



June 27, 2017

Director Anthony Star  
Illinois Power Agency  
160 N. LaSalle Street, Suite C-504  
Chicago, IL 60601

Via Email: [Anthony.Star@illinois.gov](mailto:Anthony.Star@illinois.gov)

**RE: Illinois Power Agency Request for Comments Regarding the Long-Term Renewable Resources Procurement Plan**

Dear Director Star:

GRID Alternatives (GRID) appreciates the opportunity to respond to the June 6, 2017 Illinois Power Agency (IPA) Long-Term Renewable Resources Procurement Plan (LTRRPP) Request for Comments.<sup>1</sup>

GRID Alternatives is the Nation's largest non-profit solar installer, exclusively serving low-income families (defined using the U.S. HUD definition of less than 80% of Area Median Income) and affordable housing owners through residential, multi-family, and community solar installations that target minimum 50% monthly electricity bill savings for each low-income participant. In addition to direct energy bill impacts, GRID also provides solar installation services to residents and managers of multi-family buildings, encouraging renters and building owners to realize the benefits of solar.

Using a "barn raising" installation model, GRID Alternatives' professional installation staff train and lead teams of local job trainees and other community members to install solar electric systems for our customers, in partnership with a national network of affordable housing developers, energy efficiency providers, local government agencies, workforce development programs, and solar industry partners. Since 2001, GRID has installed over 8,700 solar systems totaling over 32 Megawatts, saving low-income families over \$258 million in lifetime electricity costs, and providing over 32,700 people with solar training. GRID works locally through thirteen regional and affiliate offices to serve families in California, Colorado, the New York Tri-State and Mid-Atlantic regions. GRID Alternatives also has an international program serving Nicaragua and Nepal, a national multi-family affordable solar technical assistance program, and a tribal program serving families nationwide.

GRID is licensed in Illinois and participates in policy, regulatory, and program discussions with stakeholders nationwide to provide our expertise as leaders in low-income solar access and program design. GRID has been working with stakeholders in Illinois for the last three years via the Clean Jobs Coalition and more recently the Solar for All Working Group.

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<sup>1</sup> <https://www.illinois.gov/sites/ipa/Documents/LTRRPP-Request-for-Comments-20170606.pdf>



As GRID has expertise working across diverse markets, we understand incentives are critical to a low-income solar program's success. Therefore, we are providing feedback to IPA regarding its "C. Adjustable Block Program - Pricing" questions.

### C. ADJUSTABLE BLOCK PROGRAM

It is imperative that projects built under the ILSfA Program have access to the Adjustable Block Program (ABP). The economics of serving low-income clients are more challenging than market-rate, due to factors such as higher risk and lower capacity to contribute revenue to projects. Low-income families need positive cash flow from day one. Upfront cost of solar is the biggest obstacle and families have limited cash reserves to make investments with long-term payback periods. For low-income customers, participation in a viable solar project requires no upfront payment and near term significant economic savings. The cost-based model accurately accounts for these higher costs.

If ILSfA projects do not have access to the ABP, that means significantly increased competition for a relatively small amount of RERF funding to deliver projects at no upfront cost to families who will most benefit under the LTRRPP. To ensure a successful and scalable program, ILSfA projects must have access to the ABP. This approach also supports equitable access in Illinois as low-income ratepayers are paying into the incentive pool and deserve access to it at scale. Additionally, community solar is a large part of the ILSfA Program, and community solar in Illinois is not valued at the full retail rate. When considering offering projects with no upfront payments and near term significant economic savings, every source of financial support is important to deliver maximized savings to low-income subscribers.

GRID Alternatives understands IPA's concern that within ILSfA, a single project cannot have two sources of RECs. To address this, ILSfA incentives may be an adder to the ABP. **However, incentives for ILSfA installations should not decline or be tied to declines in corresponding general market incentives and may actually need to increase if paired with declining general market incentives.** When pairing the ABP and ILSfA incentives, the end value must be an incentive level that allows developers, installers, or the nonprofit third-party program administrator(s) to offer solar at no upfront cost to the income-qualified participant and offer immediate and significant savings.

