November 13, 2017

Attention: Mario Bohorquez,
Via email: mario.bohorquez@illinois.gov
Planning and Procurement Bureau Chief
Illinois Power Agency

RE: Comments on the Draft Long Term Renewable Resources Procurement Plan

Dear Mr. Bohorquez,

These joint comments from Elevate Energy and GRID Alternatives reflect the importance of multiple non-profit program administrators working together and with the Illinois Power Agency ("Agency") to ensure the Solar for All Program is designed to maximize savings and auxiliary benefits for participants, to involve communities throughout the state, ensure consumer protection, provide hands-on training and access to solar jobs, to be adaptable, flexible and sustainable, and to leverage the skills and experience of multiple non-profit administrator organizations.

The following pages include recommended program structure approaches for each Solar for All Program, including an alternative fifth program focused solely on multifamily affordable housing. These program approaches reflect a number of design elements and recommendations discussed with, and supported by, the Illinois Solar for All Working Group, though this document further elaborates these positions and is authored solely by GRID Alternatives and Elevate Energy to reflect our expertise, experience, and lessons learned as low-income solar and low-income energy efficiency program administrators. The following comments are focused on 1) multiple Solar for All Program Administrators, 2) Multifamily as a Dedicated Fifth Solar for All Program, 3) Solar for All Renewable Energy Credit ("REC") modeling assumptions, 4) Access to the Adjustable Block Program and 5) Solar for All Eligibility and Income Verification.

Contents

1. Program Administration 2

2. Separate Multifamily Program 6

3. Modeling for REC Pricing is Not Accurate and Impacts All Programs 9

4. Access to Adjustable Block Program Funds for Solar for All Program 13

5. Illinois Solar for All Eligibility and Income Verification 14

1. Program Administration

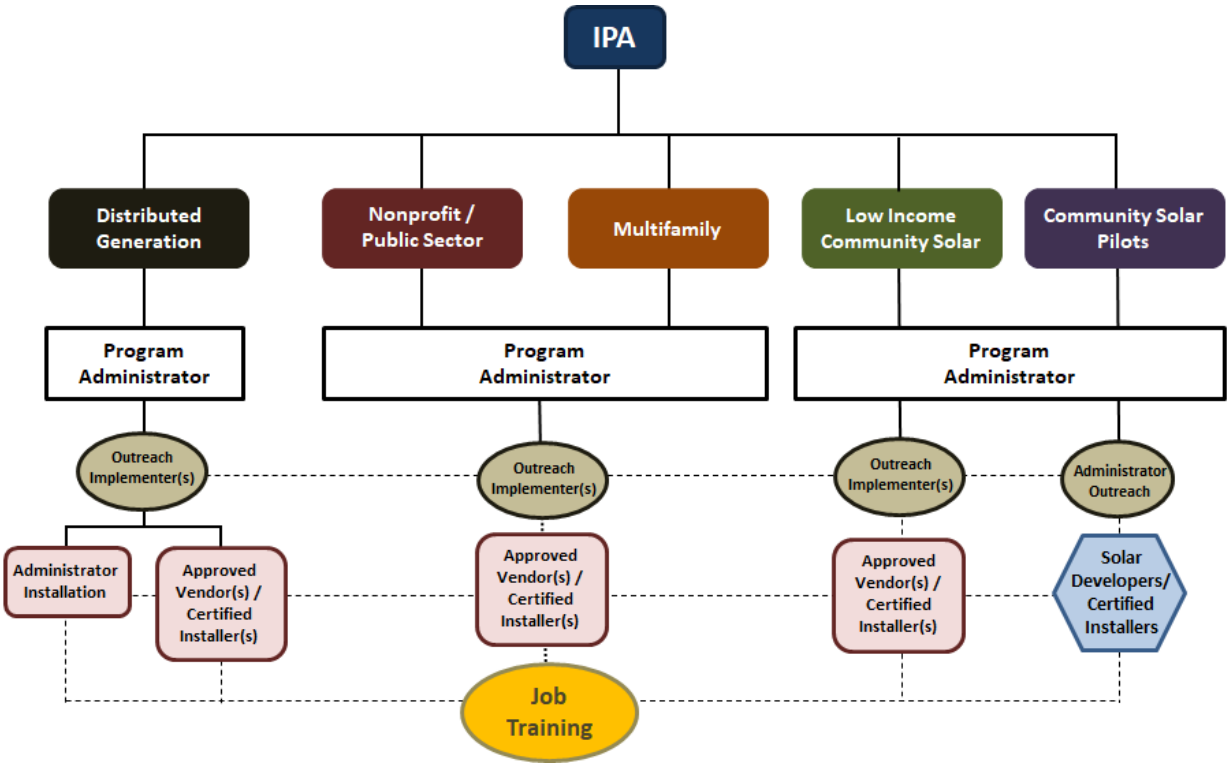
At a minimum, the **Adjustable Block Program and Solar for All Program need to have separate Program Administrators**. We appreciate the Agency reflected this important program design measure in the Draft Plan. Both of these programs are robust, complex endeavors that require significant coordination and adherence to several layers of parallel timelines. In addition, many of the components of these two programs are new, leaving the Administrator(s) without established processes or precedents to rely on in order to effectively execute. Managing the certification of Adjustable Block Program-eligible facilities and associated procurement processes is quite different than managing low-income energy programs and ensuring programs are designed to provide benefits to diverse groups of low-income stakeholders.

