

State of Illinois Integrated Resource Plan (IRP) + Resource Adequacy Mitigation Plan

Stakeholder Workshop: Scenarios

April 2026



Energy+Environmental Economics

Viridis
CONSULTING

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Meeting Participation Guidelines

- + Please introduce yourself in the chat and include your name and organization
- + Actively participate
 - Time for questions has been set aside at the end of the presentation. If you have a question or comment about a particular slide, please make note of that slide number in your question
 - Please use the Raise Hand feature to ask a question, provide feedback and comments – unmute when a moderator calls on you and please share your name and organization when you speak
 - You can also use the Chat feature which will be moderated
- + Be respectful of other people's perspectives
- + Stay concise to allow time for everyone to participate
- + Post-Meeting Feedback
 - Workshop Comment Form: link will be provided at the end of this workshop
- + This meeting is being recorded. Recording will be posted on the [ICC Integrated Resource Plan Website](#)



Agenda

Topic	Time
Objectives of the Illinois IRP and Mitigation Plan	10 min
Stakeholder responses on scenarios for IRP / Mitigation Plan	5 min
Proposed approach to scenario design	10 min
Proposed scenarios for IRP / Mitigation Plan	15 min
Next steps for feedback	5 min
Stakeholder Q&A and discussion	45 min

Objectives of the Illinois IRP and Mitigation Plan



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Illinois Planning Ecosystem

- + Illinois has several planning studies taking place across Illinois State Agencies
- + These studies use a common set of inputs as a foundation and work toward a set of coordinated actions
- + In stakeholder comments, there was broad consensus that agencies should work to coordinate the Mitigation Plan and IRP to reduce redundant processes
- + This year, the Mitigation Plan will form part of the IRP with analysis and a chapter dedicated specifically to near-term needs



CRGA Requires the IRP to Address Six Key Areas

Illinois law directs the Illinois Commerce Commission, in consultation with other agencies, to develop an IRP that evaluates how the State can maintain a reliable, affordable, and clean electric system over time.

Load and System Outlook 	Resource Adequacy and Reliability 	Evaluation of Resource Options 	Scenario Analysis 	Cost and Consumer Impacts 	Environmental and Policy Outcomes 
<ul style="list-style-type: none"> Forecast future electricity demand and peak load Consider impacts of electrification, economic growth, and large new loads Identify expected resource retirements and additions 	<ul style="list-style-type: none"> Assess whether sufficient resources are available to maintain reliability Evaluate potential capacity shortfalls and system constraints relative to the system changes over time 	<ul style="list-style-type: none"> Analyze potential roles for clean energy resources, storage, demand response, and transmission Assess how different resources could meet future system needs 	<ul style="list-style-type: none"> Evaluate multiple scenarios reflecting different assumptions about demand, technology development, and resource availability 	<ul style="list-style-type: none"> Assess total system costs and customer cost impacts Evaluate tradeoffs between cost, reliability, and environmental outcomes while factoring in equity impacts and opportunities. 	<ul style="list-style-type: none"> Evaluate emissions impacts and environmental outcomes Identify strategies that support Illinois clean energy and reliability goals

Objectives of the Illinois IRP and Mitigation Plan

Illinois law establishes two related planning processes to help ensure the power system remains reliable while the State transitions to cleaner energy.

Mitigation Plan

Objective: Address reliability risks identified in Resource Adequacy Study.

- Maintain reliable electric service
- Identify practical actions that can reduce or resolve identified shortfalls under different scenarios
- Prioritize low-emissions solutions
- Allow limited flexibility in emissions timelines only if necessary to maintain reliability.
- Provide a transparent process for agencies and stakeholders to review potential reliability solutions.



Focus: addressing reliability risks with practical mitigation strategies focused on 2026-2035.

Integrated Resource Plan

Objective: Develop a strategy for a reliable, affordable, and clean electric system in Illinois.

- Assess long-term capacity requirements and system constraints to ensure reliable service
- Evaluate different pathways for meeting identified needs
- Analyze system costs, reliability, and environmental impacts under different scenarios.
- Provide strategic guidance for future planning and investment decisions.

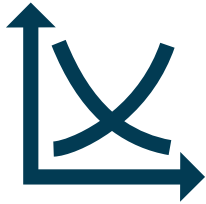


Focus: resource planning for the evolution of the Illinois electric system from today through 2045.

Outside of the Scope of the IRP and Mitigation Plan

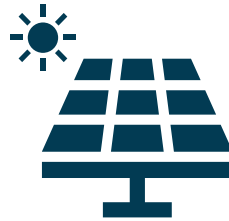
The Mitigation Plan and IRP help identify system needs and possible solutions. Other regulatory, market, and legislative processes determine how those solutions are implemented.

Changes to Regional Capacity Markets and RTO rules



- + The Mitigation Plan and IRP do not change how PJM or MISO operate (capacity markets, interconnection, etc.), but they can inform RTO planning.
- + RTO market reforms are made by PJM, MISO, and the Federal Energy Regulatory Commission.

Approval of Specific Projects



- + The plans evaluate system needs and potential resource types, not individual projects.
- + Decisions about specific projects occur through separate regulatory, permitting and procurement processes.

