STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILTIES BOARD

FILED WITH
Executive Secretary
June 24, 2014
IOWA UTILITIES BOARD

IN RE: DISTRIBUTED GENERATION	Docket No. NOI-2014-0001

COMMENTS OF THE ALLIANCE FOR SOLAR CHOICE

I. INTRODUCTION

The Alliance for Solar Choice ("TASC") respectfully submits these comments pursuant to the Iowa Utilities Board (the "Board") May 12, 2014 *Order Soliciting Additional Comments on Distributed Generation, Net Metering, and Interconnection and Including Reports* ("Order") in the above-captioned docket.

TASC advocates for maintaining successful distributed solar energy policies that expand consumer choice in energy supply. It's member companies represent the majority of the nation's rooftop solar market and include Demeter Power Group, SolarCity, Sungevity, Sunrun, Solar Universe and Verengo Solar. TASC's member companies are responsible for tens of thousands of solar installations serving businesses, residents, schools, churches and government facilities across the United States. TASC member companies have participated in numerous regulatory and stakeholder proceedings in multiple states that have involved policy questions parallel to those posed by the Board and respectfully submits these comments to assist the Board with its solicitation.

With these comments, TASC offers a number of recommendations to the Board in response to questions proposed by the Board in the Order including: (1) support for expanding

Iowa's net metering rules consistent with best practices seen in other states; (2) discussion of the propriety of feed-in-tariffs as a means to support the growth of renewable distributed generation (DG); (3) views on whether net metering results in an unacceptable cross subsidy; and (4) views on Iowa's general support for distributed generation.

II. QUESTIONS RELATED TO NET METERING

Question 1: Various commenters recommended net metering policy changes which are listed below. Discuss the advantages, disadvantages, and the regulatory changes necessary to implement each suggested change.

(a): Increase the size cap from 500 kW to 2,500 kW or 5,000 kW

TASC supports an increase of the current size cap of 500 kW, but does not believe that a specific system size limitation is necessary. Many states have moved to do away with arbitrary system size caps and instead focus on allowing customers to offset as much of their on-site load as is economical and practical for them to do so. For example, New Jersey has not specific size limits but instead limits system capacity so that it may not exceed the previous year's electricity consumption.[1] Similarly, Ohio does not provide for an explicit size limit, but limits system size to primarily offset the customer's load.[2] The removal of system size limitations to allow for customers to meet their on-site energy needs would result in a significant improvement in the current Iowa net metering rules. However, if the Board believes a system size cap is necessary, we encourage the Board to set the cap at 2 MW which is a level high enough to allow the majority of Iowa's customers to invest in renewable energy resources. To that end, the Board

[1] *See* N.J.A.C. 14:8-4.1 et seq. (June 20, 2014) (available at: http://www.lexisnexis.com/hottopics/njcode/)
[2] See, e.g. Finding and Order Docket 06-0653-EL-ORD.

could follow the lead of twelve states such as Florida[3] and Vermont[4] which have established a 2 MW system size limit.

(b): Allow "virtual net metering" where a customer who is not personally able to own a DG facility could invest in a DG facility and receive a benefit from the energy produced by that facility.

TASC has no comment at this time.

(c): Include combine hear and power (CHP) and waste heat and power (WHP) as net metering eligible facilities.

TASC has no comment at this time.

(d): Allow an annual cash-out of the net metering balance.

TASC believes that this change is unnecessary and that the current practice of allowing the indefinite rollover of net metering credits should be maintained.

The primary advantage of this "indefinite rollover" approach is that it creates an implicit customer incentive to limit the size of a DG system to that which is necessary to serve no more than the customer's long-term on-site energy needs. In doing so, it can avoid the need for specific system size limitations that may reduce self-supply opportunities for some customers. It also solidifies net metering as an arrangement that is intended to allow customers to pursue the self-supply of energy and receive fair value for incidental overproduction, while avoiding any suggestion that a sale of energy is occurring as part of the net metering arrangement. This in turn avoids the potential for adverse tax or regulatory consequences that may be created where a sale of energy is implicated.

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[3] *See* Fla. Admin. Code R. 25-6.065.
[4] *See* 30 V.S.A. § 219.

