



Illinois Power Agency Long-Term Renewable Resources Procurement Plan Request for Comments

Response from Central Road Energy, LLC

June 27, 2017

The following is Central Road Energy's response to the Illinois Power Agency's (IPA's) Request for Comments. Central Road Energy is an Illinois-based developer of green energy focusing on community solar development under the Illinois Solar for All (ILSfA) program of the Future Energy Jobs Act (FEJA). Our founding members have over 50 years of experience in developing, owning, and operating green energy projects in Illinois. We are very excited about the ILSfA program and believe that the program can do much good in Illinois, if properly implemented.

The following response to IPA's request for comments reflects our experience and viewpoint. We hope that the IPA will consider our proposals and comments and adopt those portions that they feel will best serve the people of Illinois. We greatly appreciate the chance to provide our input. If the IPA would like to further discuss our proposals or need additional information, please do not hesitate to contact Dr. Jay Corgiat at 630-561-2077 or via email at jaycorgiat@centralroadenergy.com.

The IPA's questions are shown in italic text followed by our response. The numbers used in examples in the following are used for illustrative purposes only. Should the IPA adopt any of our suggestions, input from other stakeholders should be utilized to establish the values (e.g., point values) to be used in the program.

A. GEOGRAPHIC ELIGIBILITY OF RENEWABLE ENERGY RESOURCES

What level of documentation and analysis should be required from an adjacent state project as part of a request that the Agency consider determining that the project is eligible to provide RECs for the Illinois RPS?

Response: The barrier for out-of-state Illinois REC eligibility should be very high. To meet the requirements of Section 1-75(c)(1)(I), the following conditions should apply for IL REC eligibility for distributed generation projects located outside Illinois:

1. The residence or business being served by the PV panels must be located in Illinois.
2. The PV panels must be located on property that is contiguous to Illinois property with both the in-state and out-of-state properties owned or leased by the same party.

For example, a business or home located in Illinois could lease or buy land on contiguous out-of-state property to construct solar panels that would offset their electrical load at their business or home.

For community solar projects:

3. The subscribers to the project must all be located in Illinois.
4. The petitioner must provide demonstration of why the project cannot be reasonably located in Illinois. Acceptable reasons include complications related to infrastructural, geographical, topographical or other impediments that prevent subscribers from reasonable access to the power generated by the project if it were located in Illinois.

26w271 Durfee Road | Wheaton IL | 60189

630-561-2077



5. Interconnection at the RTO level to meet this requirement should not qualify.

C. ADJUSTABLE BLOCK PROGRAM

Blocks:

Pyramid Block Structure: We advocate a program that consists of three to four blocks per program subcategory (e.g., project <=10 kW) with the higher priced block sizes smaller than the lower priced blocks (hence the pyramid). To qualify for a particular block within a subcategory, the project must have a “score” that meets a pre-determined block minimum (a “qualifying score”). The project score is based on a point system, where desirable project attributes score points for the project. An example of a pyramid block structure for the ILSfA is shown in Figure 1. Figure 2 shows an example of some potential criteria with values.

Figure 1. Example pyramid block structure for the ILSfA program

SFA Total Block REC	175,000				
LI Community Solar Pilot	25%		43,750		
	DG		Non Profit	Public LI Comm Solar	
Stakeholder Adjustment	22.5%		37.5%	25.0%	
	0.0%		0.0%	0.0%	
	22.5%		37.5%	25.0%	
	34,743		57,904	38,603	
	DG Small (<=10 kW)	DG Large (>10kW)			
	25%	75%			
Total Allocation	6%	17%			
Total Allocation RECs	8,686	26,057			
	points				
50+ Point Block	Allocation	10%	6%	2.5%	7%
	Price	\$200	\$100	\$115	\$85
	Size (RECs Annual)	869	1,563	1,448	2,702
	Total Block Offer	\$2,605,699	\$2,345,129	\$2,497,128	\$3,445,313
20+ Point Block	Allocation	15%	33%	26%	30%
	Price	\$150	\$75	\$100	\$65
	Size (RECs)	1,303	8,599	15,055	11,581
	Total Block Offer	\$2,931,411	\$9,673,656	\$22,582,721	\$11,291,360
10+ Point Block	Allocation	75%	61%	72%	63%
	Price	\$100	\$50	\$85	\$45
	Size (RECs)	6,514	15,895	41,402	24,320
	Total Block Offer	\$9,771,369	\$11,921,071	\$52,787,109	\$16,415,901
	Rec Sum	8,686	26,057	57,904	38,603
	Offer Sum	\$15,308,479	\$23,939,855	\$77,866,958	\$31,152,574
	Total:				\$148,267,865

Note: The numbers used in this Figure are not recommendations but are rather to show how the model interrelates between the different project types within the ILSfA program.



Figure 2. Examples of Possible Point Criteria

Criteria	Points
Ownership	
Minority/Female Owned	5
Comm Org Participation	10
100% Comm Org	20
Location Criteria	
Solar Array in Env Justice Comm	5
Beneficiaries In EJC	20
Brownfield	5
Geographic considerations	
Cook County	20
Collar Counties	10
Array Size	
<100kW	10
100-500 kW	5
>500 kW	1
Economic value of electricity (%EVE)	
>90%	10
>60%	5
>50%	Minimum

Note: The numbers used in this Figure are not recommendations but are rather to illustrate how scoring can reward projects for meeting the stated goals of the FEJA. This list is not comprehensive.