Note that while the Illinois Solar for All Working Group has adopted this recommendation, we are commenting separately because of the importance of this issue.

Programs designed for low-income households require a different approach than those for the general population. Marketing and communication needs to be standardized, but flexible enough to allow for diverse strategies that meet individual community needs. The organizations delivering the message need to be trusted by members of the community, requiring strategic partnerships and coordination with community-based organizations in a number of geographies across the state. The Illinois Solar for All Program includes layers of complexity with a number of diverse audiences, like low-income homeowners, renters, affordable housing owners, nonprofits and solar developers. Administrators need to understand these complexities and have direct experience providing services to these communities in order to develop effective programs that effectively pass benefits on to the intended audiences. We believe that **mission-based organizations** are more likely to have these skills and will ensure the intended results are achieved effectively. Therefore, **we recommend only non-profit organizations be considered for administrative roles**.

Multiple Solar for All Program Administrators

Multiple Solar for All Program Administrators are preferred. Using multiple Administrators who have greater specialization in the diverse program areas will ensure dedicated expertise and experience goes into program design, management and optimization. It will also ensure that dedicated attention is given to outreach, participant services and consumer protections. The non-profit Program Administrators will function as **consumer advocates** and provide **mission-based guidance** and services to ensure there is a consistent statewide messaging and delivery of service. This includes the potential full range of services that should be integrated into the solar assessment and installation process, such as energy efficiency, job training and education, etc. Efficiencies could still be gained by combining programs that are more clearly aligned. One such organizational approach for multiple Administrators would be as follows (**assuming a distinct Multifamily program**):



Alternative Wording Proposed to the Draft Long-Term Renewable Resources Procurement Plan

- **Chapter and Section**: Chapter 8, Section 8.8, Program Administration
- **[Alternative Wording Proposed]:** (p 153)
    - [Program Administrator(s) are required to be mission-based non-profit(s). Non-profit(s) function as consumer advocates and provide mission-based guidance and services to ensure there is a consistent statewide message around the potential full range of services that could be integrated in the solar installations, such as energy efficiency, job training, etc. Non-profit(s) are also better suited to leverage outside programs, resources, and dollars for the benefit of Solar for All.]
    - [The Agency may choose a single Administrator for Solar for All. If that is the case, it is extremely important the single Administrator be required to hire dedicated nonprofit implementers for the diverse array of programs offered under Solar for All to design and implement programs with the full breadth of their knowledge and experience, to design approaches that meet the needs of the target audiences they understand.]
    - The Illinois Solar for All Program Administrator(s) will at minimum:
        - [Obtain lists, centralize, and conduct income eligibility and verification] in Illinois Solar for All and coordinate this information with the Adjustable Block Program Administrator (who will process the actual application materials). This will include, but is not limited to, income verification, review of community involvement in projects, review of job training coordination, and review of Illinois Solar for All consumer protections ~~such as~~ [especially] verification of ensuring tangible economic benefits flow to low income participants. [Act as the centralized source for income verification in partnership with trusted community based organizations.

Manages centralized database for all participants, including participant info, status, construction, incentive and financing data and materials. Program Administrator(s) will work with the Agency to determine and adjust eligibility criteria, as needed, to ensure an inclusive Solar for All Program that meets the goals of the statute.]

