

Opportunities for Integrating Electric and Gas Planning

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Agenda

- Welcome and Introductions
- Background on Electric and Gas Planning
- Benefits and Challenges of Integrated Electric and Gas Planning
- Characteristics and Indicators of Integrated Electric and Gas Planning
- Implementation Options for Integrated Electric and Gas Planning



Housekeeping

- All participants are muted.
- If you have a comment or question, please use the Q&A box.
- The webinar is being recorded.
- The report is available on Berkeley Lab's website. The recording and slides will be posted there in 2-3 days. <https://emp.lbl.gov/publications/opportunities-integrating-electric>
- When it is available, we will send the link to the recording and slides to everyone registered for the webinar.



Today's Speakers





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January 15, 2025

Opportunities for Integrating Electric and Gas Planning

Webinar

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Opportunities for Integrating Electric and Gas Planning

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<https://eta.lbl.gov/publications/opportunities-integrating-electric>

Purpose and Structure of the Report

Our goal is to present a long-term vision for successful integration of electric and gas planning.

- Background on Electric and Gas Planning
- Benefits and Challenges of Integrated Electric and Gas Planning
- Characteristics and Indicators of Integrated Electric and Gas Planning
- Implementation Options

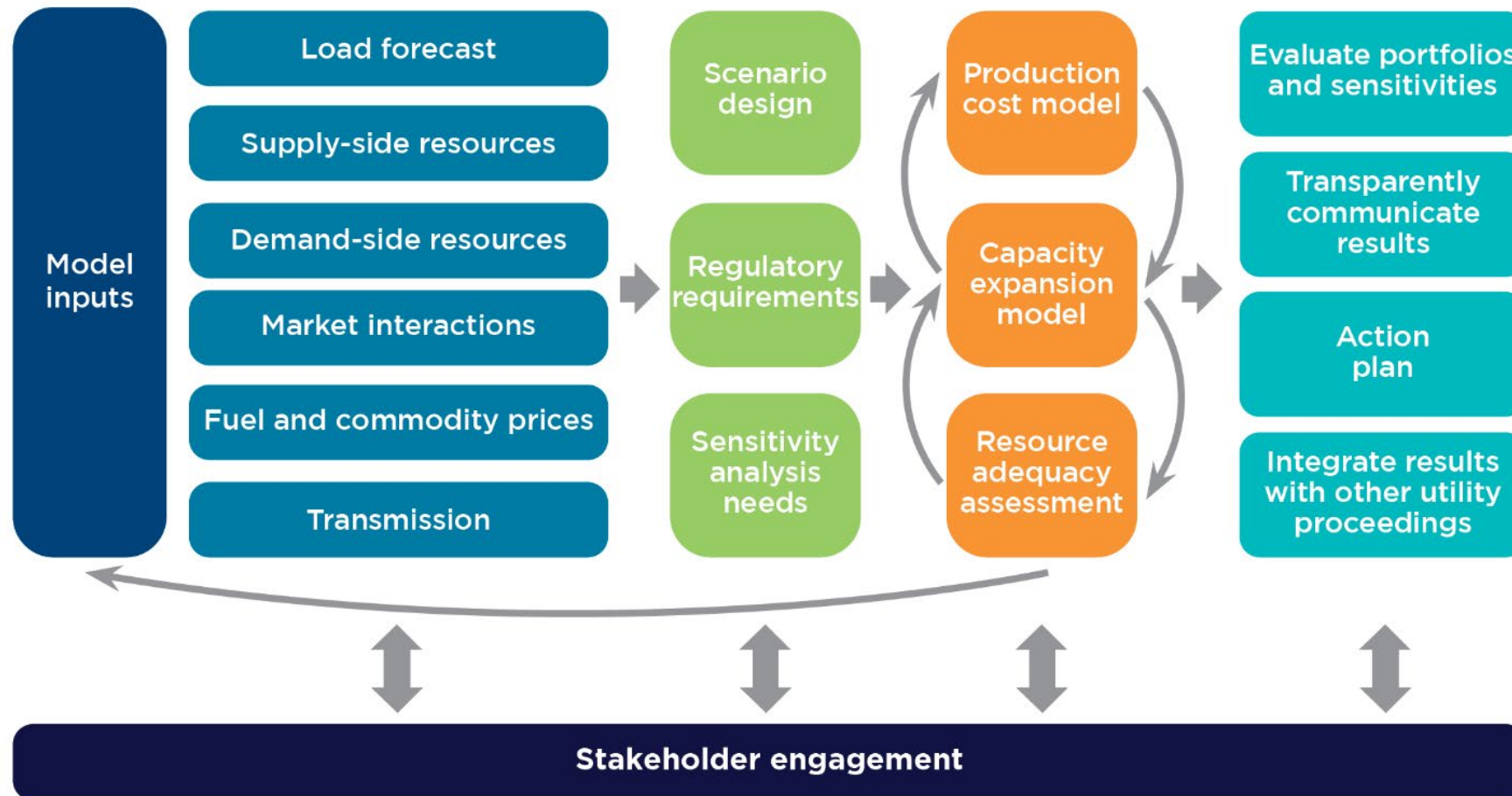
History of State Utility Planning Reforms