We do not believe that any substantive regulatory changes would be necessary to implement a policy of indefinite rollover of net metering credits, as this method has been approved by the Board and is already being employed by the state's investor-owned utilities. However, we do suggest that the clarity and understanding of Iowa's net metering practices could be improved by rule revisions that clearly state that indefinite carryover of excess generation as the chosen crediting practice.

(e): Include aggregate net metering for customers who may have more than one meter on their premises.

TASC supports aggregate net metering for electric consumers in Iowa because it can offer customers greater efficiency in deploying DG to serve on-site load. Allowing a single net metering customer to offset their energy load from multiple meters through credits generated from a single DG facility would be a substantial improvement to Iowa's net metering rules as meter aggregation allows for economies of scale due to larger sizing of a DG facility. In a state, such as Iowa, with many agricultural customers, aggregate net metering would be particularly beneficial to agricultural customers who typically have meters on their property for pumping water, drying crops, powering residential and non-residential buildings, and other activities.

Aggregate net metering can be implemented in a way that either restricts eligible meters to a contiguous property, or allows all of a customer's meters to qualify without geographical limitations. TASC supports allowing meter aggregation on a single geographic property to efficiently allow DG to serve on-site load.

Question 5: Currently Iowa does not offer feed-in tariffs. Explain why you think feed-in tariffs should or should not be implemented in Iowa. In your discussion, address the advantages and disadvantages of both net metering and feed-in tariffs.

Net metering policies have been utilized successfully to catalyze distributed generation designed to serve on-site load across the United States. More specifically, with its adoption in 1984, net metering has been utilized in Iowa for 20 years to facilitate consumer self-generation with alternative energy sources and has been particularly important to supporting the development of residential scale DG systems within the state. In its twenty-year history, net metering has demonstrated several advantages for developing a robust distributed generation market.

Net metering offers customers a straightforward billing mechanism, allowing customers to receive fair credit for on-site DG production. This enables a customer to choose to offset either a portion or their entire energy load through an investment in on-site DG, rather than relying on a utility for all of their energy needs.

Net metering has also proven a stable policy for distributed generation, having been in continuously available for Iowa consumers for two decades.

Another key advantage found in net metering is its flexibility as a policy for sustaining or growing on-site DG resources. Net metering rules can, and have, been amended over the years to increase system capacity limits, aggregate capacity caps, eligible qualifying technologies, allow for third-party ownership and community solar projects as the modern needs of energy consumers have evolved. TASC appreciates that this flexibility allows states to craft net metering rules to best serve their unique set of DG resources and energy policy landscape.

As net metering in Iowa continues to spur investment in DG systems designed to serve on-site load, TASC is confident that the Board will find the efficacy of net metering as a policy tool to be increasingly evident.

There are significant tax disadvantages to feed-in tariffs in the residential space, relative to net metering. TASC's legal analysis indicates that feed-in tariffs (FiTs) for residential customers jeopardize access to the Residential Income Section 25D credit as the energy generated by the DG system may not be deemed to be used directly on-site, while further concluding that payments received by a taxpayer under such configurations are likely includable in a taxpayer's reported taxable gross income.[5] In addition, feed-in tariffs have proven unstable, in part because administratively set prices for FiTs have been either too high, leading to short-lived programs like Gainesville Regional Utilities' FiT, which sold out of capacity in early 2013, in some market segments in a matter of minutes, and has been suspended since that time.[6] FiT programs that sell out quickly provide little long term support for development of a market that results in necessary reductions in balance of system costs and other market development that is necessary to bring solar into the energy resource mainstream. Other programs have set the FiT too low, leading to minimal participation, like City of Palo Alto's Clean Local Energy Accessible Now (CLEAN) FiT program which launched in 2012 and experienced a memorable period of low interest, with zero applications submitted between the program launched March 2, 2012 and the initial application deadline on July 31, 2012.[7]

TASC does not advocate on policies designed to spur non-load serving distributed generation, but TASC notes that feed-in tariffs have been utilized to support wholesale DG

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[5] See Skadden, Arps, Slate, Meagher & Flom LLP. *Memorandum RE: U.S. Federal Tax Consequences for Residential Solar Feed-In Tariffs.* (August 09, 2013) contained in Appendix A. (Skadden Memo).

