

Forward Procurements Workshop

For RECs from new utility-scale wind,
utility-scale solar, and brownfield site
photovoltaic projects

June 12, 2018

Today's Agenda

- 1:00 – 1:15 Welcome and Introductions
- 1:15 – 1:30 Background on the Illinois Power Agency Procurement Approach and the Revised Illinois Renewable Portfolio Standard
- 1:30 – 2:15 Review of Initial Forward Procurements; Proposed Eligibility Requirements, Key Contract Terms, Proposal Process and Requirements for Upcoming Additional/Subsequent Forward Procurements
- 2:15 – 3:15 Discussion Items Identified by the Illinois Power Agency
- Criteria for wind projects to be “new”
 - Initial REC delivery date
 - Credit and collateral provisions
 - Key contract terms
 - Project application/maturity requirements
 - Brownfield site eligibility
- 3:15 – 4:30 Discussion of Other Issues Raised by Stakeholders
- 4:30 – 5:00 Wrap up and Next Steps

Background on the IPA

- The IPA is an independent state agency created in 2007 to address concerns about the power procurement process
- IPA prepares procurement plans and conducts procurement events
 - Designed to meet the energy supply requirements for eligible retail customers (residential/small commercial customers who do not switch to alternative suppliers, including municipal aggregation)
- Procurements administered through process outlined in the Illinois Power Agency Act and the Public Utilities Act (and as approved by the Illinois Commerce Commission through their review and approval of the Agency's Procurement Plans)

Prior Illinois RPS Structure (2008-2016)

- Utilities had annual RPS percentage requirements for eligible retail customers
 - Increasing each year to 25% by 2025
 - Through 2016 the IPA included in its annual procurement plan proposed procurements to meet those targets
- Alternative Suppliers also had a separate RPS responsibility (same percentage goals)
 - Payment of Alternative Compliance Payments for at least 50% of their load
 - Payment level designed to mirror the rate that eligible retail customers were paying for RPS compliance
 - Purchase of additional RECs (or self-supply) for the balance of RPS obligations
- IPA administers the Renewable Energy Resources Fund to purchase additional renewables resources (funds collected from alternative suppliers as a portion of their RPS compliance)

The Challenges of the Original RPS

- In reality Illinois had multiple RPSs
- Retail choice meant that customers could switch back and forth between utility service and alternative suppliers leading to budget and target uncertainties
 - Large wave of municipal aggregation starting in 2011 led to the majority of eligible retail customer load leaving utility service
 - Curtailment of ComEd long-term contracts in 2013 and 2014
- The Renewable Energy Resources Fund encountered challenges as funds were redirected to other purposes, and the wording of the law constrained its use

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 with longer-term planning
- New programs for photovoltaic distributed generation, community solar, and solar for low-income households and communities
- Expands and consolidates state energy efficiency portfolio standard
- Establishes a zero emission standard to support the continued operation of at-risk nuclear facilities

Public Act 99-0906: Structural Changes to RPS

- Consolidation of three prior compliance mechanisms into one mechanism (funded via delivery services charge)
 - Alternative Retail Electric Suppliers
 - Default Supply
 - Hourly Pricing Customers
- Expansion of Illinois RPS targets to cover all retail customer load
 - Goal of 25% by 2025, with incremental growth to that point
 - New Quantitative Targets for RECs from New Build
- Utilization of separate Long-Term Renewable Resources Procurement Plan for proposing programs and procurements to meet goals
 - Initial Forward Procurements as interim process to spur wind and solar development while Plan being developed/approved
- IPA procurements are for Renewable Energy Credits (“RECs”) only
 - Net metering for DG customers; bill off-set for community solar customers
 - Off-take agreements for utility-scale projects. Not state-facilitated

Overview of RPS Responsibilities

Illinois Power Agency

- Development of Long-Term Renewable Resources Procurement Plan
- Competitive Procurements
 - Utility-scale
 - Brownfield Solar
- Programs
 - Adjustable Block Program
 - Illinois Solar for All Program

Utilities

- Contractual counterparties
- Job training funding
- Net metering
- Smart Inverter Rebates

Illinois Commerce Commission

- Approval of Long-Term Plan
- Approval of procurement event results and program contracts
- Installer certification
- ARES compliance