- [Develop and provide contracts, disclosure forms and brochures FOR Approved Vendors and trusted community based organizations. Developing clear and consistent information on the relationship between the end customer and the Approved Vendor is critical to ensuring that the fiscal risks and controls of this program are properly and prudently managed.]
- Coordinate the distribution of funding for grassroots education efforts by community-based organizations. A priority for this funding will be to promote the availability of the Illinois Solar for All Program in Environmental Justice Communities to achieve the goal of 25% of the incentives being allocated to those communities.
- Facilitate Approved Vendors meeting the additional requirements of the Illinois Solar for All Program. In particular, the Program Administrator will act as a liaison between Approved Vendors participating in the programs and organizations providing job training. The Program Administrator will also work to inform Approved Vendors of energy efficiency, weatherization, lead abatement, and other program opportunities that could provide additional benefits to participants.
- Provide guidance and education to Approved Vendors, community groups, local government agencies, and others on how to leverage other governmental policies to facilitate low-income solar projects [and assist with energy burden reduction for low-income residents]. Other relevant policies include affordable housing, economic development, public finance, and tax policies, at the federal, state, and local level. The Administrator will act as liaison with other governmental agencies that administer such programs to facilitate their use on solar development.
- Provide reports to the Agency and the Commission on a quarterly basis on the status of the Program including, but not limited to, number of applications received, number of applications approved, number of projects completed, REC payments, payments for and status of grassroots education efforts (if applicable), and a summary of technical assistance provided.
- [Develop the Program Manual(s) and Program Guidelines in such a way as to ensure maximum savings / maximum benefit for income qualified participants. Publish and maintain a comprehensive Program Manual covering all aspects of the Solar for All Program.]
- [Work with Approved Vendors or to help meet Program requirements and provide technical assistance, if needed (e.g. GATS or M-RETS registration.]
- [Provide recommendations for adjustment and improvement as part of the independent bi-annual independent evaluation of the Solar for All Program.]
- [Work with the Agency to facilitate the relationship between the Adjustable Block Program and the Solar for All Program to ensure low-income ratepayers have access to all available incentives.]
- [Work with the Agency to determine and adapt tangible economic benefit benchmarks to ensure low-income households realize meaningful savings from access to solar.]

- **Discussion, Data or Detailed Analyses:**
  - Solar for All is not a "least cost" program. This program is about delivering meaningful tangible economic benefits to residents of Illinois that will most benefit from access to solar.
  - Consumer protection is paramount and Program Administrator(s) must be consumer advocates and centralize important activities like income verification. Program Administrator(s) should be responsible for all marketing and outreach, developing translated materials, application intake, developing financing models, installations, coordination with Approved Vendors, program reports, and ensuring free hands-on and paid job training opportunities are available statewide. The Program Administrator(s) functions as a consumer advocate and provides mission-based guidance and services and ensures there is a consistent statewide message around the potential full range of services that could be integrated in the solar installation, such as energy efficiency, job training, etc. For example, in California MASH contractors and SASH subcontractors report that they benefit when they are provided resources by the program administrators for meeting the job training requirement, e.g. resumes of eligible job trainees.[1]
  - California's Low-Income Weatherization Program ("LIWP") provides an example of a diverse program offering tasked to a single program administrator that hires dedicated sub-contractors based on program type. LIWP installs solar photovoltaics, solar hot water heaters, and energy efficiency measures in eligible low-income single family and multi-family dwellings in disadvantaged communities. Each of those offerings requires specialized focus to deliver in a cost effective and efficient manner, which is executed by hiring qualified nonprofit sub-contractors.
  - Both California's SASH program and LIWP program for single-family installations have utilized a third-party ownership model since the Commission approved the model in 2015. [TPO was not allowed at the onset of either program due to consumer protection concerns] However, the Commission required the Program Administrator to develop a model, and demonstrate the model met 12 baseline requirements, all ensuring consumer protection is paramount and participating households receive maximum benefit while minimizing risks to participation. The Commission approves installation contracts for TPO developed under the Program Administrator in a public, stakeholder-engaged process where contracts are filed publicly, and major changes require a Commission resolution and voting process. The only installation contracts that can use TPO in either program are those developed by the Program Administrators and approved by the Commission.

Program Administrator as Contractor of Record

As California's Single-family Affordable Solar Homes ("SASH") program was the original template for what became the Illinois Solar for All Program in the Future Energy Jobs Act ("FEJA"), this provision of the law is intended as a consumer protection measure. A consumer protection cornerstone of California's SASH program is that installation contracts are directly with the non-profit program administrator, who is also the primary installer, and who works with vetted sub-contractors to meet the needs of the statewide program.

- **Chapter and Section**: Chapter 2, Section 2.6.2.1 Low-Income Distributed Generation Incentive
- **<u>[Alternative Wording Proposed]</u>:** (p 38) "The law also includes a provision that "[c]ontracts entered into under this paragraph may be entered into with an entity that will develop and administer the program," ~~although it is presently unclear how the administrator could leverage state funds for this use~~.

[1] January 28, 2016, Navigant Consulting, Inc. California Solar Initiative SASH and MASH Market and Program Administrator Assessment, Programs Years 2011-2013

2. Separate Multifamily Program

Note that while the Illinois Solar for All working group has adopted this recommendation, we are commenting separately because of the importance of this issue. Elevate commented on the multifamily program in our initial round of comments before the Draft Plan was released. The recommendation to create a separate program was not considered and the decision in the Draft Plan to include multifamily within the Low-Income Distributed Generation Incentive (DG) program, we believe, will limit the services available to participants and create potential issues for the Program Administrator(s). While we have not reiterated the data supporting the importance of multifamily housing to Illinois's low-income and affordable housing communities, we are restating our belief in the importance of a separate multifamily program and the problems with placing multifamily properties solely within the Low-Income Distributed Generation program. We have also conferred with the Illinois Solar for All Working Group and on this issue and are in agreement. This section and these recommendations can also be found in the Solar for All Working Group comments, but we are emphasizing the recommendation here because of its importance. We hope that with the many organizations represented in the Working Group now supporting this recommendation, the Agency will implement this additional Solar for All program in the plan submitted to the Illinois Commerce Commission.

