

# **Procurement of Renewable** **Energy Resources**

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# OUTLINE FOR DISCUSSION

- Background on Agency – what is the IPA? What do we do?
- Background on Public Act 99-0906 (“Future Energy Jobs Act”)
  - Structural Changes to Renewable Portfolio Standard
  - Focus on Facilitating Development of New Generation
  - Programs/Competitive Procurements
- Long-Term Renewable Resources Procurement Plan
  - Adjustable Block Program
  - Illinois Solar for All
  - Competitive Procurements
- Community Solar Projects
  - What is Community Solar?
  - Project Maturity Requirements
- Lottery Process
  - Why a lottery? When?
  - How would the lottery work?
  - Current work to finalize lottery process
- Timeline for What’s to Come

# Background: What is the IPA??

- Created by legislature in 2007, sister agency to ICC (state PUC)
- Moved to oversight of Executive Ethics Commission in 2011
- Established to prepare procurement plans and conduct procurement events to meet “standard wholesale product” supply requirements of electric utilities’ “eligible retail customers” (default supply customer load)
- Also tasked with implementing state’s renewable energy portfolio standard, including conducting competitive procurement events and administering state renewables fund
- Other Responsibilities
  - Resource Development Bureau
  - Assistance with Aggregation
  - Clean Coal Facility Sourcing Agreements

# For whom do we procure it? “Eligible Retail Customers”

220 ILCS 5/16-111.5(a)

Distribution service from participating utility

- No muni, co-ops, etc. customers
- MidAmerican?

Supply service from participating utility

- Not ARES customers
- Must be classes not declared competitive

Fixed-price supply service

- Not hourly pricing customers

How much of the market??

- It varies...
- Municipal aggregation major driver

# Annual Procurement Plans

220 ILCS 5/16-111.5(b)(1-4)

Hourly Load Analysis

Impact of Demand-side  
and Renewable Energy  
Initiatives

**Annual  
Plan**

Plan for Meeting  
Expected Load  
Requirements

Proposed Procedures  
for Balancing Loads

# Typical IPA Annual Procurement Plan Process (found in 220 ILCS 5/16-111.5)

Load forecasts received from utilities July 15 . . .

## Draft Plan by IPA

- Aug 15
- Comment Process
- Proposes procurements to meet statutory requirements

## Filed Plan by IPA

- Revised based on comments
- Filed with ICC (state PUC) for Approval
- Other parties intervene