Long-Term Renewable Resources Procurement Plan Development Timeline

- Public Act 99-0906 enacted in December 2016, took effect June 1, 2017
- IPA held stakeholder workshops in May 2017 and issued Request for Comments in June 2017
- IPA released draft Plan for public comment on September 29, 2017
- IPA filed Plan for ICC Approval on December 4, 2017 (Docket 17-0838) and Parties offered Objections to the Plan, then there were Responses and Replies to refine positions
- Administrative Law Judge issued Proposed Order on February 26, 2018 followed by parties filing Briefs on Exceptions and Reply Briefs on Exceptions
- ICC issued Final Order on April 3, 2018

New Programs (Not Being Discussed Today)

- Adjustable Block Program
 - Community Solar and Photovoltaic Distributed Generation Projects (under 2 MW)
 - Set REC prices rather than pay-as-bid RFP process
 - REC payments front loaded rather than paid over 15 years
- Illinois Solar for All Program
 - Incentives for low-income households and communities
 - Set asides for Environmental Justice Communities
- More Information coming soon
 - IPA in the process of selecting new Program Administrators

Competitive REC Procurements: Proposed vs. Approved

- Forward Procurements
 - New Wind, 2018
 - ICC Order increased volume from 1 million to 2 million RECs
 - Brownfield Solar, 2018 (80,000 RECs)
 - Utility Scale Solar, 2019
 - ICC Order increased volume from 1 million to 2 million RECs, will be held in 2018
 - New Wind, 2019 (1 million RECs)
 - Other New Renewables, 2019
 - ICC Order postponed; to be considered in Plan update developed in 2019
 - Non-solar Community Renewables, 2019
 - Low-Income Community Solar Pilot Projects, TBD
- Spot Procurements proposed by IPA to meet annual RPS Percentage Targets
 - ICC Order cancelled Spot Procurements

Goals for Today

- NERA Economic Consulting (IPA's Procurement Administrator) will provide an overview of the upcoming Forward Procurements
 - Review structure of Initial Forward Procurements used as basis for the Forward Procurements
 - Describe proposed project eligibility, contract terms, and proposal requirements
- IPA has flagged six issues for discussion where it desires stakeholder input
- Stakeholders will be invited to suggest additional discussion items
- IPA expects to issue a post-workshop request for comments based on today's discussion

A decorative horizontal bar at the top of the slide. It features a solid dark blue background on the left and right. In the center, there is a cluster of 3D cubes in various shades of blue and yellow, creating a sense of depth and modernity.

Upcoming Forward Procurements – Utility Scale Wind/Solar & Brownfield

Project Eligibility, Contract Terms, and
Proposal Requirements

Ben Chee, Director
Katie Orlandi, Consultant

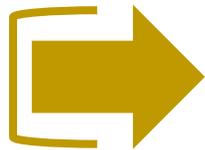
12 June 2018 – Chicago, Illinois



- Initial Forward Procurements and Upcoming Forward Procurements
- Contract Terms
- Project Eligibility
- Proposal Process and Requirements



After this presentation, the discussion portion of the workshop will begin and participants can comment on any aspect of the upcoming forward procurements.



Discussion items identified by the IPA are flagged with this symbol throughout the presentation

Participants will have the opportunity to raise additional issues in the workshop and in written comments

A decorative horizontal bar spanning the width of the slide. It features a solid dark blue background on the left and right, with a central section containing several 3D cubes. One cube is highlighted in a bright yellow, while the others are in various shades of blue, creating a sense of depth and perspective.

Forward Procurements: Overview

Key Features of the Initial Forward Procurements



- **Initial** Forward Procurements sought **15-year** REC delivery contracts
- Fixed price, REC-only contracts
- **Initial delivery date** for RECs set by the Act to be no earlier than June 1, 2019, but no later than June 1, 2021
- Inability of project to deliver first REC by June 1, 2021 would result in contract termination

Full documentation available on procurement website:

<https://www.ipa-energyrfp.com/2017-2018-initial-forward-procurements/>

Initial Forward Procurements are Complete



- Commission approved the result of all **three events** held under the Initial Forward Procurement

RESULTS

Date	Project Types	Targets	Results	
			Average price (\$/REC)	#winning sellers
9/7/2017	<ul style="list-style-type: none"> Wind Solar and Brownfield 	<ul style="list-style-type: none"> 1,000,000 wind RECs 200,000 solar RECs 	\$5.26	<ul style="list-style-type: none"> 3 wind 1 solar
3/21/2018	Solar and Brownfield	400,000 RECs	\$6.07	2
5/2/2018	Solar and Brownfield	400,000 RECs	\$5.01	2

