Hempling, et al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, National Renewable Energy Laboratory, January 2010, footnote 27.
- ⁷⁶ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 6-7.
- ⁷⁷ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 8.
- ⁷⁸ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 7.
- ⁷⁹ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 14-18.

⁸⁰ It is currently unclear what the market price of a REC would be in Nevada. (See April 7, 2010 Continued Workshop in Docket No. 09-11004, Transcript at 162-164.)

⁸¹ Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 16.

⁸² Scott Hempling, Et Al., *Renewable Energy Prices in State-Level FITs: Federal Law Constraints and Possible Solutions*, NREL Technical Report NREL/TP-6A2-47408 (2010) 18.