Including multifamily buildings in the Low-Income Distributed Generation Incentive program significantly reduces the number of single-family households that can be served. More so because the current draft plan does not stack benefits across the Adjustable Block Program and Solar for All. With the current design, the number of 1-4 unit buildings likely served annually would be about 350 to 450 and about 30 to 50 multifamily buildings. This assumes a higher average installed capacity for multifamily buildings qualifying for a lower REC price and that multifamily buildings would make up about 1/3 of the properties participating.

By creating a separate program for multifamily buildings and pulling funds from each of the other four programs per the breakdown below, we could serve 480-600 1-4 unit buildings and about 90 to 150 multifamily buildings. The programs will serve about 50% more properties with little impact to other Illinois Solar for All Program participants. Both 1-4 unit and 5+ unit multifamily buildings would also be better served with separate Program Administrators because the target audiences are significantly different, income verification will be different, and existing pipelines of participants from energy efficiency and other low-income programs are different. The skills and experience from Program Administrators, partners and vendors are also very different.

We proposed that a formal fifth Illinois Solar for All Program be created with the following allocations:

Program:	**%**	**2018-19 Allocation**
Low-income Distributed Generation	20%	$6.0M
Multifamily	15%	$4.5M
Non-profits / Public Facilities	15%	$4.5M
Low-income Community Solar	30%	$9.0M
Community Solar Pilots	20%	$6.0M

With this program distinction in mind, the REC prices used in the Low-income Distributed Generation Incentive Program, as well as the existing language in the Draft Plan around multifamily qualifications, tangible benefits and income verification all work to create a framework for a new multifamily program.

Alternative Wording Proposed to the Draft Long-Term Renewable Resources Procurement Plan

- **Chapter and Section**: Chapter 8, Section 8.6.1 Low-income Distributed Generation Incentive
- **[Supplementary Wording Proposed]:** (p 146) **[**The Act creates four sub-programs within Illinois Solar for All, with incentives for each type of development:
    - (A) Low-Income Distributed Generation
    - (B) Low-Income Community Solar
    - (C) Incentives for Non-profits and Public Facilities
    - (D) Low-Income Community Solar Pilot Projects
      Further, the Act allows for additional programs to be proposed by stakeholders and adopted by the Agency where necessary. Based on recommendations from multiple parties, the Agency has developed a fifth program (E), to directly support multifamily projects:
    - (E) Low-Income Multifamily Distributed Generation
      Multifamily properties are distinctly included in Illinois Solar for All, but are not specifically assigned to any one sub-program. As such, the Agency believes that including multifamily properties in any one of the existing sub-programs is likely to significantly reduce the number of participants and the availability of benefits in an inequitable manner. The Agency now proposes the creation of this fifth sub-program, which will draw funds proportionately from each of the other programs in order to effectively serve this segment."]

- **Discussion, Data or Detailed Analyses:**
    - In the legislation, the language that references multifamily housing is broad and sits outside of any specific program description.
        - Section 20 ILCS 3855/1-56 (b) (2): "C*ontracts under the Illinois Solar for All Program shall include an approach, as set forth in the long-term renewable resources procurement plans, to ensure the wholesale market value of the energy is credited to participating low-income customers or organizations and to ensure tangible economic benefits flow directly to program participants, except in the case of low-income multi-family housing where the low-income customer does not directly pay for energy."*
    - Significant percentages of households at or below 80% Area Median Income ("AMI") live in multifamily properties across Illinois. Any low-income household should qualify for benefits under Solar for All. While Solar for All language talks specifically about <80% AMI households in multifamily properties "where the low-income customer does not directly pay for energy" (referring to master-metered building), it also generally suggests that multifamily properties should be beneficiaries from Solar for All Programs.
    - **Elevate Energy proposes that the Agency consider a distinct program that serves multifamily housing,** separate from the four programs identified specifically in the legislation. Whether an installed distributed generation program or an incentive program, targeting multifamily property owners serving low-income households will require distinct marketing and outreach, compliance, consumer protection and quality assurance.