Changes in Illinois Policy (Limited Authority)



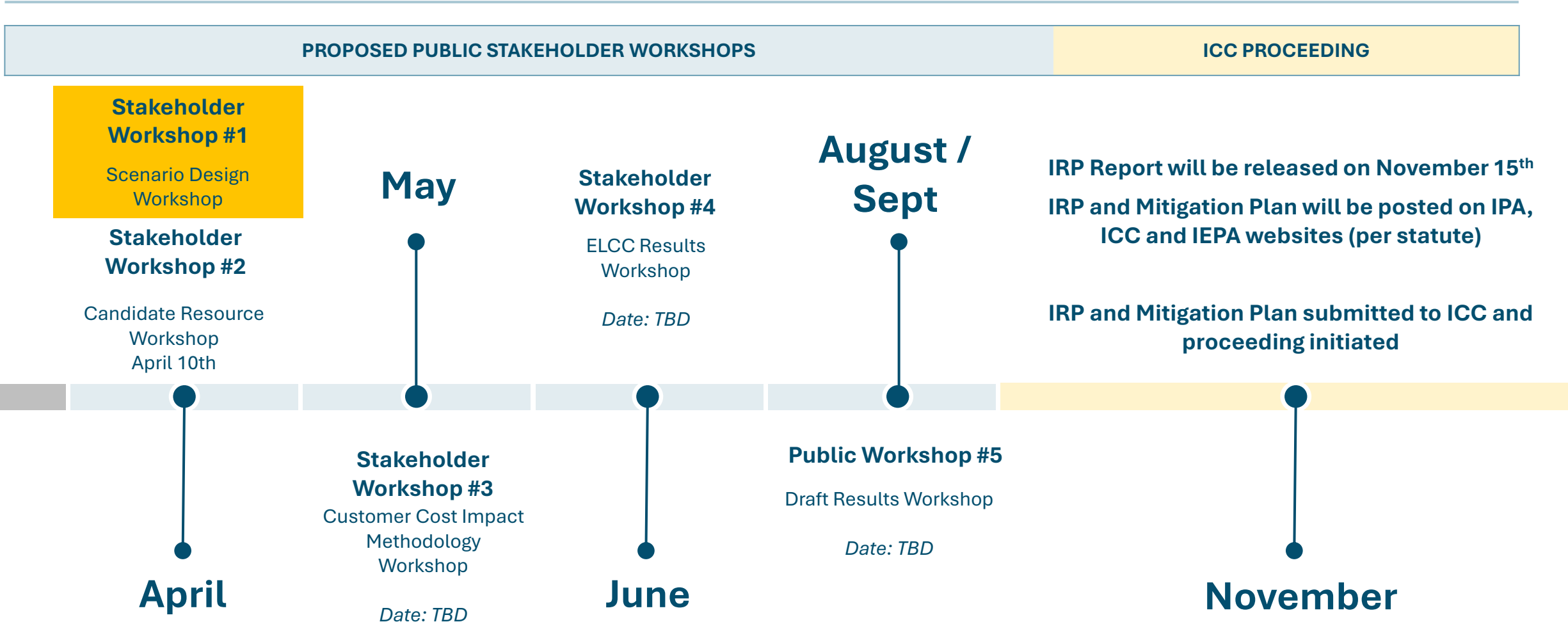
- + The Mitigation Plan and IRP operate primarily within existing Illinois law. The plans may test certain policy changes to inform planning decisions.
- + In the IRP proceeding, the Commission may modify certain policies as authorized.

Typical Data Requirements in IRPs and Sources

The IRP will draw on a wide variety of public data sources.

Category	Data Items		Source
Load forecasts	<ul style="list-style-type: none"> Annual and peak demand Large load growth 	<ul style="list-style-type: none"> Demand-side adoption Load electrification* 	RTOs, utilities, IRP modeling
Existing Resources	<ul style="list-style-type: none"> Operational parameters Costs (variable, fixed) Planned additions 	<ul style="list-style-type: none"> Emissions Retirement dates <p>CEJA-driven retirements will be considered in scenarios</p>	EIA, commercial data services (Hitachi, S&P, etc.)
Candidate Resources	<ul style="list-style-type: none"> Technology types Costs (capital, variable fixed) 	<ul style="list-style-type: none"> Operational characteristics Available potential and timing Emissions 	National labs, EIA, commercial data services
Markets	<ul style="list-style-type: none"> Market representation Zonal topology 	<ul style="list-style-type: none"> Energy price forecasts Capacity price forecasts 	RTOs, forecast providers, IRP modeling
Fuels	<ul style="list-style-type: none"> Fuel types & prices 		EIA, market data
Transmission	<ul style="list-style-type: none"> Interconnection capacity 	<ul style="list-style-type: none"> Constraints* 	RTOs, utilities
Reliability	<ul style="list-style-type: none"> PRM requirements 	<ul style="list-style-type: none"> Resource accreditation (ELCCs) 	RTOs, IRP modeling
Policies	<ul style="list-style-type: none"> Clean energy targets 	<ul style="list-style-type: none"> Federal policies 	State policies
Financial Assumptions	<ul style="list-style-type: none"> Discount rate Depreciation assumptions 	<ul style="list-style-type: none"> Inflation rate 	National Labs, RTOs, market data, FERC

2026 Proposed Stakeholder Meetings for IRP and Mitigation Plan



Stakeholder Responses on Scenarios for IRP / Mitigation Plan



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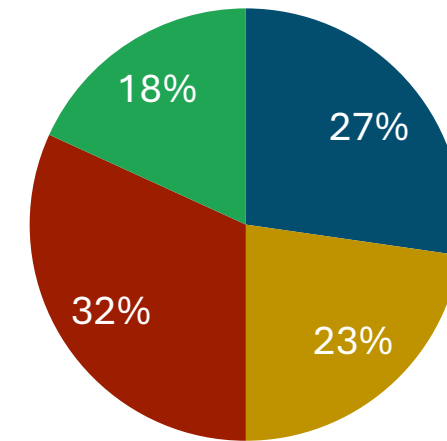
22 Stakeholders Responded to ICC and IPA IRP Questionnaires

Respondents spanned clean energy advocates, generation owners and developers, transmission developers, utilities and consumer representatives

Respondents

- + Advanced Energy United
- + Ameren Illinois
- + American Council for an Energy-Efficient Economy (ACEEE)
- + Clean Grid Alliance
- + Climate Jobs IL
- + Commonwealth Edison
- + Constellation
- + CWLP
- + Earthrise Energy, PBLLC
- + Form Energy, Inc.
- + Illinois Farm Bureau
- + Illinois Clean Jobs Coalition (ICJC) Member Organizations
- + Illinois Industrial Energy Consumers
- + Illinois Manufacturers' Association
- + Invenergy
- + Midwest Energy Efficiency Alliance
- + Northern Illinois Gas Company d/b/a Nicor Gas Company
- + People's Gas & North Shore Gas
- + SOO Green HVDC Link
- + The Coalition to Request Equitable Allocation of Costs (REACT)
- + Vistra Corp
- + Zenobe Americas