[6] *City Commission will not add to feed-in tariff in 2014.* Christopher Curry, the Gainesville Sun. (June 20, 2014) (available at: http://www.gainesville.com/article/20131219/ARTICLES/131219531?p=1&tc=pg-)

[7] *Palo Alto, Calif. had Solar Feed-in Tariff and Nobody Came.* Eric Wesoff, GreenTech Solar. (June 20, 2014) (available at: http://www.greentechmedia.com/articles/read/Palo-Alto-Calif.-Had-a-Solar-Feed-in-Tariff-and-Nobody-Came)

projects. For example, in California Renewable Auction Mechanism which have resulted in wholesale DG system deployment.[8] TASC recognizes that NEM and FiT programs can exist side by side to assist solar in filling important DG market segements – customer-side and wholeale side DG.

Question 7: If you believe that net metering results in cross-subsidization of DG customers by non-DG customers, how should the net metering rule be revised to reduce or eliminate such cross-subsidization?

and

Question 8: If you believe that net metering does not take into account the benefits that DG provides to non-DG customers, how should the net metering rule be revised to account for such a value?

TASC does not believe enough evidence exists to address these two questions because Iowa has not engaged in the type of utility-specific, robust accounting of the costs and benefits of net metered systems necessary to arrive at an answer. Accordingly, there is simply not enough information to determine the magnitude *or direction* of any cross-subsidy flowing from net-metered systems. A number of studies have shown that customer-investment in DG is a net benefit to other ratepayers. For example, in Solar Power Generation in the US: Too Expensive, or a Bargain, some of the leading researchers in the United States conclusively demonstrated that solar power is a solid investment for ratepayers.[9] Similarly, Staff at the Vermont Public Service Department determined that net-metered systems offered net benefits to ratepayers when avoided

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[8] See http://www.cpuc.ca.gov/PUC/energy/Renewables/hot/Renewable+Auction+Mechanism.htm

[9] See Perez, R., Zweibel, K., Hoff, T., Solar Power Generation in the US: Too Expensive, or a Bargain?. Energy Policy 3, 2011. Pp. 7290-7297. Available at: http://www.asrc.cestm.albany.edu/perez/2011/solval.pdf.

greenhouse gas costs were included in their analysis.[10] Given recent action at the federal level to control carbon emissions from fossil fuel power plants, the inclusion of greenhouse gas compliance costs in Vermont's analysis is reasonable. Based on these and other studies, TASC believes it is unreasonable to assume that net metering results in a cross-subsidy from non-participating ratepayers in the absence of a robust accounting of both the costs *and benefits* net-metered systems can provide. Green Mountain Power, Vermont's largest utility, has embraced customer-sited solar based on their customers' strong interest in solar energy and the cost-effectiveness of customer-sited solar based on their internal research on net-metering.[11]

Nonetheless, as discussed in our February 26, 2014, we believe that a discussion of the costs and benefits of net metering in Iowa is premature. There is simply not enough solar PV currently interconnected in Iowa to justify the resources required to appropriately conduct a comprehensive, robust study of the issue. A deferral will also allow the Board to perform a study utilizing a more sophisticated data set of installed DG systems and providing an increased return on the Board's investment in time and resources to execute such study. Most importantly, the low enrollment currently found in Iowa's net-metered programs mitigates any potential cost-shift between non-DG and DG customers and impacts to utility revenues. Accordingly, we continue to believe that the Board should defer this discussion until the market has grown to a large enough size as to warrant it.

Question 10: Provide advantages and disadvantages of the current net metering rules. Are there specific changes that need to occur to these rules to encourage additional DG in Iowa?

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[10] Evaluation of Net Metering in Vermont Conducted Pursuant to Act 125 of 2012," Vermont Public Service Department, January 15, 2013. Available at: http://www.leg.state.vt.us/reports/2013ExternalReports/285580.pdf

[11] See e.g., http://votesolar.org/2014/03/25/meet-our-2014-utility-solar-champion-vts-green-mountain-power/

A key advantage to Iowa's current net metering rules, as discussed previously, is the allowance for net excess generation to be carried forward and credited to the customer's next bill indefinitely. Indefinite rollover creates a customer incentive to limit the size of a DG system to that which is necessary to serve no more than the customer's long-term on-site energy needs.