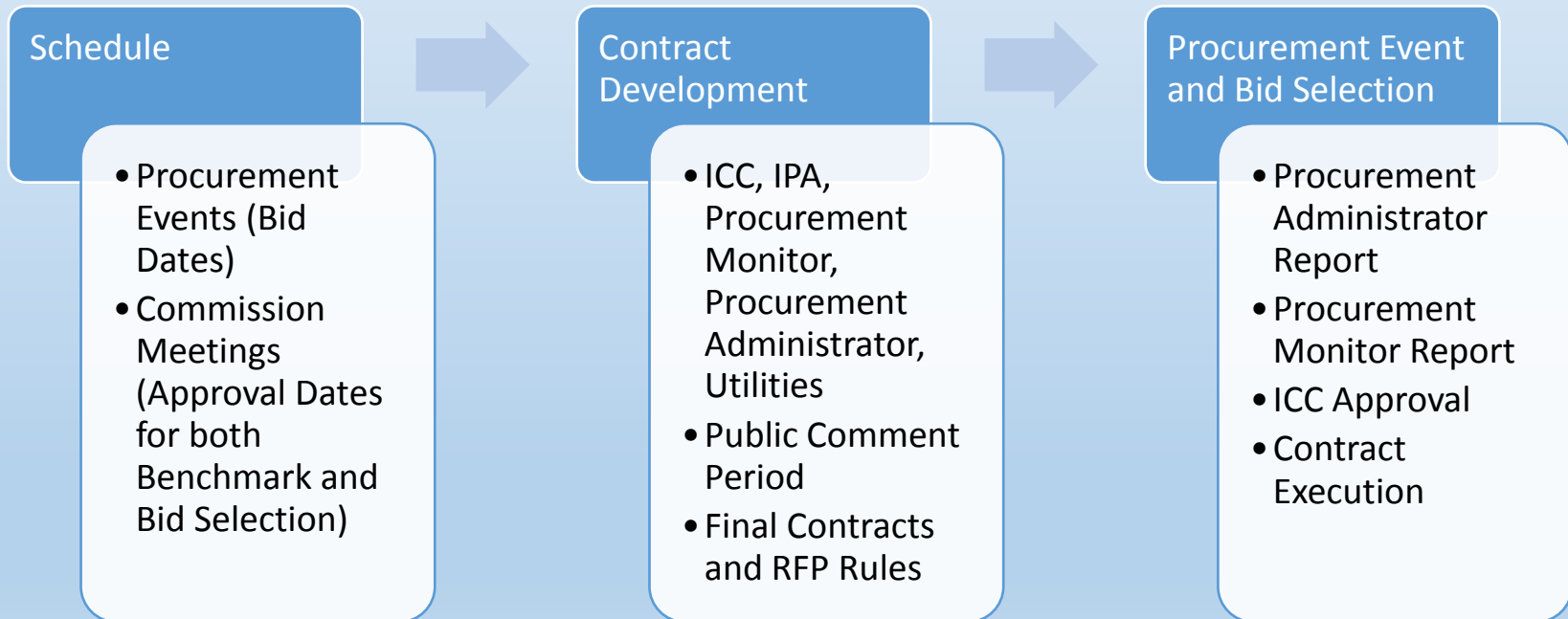
## Final Order from ICC

- After 90 day proceeding
- Final administrative action subject to appeal
- IPA files revised plan (eventually)

Pre-Public Act 99-0906, renewables was subject to the same annual planning process, and this process also provides a basic template for our long-term plan development.

# Typical IPA Procurement Event Process (found in 220 ILCS 5/16-111.5)

Final Order issued by Illinois Commerce Commission approving IPA procurement plan . . .



# Pre-FEJA Renewables Procurement Overview

20 ILCS 3855/1-75(c)(1) obligations re: eligible retail customers of utilities

- **Bill surcharge to recover expenditures of renewables procurements**
- **2.015% rate impact cap**
- **25% by 2025 with 75%/6%/1% technology-specific subtargets**

20 ILCS 3855/1-75(c)(5) obligations re: hourly pricing tariff customers

- **Alternative compliance payments by hourly customers**
- **Money held by the utilities**

220 ILCS 5/16-115D obligations re: alternative retail electric suppliers

- **Self-procurement (up to 50% of obligation)**
- **Alternative compliance payments (remainder)**



# Public Act 99-0906: Future Energy Jobs Act (effective June 1, 2017)

- Expands and consolidates state renewable energy portfolio standard into a central procurement model (20 ILCS 3855/1-75(c); 220 ILCS 5/16-115D)
- Leverages state renewable energy funds for development of low-income solar incentive program (20 ILCS 3855/1-56)
- Energy crediting for ratepayers subscribed to “community solar” generating facilities (220 ILCS 5/16-107.5(I))
  - What is community solar?
- Smart inverter rebate for distributed generation facilities (220 ILCS 5/16-107.6)
- Expands and consolidates state energy efficiency portfolio standard (220 ILCS 5/8-103, 8-103A; 220 ILCS 5/16-111.5B)
- Establishes a zero emission standard to support the continued operation of at-risk nuclear facilities (20 ILCS 3855/1-75(d-5))

