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ELEVATE ENERGY
Smarter energy use for all

November 13, 2017

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

RE: Comments on Residential Adder or Small Subscriber vs. Large Subscriber costs and assumptions used in the Crest model within the Long Term Renewable Resources Plan DRAFT

Dear Mr. Bohorquez,

Elevate Energy is an Illinois-based nonprofit that administers low-income energy efficiency programs and provides energy solutions for affordable housing, nonprofits, municipalities and others. Elevate has been a leader in research, analysis and stakeholder engagement around community solar in Illinois and nationally. We are submitting these few comments in addition to comments submitted as part of the Illinois Solar for All Working Group, and jointly with GRID Alternatives. These comments highlight an important issue not fully addressed in the ILSfA working group or joint GRID-Elevate comments; i.e. the assumptions and inputs used to build the Crest model for determining the Residential Adder for community solar. This issue is critical enough, in our view, to warrant additional attention.

In our response to the LTRRP draft plan submitted jointly with GRID Alternatives, we provided detailed comments on these specific issues:

1. The need for multiple Solar for All Program Administrators
2. The need for a dedicated and separate Multifamily program within ILSfA
3. Recommendations for adjusted inputs in the Crest models used to calculate REC prices
4. Stacking benefits between the Adjustable Block Program and ILSfA programs
5. Eligibility and Income Verification for Illinois Solar for All programs.

Small Community Solar Subscribers Require a Carve-Out or Significant Adder to Ensure Robust Opportunities.

Elevate Energy believes that a specific carve-out for small community solar subscribers is the best way to achieve robust opportunities for residential and small commercial participation. The carve-out proposed by a number of community solar advocates in the first round of comments suggested a minimal percent of residential subscribers for every project. The industry, mostly, disagreed. A carve-out can also be based on dedicated blocks that include a minimum percent of small or residential subscribers. We believe that without a carve-out, we risk creating a market where community solar developers will not provide services to residential or small subscribers because the additional cost, added work and risk will deter community solar developers – even with full cost recovery through adders. Past experience in other markets has shown that developers will seek the path of least resistance when designing community solar subscriber programs (we believe that minimal Minnesota residential participation was not because of low residential consumer interest, but a flawed program design; Colorado's initial low-income program resulted in developers giving away the required 5% low-income subscriber required shares rather than marketing to the communities that were intended to be served).

Robust Opportunities

Elevate believes that "robust participation opportunities for residential and small commercial customers[1]" means more than simply making subscriptions available to residential market segments. Instead, the program must be designed in a way that incents developers to build projects that include residential subscription services, that delivers these services to broad segments of residential markets and provides the necessary cost recovery framework that ensures the additional costs to do so are not just competitive with commercial projects, but compelling. In this sense, we agree fully with CCSA in their comment;

> *"An 'opportunity' only exists if the customers themselves are actual targets of a developer's marketing and customer acquisition strategy, and it is more objective and efficient to track subscription uptake or developer applications for REC adders rather than making an arbitrary assumption that merely establishing the availability of a REC adder creates a participation opportunity."*

This is why it is important that the Agency more clearly define "robust opportunity" and why we believe a carve-out is the best program design option. If an adder is the mechanism the IPA includes in their final plan, it is critical that the inputs in the existing model that impact the adder value be revised.

[1] 20 ILCS 3855/1-75(c)(1)(N).

Defining Small Subscribers

Elevate agrees with the Environmental Law & Policy Center's position that the definition for the adder should represent all small subscribers; i.e. under 25 kW, as opposed to just residential subscriber.

> *"Assert that the adder should be for small subscribers (25 kW or less, in line with other states) – be they residential or not. Disagree with IPA's assessment that the opportunity to subscribe will be present without further intervention into the market. State non-opposition to adder as the form of intervention but encourage IPA to ensure adder value is high enough (we have heard it is not). Furthermore suggest IPA should track portion of subscribers below 25 kW and set a goal for participation of this sector – perhaps commensurate with the energy use in the state[2]."*

The Cost of Subscriber Acquisition and Management

We believe the value of the subscriber management task as represented in the input value of $4.98 per MWh is acceptable or even high for community solar projects with only commercial subscribers, but too low when introducing residential subscribers. In addition, as stated above, granularity is critical. These costs are not static or linear as system size or subscriber type change. So, the value would be better expressed as a range, blocks or matrix. A flat assumption could mean some projects are left out of the market because they cannot recover costs as the market launches. We did not model every iteration for the following analysis, but we believe the it illustrates the importance of adjusting the Crest model and adder value relatively and more granularly based on key characteristics (system size, subscriber type or subscriber model).

The limitations of the Elevate Business Case Tool or any modeling tool

Elevate Energy and West Monroe Partners created a business case tool to develop community solar project pro forma - the first tool available that included detailed subscriber management cost options. This tool has helped us conceptualize different business and project structures and has allowed us to model many approaches and project outcomes. Elevate has received much feedback from the industry and other users since the release of the tool, and more since the IPA's REC pricing was released in September. We believe it is important to clarify the outcomes of this tool in two ways:

1) A formulaic error in the tool[3] did not accurately account for all outreach costs. It did not calculate the total new subscribers correctly and subsequently reduced overall costs. This has been corrected.

