Integrated System Planning Rules

Draft Rules Workshop

October 25, 2024

UTC
Washington Utilities and Transportation Commission

Smart Electric Power Alliance

Agenda

- Welcome
  - Objectives, Logistics, and Introductions
- Integrated System Planning - Industry Landscape
  - Guest speaker [30 mins]
- Discussion Framework
  - Topic 1: Clarifying Policy Goals [35 mins]
  - BREAK [10 mins]
  - Topic 2: Content of the Integrated System Plan [35 mins]
  - Topic 3: Implementation & Reporting [35 mins]
- Wrap up
  - Procedural Matters, Next Steps, and Closing Statements

Introductions

Facilitation Team – Smart Electric Power Alliance (SEPA)

Yok Potts
Director of Policy, Research & Industry Strategy

Elizabeth Mathis
Manager, Research & Industry Strategy

Mary Palmer,
Director of Energy Equity & Inclusion

Guest Speaker – Energy and Environmental Economics (E3)

Dan Aas
Partner

Workshop Participants – Virtual and In-Person

Background on U-240281 Rulemaking

In March 2024, the Washington State Legislature passed the **Washington Decarbonization Act for Large Combination Utilities** (formerly known as ESHB 1589).

The Washington Decarbonization Act for Large Combination Utilities requires the Washington Utilities and Transportation Commission (UTC) to:

- Develop rules to create Integrated System Plans by July 1, 2025
- Establish by rule a cost test for the clean energy transition
- Develop a compliance checklist for regulated utilities

Today's workshop represents one of the public involvement efforts in Part One of the UTC rulemaking process for Docket U-240281, as the Commission works to develop final rules.

Rulemaking Phase	Dates*	Events/Activities
Part One – CR 101	Jun 28, 2024	First Integrated System Plan (ISP) Rules Workshop
	Oct 11, 2024	Cost Test Technical Conference #1
	Oct 25, 2024	Second Integrated System Plan (ISP) Rules Workshop
	Nov 22, 2024	Cost Test Technical Conference #2
	Dec 13, 2024	Cost Test Technical Conference #3
	Jan-Feb 2025	Informal Draft Rules for Comment
Part Two – CR 102	Mar-May 2025	Formal Draft Rules, CR 102 Comment period, and Adoption Hearing
Part Three – CR 103	Jun 2025	Filing of Final Rules
Conclusion	Jul 1, 2025	Statutory Rulemaking Deadline

*Future rulemaking dates are tentative.

Workshop Goals & Scope

Goals:

- To provide stakeholders the opportunity to discuss their comments and positions on the draft rules. All stakeholders are encouraged to ask questions, share perspectives, and clarify previously submitted comments.
- SEPA's role as facilitator is to support constructive dialogue and ensure all stakeholder input is accurately captured.

Scope: This workshop will focus on the overarching Integrated System Planning rules. Detailed technical discussions that related to the Cost Test should be reserved for the upcoming Technical Conferences.

Public Participation

- This is a public workshop. The presentation will be recorded & posted.
- Whenever you speak, please state your name and your organization.
- Virtual audience reminders:
  - Please make sure your full name and organization is displayed.
  - Use chat to ask clarifying questions during the presentation.
  - MUTE your microphone when you're not speaking.

Integrated System Planning

An Industry Landscape

Dan Aas
Partner
Energy and Environmental Economics (E3)

Integrated System Planning

WA UTC Stakeholders

October 25, 2024

Energy+Environmental Economics

Dan Aas

Key Takeaways

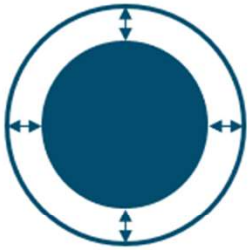
- Rapidly evolving energy system needs necessitate new, integrated approaches to meeting customer energy needs, accelerating the clean energy transition and delivering on policy goals.
- Integrated planning requires new processes to bring together traditionally siloed planning processes into a cohesive system plan. This approach is novel and will require an iterative "walk, jog, run" approach.
- Integrated planning of gas and electric systems is an emerging topic of interest to many states; studies point to promising opportunities, but there are many details that are yet to be worked out and barriers to be overcome.