- Section 20 ILCS 3855/1-56 (b) (4): "I*n the course of the Commission proceeding initiated to review and approve the plan, including the Illinois Solar for All Program proposed by the Agency, a party may propose an additional low-income solar or solar incentive program, or modifications to the programs proposed by the Agency, and the Commission may approve an additional program, or modifications to the Agency's proposed program, if the additional or modified program more effectively maximizes the benefits to low-income customers after taking into account all relevant factors, including, but not limited to, the extent to which a competitive market for low-income solar has developed. Following the Commission's approval of the Illinois Solar for All Program, the Agency or a party may propose adjustments to the program terms, conditions, and requirements, including the price offered to new systems, to ensure the long-term viability and success of the program."*
- In Illinois, 33% of the 5.3 million housing units are multifamily and 50% of all affordable housing units in the state are multifamily. In Chicago, the percentage of multifamily housing is above 75%. This underscores the importance of recognizing multifamily properties as a distinct segment of the affordable housing market especially given that it often serves as housing for households of 80% or less AMI. Multifamily is commonly defined as 5+ unit residential properties and affordable housing is defined as households with rent less than 30% of monthly income. While affordable housing is not the same as households with income of 80% or less of AMI, there is a high correlation between the two – especially relevant because data is not available for housing unit types by 80% AMI or less.
- Significant percentages of households at or below 80% AMI live in multifamily properties across Illinois, according to analysis by Elevate Energy shown below:
  Note that Illinois has more than 400,000, 2-4 unit affordable housing properties. Elevate Energy recommends that these properties be included in the Low-Income Distributed Generation Incentive Program for single-family housing.
- The Agency can consider an incentive structure similar to that of the nonprofit program; i.e. the value of RECs for multifamily projects builds off of the value of the Adjustable Block Program with adders sufficient to incent the market to serve this segment.

	1-4 units		5+ units	
Average system size in kW	4	5	15	25
Average system cost $$/watt	$3.00	$3.00	$2.75	$2.75
Average system cost TOTAL	$12,000	$15,000	$41,250	$68,750
SREC value based on current LTRRPP	$8,471	$10,588	$25,926	$43,210
SREC value S/watt	$2.12	$2.12	$1.73	$1.73
ITC value	$3,600	$4,500	$12,375	$20,625
MACRs value	$3,570	$4,463	$12,272	$20,453
Total incentive value	$15,641	$19,551	$50,573	$84,288
Total incentive value S/watt	$3.91	$3.91	$3.37	$3.37
Total incentives bucket (85% of allocated amount)	**$3,788,400**	**$3,788,400**	**$1,288,056**	**$1,288,056**
Total # projects	**447**	**358**	**50**	**30**

	DG w/ only 1-4		MF only	
Average system size in kW	4	5	15	25
Average system cost $$/watt	$3.00	$3.00	$2.75	$2.75
Average system cost TOTAL	$12,000	$15,000	$41,250	$68,750
SREC value based on current LTRRPP	$8,471	$10,588	$25,926	$43,210
SREC value S/watt	$2.12	$2.12	$1.73	$1.73
ITC value	$3,600	$4,500	$12,375	$20,625
MACRs value	$3,570	$4,463	$12,272	$20,453
Total incentive value	$15,641	$19,551	$50,573	$84,288
Total incentive value S/watt	$3.91	$3.91	$3.37	$3.37
Total incentives bucket (85% of allocated amount)	**$5,100,000**	**$5,100,000**	**$3,830,000**	**$3,830,000**
Total # projects	**602**	**482**	**148**	**89**

3. Modeling for REC Pricing is Not Accurate and Impacts All Programs

GRID and Elevate refer to the comments submitted by the Illinois Solar for All Working Group regarding the importance of Program Administrator(s) and the Agency working together to set benchmarks for tangible economic benefit and defining a "cash flow positive" experience for low-income residential participants to ensure actual significant savings are experienced by low-income households. As the Draft Plan is written now, without emphasis placed on savings, participants could unfortunately experience an ongoing payment that is only a dollar ($1) less than the expected energy savings (for example), which technically counts as a cash-flow positive experience, while System Owners have no limit to their investment returns gained from Solar for All incentives. In order to provide a framework for meaningful levels of return for System Owners and tangible economic benefits for participants, the assumptions in modeling and the REC levels themselves are critical.

Elevate and GRID agree with SEIA and the guiding principles as communicated in their comments on REC pricing; i.e. that the goal should not be to maximize or minimize the Adjustable Block pricing, but to get as close to accurate as possible. This accuracy becomes more critical when structuring the Solar for All Program REC values to ensure solar benefits are attractive to low-income customers and result in immediate and ongoing *significant* savings. In modeling costs for various blocks, getting at accuracy is difficult. We believe the best way to support the Agency in this effort is to point out specific inputs that should be represented differently, rather than trying to project specific REC values. With this in mind, we have addressed specific inputs that are most relevant to the Illinois Solar for All Programs and point to the industry comments to provide more robust input and data on other points.