# Public Act 99-0906: Structural Changes to RPS

- Consolidation of three prior compliance mechanisms (eventually) into one mechanism
- Expansion of Illinois RPS targets to cover all retail customer load
  - 25% by 2025, with incremental growth to that point
  - New Quantitative Targets for RECs from New Build
- Assessment of surcharges to fund RPS via charge to electric utility delivery service customers (single funding mechanism)
- Utilization of separate Long-Term Procurement Plan for proposing programs and procurements to meet goals
- IPA now not only administers competitive procurements, but also targeted programs
- IPA process is for RECs only
  - Net metering for DG customers; bill off-set for community solar customers
  - Off-take agreements for utility-scale projects?? Not state-facilitated

# Statewide Annual RPS Budget

Table 3-15. Statewide RPS Budget<sup>[1]</sup>

<u>Delivery Year</u>	<u>RPS Budget</u>	<u>Contracted REC Spend</u>	<u>Estimated Initial Forward Procurement REC Spend</u>	<u>Available Gross RPS Budget (est.)</u>
<b>2017-2018</b>	\$141,806,259	\$33,242,248		\$108,564,011
<b>2018-2019</b>	\$189,960,753	\$31,469,244		\$158,491,509
<b>2019-2020</b>	\$234,276,005	\$31,594,913	\$9,349,512	\$193,331,580
<b>2020-2021</b>	\$234,003,329	\$30,960,189	\$9,349,512	\$193,693,627

<sup>[1]</sup> Does not include indirect allocation, administrative set asides, ARES ACP funds collected by the utilities, or uncommitted Hourly ACP funds.

# RECs – what are they?

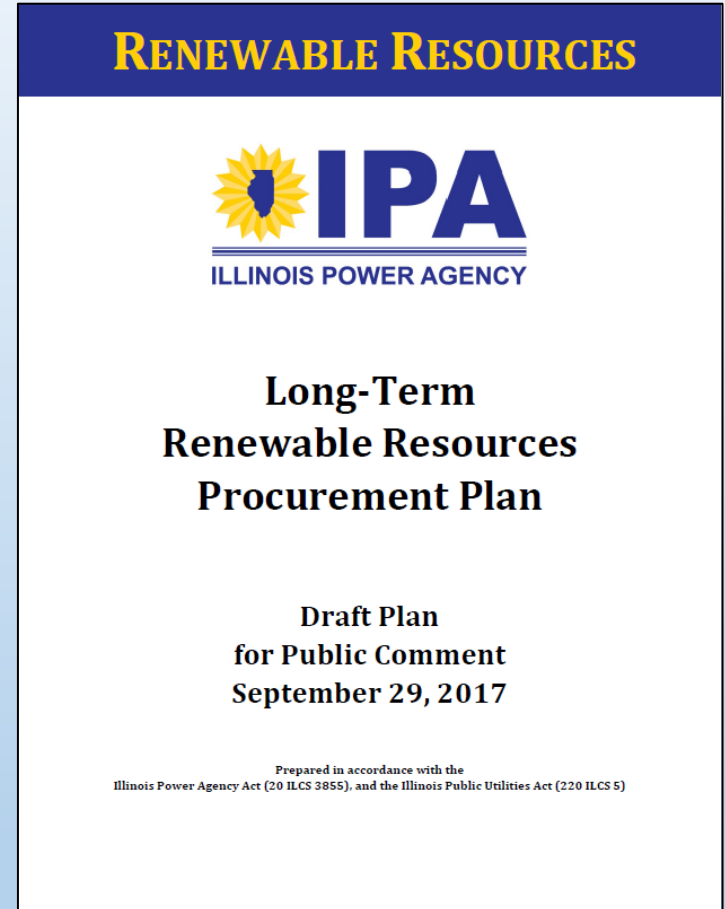
- Section 1-10 of the IPA Act
  - “a tradable credit that represents the environmental attributes of one megawatt hour of energy produced from a renewable energy resource”
- Not the energy itself; the *environmental attributes* decoupled from the underlying energy
  - If REC is sold, can no longer claim underlying energy as “clean” or “renewable”
  - However, if REC is purchased, can be associated with “brown energy” to allow underlying energy to be claimed as “clean” or “renewable”
- How are they priced?
  - For competitive procurements, set by bidders’ proposed prices
  - For programs, administratively set (part of Long-Term Plan)
  - For other purposes (corporate, ARES), market transactions
- REC revenue
  - Amount of revenue allows projects to pencil out
  - 15-year delivery contracts allows certainty of revenue stream