TASC recommends the removal of system size limitations from the current net metering rules to allow for customers to meet comprehensive on-site energy needs. This would result in a significant improvement in current Iowa net metering policy. Such a policy framework is currently implemented in Arizona, New Jersey, Colorado, and Ohio and would be effective in improving Iowa's net metering policies. Additionally, TASC encourages the Board to expand the Iowa net metering rules to allow customers of all utilities, including both municipal electric utilities and co-operative electric utilities, to net meter renewable energy systems.

TASC supports Iowa's codification of the consumer's rights to install self-generation through third-party arrangements in Iowa. Third-party ownership expands financing options available to customers interested in investing in solar PV by enabling customers to use a power purchase agreement or a lease to finance on-site PV system. In this regard, third-party ownership presents an important financial option for customers who wish to install self-generation systems but are unable to make the high upfront investment. Third-party ownership also allows customers to take full advantage of available state and federal incentives which are often difficult for many customers to fully monetize, including non-profits and government entities. Moreover, third party ownership of a PV system can relieve the host customer from the burden of necessary operations and maintenance costs which often transfer to the developer. This outcome aligns the incentives of the developer to keep the DG system operating at premium efficiency in order to receive payment with ratepayers who are supporting the installation of DG

systems in Iowa and seek to see as much renewable energy production as possible from their support.

TASC understands the legal issues associated with particular forms of third-party ownership of DG currently being addressed in the Iowa courts. TASC encourages both the Board and the General Assembly to exhaust all actions within their authority to permit a variety of financing tools, including power purchase agreements and leases.

III. QUESTIONS RELATED TO INTERCONNECTION

TASC has no comment on these questions at this time.

IV. QUESTIONS RELATED TO CONSUMER PROTECTION AND EDUCATION

TASC has no comment on these questions at this time.

V. QUESTIONS RELATED TO DISTRIBUTED GENERTION IN GENERAL

Question 2. Should Iowa have a policy goal to increase and diversify alternate energy production? Is so, should that policy be achieved with utility-owned centralized generation, utility-owned distributed generation, customer-owned distributed generation, or a mix of these alternatives?

TASC will confine our response to address the topic of utility-owned vs. non-utility owned (i.e., customer and third-party owned) DG. In this respect, we wish to reiterate the position taken in our initial comments; that the activities of regulated monopoly utilities should not extend into markets that are not characterized by the existence of a natural monopoly and can instead be served competitively. The market for customer-sited generation is one such market and we are not aware of any credible evidence suggesting that the participation of regulated utilities in this market would be better for participant customers, or ratepayers as a whole.

Some might argue that monopoly utilities should not be prohibited from participating in offering customer-sited generation services, as doing so would make the market less competitive by depriving customers of an additional service provider option. While such an assertion may sound reasonable in the abstract, it fails to consider the practical realities of competition. True competitive markets are defined by the existence of a level playing field, one characteristic of which is an equal opportunity to access information that is significant to the interests of the participant. This principle of competition is not compatible with the participation of a monopoly utility in customer-sited generation market because a monopoly utility has access to internal information, such as customer data and potential grid constraints, which is not readily available to other participants. This type of information could allow utilities to "cherry-pick" customers that might otherwise be interested in the services of another provider, or do the same for project locations with lower interconnection costs.

Moreover, the utility must be a counterparty to all interconnections. In order to ensure, safe and reliable interconnection, the solar installers must provide the utility with commercially sensitive, detailed information concerning the solar installation seeking interconnection. Taken in aggregate, the utility's role as an interconnection counterparty for all solar installers provides the utility with detailed market data on all of it's competitors which is antithetical to a competitive market.