The process would consist of an Adjustable Block Program (ABP) qualification, block opening and closing, contract award, and block evaluation and adjustment. In the qualification process, an applicant would go to a web page to register their potential project for participation in the ABP. Included in the registration process would be a list of project attributes for which points can be awarded to the project. The possible point total for those attributes, the documentation that must be provided to award the points to the project, and the approval of the third-party administrator for those points would be included in the application process. The ABP qualification process would be continually open with project registration good for a set time (e.g., one year from the time of approval). During that set time, the project can request a contract for RECs in any open block for which they qualify.

The blocks that comprise a pyramid should open and close together on a regularly scheduled basis. A pyramid of blocks would be open for a short time (e.g., a week) during which qualifying projects could request REC contracts at the offered block price for any block for which the project qualifies. When a pyramid of blocks closes, the next pyramid of blocks should be opened as soon as possible. For small DG, the goal should be to have a pyramid of blocks open continuously. For larger projects that consume more of the REC money, the pyramid of blocks can open once monthly or at even lesser intervals depending on response and program goals.

After the blocks close, a project's score would prioritize that project's selection within a block. If necessary, projects with identical scores within a block should be chosen by lottery. This incentivizes a project to bid into the lowest-priced block that works for the project because a higher scoring project would have a better chance to be selected within a lower qualifying-score block.

Block price and/or qualifying score adjustments can be made by the IPA based on participation rate within each block and the goals of the program. For example, if a particular geographic area is getting a disproportionate share of solar projects, the points awarded for "location" can be decreased for that particular area. If a block is oversubscribed and the block below is undersubscribed, The IPA could increase the undersubscribed block price or, conversely, lower the oversubscribed block price or change the point total required to qualify for a particular block.



A second tier of pyramid blocks should be available for projects that qualify for the ILSfA program. These should be treated as “adders” to the ABP. The structure should be the same but the points for this program should be based on the criteria for the program defined in the law.

One of the most important ILSfA criteria of the law is the requirement that the “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.” The registration for an ILSfA project should clearly state the Low Income (LI) beneficiaries targeted by the project, reasonably estimate the percentage of the economic value of the energy (%EVE) generated that will benefit the LI beneficiaries, the projected number of beneficiaries served, and the yearly dollar value of the benefits per beneficiary. The assumptions (e.g., power pricing, electrical usage of the LI beneficiary) and calculations used in this determination should be documented. An estimate of any revenue generated through energy production that does not flow to the beneficiaries (e.g., Operation and Maintenance) should be subtracted from the total amount of projected energy revenue. Based on the above calculations and using the maximum % allowed by the law for the anchor tenant (40%), the minimum total benefit to LI beneficiaries should be a %EVE of 60%. The applicant should also describe any additional economic value beyond %EVE that may accrue from the project to the LI Beneficiaries.

For example, a community solar project that has an anchor tenant with 15% of the project would be expected to provide the economic value of 85% of the power generated to the LI Beneficiaries. This assumes that the money generated by the sales of electricity to the anchor tenant is not going to the beneficiaries but rather is the sole source of money used to pay for operations, maintenance, and management. For a 2 MW project and using a 9000 kWh/yr average usage for an Illinois house, a capacity factor of 14.38%, and an energy supply price of \$0.05/kWh, the value of the benefit to the LI beneficiaries is \$107,073/yr. Using a 50% power offset subscription, the potential number of beneficiaries served for the above described scenario is 476, each of whom would each receive \$225/yr or \$18.75/month. This evaluation may require outreach and education for developers on the part of the program administrator as well as standard set of assumptions. The program administrator could provide standardized tools (e.g., pre-formatted spreadsheets) to perform and submit these calculations.

The value of the benefit to the LI community should be the major scoring factor in the block qualification process. A higher %EVE project should be favored over a lower %EVE project. For example, a 100% EVE could score 30 points. The amount of points scored for a project with less than 100% EVE should be the %EVE multiplied by 30. There should be a mechanism to favor the selection of projects that demonstrate additional economic value beyond the %EVE.

Another example of a standard that exists for the ILSfA but not the ABP is the electrical efficiency clause in the law. The law states “The objectives of the Illinois Solar for All Program are ...to integrate, through interaction with stakeholders, with existing energy efficiency initiatives...”. Furthermore, an unintended consequence of supplying subsidized power may be an increase in energy usage by the beneficiaries. Therefore, the registration process should include a means to submit any plans that the applicant may have to implement or encourage energy efficiency for the LI beneficiaries.

The plan should describe how the project will encourage, educate, and/or incentivize energy efficiency measures amongst the LI beneficiaries the project will serve. If possible, the applicant will describe the metrics that will help evaluate the success of the energy efficiency efforts. These metrics should be included in annual reports to the program administrator. The better the electrical efficiency implementation, the more favored the project should be for selection. The project should be awarded points for the ILSfA pyramid block for an effective plan. For example, a plan can be awarded a score of



one to five points by the ILSfA third-party administrator based on criteria they establish for an effective plan.

The pyramid block structure for the ABP and the ILSfA adder structure addresses many of the concerns expressed by the IPA as described in the responses below.