Granularity of Costs

The costs associated with solar deployment will vary widely based on a number of factors. We are pleased that the Agency recognizes this and has reflected this in the Adjustable Block Program through distinct REC pricing for various system sizes, for utility territory and through Adders for other key components. We believe this granularity must be carried through to the individual inputs in the Crest model to get accurate pricing. For example: installation costs as conveyed in a cost per installed watt and will vary based on system size and installation type; the Levelized Cost of Energy ("LCOE") rate for subscriber management costs for community solar will vary depending on system size and subscriber type. At a minimum, we believe the following input values should vary based on block or sub-block:

- Installation costs should vary by system size and installation type
- Capacity factor should vary based on distributed generation versus community solar
- Subscriber management for community solar should vary by system size and subscriber type
- Individual O&M component costs should vary based on system size and Solar for All Program type (evaluation and reporting requirements)

System Inputs

- The 17% AC capacity factor is too high. We recommend a **15% AC capacity factor, which is more realistic for residential solar installations** (i.e. fixed axis, non-ideal orientation, and some shading) with Illinois climate data.
    - The Energy Information Agency says the average capacity factor nationally is 15%: https://www.eia.gov/todayinenergy/detail.php?id=22832
    - While capacity factor will change regionally and by system, siting, etc., no data suggests regional changes to be 17% AC. The current NREL PV Watts uses 14.8% specifically for Chicago and 13.1% for Cook County: http://pvwatts.nrel.gov/
        - **Recommended Change:** Crest Inputs; Cell G11; Change from 17.00% to **15.00%**

Tax Assumptions

- A number of expected participants in the Illinois Solar for All Program face barriers in securing financing for solar deployment. Low-income households, multifamily affordable housing owners and non-profits are all perceived as greater financing risks. For these reasons, the costs for financing these entities is more expensive. This should be reflected in anticipated cost of capital, interest rates and Debt Service Coverage Ratio assumptions.
    - **Recommended Change:** Crest Inputs; As appropriate in the "Permanent Financing section, inputs should be changed to reflect an overall cost increase to service DG, multifamily and non-profit entities, reflected in the Crest models that feed the REC prices for those programs.

- **The model should not assume Solar for All projects will have owners with tax appetite and be financeable.** Low-income households and non-profits do not have personal tax liability. Third party financing requires significant transaction costs.
    - **Recommended Change:** Crest Inputs; Cell G73; Change from Yes to **No** for Nonprofit, Multifamily and Low-Income Distributed Generation Incentive projects.
    - **Recommended Change:** Crest Inputs; Cell Q20,21,22 Change to reflect **0% tax benefits**.

Community Solar Inputs

- Land lease costs for community solar must be included. Per the SEIA comments, the current land lease options being secured in Illinois range from $800 to $1,200 per acre. We agree with the recommendation of $13,000 per year for a 2 MW project.
    - **Recommended Change:** Crest Inputs; Cell G30 from "Simple" to **"Intermediate"**
    - **Recommended Change:** Crest Inputs; Cell G41 from $5,000 to **$13,000**

- Subscriber management costs are represented as a LCOE of $4.98 per MWh, with the addition of a $7.89/MWh adder for more than 50% residential subscribers. Per SEIA's comments "*The proposed $4.98/MWh cost adder for a basic large C&I offtake project (as few as three larger C&I customers) is likely too high, because generally speaking managing relationships with fewer and sophisticated customers takes less effort. However, to the extent more smaller customers are added, the project operator's costs increase due to contract volume and the potential for more frequent customer turnover. The proposed $7.89/MWh cost adder for 50% small customer participation is may be too low for management of this customer group.*". As is the assumed cost in the Crest model for subscriber management. For example, the results of a 20 year LCOE analyses based solely on system size using the Elevate cost model shows a range of $19.87 to $40.47. This is based on a 40% anchor and 60% small customer project, assumes a minimum of 50% small customer and ignores the <10kW range for community solar: Elevate's model looked at just system size and found a nonlinear relationship to the cost of subscriber management. For example, the results of LCOE based solely on system size using the Elevate cost model shows a range of $14.68 to $29.90 (if you ignore the <10kW range for community solar).
    - **Recommended Change:** Crest Dashboard; Cell C4 and D4 change, in combination with residential adder, from $4.98 to appropriate values to exceed the following ranges for a minimum of 50% residential ranging as follows. These are example values to illustrate the various outputs that should be generated from a granular approach to adder values:
        - <10 kW = NA
        - 10 kW - 100 kW = **$40.47**
        - 100 kW - 200 kW = **$26.11**
        - 200 kW to 500 kW = **$22.08**
        - 500 kW to 1 MW = **$19.87**
    - The values should be proportionately higher for a 75% residential minimum.

- The incentive structure does not adequately incent low-income residential participation in projects (i.e. projects will need to rely on affordable housing, non-profit or other anchor partners for financing). **REC incentives need to be structured, at least initially, at no cost for participation for low-income residential customers (not just no up-front cost, but <u>no cost</u>), and can step down from there as necessary**. Even if low-income customers are willing to pay for subscriptions, they still cannot be included in the financial modeling because they are perceived as high risk customers. This can be addressed through the residential adder approach by reflecting the no-cost initial approach, and adjusted as necessary. GRID Alternatives recommends at least a $.03 kWh residential adder.
    - **Recommended Change:** Crest Inputs; It is not clear in the Crest model how the offtaker or Solar or All participant savings are factored into the model - whether via Equity or Royalties assumptions. We recommend that a savings of 50% to 100% of the cost for low-income households be factored into the models for all Programs.