If IPA designs ILSfA incentives to be an adder to the ABP, the IPA should account for the expected use of the ABP by ILSfA projects in setting block sizes. Block design should account for accurate project development timelines, especially specific to project development timelines for low-income community solar projects. Developing projects that serve low-income customers may take longer and are costlier. Additionally, non-profit developers are not as well resourced as larger for-profit companies so milestones like siting take longer; larger blocks would help facilitate a longer development timeframe for ILSfA projects. IPA may consider a time-based approach, in which case low-income projects should be allotted additional time for project development than the broader market - i.e. 18 months for broader market, 24 months for low-income. To account for the longer development timeframes for low-income community solar projects, in its block design the IPA should allow for reservation extensions for ILSfA projects. This gives developers of low-income community solar projects additional time to overcome the unique challenges of these projects, including siting, customer acquisition and financing.



If IPA has the capability, another possible solution is for IPA to move from a production-based incentive model (i.e. RECs) in to an upfront incentive model (i.e. upfront \$/kW rebate). Importantly, the ILSfA project still receives the money upfront.

**Pricing**

**6. Should the ABP REC prices be based on a cost-based model which takes into account the revenue requirements for new projects in Illinois, or should it be based on market observations of pricing data as well as developments in other jurisdictions?**

IPA should base ABP REC prices on a cost-based model.

Incentives should be structured to enable significant low-income household energy savings, of at least 50% monthly electricity bill savings, not just enable program participation. If IPA doesn't design incentives to mandate a minimum 50% electricity bill savings, IPA should design the ABP and ILSfA so that higher incentives are available for projects offering higher electricity bill savings and lower incentives for less electricity bill savings.

**a. For the cost-based approach please provide recommendations for data inputs that should be considered for the model. If there are publicly available models that could be used as a template, please provide information about those models.**

[Answer Provided in GRID’s Confidential Response]

**b. For the market observations approach, please identify the jurisdictions that could be considered, and any significant differentiators between those jurisdictions and Illinois that should be used to adjust results.**

GRID Alternatives cautions IPA against using a market observations approach as each market has different and specialized considerations and requires expertise and knowledge in policy and regulations affecting that particular market. GRID, however, does recommend comparing the incentive structures being considered for ILSfA to other successful programs in the country (e.g. California’s SASH Program), as well as programs that have fallen short (e.g. New York’s Affordable Solar Program).

PROGRAM	INCENTIVE
<a href="#">California’s Single-family Affordable Solar Homes (SASH) Program</a>	<i>Single-family Rooftop:</i> Non-declining \$3.00/W-AC, capped at 5kW AC. The statewide program administrator for SASH ensures that all systems are cash-flow positive for a low-income household from day one. Incentives are deliberately set at a level to cover a significant percentage of the system cost. Any gaps in financing between the available incentive and the system cost are filled by the program administrator, a non-profit organization that contributes proceeds from a third-party ownership (TPO) arrangement and its own philanthropic fundraising to projects. Under the SASH TPO offering, participating households have no financial liability to the system owner. The SASH