# Public Act 99-0906: Changes to RPS targets

- Initial forward procurements: 15 year contracts for RECs from new utility-scale wind and new utility-scale/brownfield PV
  - 1,000,000 RECs per year of wind, solar
  - Results in new generating capacity corresponding to what's needed to produce these amounts
- New quantitative targets for each of wind and photovoltaics: Minimum 2,000,000 RECs delivered annually by 2020, 3,000,000 by 2025, 4,000,000 by 2030
  - Met through utility-scale (40%), adjustable block program (50%), and brownfield site projects (2%)
  - Additional forward procurements to meet utility-scale/brownfield targets
- IPA develops and administers Adjustable Block Program for DG and community solar
- IPA develops and administers Illinois Solar for All incentive program for low-income solar projects
- **Outside of initial forward procurements, proposals are made in Long-Term Renewable Resources Procurement Plan**

# Long-term Renewable Resources Plan Development Timeline

- Initial workshops and comment process in May-July of 2017
- Draft Plan published for comment on September 29, 2017
- 45 days for stakeholder comment (November 13, 2017)
  - Public hearings in each utility service territory as well
- 21 days for Agency to revise Plan and file it with Commission for approval (December 4, 2017)
  - ICC Docket No. 17-0838
- 120 days for Commission to review and approve
  - Commission Order issued on April 3, 2018



Filed Plan available at:

[www.illinois.gov/sites/ipa/Pages/Renewable Resources.aspx](http://www.illinois.gov/sites/ipa/Pages/Renewable_Resources.aspx)

# “LTRRPP” – what does it contain?

## Background/Context Setting

1. Introduction
2. Legislative/Regulatory Requirements of the Plan
3. RPS Goals, Targets, and Budgets

## Utility-Scale Procurements

4. Renewable Energy Credit Eligibility
5. Competitive Procurement Schedule

## Distributed and Community Generation

6. Adjustable Block Program
7. Community Renewable Generation Projects
8. Illinois Solar for All Program

# Adjustable Block Program: What is it?

- Provides a mechanism for payment for the environmental attributes of new DG or community solar projects
  - Leverages funds to facilitate the development of these projects
  - Primary mechanism is through a 15-year REC delivery contract
  - RECs delivered to utility through tracking system and retired to meet RPS compliance obligation
- “Block” refers to a volume of systems (measured by generating capacity) that could apply to meet that incentive at a transparent, administratively set REC price
  - “Approved vendors” submit applications of at least 100 kw in systems
  - Successful participation results in execution of REC contract
- “Adjustable” means that the price “adjusts” as block capacity is filled
  - Price (generally) drops when one block fills and the next block opens
- Requirements in place to ensure that systems aren’t merely speculative and that vendors meet basic standards



# Adjustable Block Program: Block Structure

Table 6-1: Illustrative Block Opening Volumes (MW)

Block Group	Block Category	Block 1	Block 2	Block 3
Group A (Ameren Illinois, MidAmerican, Mt. Carmel, Rural Electric Cooperatives and Municipal Utilities located in MISO)	Small	22	22	5.5
	Large	22	22	5.5
	Community Solar	22	22	5.5
Group B (ComEd, and Rural Electric Cooperatives and Municipal Utilities located in PJM)	Small	52	52	13
	Large	52	52	13
	Community Solar	52	52	13
<b>Total</b>		<b>222</b>	<b>222</b>	<b>55.5</b>

<sup>14</sup> Block 3 volumes were decreased in for consistency with the Commission's Order in Docket No. 17-0838 requiring that the 25% of discretionary capacity be held in reserve. See Docket No. 17-0838, Final Order dated April 3, 2018 at 60.