2) The models produced by Elevate specifically for subscriber management costs are based on hypothetical scenarios. In the first round of comments to the LTRRP, Elevate caveated our analysis by stating the values were not intended to determine REC prices specifically, but to show the relative value of potential REC prices based on certain inputs. We used this analysis to show the importance of adders, but not to define their value.

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[2] *Environmental Law & Policy Center Draft Comments*

[3] *Admin_and_Transaction_Costs tab at row 95. These cells refer to the New Subscriber Gains annually to calculate the outreach costs per subscriber.*

Only the industry has actual data that measures the performance of projects with relation to subscriber management costs. Many comments from the industry suggest that the default values from our tool outcomes do not fully represent the values they are seeing in the market. Until the industry begins to publish this data, we cannot correct the problem of assumptions simply with anecdotal information. However, in the modeling included here, we have 1) used the corrected formula for subscriber outreach, and 2) selected the default for "Difficult" recruit instead of "Moderate. This does support the statements from CCSA and SEIA that the current adder value is not high enough to reflect true cost recovery or, further, to incentivize the small subscriber market.

Modeling Subscriber Management Costs: Large Subscribers vs. Small Subscribers

The revised modeling for subscriber management costs below represents three scenarios. All are based on a 1,250 kW system - a midway point in the largest REC block system size range and an expected average size we will see in the market. Key parameters are listed below. There is a question on the number of years assumed for the life of the system. The difference from 15 years to 25 years is significant in the outcome of the potential adder value for small subscribers. We have modeled both. The relative value difference is similar and evident either way and, we hope, encourages the IPA to take a fresh look at the way it is determining the adder value for residential community solar. We believe it needs to be increased and more granular (different for different blocks).

The results show that the current adder price for community solar may be too high for projects with a few large subscribers. But, it is certainly too low for projects with many small subscribers.

- **Recommended Change**: We recommend increasing the value based on various "blocks" of adders such as1) 50% minimum small subscriber participation, 2) 100% small subscriber, and 3) varied by system size*.

**The analysis below is, again, not intended to provide specific adder values. Instead we hope to show 1) the current values are likely too low and 2) that the adder values require more granular modeling with varied inputs based on system or subscriber characteristics.*

	100% Large Subscriber	40% Large /60% Small Subscribers	100% Small Subscrbers
Total Upfront Administrative Costs (Year 1)			
Marketing & Communications	$7,420	$27,553	$41,442
Customer Acquisition Setup	$10,240	$11,670	$11,670
Outreach Setup	$3,120	$3,120	$3,120
Admin Setup	$2,080	$2,080	$2,080
Year 1 Subscriber Management Costs	$11,060	$58,012	$96,674
TOTAL UPFRONT COSTS	***$33,920***	***$102,435***	***$154,987***

Total Lifetime Subsciber Management Costs (year 2-25)	Total ($)	Total ($)	Total ($)
Outreach	$3,738	$10,961	$18,415
Sales	$3,318	$1,077	$1,809
Sign-up Transaction	$1,659	$769	$1,292
Customer Service	$27,915	$7,333	$12,221
Billing Admin	$96,804	$443,151	$738,497
TOTAL ONGOING-TRANSACTIONAL COSTS	***$133,434***	***$463,292***	***$772,234***

TOTAL LIFETIME SUBSCRIBER COSTS	***$167,354***	***$565,727***	***$927,220***

Total Subscriber Mgt Cost per Watt	$0.13	$0.45	$0.74
Installation cost per watt used in model	$1.98	$1.98	$1.98
Average panels per subscriber	1042	1667=C&I 15=Res	15=Res
Total # subscribers	4	167	278
Subscriber turnover	1 ea. 10 years	2% annually	2% annually
Total MWh's over 25 years	33794	33794	33794
LIFETIME SUBSCRIBER COSTS PER MWh	*$4.95*	*$16.74*	*$27.44*
ADDER VALUE IN THIS MODEL		***$11.79***	***$22.49***
Total MWh's over 20 years	27394	27394	27394
LIFETIME SUBSCRIBER COSTS PER MWh	*$6.11*	*$20.65*	*$33.85*
ADDER VALUE IN THIS MODEL		***$14.54***	***$27.74***
Total MWh's over 15 years	20815	20815	20815
LIFETIME SUBSCRIBER COSTS PER MWh	*$8.04*	*$27.18*	*$44.55*
ADDER VALUE IN THIS MODEL		***$19.14***	***$36.51***

Supporting documents and financial models:

Summary of Subscriber Management Costs for hypothetical 1.25 MW project:
https://www.elevateenergy.org/wp/wp-content/uploads/Elevate-Small-vs-Large-Subscriber-Admin-Cost-Summary.xlsx

Model for Large Subscriber Project:
https://www.elevateenergy.org/wp/wp-content/uploads/LTRRP-community-solar-1250MW-large-subscriber.xlsm

Model for Mixed Subscriber Project:
https://www.elevateenergy.org/wp/wp-content/uploads/LTRRP-community-solar-1250MW-mixed-subscriber.xlsm

Model for Small Subscriber Project:
https://www.elevateenergy.org/wp/wp-content/uploads/LTRRP-community-solar-1250MW-small-subscriber.xlsm

Sincerely,

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