Commission Approved Holding Further Forward Procurements



- The Commission has approved the following **quantities in 2018**:
 - 2 million RECs from new utility-scale wind projects
 - 2 million RECs from new utility-scale solar projects
 - 80,000 RECs from new brownfield site photovoltaic projects
- Unlike the Initial Forward Procurement, there is a **quantity set aside for new brownfield** site photovoltaic projects
- These events are **different and separate** from the Adjustable Block program where prices are administratively set (not determined through competitive procurements)

Initial Forward Procurement Model Serves as Starting Point



- The procurement design (including the contract terms and proposal requirements) will evolve from that starting point on the basis of comments and experience with the Initial Forward Procurement events
- The Initial Forward Procurements were held prior to the IPA's development of the Long-Term Renewable Resources Plan and prior to the Commission Order on the Plan, which provide new details on specific eligibility requirements
- Some features of the Initial Forward Procurement were specified in the Act, but the Act does not prescribe that these features be carried through to the other Forward Procurements

Key Contract Concepts



Elements Specified in the Act Include Project Types and Sizes



- **Utility-scale wind**
 - more than 2 MW (AC rating)
- **Utility-scale solar**
 - more than 2 MW (AC rating)
- **Brownfield site photovoltaic**
 - No minimum size
- Also, project **cannot be** a generating unit whose costs are being **recovered through rates** regulated by Illinois or by another state

Basic Features



- **15-year** REC delivery contract associated with a particular project
 - 15-year term begins with the delivery of the first REC
- Seller is paid a **fixed price** per REC
 - Same price for all RECs
 - No escalator
- Seller is paid **only for RECs** and not energy
 - Energy can be sold separately through an off-take agreement or on the wholesale market at the Seller's option
- Seller has a contract with each of the three utilities

Project Must Be “New”



Solar / Brownfield Projects

- Energized after June 1, 2017
- This requirement also applied to the Initial Forward Procurements

Wind Projects

- As specified in the Act, **energized no later than** three years after Commission decision on procurement event
- **A date before which the project could not have already been energized** is not specified in the Act
- However, such a date should be specified to be consistent with intent of Act to incent new generation
- The IPA solicits input on what such a date would be



Initial Forward Procurement

- No earlier than June 1, 2019
- No later than June 1, 2021
- Failure to meet “no later than” date would result in contract termination because the dates were hard-coded in the Act

Upcoming Fwd Procurements

- The same requirements **do not** apply
- No requirement for a “no earlier than” date – this design feature appears unnecessary subject to stakeholder comments
- Several elements can inform a “no later than” requirement:
 - Design expected to increase likelihood of REC deliveries in 2020-2021 delivery year
 - For wind projects, project would no longer be new 3 years after Commission decision and thus first delivery would have to occur before then
- IPA seeks input on delivery start





Initial Forward Procurement

- Project meets “Annual Quantity” each year except first year the obligation is to deliver 50%
- All RECs from the project delivered to Illinois utilities before RECs can be sold elsewhere
- Failing to meet the Annual Quantity in three or more Delivery Years leads to contract termination if amount of shortfalls exceeds Annual Quantity
- Banking: if project produces more RECs in a year, seller use these to deal with any shortfalls in later years of contract
- No replacement RECs

Upcoming Fwd Procurements

- The approach from the Initial Forward Procurement was reached after several opportunities for comments at workshop and through the contract comment process
- The IPA will continue to seek input from stakeholders on those key provisions



Initial Forward Procurement

- Contract value = Annual Quantity times the bid price/REC
- Collateral Requirement is based on the annual contract value
 - Before June 1, 2019: 50% of annual contract value
 - On or after June 1, 2019: 100% of annual contract value
- Subject to \$50,000 minimum for each utility through the first 10 delivery years
- Unsecured credit granted to entities that are investment grade
- Cash or standard form of letter of credit or guaranty used to post performance assurance

Upcoming Fwd Procurements

- The approach could yield low level of financial assurances for a sufficiently low winning bid price
- The IPA is seeking views on the approach



Project Eligibility



Additional Requirements for Brownfield Site Photovoltaics

- The Act specifies that brownfield projects must be
 - **Interconnected** to an electric/municipal/public utility or cooperative
 - At a site regulated by EPA's Comprehensive Environmental Response and Liability Act of 1980 as amended; or EPA's Corrective Action Program Compensation federal Resource Conservation and Recovery Act; or IEPA's Solid Waste Program; or IEPA's Site Remediation Program
- Commission has decided that brownfield sites in the IEPA's Site Remediation Program will face **additional requirements** to show that such site currently feature or featured actual blight or contamination prior to remediation
- The IPA is developing these additional requirements and seeks stakeholder input