# Adjustable Block Program: REC payments

- 15-year REC contracts with electric utility
- Pre-payment
  - 100% pre-payment for systems below 10 kW in size upon interconnection and energization
  - 20% upon interconnection and energization for remaining DG and community solar; remainder paid over subsequent 4 year period (5 total payments)
- Collateral requirements to ensure delivery
  - 5% of contract value
  - May be withheld from first payments
- Levels of REC payments set forth in Long-Term Plan
  - REC Pricing Model based on NREL CREST model and nets out net metering and smart inverter rebate (as applicable)
  - Prices expected to decline 4% between each block
  - Prices differ by system size and service territory
  - Prices eligible for “adders” for small customer participation in CS

# Adjustable Block Program: REC Prices

Table 6-2: Block Group REC Prices (\$/REC)<sup>[1]</sup>

Block Group	Block Category		Block 1	Block 2	Block 3	
Group A (Ameren Illinois, MidAmerican, Mt. Carmel, Rural Electric Cooperatives, and Municipal Utilities located in MISO)	Small	≤10 kW	\$85.10	\$81.70	\$78.43	
		>10 - 25 kW	\$78.70	\$75.55	\$72.53	
	Large	>25 - 100 kW	\$64.41	\$61.83	\$59.36	
		>100 - 200 kW	\$52.54	\$50.44	\$48.42	
		>200 - 500 kW	\$46.85	\$44.98	\$43.18	
		>500 - 2,000 kW	\$43.42	\$41.68	\$40.02	
		Community Solar	≤10 kW	\$96.12	\$92.28	\$88.58
	Community Solar	>10 - 25 kW	\$87.07	\$83.59	\$80.24	
		>25 - 100 kW	\$70.95	\$68.11	\$65.39	
		>100 - 200 kW	\$60.47	\$58.05	\$55.73	
		>200 - 500 kW	\$55.46	\$53.24	\$51.11	
		>500 - 2,000 kW	\$52.28	\$50.19	\$48.18	
		Co-located systems exceeding 2 MW in aggregate size	\$47.03	\$45.15	\$43.34	
	Group B (ComEd, and Rural Electric Cooperatives and Municipal Utilities located in PJM)	Small	≤10 kW	\$72.97	\$70.05	\$67.25
			>10 - 25 kW	\$73.23	\$70.30	\$67.49
Large		>25 - 100 kW	\$65.61	\$62.99	\$60.47	
		>100 - 200 kW	\$53.75	\$51.60	\$49.54	
		>200 - 500 kW	\$48.07	\$46.15	\$44.30	
		>500 - 2,000 kW	\$44.64	\$42.85	\$41.14	
		Community Solar	≤10 kW	\$91.89	\$88.21	\$84.69
Community Solar		>10 - 25 kW	\$82.82	\$79.51	\$76.33	
		>25 - 100 kW	\$66.65	\$63.98	\$61.42	
		>100 - 200 kW	\$56.12	\$53.88	\$51.72	
		>200 - 500 kW	\$51.09	\$49.05	\$47.08	
		>500 - 2,000 kW	\$47.88	\$45.96	\$44.13	
		Co-located systems exceeding	\$42.59	\$40.89	\$39.25	

# Illinois Solar for All: What is it?

Designed to provide incentives for low-income project development

Leverages the Renewable Energy Resources Fund balance

- IPA counterparty to contracts using RERF
- Utility counterparty to contracts using Renewable Resources Budget

Full prepayment of REC value for 15 year REC contracts

REC prices reflect higher structure than Adjustable Block Program

- Contracts entered into similar for DG and community solar projects, with price adjustments