PROGRAM	INCENTIVE
	<p>program’s TPO model must meet 12 baseline consumer protection minimum standards<sup>2</sup>, including ensuring customers receive at least 50% of the savings, as compared to standard utility rates, from the solar generating equipment.</p>
<p>California's <a href="#">Multifamily Affordable Solar Housing (MASH) Program</a></p>	<p><i>Multi-family Affordable Housing:</i> MASH provides fixed, up front, capacity-based incentives for qualifying affordable housing solar energy systems. The amount of the incentive depends on which Track (1C or 1D) the applicant is eligible for:</p> <ul style="list-style-type: none"> <li>● \$1.10/Watt for Track 1C - PV System Offsetting one of the following: Common Area Load, Non-VNM Tenant Load, or VNM Tenant Load with &lt;50% Tenant Benefit</li> <li>● \$1.80/Watt for Track 1D – PV System Offsetting: VNM Tenant Load with &gt;50% Tenant Benefit.</li> </ul> <p>MASH is a contractor-driven program, and the incentive program dollars for MASH 1.0 were fully reserved several years before the scheduled sunset; the MASH 2.0 incentive dollars were fully reserved days after reopening the MASH 1.0 waitlist. This created a “start-stop” program of pent up demand, which had negative implications for building owners and contractors. Because incentives were likely unnecessarily high, the program reserved its incentive funding but has not yet developed the reserved projects.</p>
<p>California's <a href="#">Low-Income Weatherization Program – Large Multifamily (LIWP-LMF)</a></p>	<p><i>Multi-family Affordable Housing:</i> The LIWP program contains a “matrix” by which the incentive is set based upon the project cost and the other types of funding the project leverages (ex. ITC, LIHTC, MASH) and is further delineated based on the percentage of common load versus tenant offset load. The LIWP program also has parameters for incentive level review once certain MW targets are attained in the program, allowing flexibility to make adjustments when market conditions change. Incentives cover approximately 50-100% of solar installations.</p>
<p>California’s <a href="#">LIWP - Single Family Program</a></p>	<p><i>Single-family Rooftop:</i> Using a similar structure to the SASH program, this program provides up-front rebates to qualifying residents, and can be used in tandem with SASH incentives for residents who qualify for both. LIWP includes a direct incentive (\$1.75/watt to \$4.75/watt rebate, based on eligibility for other funding programs); gap financing provided by the program administrator; and comprehensive programming (direct energy efficiency coordination and workforce development requirements).</p>
<p>Colorado’s <a href="#">Xcel Energy Settlement Agreement</a></p>	<p><i>Single-family Rooftop:</i> Includes incentives and programming for the 300 kW of rooftop (Solar Pilot Program) that will be administered by the Colorado Energy Office (CEO) in partnership with Public Service and implemented through the CEO weatherization assistance program. CEO will fund the initial installation of the solar PV system using:</p> <ul style="list-style-type: none"> <li>● Department of Energy (“DOE”) funds of up to \$3,545 per home to offset the cost of the solar PV system.</li> </ul>

<sup>2</sup> Decision 15-01-027, January 29, 2015. “Decision Extending the Multifamily Affordable Solar Housing and Single-family Affordable Solar Homes Programs within the California Solar Initiative,” pg. 56.



PROGRAM	INCENTIVE
	<ul style="list-style-type: none"> <li>● The overall incentive funding for each project is approximately [\$3.50/watt]. Public Service will provide an upfront incentive of \$2.00 per installed watt to offset the remaining costs of the solar PV system. These incentives will be paid from the Renewable Energy Standard Adjustment (RESA) account (RESA is a 2% rider, approved with the Colorado Renewable Energy Standard, to allow utilities to finance the incremental costs of renewable energy. All Investor Owned Utility ratepayers in Colorado have contributed to the RESA account since 2006).</li> <li>● In addition, Public Service will provide a production-based incentive equal to \$0.034/kWh for the electricity generated by the PV system.</li> </ul> <p><i>Community Solar:</i></p> <ul style="list-style-type: none"> <li>● 4 MW 100% Low-income Community Solar RFP: annual RFP that will offer either up-front incentives or production-based incentives for projects that exclusively benefit low-income families or affordable housing providers. Evaluations will also consider 1) Percentage of expected electric utility bill reduction for the low-income customer, 2) Provision of solar installation job training for low-income individuals at the bid CSG, and 3) Coordination with installation of EE measures.</li> <li>● 500 kW 100% Low-income Community Solar Standard Offer: annual, first come, first serve community solar incentives for up to 100 kW systems (so, five 100 kW projects, or ten 50 kW, etc.) that exclusively benefit low-income families or affordable housing providers. REC incentive for standard offer will be the average annual awarded REC for the low-income 4 MW CSG RFP paid as an up-front incentive, plus \$0.01/kWh.</li> <li>● Solar*Rewards Community Program: RFP offering up to 44 MW annually, including the ability for projects with higher low-income participation, or other innovative projects that benefit low-income subscribers, to receive consideration for higher incentives, provided that any low-income minimum proposed through the solicitation, as well as through the low-income solicitation, must be maintained through the life of the Solar*Rewards Community contract.</li> </ul> <p><i>Multi-family Affordable Housing:</i> The November 2016 settlement agreement states non-profit affordable housing buildings or public housing authority buildings (Including homes and multi-family residential buildings) will be considered “low-income subscribers” so long as: (1) The building’s residents meet the “low-income” definition set forth in § 40-3-106, C.R.S.; and (2) The housing authority provides verifiable information that these residents are the beneficiaries of the solar. This is key for affordable housing providers because they can qualify as low-income under the community solar program rules, regardless of whether operators or tenants are paying utility bills, as long as the participating buildings have residents that meet the low-income program definition of 185% of Federal Poverty Level or below. This will allow affordable housing providers, or projects that include them, to qualify for incentives associated with the low-income community solar programs in the settlement.</p>