- Electric Integrated Resource Planning
 - Widely adopted beginning in the 1980s
- Gas Integrated Resource Planning
 - Limited adoption beginning in the 1990s
- Electric Distribution Planning
 - Significant attention starting in early 2010s
- Gas Distribution Planning
 - Significant attention starting in late 2010s

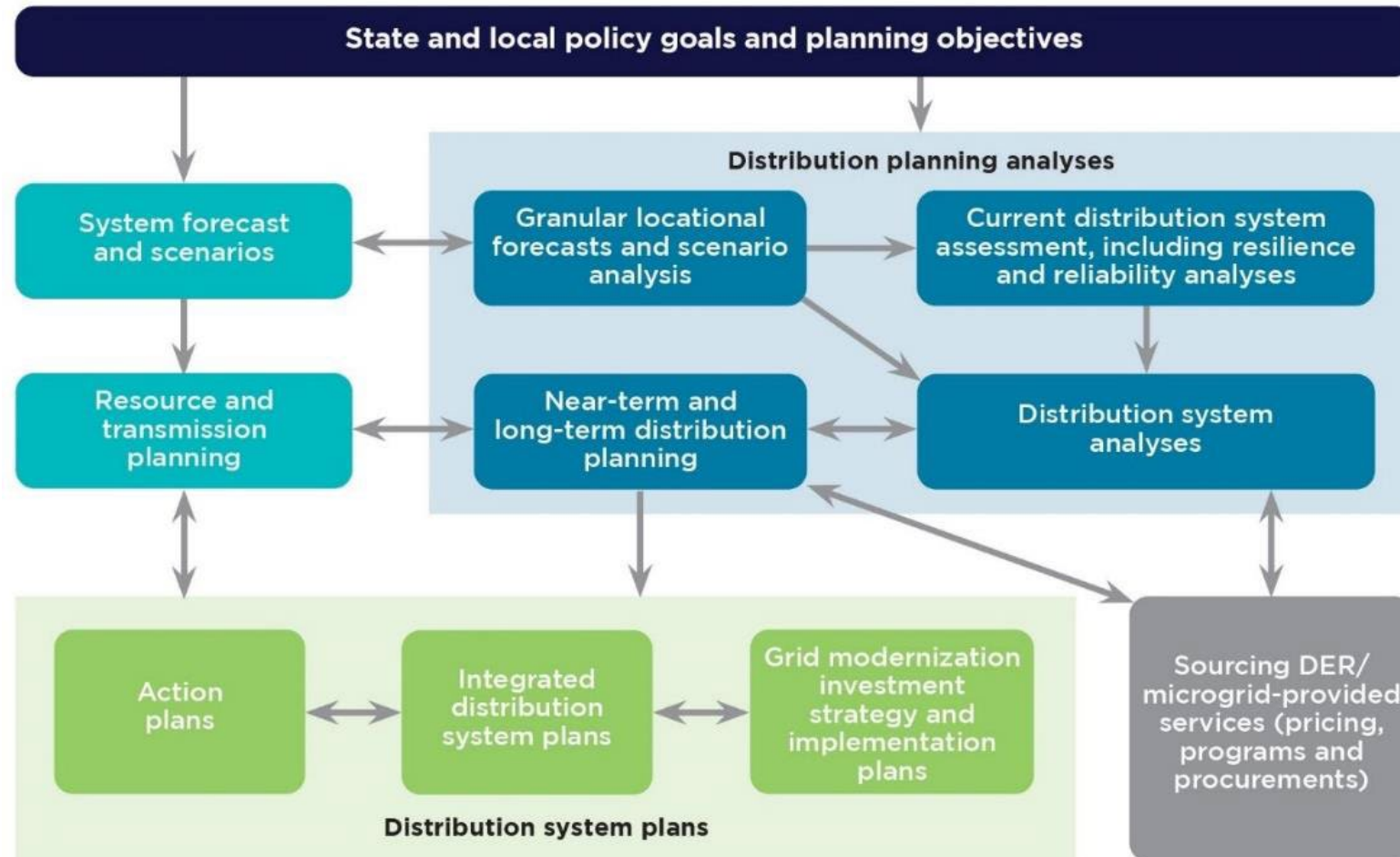
Goals of Improved Planning Processes

- Lower costs
- Improved reliability and resilience
- Greater confidence in investment choices
- Least-cost compliance with environmental and public health requirements
- Reasonable administrative burdens on utilities, commissions and stakeholders
- Equitable allocation of costs

Electric Integrated Resource Plan Flow Chart




Electric Distribution Planning Flow Chart



Shared Features of Modern Utility Planning

- Advanced Forecasting and System Modeling
- Disclosure of System Needs and Value
- Improved Solution Acquisition Practices
- Support for Innovation
- Meaningful and Equitable Stakeholder Participation