Managed by separate third-party administrator

- Distinct Administrator from Adjustable Block Program

# Illinois Solar for All: Four Programs

Low-income  
Distributed  
Generation  
Incentive

Low-income  
Community Solar

Public Facilities  
and Non-Profits

Low-incomed  
Community Solar  
Pilot Program

# Competitive Procurements

**Table 5-1: 2018 and 2019 Forward Procurements Summary**

Section	Procurement	Technology	Type	Procurement Date	Term	Delivery Start	Annual REC Target
5.7.1	First Subsequent Forward	Wind (utility-scale)	New	Summer 2018	15 Years	2020-2021	2 million
5.7.2	Brownfield Site Forward	Photovoltaic (brownfield site)	New	Fall 2018	15 Years	2020-2021	0.08 million
5.8.1	Photovoltaic Forward	Photovoltaic (utility-scale)	New	Fall 2018	15 Years	2020-2021	2 million minimum
5.8.2	Second Subsequent Forward	Wind (utility-scale)	New	Fall 2019	15 Years	2021-2022	1 million minimum
5.8.3	Other Renewables Forward	Any other than wind/ photovoltaic	New	To be determined	15 Years	To be determined	To be determined
5.8.4	Community Renewable Generation Program Forward	Any non-photovoltaic (with subscribers)	New	Fall 2019	15 Years	2020-2021 or later	To be determined
8.6.4	Low-Income Community Solar Pilot Project	Photovoltaic (with community participation/s ubscribers)	New	To be determined (tentatively late 2018 or early 2019)	15 Years	To be determined	Based on available budget

# Adjustable Block Program and Community Solar

- Community solar definition
  - Interconnected with utility/muni/co-op
  - In same service territory as subscribers
  - No greater than 2 MW in size
  - No subscriber more than 40% of nameplate capacity
- Community Solar constitutes no less than 25% of Adjustable Block Program (but also no more than 50%)
  - 25% (small DG)/25% (larger DG)/25% (community solar) minimum allocation
- Initial Blocks = 666 MW in aggregate
  - Divided into three sets of blocks for progressive pricing
  - Commission Order – withholds 25% of discretionary capacity
- Co-locating two 2 MW projects on the same or adjacent parcels permitted under Commission Order

# Adjustable Block Program: Project Application/Approved Vendor Requirements

- APPLICATION: Must be Approved Vendor
  - Approved Vendor process described in Plan
    - Participate in registration and complete training developed by the Agency
    - Abide by ongoing program terms and conditions
    - Be registered to do business in Illinois
    - Disclose to the Agency names and other information on installers and projects
    - Provide information to the Agency on the Approved Vendor's organizational history, capacity, financial information, regulatory status in Illinois and other states
  - Guidelines and application process published after Plan approval
  - Enrollment of Approved Vendors opening in November
  - Batch submittal scheduled to open on January 15
  - Projects submitted in batches of at least 100 kw in size



# Adjustable Block Program: Project Maturity Requirements

- Information about the system location, and size, including but not limited to
  - Description of the technical specifications of the main system components including the make and model, manufacturer, number (quantity) of panels, of panels and inverters and meters, array location (roof or ground mount), tilt, orientation, and shading percentage.
  - Site map or other project details
  - Proof of site control and/or host acknowledgement
  - Project-specific estimate of REC production during the 15-year delivery term using PV Watts or a similar tool
  - **For systems over 25 kW, a signed Interconnection Agreement**
  - **For systems over 25 kW, evidence of having obtained all non-ministerial permits that, according to the commercially reasonable investigation of the Approved Vendor, are necessary to the project at the time of application to the Adjustable Block program**
  - Shading study

# Adjustable Block Program: Additional Community Solar Project Requirements

- Community solar projects will not be required to demonstrate that they have acquired subscribers as part of their initial application. However, by the time that such systems are energized, minimum subscriber requirements must be met in order to be eligible to be paid for RECs.
- The application for a REC delivery contract for a community solar project will require the applicant to describe the proposed subscription model (e.g., typical length and structure of contract, economic terms, marketing channels, etc.) and expected mix of residential and non-residential subscribers. The Agency will assess whether the subscription model will reasonably meet program terms and conditions described in the Plan.