1. *What approaches should the IPA consider for determining the size of blocks? What are the advantages/disadvantages of having a larger block size as opposed to a smaller block size?*

Response: We believe many of the issues the IPA has regarding the Adjustable Block Program can be addressed through a pyramid block structure, which is described above. With the pyramid block structure, projects can choose to participate in the block that provides them the best chance for project selection at the price that they need to make the project economically viable. This structure also helps safeguard the rate payers by limiting the potential impact of the IPA setting a block price that is too high. The total amount of all the block sizes should be based on the number of RECs needed for the year divided by the number of projected block openings. The program would close when the money allocated for the program for that year is committed.

2. *Should the category for systems between 10 kW and 2 MW be subdivided into distinct blocks? And if so, what are the appropriate break-points (e.g., 100 kW, 200 kW, 500 kW) between categories, and why?*

Response: Beyond the major break points (e.g., 10 kW) that warrant the establishment of individual pyramid blocks, the pyramid block structure can address the cost differential between finer subdivisions of DG project size by awarding the project size that the IPA wants to encourage with more points. This would help qualify the project for a higher block price within its subcategory without limiting other worthwhile projects that also qualify for a particular block. If the IPA does not see adequate participation at a particular system-size level, additional points can be awarded for that particular system size to incentivize additional development and/or the block price can be adjusted.

3. *Should the initial block or blocks have a different structure than subsequent blocks to account for expected pent up demand?*

Response: Block sizing should be consistent between events or slightly larger in the initial event. We do not recommend nor see an advantage to a different structure.

4. *What criteria should be used to prioritize projects within a block when applications exceed the remaining available capacity in a block? Should the projects be prioritized on a first-come first-served basis or by other criteria?*

Response: See the pyramid block structure description above. After the blocks close, a project's score would prioritize that project's selection within a block. If necessary, projects with identical scores within a block should be chosen by lottery. This incentivizes a project to bid into the lowest-priced block that works for the project because a higher scoring project would have a better chance to be selected within a lower qualifying-score block.

5. *How should the Agency handle the transition between blocks? Should a block close automatically upon being filled? Or should a block remain open until a predetermined date? Upon a block being closed, should the next block open immediately, or should there be some delay?*



Response: See Pyramid block structure description above. The blocks that comprise a pyramid should open and close together on a regularly scheduled basis. A pyramid of blocks would be open for a short time (e.g., a week) during which qualifying project could request REC contracts at a single offered block price for any block for which the project qualifies. When a pyramid of blocks closes, the next pyramid of blocks should be opened as soon as possible. For small DG, the goal should be to have a pyramid of blocks open continuously. For larger projects that consume more of the REC money, the pyramid of blocks can open once monthly or at even lesser intervals depending on response and program goals.

Prices

At the May 17 afternoon workshop, the IPA outlined two potential approaches for setting ABP REC prices: a cost-based model, and a market observation approach.

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?*

Response: We advocate the initial block pricing be estimated using a probabilistic cost model. Probabilistic cost estimating involves defining distributions of potential values for each uncertain variable (input) in a spreadsheet cost model. The inputs for the model should draw from current literature and stakeholder involvement. Once the distributions have been defined for each input, the model is analyzed using Monte Carlo simulation. In a Monte Carlo simulation, a single value is randomly generated from the defined distribution of potential values for each of the input variables in the model. This process is repeated 10,000 times (or as many times as the modeler chooses) and the results of each “trial” are tracked. Once the simulation is complete, the results are graphed and statistically analyzed.

A probabilistic cost model should be established for each different subset of project that has a block set (e.g., DG projects $\leq 10\text{kW}$, community solar). The results of a simulation provide the range of possible outcomes as well as the probability of a particular outcome occurring. The results of this modeling fit the pyramid block structure described above. The outputs for projected total project costs in $\$/\text{kW}$ from the model are provided as a range of values with a probability for a particular value. For example, the top and smallest block of the pyramid could be initially set at the 85th percentile value for that particular subset of project, The middle block at the 65th percentile and the largest and lowest block at the 45th percentile.

After the first block, a market based approach should be used. Adjustments to the Block price and/or qualifying score adjustments can be made by the IPA based on participation rate within each block and the goals of the program.

For the ILSfA program, the end value of the paired ABP and ILSfA incentives must be an incentive level that allows developers, installers, or the non-profit third-party program administrators to offer solar at no upfront cost to the income-qualified participant with near term significant economic savings realized by the household. For this goal to be achieved, the ILSfA pyramid blocks could initially be set using a cost-based approach similar to that described above for the ABP using input provided from stakeholders.

- 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.*



Response: The NERL's SAM model provides a comprehensive financial analysis and can be found at: <https://sam.nrel.gov/>

Elevate Energy has developed a comprehensive model for community solar projects in Illinois available at:

<http://www.elevateenergy.org/communitysolar/communitysolarbusinesscasetool/>

Both these models would need to be modified for a probabilistic approach.

This model could be the basis for the initial community solar block prices. Developers could be invited to provide unit costs to the third-party administrator for consideration for incorporation in the model. A probabilistic approach using Monte Carlo modeling could help quantify and address the risk associated with the inputs as well as quantify input sensitivity to model output.

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.