The playing field would be further distorted by the ability of regulated utilities to rate base assets and earn a guaranteed rate of return; a structural advantage that no other market participant would enjoy. Finally, the existing connections that utilities have to customers, in the form of information distribution and the use of utility web sites for billing regulated services, confers a further advantage with respect to the advertisement of new services. This advantage is

not the result of ingenuity, experience, or competence, but instead derives wholly from the regulated utility position. For these reasons, TASC believes that the participation of monopoly utilities in the customer-sited generation market would undermine competition in the DG market, to the ultimate detriment of potential customers and Iowa ratepayers. However, TASC is not opposed to an affiliate of a utility entering the solar market as long as the affiliate is subject to robust affiliate transaction rules and appropriate regulatory oversight designed to ensure the affiliate cannot leverage the information and other advantages of the monopoly utility. TASC is not aware of any barrier to a utility in Iowa from taking this path.

Question 4: Should utilities include distributed generation in their resource planning? If so, how is DG accounted for? If not, why and is this likely to change?

TASC is not currently aware of a rigorous process in place in Iowa for utilities to include customer investment in DG in their resource planning. However, we believe that utilities need to start taking account of the likely sources of customer-sited generation and customer load over the longer term in order to ensure that future investments in transmission and distribution (T&D) assets and other utility resources are prudently incurred and to ensure ratepayers fully realize the long-term benefits stemming from customer investment in DG resources as a means to avoid unnecessary T&D investments. FERC's recent Order 1000 requires FERC-jurisdictional entities to provide comparable consideration of non-transmission alternatives in transmission planning and we believe a similar framework should be put in place for other utility resource planning. Moreover, reformation of utility planning processes will enable utilities to take account of changing customer preferences for DG resources in the way they design their system. Accordingly, changes in planning process will not only allow for the full unlocking of the benefits DG can provide but could also facilitate further customer adoption of DG facilities by

avoiding distribution or transmission plans that cause may unnecessary interconnection bottlenecks. We appreciate that there are significant policy issues involved in reforming utility planning processes to plan for and forecast customer adoption of DG, but the currently low levels of customer-installed DG facilities gives the Board time to address this issue while it simultaneously seeks to facilitate further customer investment in DG.

VI. CONCLUSION

TASC appreciates the opportunity to submit these comments addressing the questions presented in the Board's May 12th Order.

RESPECTFULLY SUBMITTED this 24th day of June, 2014.

By REDACTED

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Appendix A

MEMORANDUM

August 9, 2013

TO: The Alliance For Solar Choice (TASC)

FROM: Sean Shimamoto, Partner, Skadden, Arps, Slate, Meagher & Flom LLP Emily Lam, Partner, Skadden, Arps, Slate, Meagher & Flom LLP

RE: U.S. Federal Income Tax Consequences for Residential Solar Feed-In Tariffs

This memorandum summarizes certain U.S. federal income tax consequences regarding feed-in tariffs, value of solar tariffs, and other comparable in front of the meter solar configurations. Specifically, this memorandum will address (i) whether a residential solar system that would otherwise qualify for the Residential Energy Efficient Property credit under Section 25D[1] would so qualify under a feed-in tariff, and (ii) whether payments received by a taxpayer pursuant to a feed-in tariff constitute gross income of such taxpayer.[2]

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Internal Revenue Service Circular 230 requires us to advise you that, unless otherwise expressly indicated, any U.S. federal tax advice contained in the analysis set forth below was not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or (ii) promoting, marketing, or recommending to another party any tax-related matters addressed herein.

Background

Several states, municipalities, and investor-owned utilities have enacted various forms of feed-in tariff arrangements or Value of Solar Tariffs (collectively, "FITs") for

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[1] Unless otherwise indicated, all Section references herein are to the Internal Revenue Code of 1986, as amended (the "Code").

[2] This memorandum analyzes the general framework of feed-in tariffs, value of solar tariffs, and other in front of the meter configurations under current law. The precise rules governing these configurations vary by program, which differences could change the U.S. federal income tax consequences discussed herein. However, the following analysis is generally applicable to all buy all/sell all arrangements as described further below in the "Background" section.

residential solar systems. These programs generally work as follows: utilities purchase all of the electricity generated by a residential solar system either under a long term power purchase contract or a tariff that changes values based on regulatory reviews. The homeowner sells all of the electricity generated by the residential solar system in exchange for a kWh rate. Legal title to the electricity passes prior to any ability of the homeowner to consume the electricity. The arrangement is thus a "sell all" situation in which the full amount of electricity generated by the residential solar system is sold to the utility.