Set-aside quantities for brownfield in the upcoming forward procurements

Eligible Locations Determined by Act and IPA's Point System



- **Illinois projects** will be eligible
- **Projects in adjacent states** (Wisconsin, Iowa, Missouri, Kentucky, Indiana, and Michigan) will be eligible as long as the facility meets the public interest criteria in the Act
- The IPA makes a determination whether a project satisfies those public interest criteria using the **point system** proposed by the IPA and **approved by the Commission**
- If an adjacent state project receives a **score of at least 60** then the project's RECs are eligible for compliance with the Illinois RPS and the project may be presented in a forward procurement event

See Chapter 4 of the IPA's Long-Term Renewable Resources Procurement Plan for Full Details

IPA's Point System for Adjacent State Projects



NERA
ECONOMIC CONSULTING

Public Interest Criterion

1. Minimizing sulfur dioxide, nitrogen oxide, particulate matter and other pollution that affects public health in Illinois
2. Increasing fuel and resource diversity in Illinois
3. Enhancing reliability of the electricity distribution system in Illinois
4. Meeting goals to limit carbon dioxide emissions
5. Contributing to a cleaner and healthier environment for the citizens of Illinois

Proxy Measure

1. SO₂ and NO_x emissions compared to new natural gas-fired generating facility, weighted by a wind duration and direction factor
2. Distance to Morris IL compared to furthest point in an adjacent state
3. Whether in PJM and MISO and distance to Morris IL
4. CO₂ emissions compared to new natural gas-fired generating facility
5. Average of 1 and 4

Calculations are simpler for wind and solar (no emissions)
Methodology extends to combustion sources of renewables

A decorative horizontal bar at the top of the slide. It consists of a solid dark blue section on the left, a central section containing several 3D cubes in various shades of blue and one yellow cube, and a solid dark blue section on the right.

Proposal Process and Requirements

Structure of Proposal Submission Process Common to all IPA Procurement Events



- Each proposal consists of two (2) parts:
 1. **Part 1 Proposal:** response to qualification standards
 2. **Part 2 Proposal:** includes the bid and bid assurance collateral
- Bids are submitted on a designated “Bid Date” once the Part 1 and Part 2 Proposals are complete
- Bidders are given time to cure any deficiencies with their submissions
- For the forward procurement of RECs, a “Proposal” is associated with **a specific Project**



Initial Forward Procurement

- **Bid Participation Fee** of \$500 for Bidders that have not paid this fee yet in 2018
- **Contact information** for entity submitting proposal and entity who would be the seller under the contract
- Information to show the project meets the **eligibility requirements**
- Seller **accepts terms** of the standard contract and the RFP
- Assessment of **project maturity** by requiring interconnection agreement or, if unavailable, proof of site control