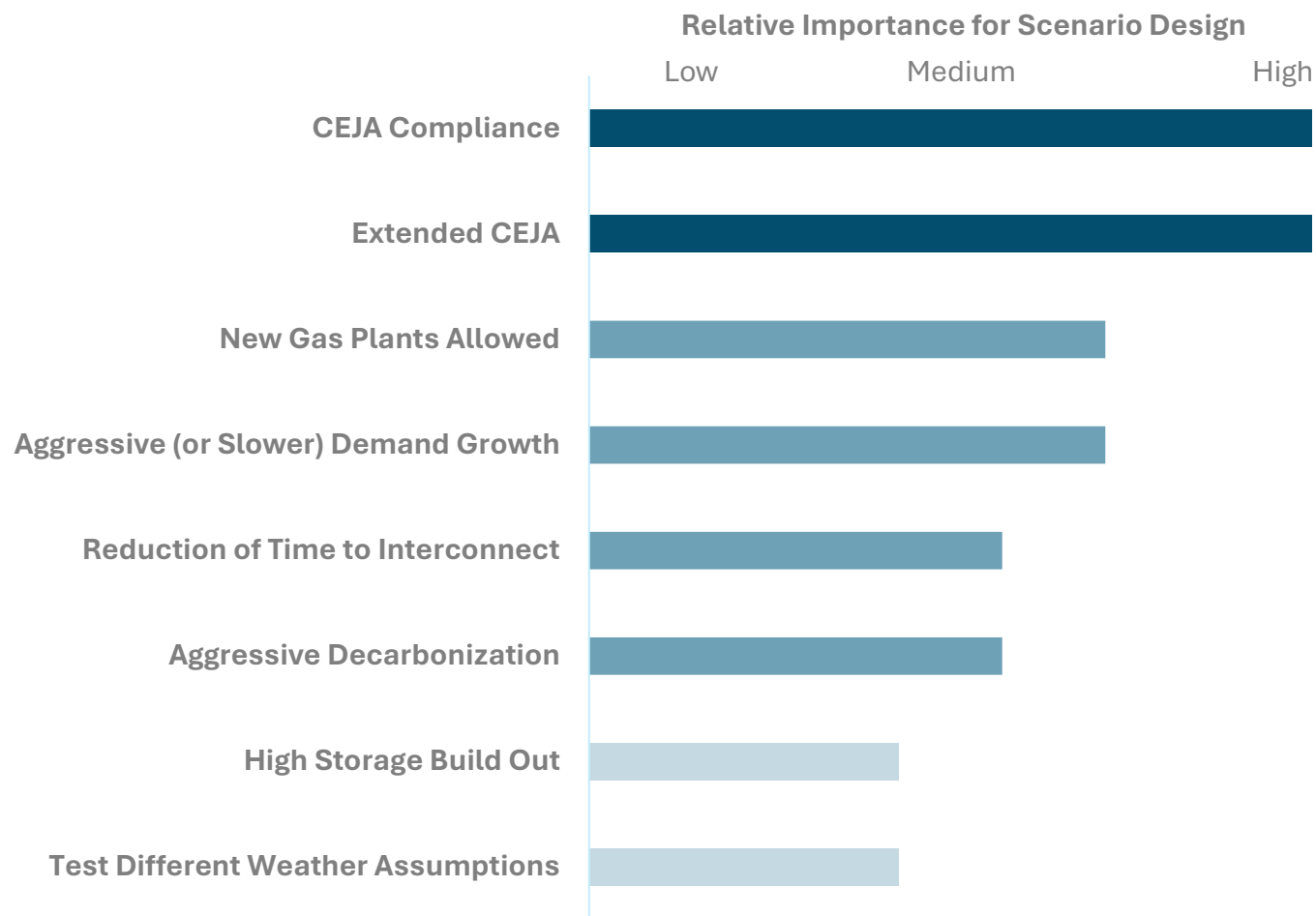
Breakdown of respondents by category



- Clean Energy & Policy Advocate
- Utility
- Energy Developers & Power Producers
- Consumer & Industry Representatives

Stakeholders Identified CEJA Compliance or Extension, New Gas Generation, and Demand Growth as the Most Important Scenarios

Stakeholder Priorities: Scenario Drivers for the IRP



- + This includes responses from ICC and IPA questionnaires about scenario preferences
- + Respondents combined some of the scenarios to form aggregated “aggressive” or “mild” scenarios
- + Respondents were interested in both high and low demand growth scenarios

Stakeholders Ranked CEJA Compliance or Extension, New Gas Generation, and Demand Growth as the Most Important Scenarios

- + Most respondents highlighted the importance of CEJA retirement schedule, whether new gas was allowed, and the storage budget as the most important scenario drivers
- + Many respondents selected interconnection timing as one of their top 3
- + Respondents listed renewables and EE budgets with a lower level of importance

Summary of responses to ICC Question 1b: Please rank in order of importance as scenario driver*