PROGRAM	INCENTIVE
New York’s <a href="#">Affordable Solar Program</a>	<i>Single-family Rooftop:</i> The low-income incentives under the NY-Sun Affordable Solar program are too low and problematic because they declined alongside the non-low-income incentives, therefore disregarding the costs to market or build projects for this sector. To illustrate this point, during the second quarter of 2016 in New York State, only six solar installations were completed under the Affordable Solar program (which doubles the standard incentive), and applications for 16 installations were approved. During the same period, under the non-low income incentive program, 5,506 installations were completed and NYSERDA received applications for 4,108 projects. New York’s beginning ranges were from \$.60/watt to \$1.40/watt (service territory dependent). From October 2015 through the end of 2016, only 102 projects were completed using the added Affordable Solar incentive, with an additional 66 projects in the pipeline.

***c. Does the methodology for determining REC pricing have to be either cost-based or market observation based, or can it be a combination of both? Are there any other approaches that should be considered?***

No matter the approach, ILSfA and ABP incentives should work together to be set at a level that overcomes a low-income family’s inability to pay anything upfront (i.e., avoid credit requirements, maximize benefits, protect clients, and increase participation) and realize meaningful and near term savings.

The IPA should reserve its ability to do both cost-based and market-based. The first set of RECs should be cost-based. Then IPA should move to market-based once a larger set of data is available from Illinois’ own market.

***7. How should the approach for determining REC prices take into account geographic differences in price or cost factors, e.g. local labor/land costs etc.? How narrowly or broadly should geographic factors be considered?***

Low-income families are typically not a source for traditional financing so installers and developers like GRID will need to find other financing, incentives and philanthropic revenue sources, which is why it is imperative that ILSfA projects have access to the ABP.

The availability of additional funding sources, as well as differences in installation and client acquisition costs, could result in less uptake in some parts of the state than others. It is difficult to accurately predict program uptake in advance, but the ILSfA Program has an important evaluation metric built into program design. The ILSfA nonprofit third-party program administrators and IPA should work with the independent evaluator to identify geographic factors that may require differences in price or cost factors and adjust the ABP and ILSfA incentives accordingly. It is important that the IPA and ILSfA third-party program administrators have the flexibility to make these adjustments throughout the program to fine tune incentive amounts to ensure that the funds are used most effectively to provide the greatest



benefit for the whole state.

***8. Besides geography and system size, are there other factors that should be considered to create differentiated pricing?***

The step-down of the federal Investment Tax Credit and change in value of the DG rebate should be factored into pricing levels over the life the program. Additionally, electricity prices (accounting for variability in territory) should be factored into pricing and incentive levels.

Thank you for the opportunity to provide comments.

Respectfully submitted on June 27, 2017,

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