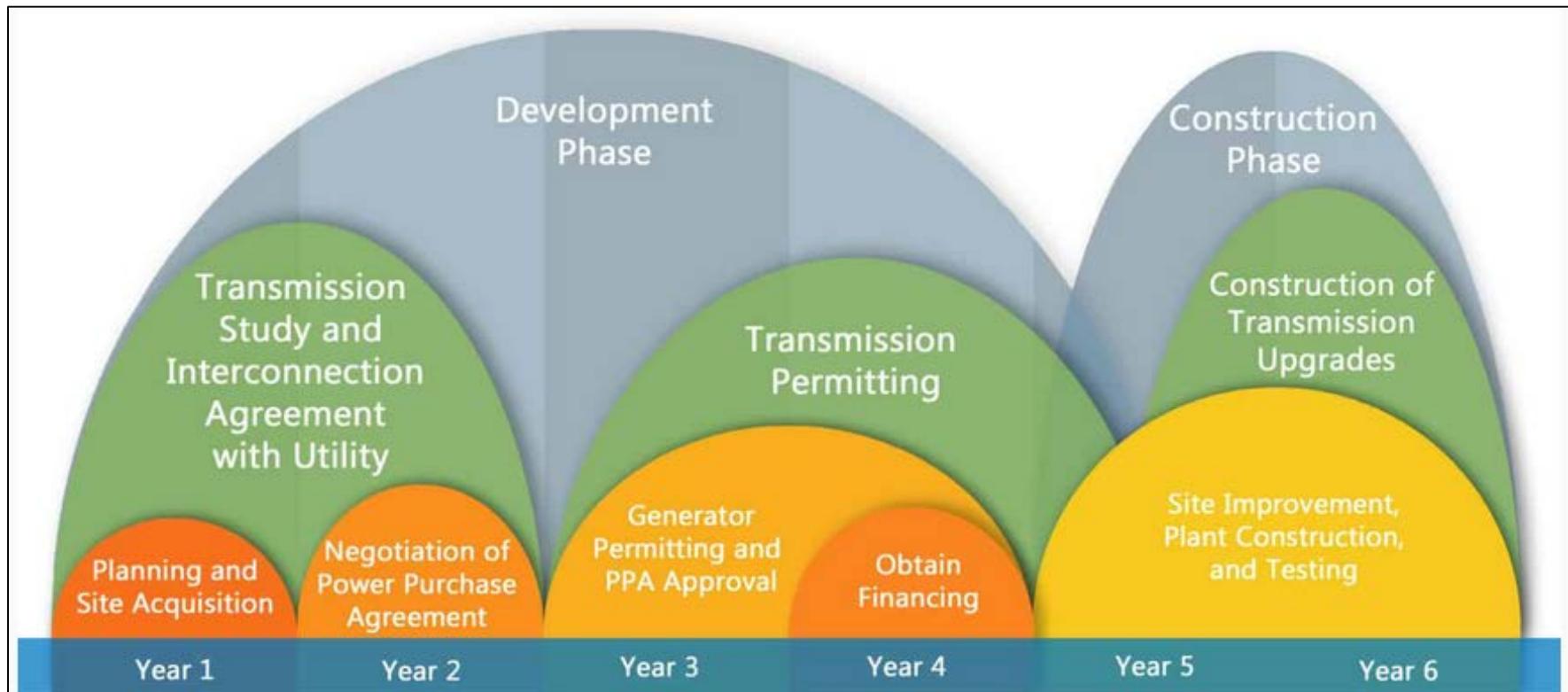
Upcoming Fwd Procurements

- Approach designed to increase likelihood that project will be developed in the desired timeframe and that seller can meet the obligations of the contract
- Proof of site control can be onerous especially for wind projects
- Proof of site control early in the development timeline
- Alternative milestone to show adequate project maturity, such as a letter of intent from a lender to finance a portion of the capital cost of the project, may be more appropriate
- The IPA is seeking input on appropriate milestone

Project Maturity Timeline



- Initial forward requirement asked for interconnection agreement and, if unavailable, for proof of site control
- Some differences may exist across technologies



Notes & Sources:

1 <https://www.seia.org/research-resources/development-timeline-utility-scale-solar-power-plant>

Central Part 2 Proposal Requirement: Bid Assurance Collateral



Initial Forward Procurement

- **Bid assurance collateral** must be provided in the form of cash or a pre-bid letter of credit
- Bid assurance collateral is a function of the **project size** and is subject to a ceiling that depends on the total number of RECs procured

Company	Wind	Solar/ Brownfield
	Amount /MW	
AIC	\$1,600	\$4,000
ComEd	\$4,000	\$10,000
MEC	\$400	\$1,000

Upcoming Fwd Procurements

- Ability to post bid assurance collateral by one of two methods not expected to change
- Amount of bid assurance collateral related to level of collateral requirement during the contract term – should provide assurance that collateral requirement will be met by the seller upon contract start
- The IPA is seeking comments on the approach – noting that the approach will adapt to final collateral requirements under the contract, which are themselves subject to stakeholder comment