Response: After the initial pyramid block set is closed subsequent pyramid block sets would take a market approach with all of Illinois as the jurisdiction. Block price and/or qualifying score adjustments can be made by the IPA based on participation rate within each block and the goals of the program. For example, if a particular geographic area is getting a disproportionate share of solar projects, the points awarded for "location" can be decreased for that particular area. If a block is oversubscribed and the block below is undersubscribed, The IPA could increase the undersubscribed block price or, conversely, lower the oversubscribed block price or change the point total required to qualify for a particular block.

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?

Response: as described above, we advocate a cost model for the initial pyramid block sets followed by a market based approach on subsequent pyramid blocks.

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?*

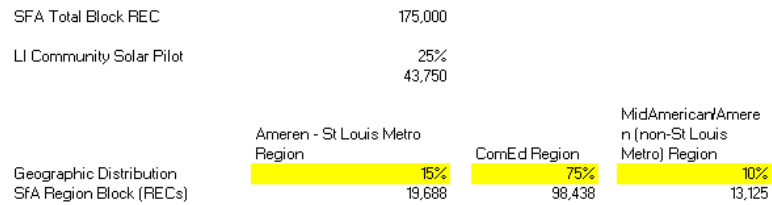
Response: We are not convinced that this should be a concern of the IPA for determining REC prices. The state is not so big that a crew cannot be mobilized to work on a project almost anywhere in the state nor should we subsidize for development on land that would not be utilized at its highest and best use. The only geographic factor that should come into play is the fairness issue of the distribution of subsidies.

One possible approach is for the state to be divided into regions and SREC amounts assigned to each region based on rate payer contribution to the program. Each region would have a pyramid block structure established for that region. For example, the state could be divided into a ComEd region, an Ameren St. Louis Metro Region, and a MidAmerican/Ameren (non-St Louis Metro)



Region. An example of this type of structure is shown in Figure 3 for the ILSfA program. The numbers used in the example are placeholders for illustration purposes only.

Figure 3. Geographic Distribution of RECs Available for Blocks



With the pyramid block structure within each region, further fine tuning of geographic distribution issues can be addressed by providing additional points to more specific geographic regions.

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

Response: See the pyramid block structure described above. For the ILSfA, a goal of the law is to have projects proportionally distributed to LI communities throughout the state. Furthermore, the law requires that “a minimum of 25% of the incentives for this program be allocated to community photovoltaic projects in environmental justice communities.” ILSfA block points should be awarded for the location of a project and/or LI beneficiaries that are within an environmental justice community. By increasing a potential project’s points total, the applicant has the ability to participate in a higher priced block effectively creating “differentiated pricing”.

Project Development Process

9. *How much time should be allowed between system application/contract approval and when a system must be energized? The time allowed could take into account issues like (i) the seasonality of applications, (ii) delays in permitting, interconnection, (iii) equipment availability and etc. Should this time vary by size of system, geographic location, or interconnecting utility?*

Response: A REC contract should have a definitive amount of time to build, energize, and register a project in an applicable tracking system to deliver RECs to the IPA. The current process gives the awardee 12 months from the bid date. Because of the added complexity of coordinating community organizations and LI subscribers, a more realistic timeframe may be 18 months for ILSfA community solar projects.

10. *What type of extensions to a guaranteed in-service date should be allowed, and what additional requirements should there be for extensions?*

Response: As with the current process, a bidder should be able to request a six-month extension upon demonstration of project delays that do not otherwise jeopardize the successful completion of the project; that extension should be granted at the IPA’s sole discretion. The approval and any reporting requirements that the IPA might deem necessary can be provided in an amendment to the permit.

11. *What information about a system should be required for a system to be qualified to participate in the program (e.g. site control, local permitting, interconnection status, etc.)? Should the requirements be different for smaller systems (e.g., under 10 kW) than larger systems? Should the*



requirements be different depending on whether the system is being interconnected with an investor-owned utility, a municipal utility, or a rural electric co-op?

An applicant to the ABP (and the ILSfA adder) should be required to demonstrate control of the proposed site location (e.g., site ownership, option to buy, site lease, or option for site lease), have filed an interconnection application, and have the necessary property entitlements in hand such as letters of intent with community organizations or potential subscribers and local permits and zoning approvals.

The applicant should be provided the standard agreements, permits, licenses, guarantees, certifications, and/or warranties that will be required of the project. As part of their bid package the bidder should sign an agreement that they have reviewed and understand these legal documents and are willing to sign them if their project is awarded RECs.

As previously noted, a goal of the ILSfA is to have projects proportionally distributed to low income (LI) communities throughout the state. Furthermore, the law requires that “a minimum of 25% of the incentives for this program be allocated to community photovoltaic projects in environmental justice communities.” Consequently, the application for participation should include a map showing the location of the proposed project and the location of the community the plant is intended to serve. The application should specify if the LI beneficiaries are in an environmental justice community.

The applicant should include a description of the ownership structure for the project that includes a description of the corporate entity, a list of owners of the entity (or description of targeted LI owners if the project is so structured), management or responsible parties, and the percentages of ownership for each entity (or how the percentage will be determined). Each owner should specify if they are non-profit, governmental, or private entities and if any of the owners have been involved in a bankruptcy, criminal investigation, or litigation.