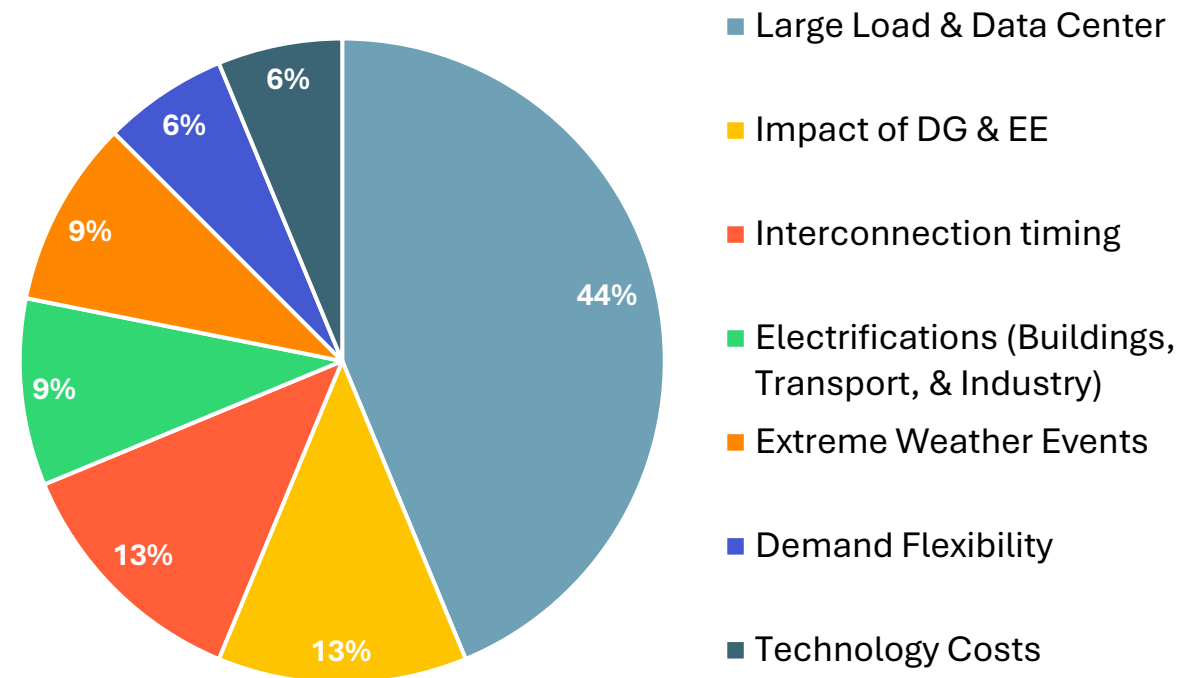
	CEJA retirement schedule vs extension beyond	New IL gas allowed vs no new IL gas	Storage portfolio budgets vs expanded	Renewables portfolio budgets vs expanded	EE portfolio budgets vs expanded	Interconnection timing vs elimination of
Percent of respondents rating 5	53%	50%	7%	14%	8%	31%
Percent of respondents rating 4	7%	14%	50%	21%	23%	23%
Percent of respondents rating 3	20%	7%	14%	21%	23%	23%
Percent of respondents rating 2	0%	21%	14%	29%	15%	8%
Percent of respondents rating 1	20%	7%	14%	14%	31%	15%

*Rating of 5 was most important and Rating of 1 was least important

Stakeholders Focused on Large Loads, Followed by Distributed Generation, Energy Efficiency, and Interconnection Timing

- + Several respondents also referenced the importance of analyzing the geographic clustering of large loads and data centers
- + Demand flexibility and the impact of distributed generation and energy efficiency were the next most commonly listed demand drivers
- + Several respondents noted that the IRP should also analyze customer behind the meter generation (BTM) adoption as part of demand flexibility

Percent of respondents* mentioning these topics as important for demand sensitivity



*From ICC Questionnaire on Demand Sensitivity and IPA Questionnaire on Load Growth Forecasts

Proposed Approach to Scenario Design



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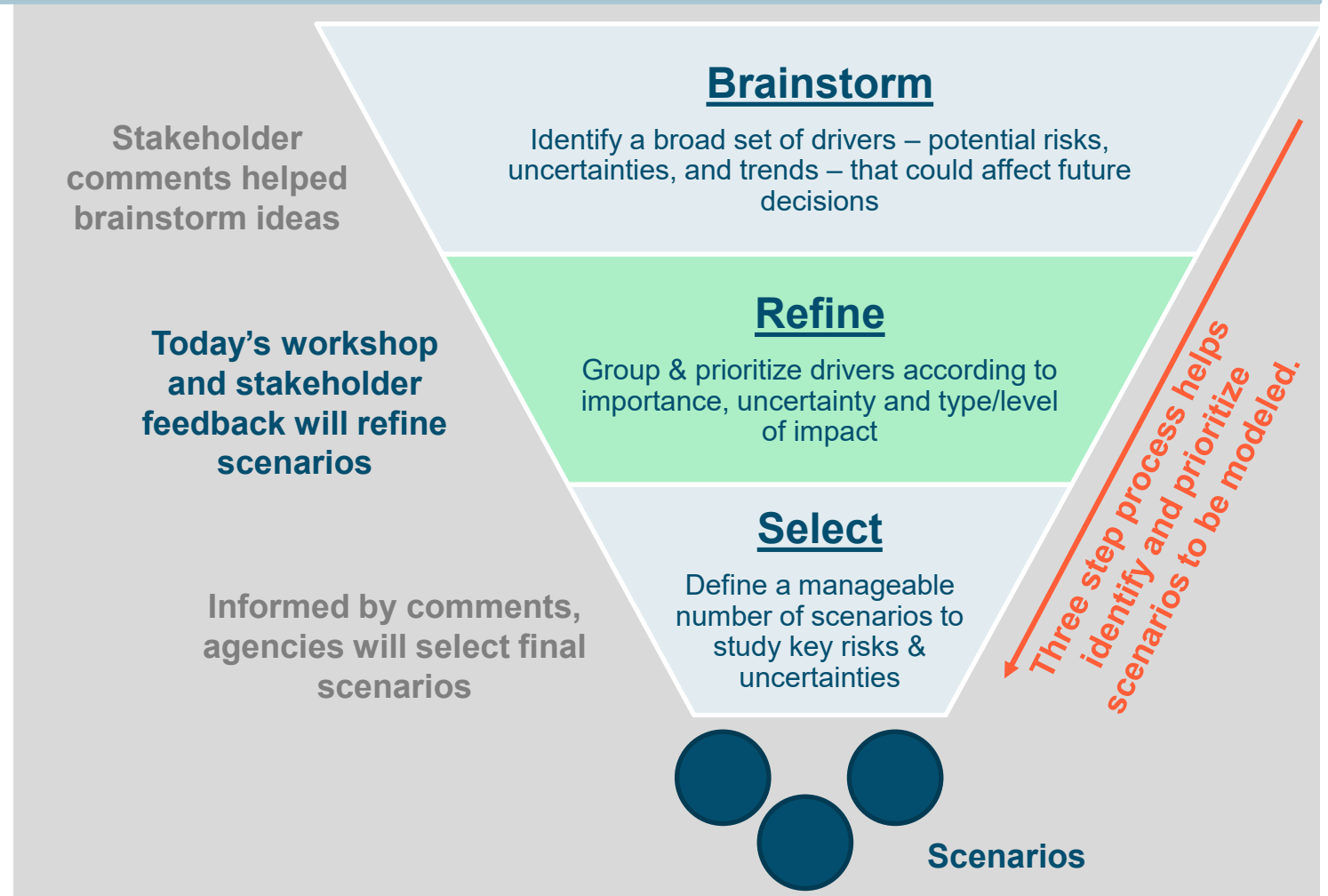
Scenario Development Process