Other Financial Inputs

- The **project useful life** in the model is assumed to be 25 years but **should be 20 years**. While that is a reasonable assumption for equipment life, generally projects are financed through a PPA structure, which are typically 20 years, so it is not appropriate to assume the economics extrapolate out to 25 years.
- Some measure of customer savings must be included in the model for all Solar for All Programs, including community solar. SEIA suggests in their comments that a reasonable assumption is 20% of the estimated annual net metering credit value and suggests an appropriate way to capture this cost in the model is by reducing the net metering credit value by 20%. Elevate and GRID believe that **Solar for All programs should reflect a higher level of savings - 100% savings for low-income distributed generation and 50% savings for low-income community solar is not unreasonable, based on experience in low-income solar programs in other markets**.
    - A method for building this into the Crest model suggested in conversations with the industry is to provide that 1) community solar projects are modeled to require a higher Internal Rate of Return ("IRR") than any other solar projects (i.e. 14% instead of 10%); or 2) that all Solar for All projects are modeled to require a higher IRR than other solar projects. This is because these projects are more complex, carry a higher risk and incur higher transaction costs associated with financing.
    - The Low-Income Distributed Generation Incentive should allow the Program Administrator(s)/Approved Vendors to cover full the cost of the single-family rooftop project (i.e. maximize consumer protections, avoid credit requirements, maximize bill savings and tangible economic benefit, easier outreach, etc.). Costs will be higher initially (e.g. including workforce development requirements, higher new market soft costs, and variable module pricing).
    - **Recommended Change:** Crest Inputs; Cell G62; Change from 12.00% to **14.00%** for all community solar projects.
    - **Recommended Change:** Crest Inputs; Cell G62; Change from 12.00% to **14.00%** for all Illinois Solar for All projects.

- Key ongoing costs are not reflected in the model (insurance, property taxes, asset management fees, collateral). These costs will vary nonlinearly based on system size and project type. For a 2 MW project, for example, assume $20,000/year insurance, $20,000/year for asset management / property taxes.
    - **Recommended Change:** Crest Inputs; Cell G30 from "Simple" to **"Intermediate"**
    - **Recommended Change:** Crest Inputs; O&M inputs per the tax section above, and any other input changes to reflect the principles outlined here

4. Access to Adjustable Block Program Funds for Solar for All Program

The Plan describes the Agency's intent to fund and administer contracts for Illinois Solar for All projects through separate contracts at premium prices rather than an "incentive premium" on top of Adjustable Block Program REC contract prices. (Plan at 35) According to the Plan, this approach is "most appropriate" because "parsing REC delivery contracts into two components—the base payment-for-a-REC delivery contract and a separate incentive adder, potentially paid by a different counterparty—appears inconsistent with a program design built around "contracts" rather than rebates or grants." (Plan at 35)

Elevate Energy and GRID Alternatives support the Illinois Solar for All Working Group comments, which make the argument for why layering the Solar for All funds on top of Adjustable Block contract prices is so critical to the success of the program. However, we recognize that doing so may present logistical and potentially legal challenges. As such, we would like to offer the following suggestion, which is being proposed by Environmental Law and Policy Center ("ELPC"), as a potential compromise.

The Plan acknowledges that the Illinois Solar for All program has more than one funding source. In some cases, the Illinois Solar for All projects will be funded by the RERF and in others they will be funded through a portion of the funds collected by the utilities under their Section 16-108(k) RPS tariffs. (Plan at 35) The counterparty for contracts entered into using RERF funds is the Agency, while the counterparty for contracts using utility funds will be the applicable utility. (Plan at 37) Thus, there will be many situations in which the Agency's concerns about "parsing" contracts between two different counterparties will not apply. In those situations (i.e. when the utility serves as the counterparty for an Illinois Solar for All contract), there appears to be no legal or practical prohibition on executing this funding as an adder on top of the ABP. Doing so would both allow a limited funding stream for low-income solar projects to go further and, in creating a larger pool of funds that is more fully integrated with the rest of the DG solar market REC funding in Illinois, could attract and facilitate greater interest from the solar developers that serve the non-low-income Illinois solar market. This would ultimately further the legislative goal of facilitating the development of "a long-term, low-income solar marketplace throughout this State." (20 ILCS 3855/1-56(b)(2))

Additionally, we echo ELPC's understanding that the prospect of simultaneously running part of the Solar for All Program as an adder to the ABP and part as a full incentive may seem complicated, there is nothing prohibiting the Agency from spending down the RERF first, before utilizing funding available from the utilities. In fact, doing so would be in line with some comments during the May workshops that it may be prudent to spend the RERF down quickly given that that funding is subject to legislative sweeps. Furthermore, spending the RERF down first would not imply the same cliff in the Solar for All Program under a structure where the (smaller quantity of) utility funding could be used as an adder rather than to fund the entire incentive. Finally, the ability of the IPA to roll over funds during the first few years of program implementation means that the utility funds could still be accessed in later years. Elevate and GRID defer to ELPC's recommendations regarding language changes to support the implementation of this recommendation.