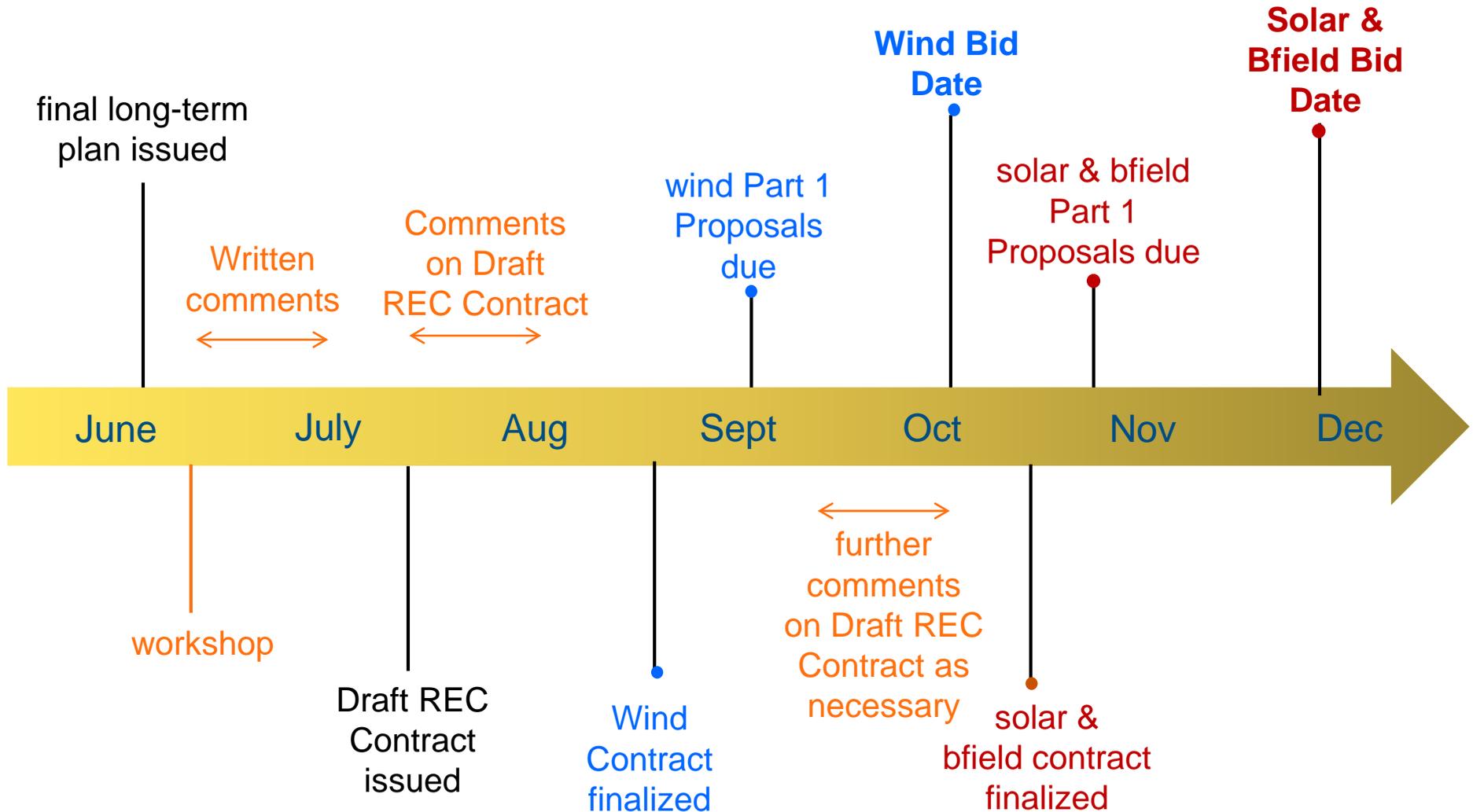
A decorative horizontal bar at the top of the slide. It consists of a solid dark blue section on the left, followed by a square inset containing several 3D cubes in various shades of blue and yellow, and a solid dark blue section on the right.

Timeline and Opportunities to Comment --- Discussion

Timeline and Opportunities to Comment



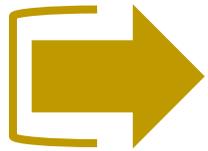
NERA
ECONOMIC CONSULTING



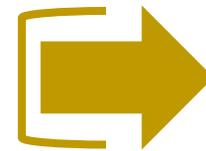
Discussion Items



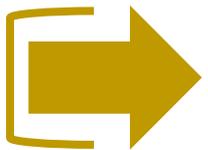
Please also provide your suggestions for other topics not listed below



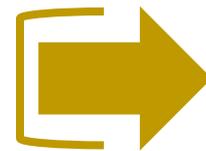
Criteria for wind projects to be “new”



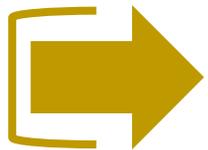
Key Contract Terms



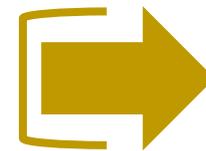
Latest initial delivery date under Contract



Assessment of Project Maturity



Credit and Collateral Provisions



IEPA Brownfield Site Eligibility Requirements