This process moves from broad brainstorming of key uncertainties to a refined set of scenarios that can be evaluated through quantitative modeling.

+ Goals for scenario development:

- Capture a diverse set of distinct future outcomes
- Provide support for clear and easy-to-understand decisions by the State
- Incorporate factors that can be studied quantitatively using available analytical tools

+ Most effective frameworks for scenario development begin with broad brainstorming and eventually narrow focus to a set of core scenarios for modeling.



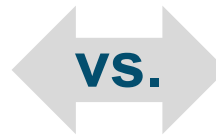
Scenarios Should Test Policy and Portfolio Decisions Against Combinations of High Impact, High Uncertainty Factors

A scenario is a combination of policies and external forces representing one view of the future system.
A sensitivity is a change in one variable from a scenario to test the isolated impact of this variable.



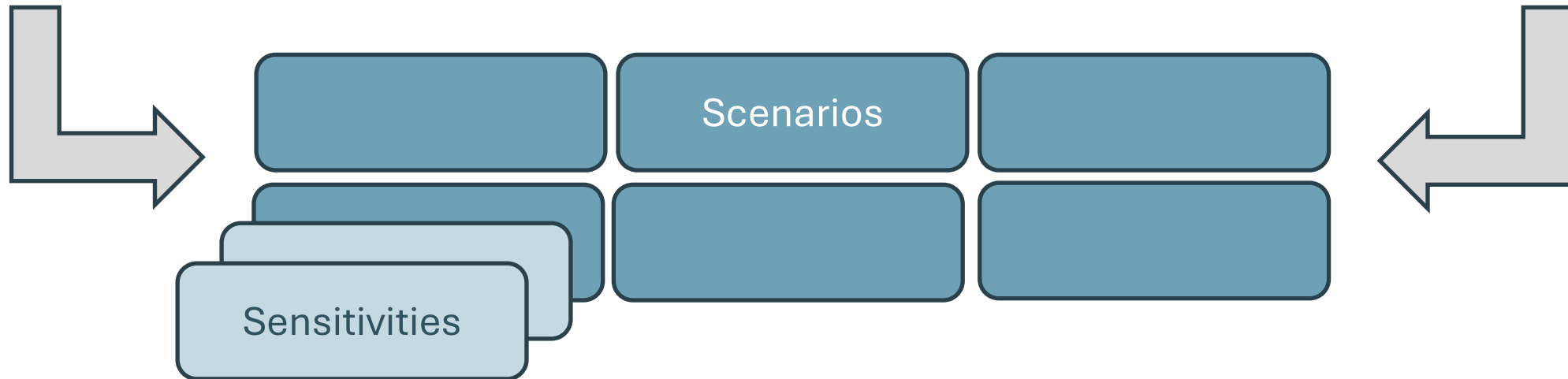
Policy Decisions

Future choices made by the State of Illinois to meet objectives



External Forces:

Certain or uncertain variables outside of Illinois's control





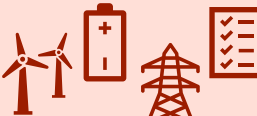



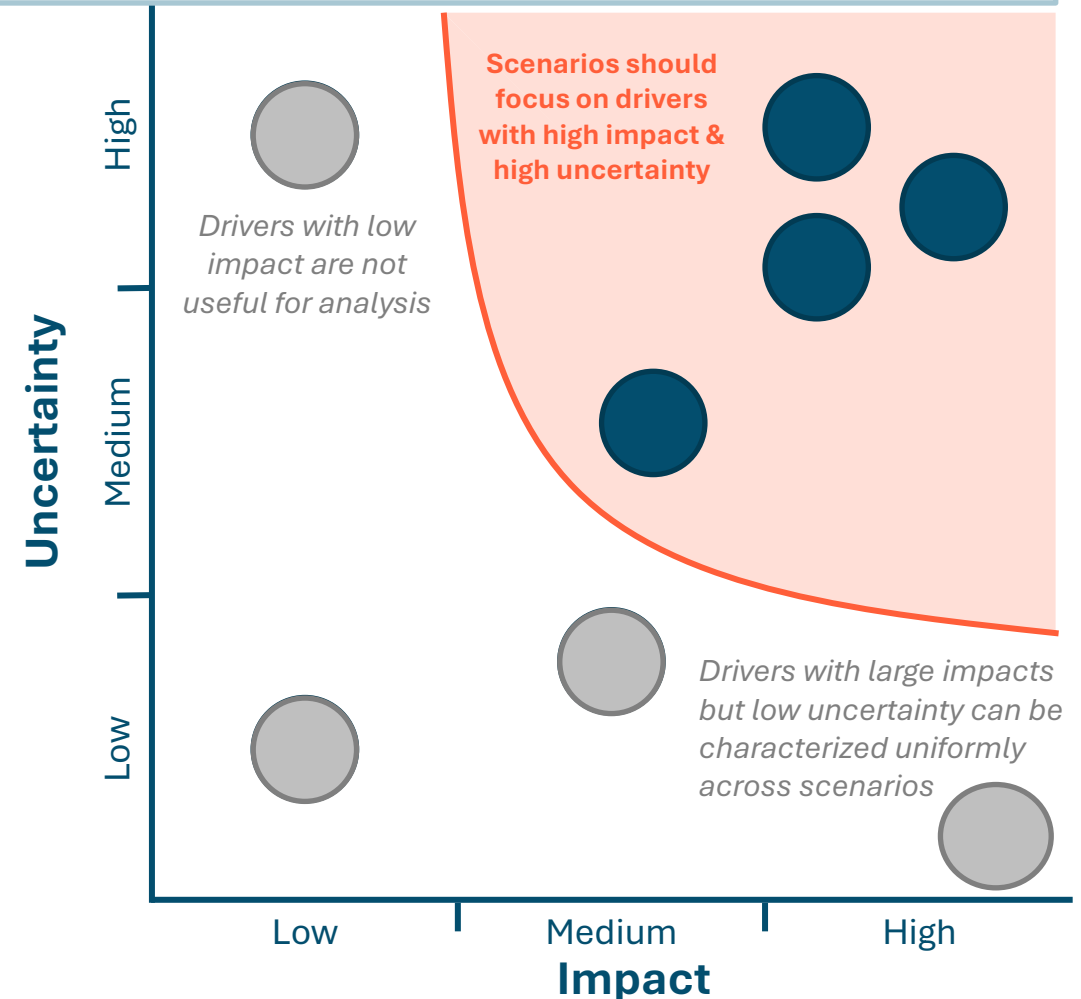
Sensitivity Analysis

Variation of a single parameter or variable within a scenario to understand its impact on key metrics

Scenarios Should Test Policy and Portfolio Decisions Against Combinations of High Impact, High Uncertainty Factors

Scenarios will explore key dimensions of policy decisions and external forces that represent a range of plausible futures, focusing on those dimensions with high impact and high uncertainty.

Scenario Dimension	Factors
Policy Decisions   	Demand-side programs
	Clean energy policies
	Resource retirements
External Forces   	Load growth: data centers, industrial, commercial, residential (electrification is both policy-driven and external)
	Resource costs, performance, and development timelines
	Emerging technologies



Review: Scenario Design and Cases Modeled in the RA Study

+ Base Case:

- *What future resources would meet the future system needs at lowest cost?*

+ CEJA Extension:

- *How would the portfolio change if in-state fossil generator retirements were delayed?*

+ No New Illinois Gas:

- *What alternative resources would replace hydrogen-ready gas turbine selections?*

+ Illinois Net Zero:

- *If Illinois balanced its imports & exports to ensure net zero emissions were achieved, how would that impact the portfolio?*

+ Low Battery Costs:

- *How much additional battery capacity would be economic if costs were lower?*

These key RA drivers were identified and used to design the set of scenarios modeled in the analysis

Modeling Cases	New Illinois Gas Allowed	CEJA Extension	Illinois Net Zero Emissions	Battery Costs
Base Case	Yes	No	No	Base
CEJA Extension	Yes	Yes	No	Base
No New Illinois Gas	No	No	No	Base
CEJA Extension, No New Illinois Gas	No	Yes	No	Base
Illinois Net Zero	Yes	Yes	Yes	Base
Low Battery Costs	Yes	Yes	No	Low

Proposed Scenarios for IRP / Mitigation Plan Modeling



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Proposed Load Forecasts for Modeling

Propose to study 3 load forecasts that vary data center load and electrification in Illinois.