As part of a projects qualification to participate in the Adjustable Block Program, the ownership should be vetted to eliminate “bad actors.” Bids from owners or with leadership that has a history of bankruptcy, criminal investigations, and litigation that is not readily explainable should be rejected. A permit should be issued to the owners listed on the application (see permitting under Clawback Provisions below).

This proposed vetting process will help the IPA to meet the objectives of FEJA. For the ILSfA program, one of the goals of the program is to encourage community and community organizer ownership of projects. The law requires that “The developer of each project shall identify its partnership with community stakeholders regarding the location, development, and participation in the project.” The greater the involvement of the community, the more likely the long-term success of the project. For the Adjustable Block Program, screening potential project owners prevents bad actors from participating.

12. What development deposit/credit requirements should there be in addition to any program fees? And for how long should such requirements run?

Response: REC contracts for greater than a specified amount (e.g. 3,000 total) should require a performance bond to ensure construction of the facility. The performance bond can be set at a specified \$/REC₁ rate. For example, a facility requesting a contract for 3,000 REC would need to post a \$270,000 performance bond based on a \$90/REC rate. The permit requirement that defines the necessary amount for the performance bond requirement could include a clause that specifies that the requirement no longer applies upon energization of the project. We believe these requirements are



also prudent for the ILSfA program. Without this demonstration of financial wherewithal, ILSfA adders would be tied up with speculative projects for as long as two years before they failed and the money for the committed adders could be re-entered into the program. The success of the ILSfA program is contingent on projects getting built and operating.

13. Should there be intermediate project milestones to help ensure that projects that have reserved RECs out of a block are successfully developed, and that closure of blocks due to all RECs being allocated is effectively managed? If so, how should milestones and performance standards vary between smaller and larger projects?

No comment.

14. For the Supplemental Photovoltaic Procurement, inverter readings were allowed for systems below 10 kW, and revenue grade meters were required for larger systems. How should these standards be updated for the ABP?

No comment.

Clawback Provisions

The ABP allows for contracts to include provisions to ensure the delivery of the RECs for the full term of the contract. This is to account for the fact that upfront payments for RECs could create a variety of challenges including, but not limited to, (i) poorly installed or maintained systems that do not generate the intended amount of RECs (or energy), (ii) failure to provide generation data to the tracking system for the creation of RECs, and (iii) arbitrage risk related to sellers seeking revenue for committed RECs from other markets.

Permitting: Facilities over a certain size or aggregators that aggregate REC contracts over the size limit (e.g., 3000 RECs) should be issued a permit from the IPA that defines the requirements under which the facility or projects must be built and operated. The agreement between the IPA and the facility/aggregator to operate under the permit should be a part of the REC contract. The permit should include the reporting requirements for the facility or aggregator, the financial assurance requirements, and the fines/penalties that the facility would incur should it not meet the requirements of the permit. For example, ILSfA projects require information from owners for program evaluation by the third-party administrator. What information, how this information is to be provided, and when the information is due to the third-party administrator should be defined in the permit. The permit should also define penalties in the event that the permit is violated. The permit is no longer necessary when the REC contract has been fulfilled. The REC contract should not be considered fulfilled until all the RECs promised are delivered to the IPA regardless of the time it may take to produce those RECs, whether shorter or longer than the projected 15 years.

15. What clawback provisions would be appropriate for ensuring that RECs are delivered while not creating potentially prohibitive additional costs or burdens?

Clawback or financial assurance mechanisms are vitally important to preventing abuse of the significant upfront funds that the State will be committing for the RECs from new solar projects, especially within the ILSfA program and its first-year upfront payment. We feel that larger projects that are loaded with debt either prior to or after completion are the most likely to fail. Consequently, we advocate basing financial insurance requirements on the project size and the amount of debt taken on by the project. For example, DG projects less than 10kW should not require financial assurance. However, aggregators that hold a total amount of small DG REC contracts greater than a specified amount (e.g., 3000 RECs) should be required to post financial assurance. Ownership, rather than



company structure, should be the deciding factor in amount of solar aggregated. This prevents an owner or group of owners from forming a series of LLCs to stay below the specified total kW.

For projects or aggregate ownership over the IPA-specified REC amount, the project should post financial assurance to the contract counterparty (e.g., the utility for the ABP projects) in the form of a cash deposit, surety bond, or letter of credit. The amount of the financial assurance should be based on the amount of debt backed by the facility's assets relative to the project (or aggregate) size in kW multiplied by an "asset value" multiplier (AVM). If a project has greater than 50% debt to "asset value", financial assurance must be provided for every debt dollar over that amount. For example, if a 2 MWac project had a REC contract for \$3M and the AVM was \$1.50 /Wac, the amount of debt that the project could take on without providing financial assurance would be 50% of \$3M or \$1.5M. If the project had \$2M worth of debt, financial assurance would be required on \$500K. As part of the facility/ aggregator permit, the financial assurance amount should be recalculated yearly or when additional debt is taken on by the facility (i.e., the facility is used as collateral for new debt)

In addition to financial assurance, the REC contract and the permit should require adequate insurance and name the REC contract counterparty (e.g., the utility for the ABP) as an additional insured. Adequate insurance coverage should cover replacement cost for the solar installation in the event the solar array is destroyed or rendered non-functioning or the amount of the outstanding RECs, whichever is less.