The electric system requires massive investments

Decarbonization will require massive investments in the U.S. electric system

>$2 trillion
2025-2035

$3-6 trillion
2035-2045



Source: Princeton Net-Zero Carbon America Study

Many forces are driving high investment needs over the coming decades

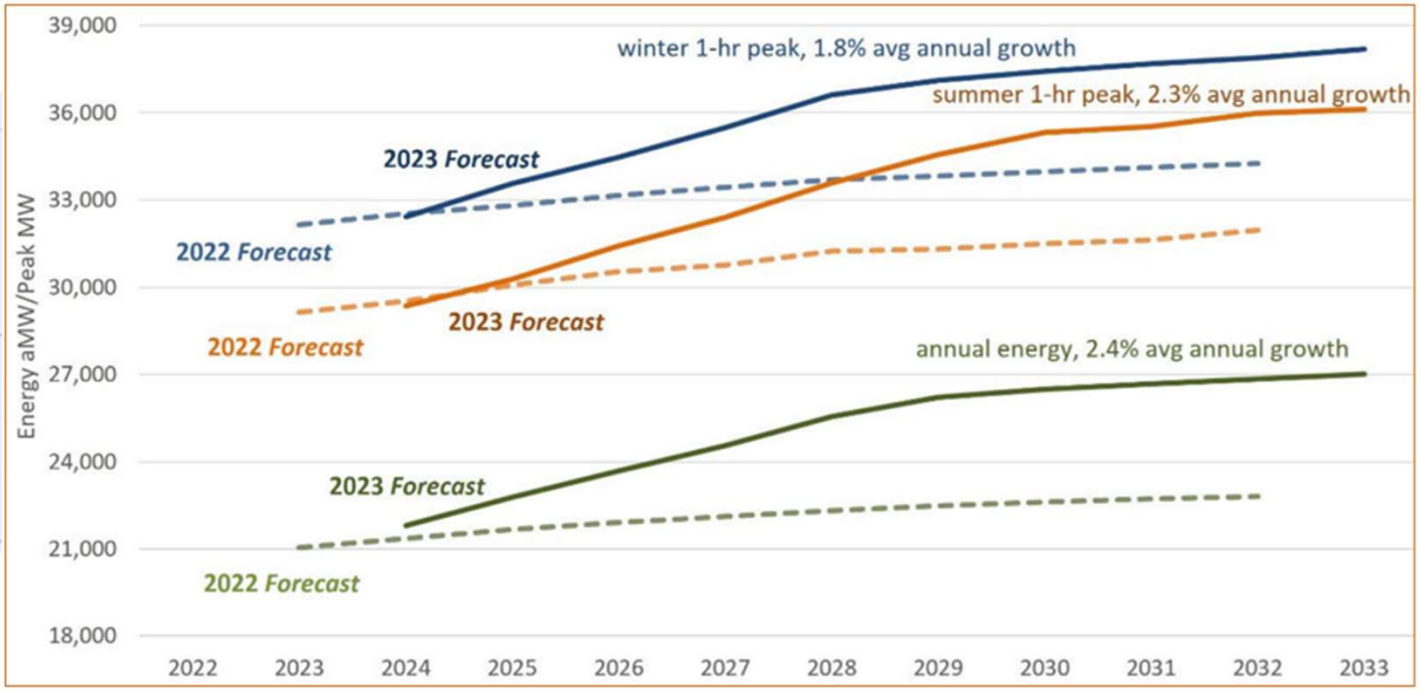
- Decarbonization of power system
- Industrial and data center load growth
- Electrification
- Aging infrastructure
- Wildfire risks
- Cybersecurity

Substantial electric load growth is now occurring in the PNW for the first time in decades.

Pacific Northwest Utilities Conference Committee (PNUCC) Planning Area

WA, OR, ID (statewide)
+ Western MT
+ Columbia River Basin
+ Co-ops served by BPA

PNW Utility Load Forecasts: 2022 vs. 2023 Vintages



Source: *Northwest Regional Forecast of Power Loads and Resources. PNUCC. May 2023. Page 4.*
https://www.pnucc.org/wp-content/uploads/2023-PNUCC-Northwest-Regional-Forecast-final.pdf

Note: 2024 PNUCC forecast shows higher load growth relative to 2023

In this period of rapid change, energy system planning must evolve, while still meeting foundational goals

Planning goals:

Safe and Reliable

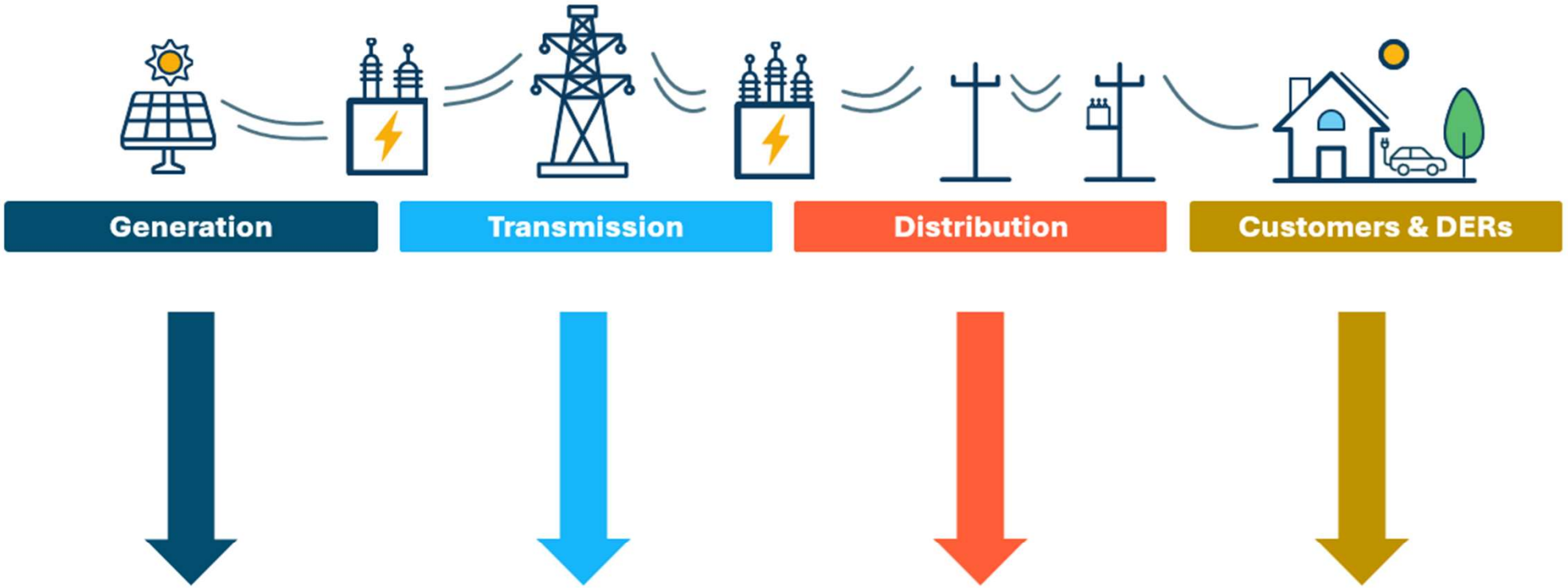
Affordable

Clean

Need to ensure that planning identifies

- The right investments…
- in the right locations…
- at the right times

System planning is largely siloed today



Many system planners are undertaking integrated system planning initiatives

In April 2024, SRP published its first-ever Integrated System Plan (ISP), which included full system planning through 2035. SRP is currently planning the next ISP cycle.

In 2023, Hawaiian Electric filed its first Integrated Grid Plan (IGP), which included detailed analysis of Hawaiian Electric's five island grids through integrated planning of utility-scale generation, distribution, transmission, and customer DERs.

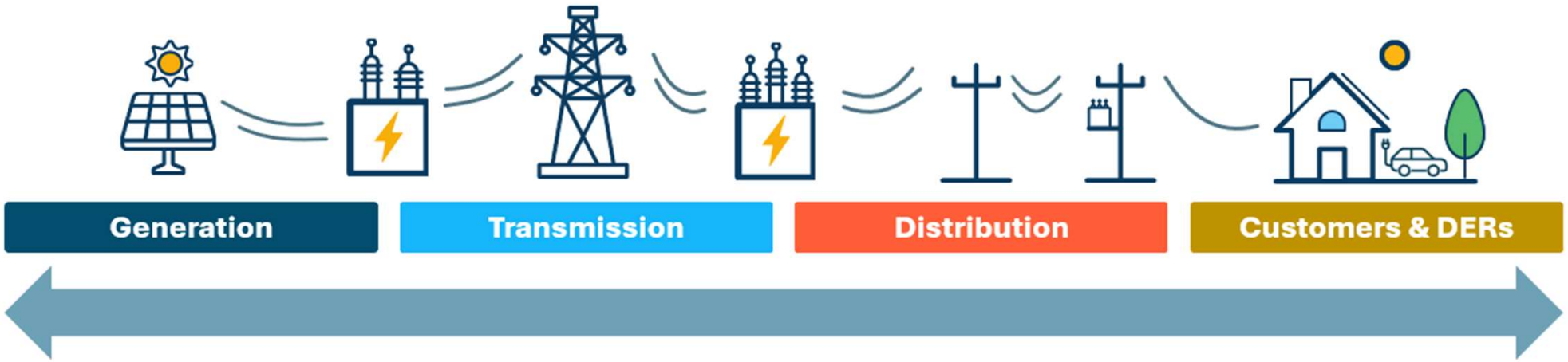
In late 2022, Xcel Energy created a centralized Integrated System Planning (ISP) team – combining generation, transmission, distribution, and natural gas into a single department. The modeling function of each team was also combined under central leadership