# Adjustable Block Program Lottery Process

- For each Block 1, projects submitted within 14 days of the program opening will be considered for that Block. If the total quantity of reviewed and approved projects submitted in Block 1 during that first 14 days exceeds 200% of the Block 1 volume, then the Agency will assess the total dollar value of projects submitted and the available (uncommitted) current and future year RPS budgets of the applicable utility. The Agency would then select, through a lottery, projects that would be included in the approval of initial batches for inclusion in Block 1.
- If after 14 days project applications would use more than 200% of Block 1 volume, then there would be a lottery to select projects. For community solar projects the following additional provisions would apply:
  - o Priority will be given to projects that propose to include at least 50% small subscribers. 50% of the available funding would be reserved for these projects.
  - Those projects will be required to meet their proposed subscription levels within one year of energization. Failure to do so would result in a 20% penalty on the total value of the REC contract.

# Current Interconnection Queue Status: Will We Need A Lottery?

- Current interconnection queue status:
  - MANY MORE SYSTEMS IN INTERCONNECTION QUEUE THAN CAPACITY AVAILABLE IN ADJUSTABLE BLOCK PROGRAM
  - Applicable to both ComEd and Ameren Illinois
- First two blocks for Community Solar in ABP (Ameren and ComEd combined): 148 MW
- Community Solar in Utilities' Interconnection Queues: Over 1000 MW
  - Almost exclusively 2 MW projects
- This oversubscription dynamic creates unique challenges
  - How many applications can utilities process?
  - How to offer interconnection cost estimates (and how to determine that project is financially viable)?
  - How to sort through interconnection queue after lottery?
  - When will projects actually be energized?

# Current Process Underway

- Lottery Guidelines Feedback & Finalization
  - Draft Guidelines Published September 10, 2018
    - <http://illinoisabp.com/wp-content/uploads/2018/09/ABP-Lottery-Procedure-draft-for-stakeholder-comment.pdf>
  - Webinar on Draft Guidelines on September 17, 2018
  - Comments on Draft Guidelines Due September 28, 2018
- ComEd Interconnection Filings
  - 18-1503: seeks to allow ComEd a “waiver of the deadline established by Section 466.120(e)(3)(D) for provision of interconnection agreements to applicants” – when agreements are given out and with a uniform effective date established for each
    - Status hearing today at 1 p.m.
  - 18-1510: allow the availability of a system map showing applicant projects
  - 18-????: seeks to establish a system to sort through the queue (i.e., attempts to filter out non-selected projects)
    - Not yet filed as of September 27, 2018
- Ameren Interconnection Filings?
  - None that we’re aware

# Key Issues in Lottery Process

- Random selection of projects?
  - Small Subscriber commitment for first 50% selected
  - Beyond that, proposal is purely at random assuming program qualifications are met
- Limitations on developer participation?
  - No limit in existing proposal
- Treatment of co-located projects?
  - Treated as separate projects in existing proposal
- Project substitution?
  - Is it allowable?
  - If so, is it allowable across multiple projects?
  - If so, by when need substitution determinations be made?
    - Interplay with interconnection cost estimate issues
- Rank all projects? Or only those “selected”?
  - Rankings binding upon future selections/lotteries?
- When is next lottery/block opening?
  - How does this interact with interconnection queue exits?

# Summary Timeline of Events to Come

- **ESTIMATED & TENTATIVE TIMELINE**

- Resolution of Key Open Issues – September through December
  - Finalize Lottery Guidelines
  - Resolution of Interconnection Queue/Agreement Issues
- Publishing Approved Vendor Requirements – October
- Beginning of Approved Vendor Registration – November
- Opening of Blocks – January 15, 2019
- 200% threshold deadline – January 29, 2019
- Project Selection Lottery – February 2019
  - Need to offer thorough review of project applications first
- Interconnection Queue Settling Out – March 2019
- Projects Moving Forward to Full Development
  - Distribution System Work for Interconnection – 2019-2020?
  - Community Solar Project Energization – 2019-2020?
- UPDATES AVAILABLE AT [www.Illinoisabp.com](http://www.Illinoisabp.com)

# Procurement of Renewable Energy Resources

## Questions?

September 28, 2018

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