A community solar project should post financial assurance to the contract counterparty for any unsubscribed portion of the facility's capacity below 95% in the form of a cash deposit, surety bond, or letter of credit. The amount of this additional financial assurance should be equivalent to the total amount of the outstanding REC contract multiplied by the % unsubscribed under 95%. This amount should be adjusted yearly over the first three years of the project. Three years after energization, the facility should have a 95% subscription rate. The IPA should have the ability to grant a one year extension to meet the prescribed subscription rate for extenuating circumstances. If the facility has not met the prescribed subscription rate within the time allowed by the IPA, the facility should forfeit the financial assurance and the permit rewritten to reflect the size of the facility that meets the 95% subscription rate. The RECs generated from the entire plant including the portion that is no longer deemed "community solar" continues to be the property of the contract counterparty until the contract's original number of RECs are received.

A community solar facility must maintain a 95% subscription rate. If the subscription rate falls below 95% for two years in a row, financial assurance will be required to be posted for the shortfall. The amount of financial assurance should be calculated as described above. The facility's permit should include the reporting and financial assurance requirements, if any, for subscription rates.

Financial assurance requirements become even more important for projects under the ILSfA program because these subsidies are paid in full upon energization. In addition, ILSfA community solar financial assurance requirements can encourage ownership structures that meet the stated goal of FEJA for the involvement of community organizations in ownership. By implementing financial assurance requirements and encouraging ownership or partial ownership of projects by legitimate, responsible community organizations, "bad actors" can be discouraged from participating. A completely privately-owned enterprise or a "shell" community organization set up just for an ILSfA community solar project (herein referred to as a "Special Entity Community Organization") are the most likely ownership structures to abuse the subsidy. Consequently, these types of project structures should have the highest financial assurance requirements. Conversely, the risk of contract default diminishes with the participation of legitimate established community organizations and public



entities (e.g., a housing authority). With the lowered risk, the amount of financial assurance can be reduced. Lower financial assurance costs will encourage these ownership scenarios.

The purpose of the ILSfA program is to bring the benefits of solar to low income individuals and households. Consequently, the commitment to deliver those benefits is as important as the commitment to deliver the RECs. The %EVE for ILSfA reported in the registration process should be a guarantee of the solar plant owners. The %EVE should be documented in the permit and should be required to be reported to the program administrator annually. If the %EVE is not achieved, the owners can propose remedies and, if the owners do not meet their commitment to remedy the shortfall to the satisfaction of the program administrator and the IPA or the remedy agreement is violated, the IPA can trigger the financial assurance mechanisms of the REC contract.

We suggest that financial assurance requirements for ILSfA projects or aggregators over the IPA-designated minimum REC contract size be as follows:

- **Privately-owned or Special Entity Community Organization:** Cash deposit, surety bond, or letter of credit for 50% of the total outstanding RECs, 50% of the total estimated economic value of the energy (EEVE), and 50% of any debt taken on by the plant above the asset value calculation described above. The amount of the LOC can be recalculated yearly to reflect the reduction in the EEVE, the RECs delivered, and any debt paydown. The EEVE should be based on the %EVE commitment of the owner of the facility multiplied by an IPA-issued energy value multiplier and the total amount of outstanding RECs under contract. For example, a 2 MW facility the commits to providing an 85% EVE would need to provide \$461,000 in EEVE financial assurance for the first year of operation based on a \$2.50/REC energy value multiplier and the 43,586 outstanding RECs.
- **Private-LI community partnership and non-profit/LI community ownership:** A non-profit, LI community organization ownership or a LI community partner must be an established organization that provides services beyond just the community solar project itself. To prevent the misuse of these non-profit companies (e.g., setting up a Special Entity Community Organization in a private-non-profit partnership), they must demonstrate a history of significant community involvement, have independent boards/leadership from any teaming partners, and have a history in the actual or similar LI community that the project is planning to serve. The non-profit, LI community organization ownership or a LI community partner must be an owner in the project and have a significant role in company management. A cash deposit, surety bond, or letter of credit for 25% of the total estimated economic value of the energy dedicated to the LI beneficiaries and 25% of any debt taken on by the plant above the asset value calculation described above. The amount of the financial assurance can be recalculated yearly to reflect the reduction in the EEVE commitment and the debt paydown.

16. *What would be reasonable circumstances to allow for the waiving of clawback provisions? (e.g., fires, severe weather, etc.)*

Response: There should be no waiver for financial assurance or insurance requirements. However, the IPA should have the discretion to not invoke the provided financial assurance based on the circumstances that cause the potential delay in REC delivery or, for the ILSfA, the EEVE. For example, the destruction of a solar array by a weather event may cause the facility to not meet its REC obligation for a particular year. The facility owner should supply a plan to the IPA to bring the facility back on line in a timely fashion and an agreement to replace the RECs lost (e.g., through an extension of the contract). The IPA should request a bond or other form of assurance that the insurance money will be used to reconstruct the facility or pay back the outstanding RECs. Should



the plan be approved by the IPA, the financial assurance claims provisions would be waived while the plan is being implemented. Should the facility not be brought back on-line in accordance with the plan, the IPA can make claims against the financial assurance mechanism. The cost of outstanding RECs, if they are to be replaced rather than the facility rebuilt, should be based on the initial price paid for the RECs with interest based on a rate chosen by the IPA and a buyback penalty. The buyback penalty should cover the costs to replace the RECs that have been returned and the expenses incurred by the IPA to procure said RECs.