“Gas and electric utilities plan and operate their networks in parallel to one another even when they are affiliated companies with a common parent company because historically there has been little need for coordination.”

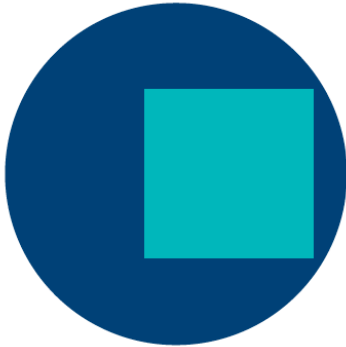
Eversource Massachusetts Electric System Modernization Plan Filing (January 2024)

Why Integrated Electric and Gas Planning?

- Simultaneous impacts on electric and gas system from heating electrification makes the two systems linked in a way they have not been before
- Integration may deliver improvements compared to siloed processes
 - Lower costs and improved affordability
 - Better reliability
 - Greater confidence in utility investment decisions
 - Least-cost compliance with environmental and public health requirements
 - Streamlined administrative processes
 - More equitable allocation of costs across fuels and customers

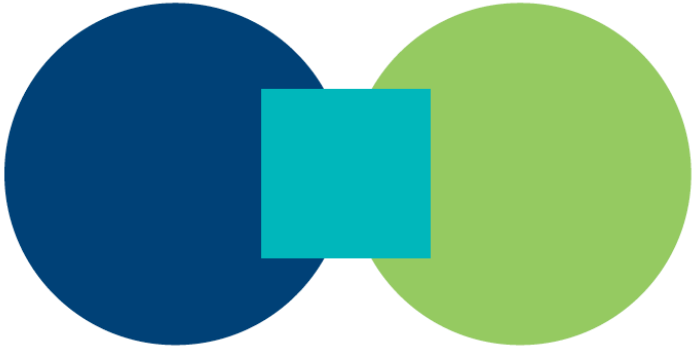
Service Territory Scenarios

Case A



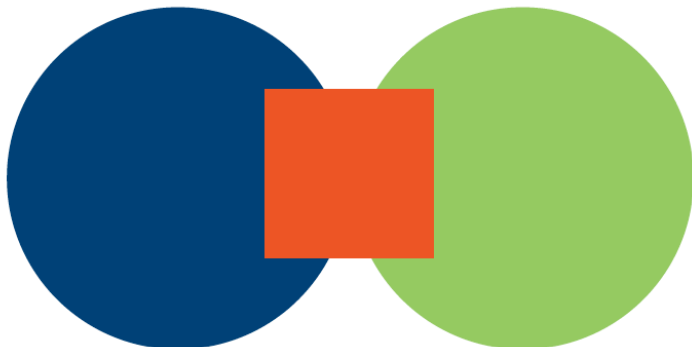
- Utility 1 owned electric service territory
- Utility 1 owned gas service territory