In a separate transaction, the utility sells electricity to the homeowner for the homeowner's personal consumption. FITs are commonly referred to as "in front of the meter" transactions. Although FITs may differ in their specific terms, the above description provides the common framework of all FITs contemplated in the following analysis.

Discussion

Section 25D Credit

Individual taxpayers may be eligible for a tax incentive under Section 25D known as the Residential Energy Efficient Property credit (the "Section 25D credit"), for expenditures for qualified energy efficient residential property, which includes qualified solar electric property ("QSEP").[3] For expenditures on QSEP during the tax year, taxpayers are allowed a personal tax credit in the amount of 30% of such expenditure.[4] A QSEP expenditure is an expenditure for property that uses solar energy to generate electricity "***for use in a dwelling unit***."[5] The dwelling unit must be located in the U.S. and must be used as a residence by the taxpayer.[6] Moreover, if less than 80% of the use of the property is for nonbusiness purposes in the dwelling unit,[7] only that portion of the expenditures which is properly allocable to use for nonbusiness purposes shall be taken into account.[8]

Because under FITs all of the electricity generated by the residential solar system is sold to the utility, that electricity is not used by the taxpayer/homeowner in its personal residence as expressly required to qualify for the Section 25D credit.

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[3] Section 25D(a).

[4] Section 25D(a)(1).

[5] Section 25D(d)(2) (emphasis added). *See also* Section 3.03 of Notice 2009-41, 2009-19 I.R.B. 933, released on May 11, 2009, by the Internal Revenue Service (a taxpayer claiming a Section 25D credit with respect to an expenditure is responsible for determining whether the expenditure appropriately relates to a qualifying dwelling unit).

[6] Section 25D(d)(2).

[7] A nonbusiness use in a dwelling unit would not include, for example, use for a home office. Treas. Reg. § 1.23-3(g).

[8] Section 25D(e)(7).

Further, as noted above, if the taxpayer is not directly using at least 80% of the electricity generated by the solar electric property for nonbusiness purposes, then the Section 25D credit is not available for that portion of business use. Under FITs, 100% of the electricity generated is sold to the utility, and thus 100% of the use of the residential solar system is for business use. Therefore, even if a residential solar system were otherwise eligible for a Section 25D credit, because all of the electricity generated is sold, none of it is used by the taxpayer for nonbusiness purposes, and thus none of the expenditures qualify for the Section 25D credit.

Gross Income

In addition to the loss of the Section 25D credit, the payments received by a taxpayer for the sale of electricity under FITs appear to fall squarely within the definition of taxable gross income. Section 61 provides that gross income means "all income from whatever source derived." In the landmark case *Commissioner v. Glenshaw Glass*, the United States Supreme Court interpreted the concept of gross income broadly, "in recognition of the intention of Congress to tax all gains except those specifically exempted," to include "instances of undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion."[9]

The terms of FITs provide for the sale by the taxpayer to the utility of all electricity generated by the taxpayer's residential solar system. In exchange, the utility compensates the taxpayer with either cash or a credit on the taxpayer's utility bill. Although the taxpayer may also purchase electricity from the utility, under FITs, the two transactions are separate and distinct. The proceeds from the taxpayer's sale of electricity to the utility therefore likely constitute gross income.

This conclusion is supported by Senate bill S.1225, introduced by Sen. Mark Udall, on June 26, 2013, which would add a new Section 139E to the Code to provide an income exclusion for "any gain from the sale or exchange to the electrical grid" of electricity generated by property with respect to which QSEP expenditures are eligible for a Section 25D credit, "but only to the extent such gain does not exceed the value of the electricity used at such residence during such taxable year." The proposed bill creates a clear negative inference that absent the income exclusion proposed in a new Section 139E, gain from the sale of electricity in this context constitutes gross income.

Conclusion

Under current law, residential FITs jeopardize the Section 25D credit because electricity generated by such residential solar systems is sold to the utility, rather than used in a personal residence of the taxpayer. Further, payments received by a taxpayer under FITs are likely includable in taxable gross income.

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[9] 348 U.S. 426, 431 (1955).