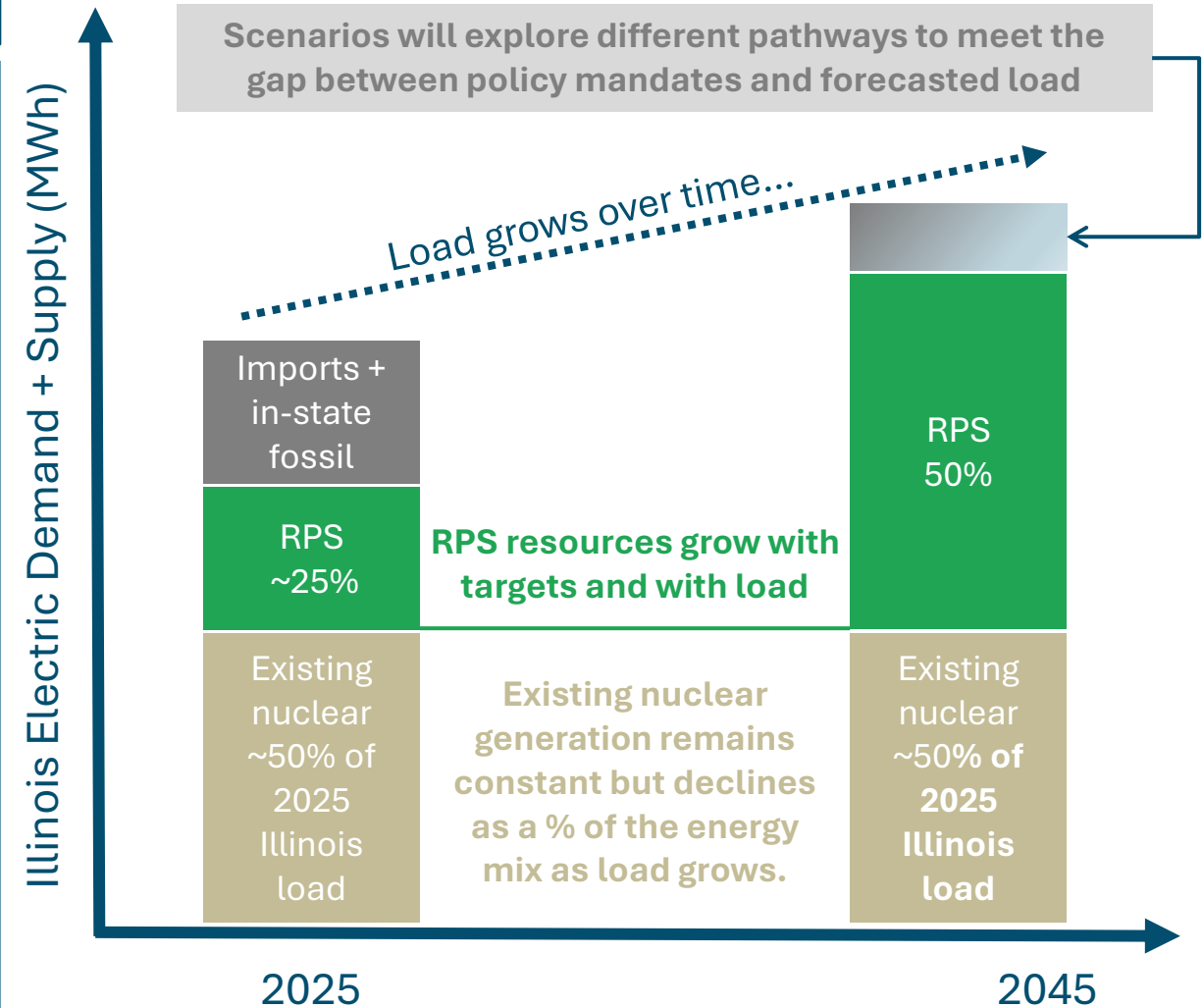
Lowest Load

Highest Load

Load Component	Low Case	Base Case	High Case
Baseline retail customers	Residential, commercial, and existing industrial loads in Illinois are forecasted from utility and RTO data with consistent load shape and growth rates (inclusive of baseline energy efficiency) across all load cases.		
Data Centers	Only data centers in development are included; no future growth assumed	Data Centers in development plus moderate growth rate from Illinois utility forecasts	Data Centers in development plus high growth rate for Illinois from utility and RTO forecasts
Electrification	EV and building electrification projected to grow based on historical adoption rates in Illinois (informed by adoption rates in other states / nationwide if data is limited for Illinois specifically)		High EV + building electrification from PATHWAYS study*
PJM/MISO Load	Outside of Illinois, load forecasts for MISO and PJM will be based on RTO forecasts of demand.		

Illinois Clean Energy Policy Targets



Illinois Policy Goals and Mandates			
Year	RPS	CES	Illinois Thermal Generators*
2025	25%		
2026-2029	+3% per year		
2030	40%		+ All private oil units retire. + All private coal units are zero GHGs or retired. + High emissions gas plants in EJ communities are zero emissions or retired.
2035			+ Public coal units reduce GHGs by 45% or retire. + Low emissions gas plants in EJ communities reach zero emissions or retire.
2040	50%		+ High emissions gas plants not in EJ communities are zero emissions or retired.
2045			+ Public coal units are zero GHGs or retire. All remaining gas plants are zero emissions or retired.
2050		100% of retail sales	



Modeling Illinois Policy



The IRP will model all policy mandates as part of the Core Policy Cases and will consider alternative approaches to meet state goals in Alternative Decarbonization Paths.

Proposed Policies to Model in IRP/Mitigation Plan

	Core Policy Cases	Alternative Decarbonization Paths
	RPS goals met each year through 2040 and beyond.	
RPS Policy	Ratios of BTM solar, utility solar, wind are constant over time following current policy targets.	 Model is allowed to adjust ratios of BTM solar, solar, and wind.
CES Goal	2050 Clean Energy Goal not included in model. Model horizon will end in 2047.	 2050 CEJA goal is met: 100% of Illinois demand is met by generation from GHG-free sources.
Illinois Gen.	Units retire on schedule per CEJA emissions limits. GHG-emitting generation is not allowed in Illinois after January 1, 2045.	Gas generation (existing and new) is allowed in Illinois through 2045 but only if emissions are offset by clean exports to meet 100% CES goal.







Proposed Technology Factors to Test in Scenarios

Building on the scenarios studied in the RA Study, the IRP and Mitigation plan proposes to examine CEJA compliance, CEJA Extensions, Net Zero and Emerging Technologies.

Technology Drivers	Core Policy Cases	System Evolution Futures
Demand-Side Resources	<p>Baseline energy efficiency forecast across all load scenarios.</p> <p>Existing demand response resources are included.</p> <p>New VPPs assumed following post-CRGA VPP tariffs.</p>	 <p>Demand-side resources in Core Policy Cases are all included.</p> <p>In addition...</p> <p>Higher energy efficiency trajectory is assumed. Model is allowed to select a generic load flexible resource (representing DR and VPPs) with potential MW, duration, and cycles/year.</p>
Emerging Technologies	<p>New nuclear reactors (and uprates) and long-duration energy storage (LDES) are available for model selection at current market projections for timeline and cost.</p>	 <p>New nuclear reactors (and uprates) and long-duration energy storage (LDES) are available for model selection earlier and/or at lower cost vs. the base case.</p>

Proposed Scenario Matrix

Each scenario combines a load forecast, policy posture and technology assumption.

	Core Policy Planning Futures			System Evolution Futures			Alternative Decarbonization Paths (CEJA Extension)			
Scenario	Base Case	Low Load	High Load	High Flexible Future	High Flexible, High Load Future	Advanced Technology Acceleration	CEJA Extension	Net Zero	Net Zero + High Load	Illinois Resource Prioritization
Purpose	Central Planning Case	Lower bound of system need	Upper Bound of system need	Impact of high load flexibility on base case	Impact of high load flexibility with high load growth	Test emerging technology potential with optimistic timing + costs	Evaluate cost and benefits of delayed shutdown	Evaluate a 'net zero' emissions goal for electricity	Evaluate 'net zero' goal with high load growth	Analyze prioritization of all Illinois resources
Load Forecast	Base Case	Low Case	High Case	Base Case	High Case	High Case	Base Case	Base Case	High Case	Base Case
Key Change from Base Cases	Base Case	Base Case	Base Case	 Higher EE, DR, VPP potential	 Higher EE, DR, VPP potential	 Earlier and lower-cost advanced nuclear, and LDES	 CEJA Extension			
							 Net Zero (exports offset in-state and imported emissions)			
							 RPS Resource Flexibility			

Stakeholder Feedback and Q&A



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How Can Stakeholders Submit Comments?