5. Illinois Solar for All Eligibility and Income Verification

Multifamily Eligibility and Income Verification

It is important to ensure that low-income households are adequately and easily served by all programs. To accomplish this, we recommend Solar for All Program Administrator(s) determine criteria for multifamily buildings that qualify for FEJA-instituted low-income energy efficiency programs to receive reciprocal approval for Illinois Solar for All Programs. This serves to create a more streamlined experience for building owners, ease the burden on Administrators, and create a strong pipeline for solar projects.

Alternative Wording Proposed to the Draft Long-Term Renewable Resources Procurement Plan

- **Chapter and Section**: Section 8.13.12 Determining Income Eligibility:
- **[Alternative Wording Proposed]:** (p 160) For two to four unit buildings, at least two of the households in the building must qualify. For a [5+ unit] multi-family building, [any building that qualifies for low-income energy efficiency programs will automatically qualify for the Low-income Distributed Generation Incentive Program and Multifamily Program, with eligibility criteria provided by Solar for All Program Administrator(s). If the building is not participating in energy efficiency programs for] either at least 50% of the households must qualify, or the building owner may demonstrate that the building meets the definition of "affordable housing" contained in the Illinois Affordable Housing Act, namely:
  "Affordable housing' means residential housing that, so long as the same is occupied by low-income households or very low-income households, requires payment of monthly housing costs, including utilities other than telephone, of no more than 30% of the maximum allowable income as stated for such households as defined in this Section."

Low-income Community Solar Eligibility and Income Verification

Elevate Energy agrees with the Agency's proposal for a geographic-based eligibility at the census tract level for community solar subscribers. However, there are a few limitations to HUD Qualified Census Tracts ("QCTs") to note.

- HUD QCTS are currently calculated using data from 2010. Internal Elevate research from the American Community Survey shows that from 2010-2014, 10% of Illinois census tracts experienced a median household income decrease of more than $10,000. The recent volatility of household income makes a strong argument for using the most current possible data.
- As the Agency noted, QCTs must have 50 percent of households with incomes below 60 percent of the Area Median Gross Income (AMGI) or have a poverty rate of 25 percent or more. Therefore, the QCT definition is stricter than the original statute proposed. If due to this more limited scope, the community solar administrator has difficulty filling the subscriber quota in the first year, Elevate recommends that they revisit using QCTs.
- An alternative methodology would be where all households in census tracts qualify where at the least 50 percent of the households make below 80% AMI. In effect, HUD income limits and ACS income brackets data, at the census tract level, should be used to determine the number of households in each tract that fall below the 80% AMI threshold for that area, adjusted for household size. This number should be divided by the total number of households in the tract to give a percentage of households below 80% AMI. Census tracts should then be designated as

qualifying or not qualifying at a given density threshold of 80% AMI. For the recommended 50% density eligibility standard, any tract with more than 50% of households at or below 80% AMI would be considered qualifying. Effectively, any census tract with a median household income below 80% AMI for that rental market would qualify and all housing units would be considered affordable. In the attached map, you will see that using this method would increase the number of eligible households by more than 800,000. It also highlights the municipalities that would be impacted the most.

- For community solar projects, the Agency recognizes that transaction costs of proving income eligibility compared to the value of the incentive may be higher than for an installation of a project on-site, and therefore proposes a streamlined income verification approach.
    - A subscriber can be verified as low-income via the same provisions used for the Low Income Distributed Generation Incentive.
    - A subscriber can be verified as low-income if they reside in a HUD QCT and provide a signed affidavit that they meet the income qualification level.

Alternative Wording Proposed to the Draft Long-Term Renewable Resources Procurement Plan

- **[Alternative Wording Proposed]**: (p 161) It will be the responsibility of the Approved Vendor to track subscribers and document income eligibility for community solar projects. Approved Vendors will be required to report to the Agency on subscription rates once a year. [If after one year, subscription rates are not at full capacity, the Agency will consider broadening the income verification approach to include those census tracts where at least 50% of the households make <80% AMI.]

Respectfully Submitted,

Ingrid Schwingler
GRID Alternatives
1171 Ocean Avenue, Suite 200
Oakland, CA 94608
Phone: (510) 731-1310
Fax: (510) 225-2585
gridalternatives.org

Vito Greco
Elevate Energy
322 S. Green St., Ste. 300
Chicago, Illinois 60607
T: (773) 328-7011
F: (773) 698-6869
ElevateEnergy.org