17. Should clawback provisions vary based on system size? If so how should these provisions vary?

Response: See Response to item 15 above.

18. How should clawback provisions carry over when a system and/or system location is sold?

Response: The permit (see permitting above) would define how the transfer of ownership of a facility must occur and the requirements for that transfer. The new owners must assume the responsibility for providing financial assurance and insurance. In addition, the new owners must demonstrate, agree to, and provide whatever documentation is required as part of application to participate in the adjustable block program (and the ILSfA program, if the project is an ILSfA project). If the permit is not transferred, the owners of the property listed on the permit are obligated to continue to provide financial assurance and insurance and would be held responsible for any violations of the permit. Once the required documentation of ownership, financial assurance, and insurance are provided to the IPA, the IPA can issue a permit for the facility/aggregator to the new owner.

Consumer Protections

19. What consumer protection elements should the IPA consider adopting as part of the ABP program? How should those elements differ between distributed generation and Community Solar?

Response: We support the position taken by the ILSfA working group on this issue.

20. Should the ABP require the use of a standard disclosure form? If so, what elements should that form include?

Response: We support the position taken by the ILSfA working group on this issue.

21. Are there examples from other states of model approaches to consumer protection, and/or lessons learned regarding insufficient consumer protections?

Response: We support the position taken by the ILSfA working group on this issue.

D. COMMUNITY SOLAR

Geographic Considerations

1. Should the IPA consider taking steps to encourage projects to be located geographically closer to subscribers? If so, what steps should be considered?

Response: No. We feel this contravenes the law, which specifically allows subscribers to community solar to be located anywhere within the utility in which the project is located. Furthermore, prior versions of the bill had distance requirements for community solar locations. For example, the Next Generation Energy Plan (SB1585) had a requirement that a community solar



project be located within five miles of the subscribers (see Sec. 16-107.6(i)(1)). Since this requirement was dropped in the final version of the law, the legislature made an informed, conscientious decision about this requirement. The IPA should not contravene this decision.

2. *How can geographic diversity be ensured?*

Response: The pyramid block program described in the Adjustable Block Program section above provides two methods to ensure geographic diversity. The first is the division of the state into regions under which pyramid blocks are organized, the second is the point system, which provides additional abilities for the IPA to encourage more specific geographic diversity.

Project Application Requirements

3. *Should Community Solar projects have different application requirements than a comparably sized distributed generation project? What level of demonstration of subscriber interest should be required prior to approving an application from a Community Solar project?*

Response: A minimum subscription percentage should be required. At least 40% of the project should have a subscriber, which is the maximum size of a single subscriber. The pyramid block program described in the Adjustable Block Program section above provides a means to address this issue. Points should be awarded for subscriptions to a project, so the more fully subscribed the project, the better the chance the project has for being selected for a REC contract. For example, for a project that is 100% subscribed, 15 points could be awarded. The 15 points could be multiplied by the % subscription rate for anything less than 100% (e.g., a project that was 75% subscribed would get 11.25 points). Furthermore, the IPA could use the point system to differentiate between commercial and industrial (C&I) and residential community solar projects. For example, the IPA could award 20 points to a residential community solar project and 10 points to a C&I community solar project. A project that was 50% residential with a 75% subscriber base for the residential portion and a 100% subscriber base for the C&I would be awarded 12.5 points ($20 \text{ points} * 50\% * 75\% + 10 * 50\% = 12.5$).

4. *How should co-location of Community Solar projects be addressed in light of the definition of community renewable generation projects that is capped at 2 MW?*

A project should only be defined by the presence of the interconnect, not the location of neighboring projects. The pyramid block program described in the Adjustable Block Program section above provides a means to address this issue should it become a problem or if the IPA wants to discourage this practice. Co-location can be addressed by subtracting points for projects that are co-owned or co-developed and are located within 5 miles of each other. For example, if an owner is proposing a new project that is within 5 miles of an existing project, the score for the new project should lose 10 points. If two projects are pending for a block at the same time, one of the projects should have the points subtracted.

Community Solar Blocks

5. *Should the design approach for blocks for Community Solar vary from that used for Distributed Generation (e.g., size of blocks, criteria for prioritizing applications)?*

Response: Yes, because the requirements of the program are different. However, the community solar blocks should be similar to the DG blocks. See the pyramid block program described in the Adjustable Block Program section above. Different scoring criteria should be applied to the different type of solar projects to meet the goals and requirements laid out by the law and expressed as desirable by stakeholders.



6. *What would be reasonable assumptions to make for the cost of acquiring and maintaining subscribers? How will these costs be expected to vary over time (e.g., the difference between initial subscriber recruitment and managing churn rates)? How will these costs differ between managing residential and commercial subscribers?*

Response: This should not be the IPA's concern beyond a gross estimate for the initial setting of the pyramid block prices. Once the initial blocks are closed, adjustments to the prices and scoring criteria can be made to address any short falls in project types.

7. *Should the value proposition to the customer for a subscription to a Community Solar project be more, or less, attractive than for a comparable sized DG system at the customer's location?*

Response: The value proposition is inherently less attractive for community solar because community solar projects can only offset the value of the energy supply portion of their electrical bill. Some of this can be offset by the lower installation price achieved through the bulk buying of equipment and the simplified installation. This should not be a concern for the IPA but rather the developers.