+ Submit comments in response to this workshop

- Comments should be submitted within **14 days – April 21, 2026**
- Stakeholder Meeting #1 Comment Form
 - Comment form is available [here](#)
- Additional IRP-Related Questions for the ICC can be submitted via e-mail:
 - Joy Nicdao-Cuyugan: joy.nicdao-cuyugan2@illinois.gov
 - Subject Line – IRP Stakeholder Comments – Workshop #1



Stakeholder Questions

+ Do the proposed scenarios reflect a reasonable range of the most impactful and most uncertain drivers?

- If not, what key drivers or assumptions should be added, removed, or modified?
- Are there additional scenarios that should be considered to better capture plausible future outcomes?
If so, which of the current proposed scenarios would you remove?
- What data sources, studies, or inputs should be used to inform key scenario parameters?

+ Do these load scenarios capture a reasonable range of the most impactful drivers?

- If not, what specific drivers of load are missing?

+ For this study, sensitivities are defined as changes to a single input or assumption within a given scenario.

- Please suggest 1-3 sensitivities that you believe are particularly valuable to test.
- For each sensitivity include:
 - Which input should be varied (resource cost, interconnection timelines, etc.)
 - What scenario the sensitivity should be applied to

Q&A



- If you have a question or comment about a particular slide, please make note of that slide number in your question
- Please use the Raise Hand feature to ask a question, provide feedback and comments – unmute when a moderator calls on you and please share your name and organization when you speak
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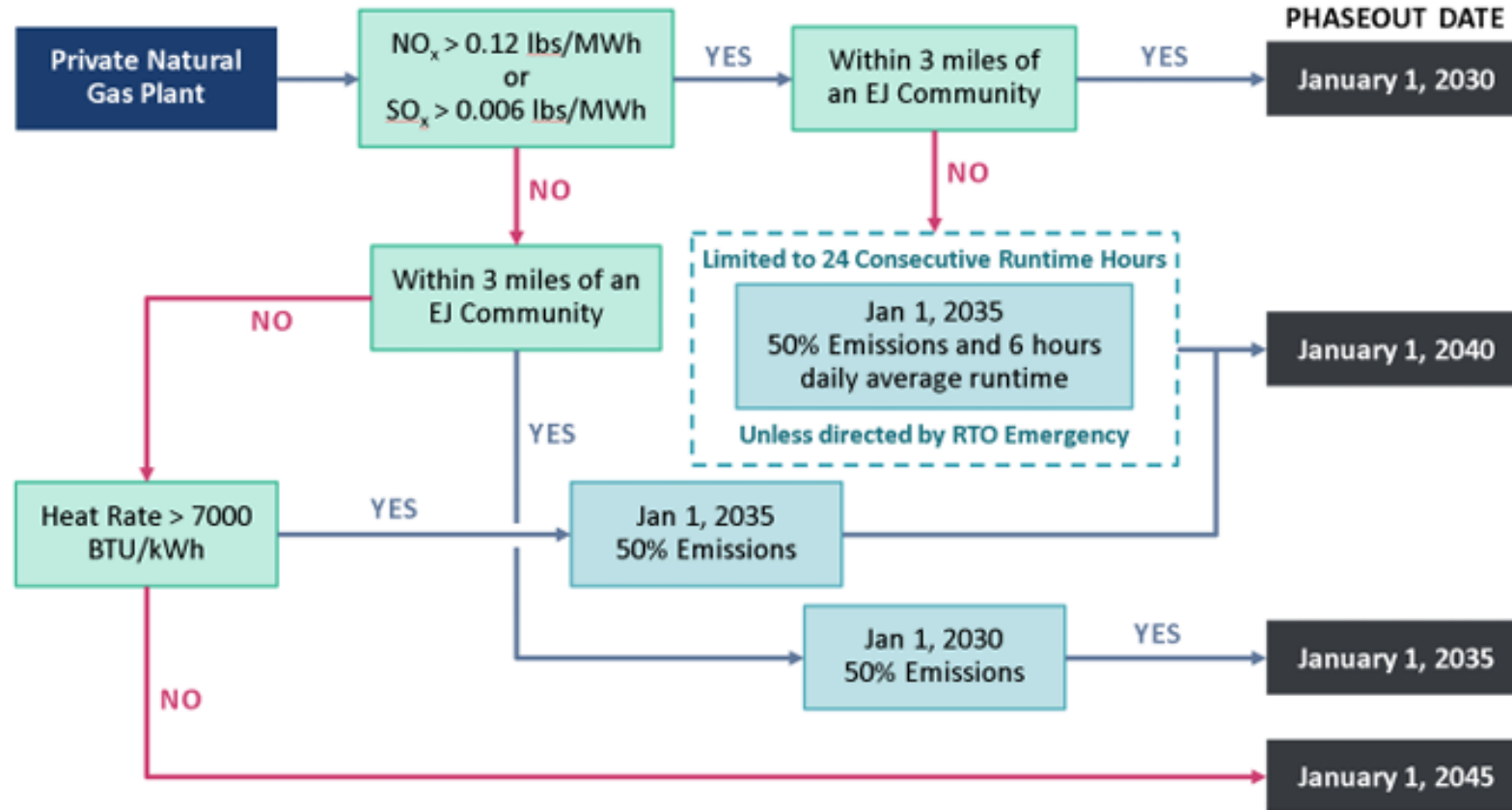


Appendix



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Illinois Private Natural Gas Phase Out Structure



Sources and Notes: PJM, [Illinois Clean Energy Jobs Act Fossil Fuel Generation Phase Out](#), (December 2, 2021) at 6.