Case B



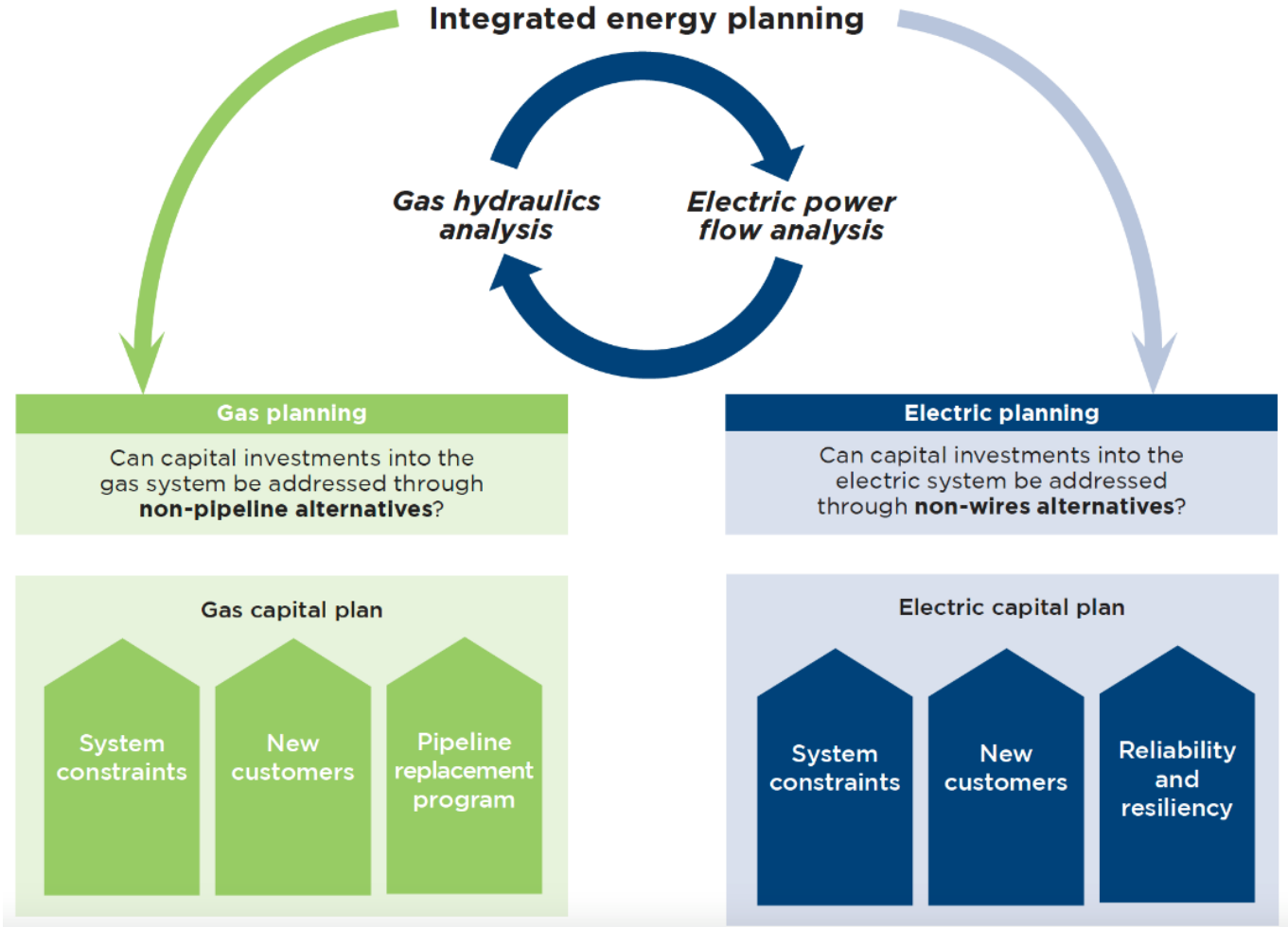
- Utility 1 owned electric service territory
- Utility 1 owned gas service territory
- Utility 2 owned electric service territory

Case C



- Utility 1 owned electric service territory
- Utility 2 owned electric service territory
- Utility 3 owned gas service territory