Development Milestones

8. *Should the time allowed for Community Solar project development be different than for comparably sized Distributed Generation systems?*

No Comment

9. *What project development milestones should be required to demonstrate sufficient levels of subscriber interest before a contract may be terminated?*

Response: See the response to *Project Application Requirements* item 3 above.

Residential versus Commercial Interest

10. *What, if anything, should the IPA consider to ensure robust residential participation in Community Solar?*

Response: We feel that robust participation by residential subscribers is very important to the long-term acceptance and adoption of solar power policies in the state. The IPA should target 85% residential/15% C&I mix of community solar projects. The pyramid block scheme can be used to meet this target. As noted in the response to *Project Application Requirements* item 3, the IPA could use the point system to differentiate between commercial and industrial (C&I) and residential community solar projects. For example, the IPA could award 20 points to a residential community solar project and 10 points to a C&I community solar project. A project that was 50% residential with a 75% subscriber base for the residential portion and a 100% subscriber base for the C&I would be awarded 12.5 points (20 points * 50% * 75% + 10 * 50% = 12.5). The amount of points awarded for C&I solar projects can be decreased substantially (or even made negative) if the IPA determines that too much C&I solar is being developed.

11. *Should REC pricing vary based on the portion of the project that is residential? How can this be verified, and what would be required over time to ensure ongoing residential participation?*

Response: The pyramid block program addresses this issue. See response to comment 10 above.



12. *Should project application/viability requirements be different based on the mix of residential and commercial customers?*

Response: The pyramid block program addresses this issue. See response to comment 10 above.

13. *Are there additional considerations that should be made for projects that are entirely subscribed with commercial customers, or entirely subscribed with residential customers?*

Response: The pyramid block program addresses this issue. See response to comment 10 above.

E. ILLINOIS SOLAR FOR ALL PROGRAM

1. *How should the concept of “80% of area median income” be applied? What size area should be considered (e.g., municipality, county, utility service territory)?*

Response: We support the position taken by the ILSfA working group on this issue.

2. *What should be the balance between verifying individual income eligibility and using other criteria such as median income of census tract?*

Response: We support the position taken by the ILSfA working group on this issue.

3. *What provisions in contract and REC payment structure should the IPA consider to ensure that any revenue received for RECs does not hinder participants’ eligibility in other benefits programs?*

Response: The ILSfA contract should state that “Revenue received for RECs should not hinder participants’ eligibility in other benefits programs.” The major received-revenue issues that would impact a subscriber’s benefits should be expressly prohibited such as a cash payment. However, it is not possible to guarantee how a particular benefit from solar might impact an individual’s benefits, especially with future unforeseen changes to tax and low income assistance laws.

4. *What distinct requirements and considerations should apply to multi-family buildings?*

Response: We support the position taken by the ILSfA working group on this issue and believe the pyramid block structure can adequately address the concerns related to multi-family buildings either through establishment of a multi-family building ILSfA adder pyramid block or by awarding points to multi-family building projects.

5. *How should the concept of low-income be considered for non-profit and public facilities? Should all non-profits and public facilities be eligible for that Solar for All program, or should there be some nexus with low-income criteria?*

Response: We support the position taken by the ILSfA working group on this issue. We advocate the prioritization of non-profit and public facilities solar development for those non-profits and public facilities that serve or are associated with low income communities. If the pyramid block structure were adapted, points could be awarded to projects that meet these criteria.

6. *For Illinois Solar for All grassroots education efforts in rural areas, what opportunities are there for partnering with community organizations and institutions?*



Response: We support the position taken by the ILSfA working group on this issue.

Utility Funded and Administered Job Training Programs

7. *In some instances, trainees may be unavailable to participate in project development (due, for instance, to the time to complete training programs or geographical constraints). What flexibility should be considered to account for the potential lack of availability of trainees to work on projects?*

Response: We support the position taken by the ILSfA working group on this issue.

8. *How can the IPA ensure that project developers offer meaningful employment opportunities and career advancement to job trainees and others in the workforce development pipeline?*

Response: We support the position taken by the ILSfA working group on this issue. We also advocate that the third-party administrator establish a certification process for ILSfA-qualified contractors. A certification would ensure that developers are using contractors that are complying with the requirements and goals of the ILSfA program.

Environmental Justice Communities

9. *In defining an Environmental Justice Community, how should the IPA weigh factors such as (i) Income, (ii) Race/Ethnicity, (iii) Environmental Impacts, (iv) Regional Economic Conditions, or (v) Other demographic factors? What environmental impacts should the IPA prioritize, and what other factors should the IPA consider?*

Response: We support the position taken by the ILSfA working group on this issue.

10. *What level of community self-designation should be considered (or community ability to decline designation)?*

Response: We support the position taken by the ILSfA working group on this issue.

Consumer Protections

11. *What additional consumer protections should be specific to the Illinois Solar for All programs above and beyond the consumer protections offered more generally to participants in the Adjustable Block Program?*

Response: We support the position taken by the ILSfA working group on this issue.

12. *What does providing that “tangible economic benefits flow directly to program participants” imply in terms of either upfront payments to participants and/or assurances that participation creates a positive cash flow?*

Response: See the %EVE discussion in the response to *Clawback Provisions Item 15* above.