The Heart of Integrated Planning



Challenges

- Siloed Organizations and Lack of Visibility
- Insufficient Collaboration and Stakeholder Input
- Suboptimal Inputs and Inconsistent Forecasts
- Incomplete Analysis of Interactive Electric and Gas Investment Impacts

Four Characteristics of Integrated Planning

- Improved Organization, Communications, and Collaboration
- Aligned Inputs for Forecasting and Modeling
- Reformed Analytical Structure
- Sufficient Outputs for Procurements, Programs and Other Processes

Improved Organization, Communications, and Collaboration

Indicator	Description
<i>Integration across internal organizational silos</i>	<ul style="list-style-type: none">• Dual-fuel utilities, commissions, and other stakeholders re-organize personnel and corporate structures to have cross-fuel deliberations
<i>Effective data sharing</i>	<ul style="list-style-type: none">• Separately operated gas and electric utilities with overlapping service territories establish methods to securely exchange data with their counterparts and answer specific inquiries.• Additional data sharing is arranged for government entities, stakeholders and solutions providers.
<i>Mechanisms for education, collaboration, and stakeholder input</i>	<ul style="list-style-type: none">• Policymakers and utilities provide robust forums and stakeholder support specific to integration issues.

Improved Organization, Communications, and Collaboration: Options

- Internal Organizational Reforms
 - Cross-functional teams at dual-fuel utilities and commissions
- Communications and Data Sharing
 - Specific communications channels for utilities with overlapping service territories
 - Clear approach to transfer and access data
- Collaboration and Stakeholder Support
 - Electric-gas collaborative
 - Financial support for stakeholders
 - Educational and technical support for stakeholders

Aligned Inputs for Forecasting and Modeling

Indicator	Description
<i>Consistent and aligned forecasts and inputs across proceedings</i>	<ul style="list-style-type: none">Regulators or utilities create a centralized process for forecasting to allow for separate planning proceedings to reach consistent and coordinated results
<i>Best available data inputs and up-to-date modeling techniques</i>	<ul style="list-style-type: none">Regulators establish best practices for data and modeling, as well as assumptions and estimates for jurisdiction-wide issues, to provide for efficient results and eliminate duplicative analysis.

Aligned Inputs for Forecasting and Modeling: Options

- New Processes to Coordinate Forecasting
 - New electric and gas forecasting proceeding
 - Joint forecasting approach
 - Centralized state agency forecasting process
- Improved Inputs and Modeling Approaches
 - Best data sources and technology inputs
 - Comprehensive analyses of federal, state and local policies
 - Consistent scenarios and uncertainty analysis

Reformed Analytical Structure

Indicator	Description
<i>Improved sequencing and coordination of utility filings</i>	<ul style="list-style-type: none">Regulators adjust the ordering and cadence of proceedings to build upon each other and leverage cost estimates across proceedings, with the potential for joint filings
<i>Joint assessment of electric and gas system impacts and costs</i>	<ul style="list-style-type: none">Utilities have sufficient information and analytical tools to optimize joint system costs, which requires understanding of impacts for varying investment and program options across fuels, and provide for efficient investment patterns

Reformed Analytical Structure: Options

- Improved Sequencing and Coordination of Utility Filings
 - Align filing timing for single-fuel utilities with overlapping service territories
 - Require collaboration or joint filings between single-fuel utilities with overlapping service territories
- Joint Assessment of Electric and Gas System Impacts and Costs
 - Simultaneous analysis of alternative investments and other strategies

Sufficient Outputs for Procurements, Programs and Other Processes

Indicator	Description
<i>Use planning data to structure multi-fuel procurements and improve customer programs</i>	<ul style="list-style-type: none">• New outputs of both electric and gas data are provided to efficiently and fairly run multi-fuel procurements and better target other programmatic efforts
<i>Use planning analysis to improve cost allocation</i>	<ul style="list-style-type: none">• Data and analysis from integrated planning processes, particularly benefits calculations, are used to estimate equitable cost recovery methods across fuels and customers
<i>Use combined customer data to improve affordability programs</i>	<ul style="list-style-type: none">• Utilities can create a joint database that combines electric and gas billing data for individual customers served by more than one utility. Affordability programs and energy burden analyses can then utilize combined customer electric and gas billing data instead of averages and estimates.

Sufficient Outputs for Procurements, Programs and Other Processes: Options

- Use Planning Analysis to Structure Multi-Fuel Procurements and Programs
 - Enable multi-system procurements
 - Outputs inform programmatic choices
- Use Planning Analysis to Improve Cost Allocation
 - Benefits analysis can inform allocation methods
 - Options for repurposing funds across fuels and programs
- Use Planning Data to Improve Affordability Programs
 - Combined utility billing data can improve low-income programs and evaluation of rate design alternatives

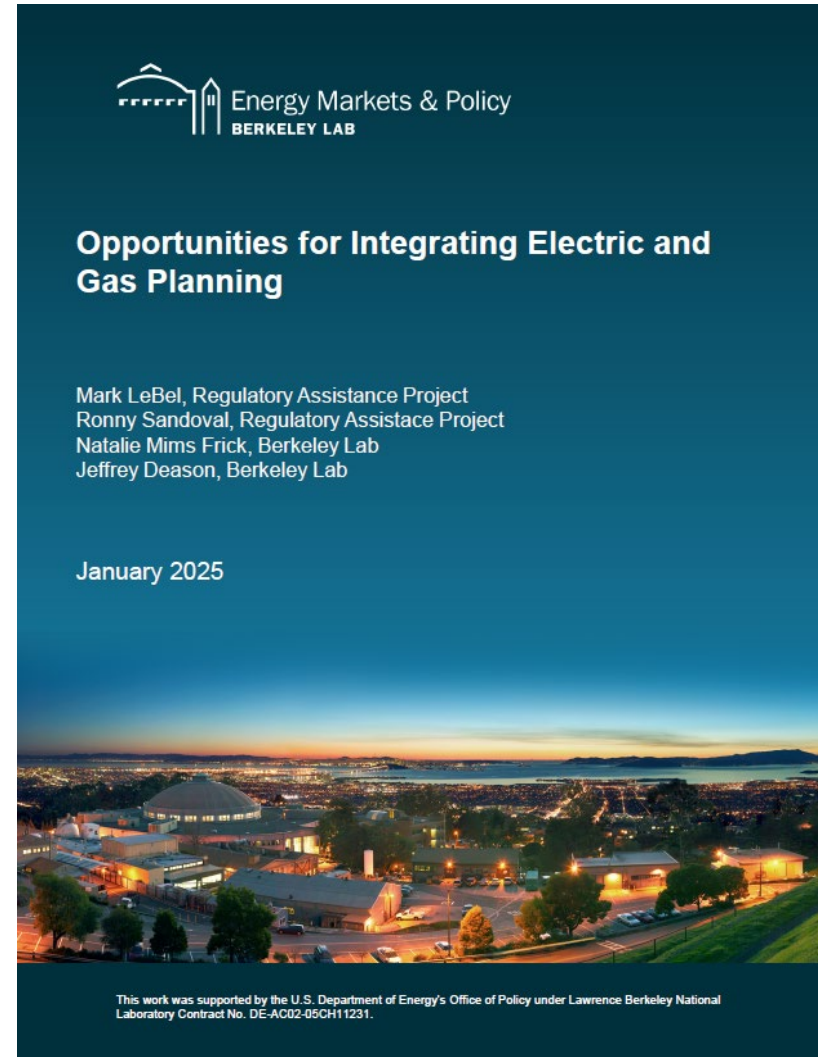
Short-Term Steps

- Steps to take across silos
 - Asking similar questions about underlying inputs and comparing forecasts across planning proceedings;
 - Adjusting the sequencing of planning filings for electric and gas;
 - Aligning the formatting and other aspects of public data disclosures across systems; and
 - Requiring dedicated communications channels and periodic meetings between electric and gas utilities that share service territories.
- Initiate scoping docket to explore current capabilities, educate stakeholders and understand any regulatory and statutory limitations

Conclusions

- Integrated electric and gas planning should be viewed as continuation of efforts to improve planning frameworks over past four decades
- Integration offers a range of benefits
 - Notably lower costs and greater confidence in utility investment decisions
- Path forward depends on service territory structures
 - Dual-fuel utilities have some built-in advantages
 - Integration in areas served by two different utilities likely requires implementation across all four characteristics
- Small steps now can set up for long-term success

Questions



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About RAP

Regulatory Assistance Project (RAP)[®] is an independent, global NGO advancing policy innovation and thought leadership within the energy community.

Learn more about our work at raponline.org

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