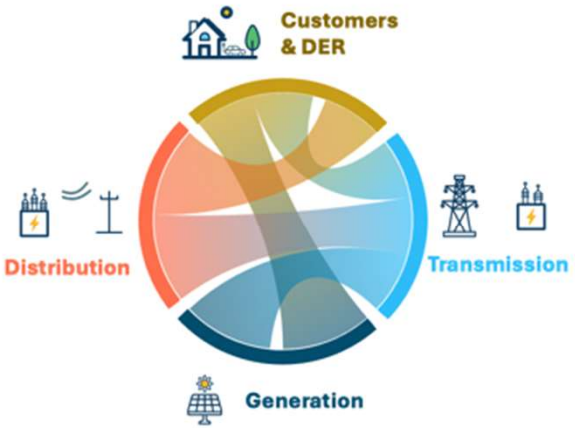
In Massachusetts Eversource, National Grid and Unitil are in the process of developing "Integrated Energy Planning" frameworks to jointly plan electric and gas distribution infrastructure and operations. This includes both development of internal and cross-company integrated planning processes.

ESIG
ENERGY SYSTEMS INTEGRATION GROUP

This year, ESIG kicked off its Integrated System Planning Task Force, which provides a platform for planners and system operators to discuss and advance the integration of electric system planning for electric generation, transmission, distribution, and load. E3 is leading the Task Force Meetings for this initiative.

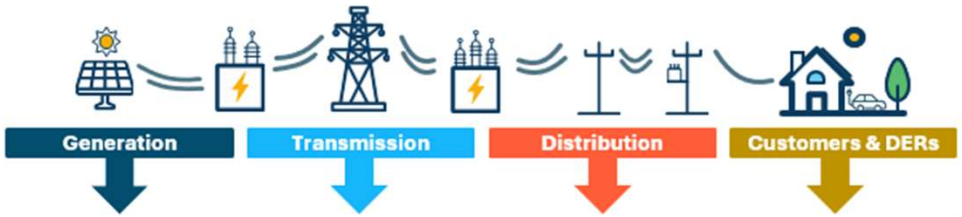
Integrated system planning considers the system as a whole

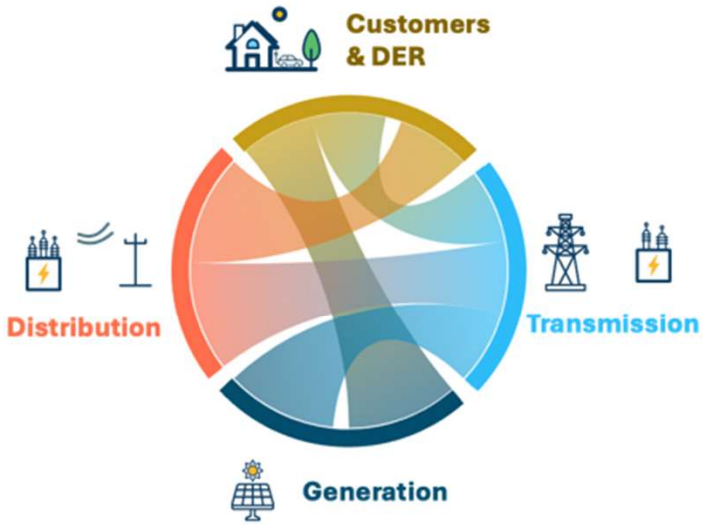




The goal of integrated system planning is to **harmonize planning processes** to ensure that investments are optimal from a **system-wide planning perspective**

Defining integrated planning





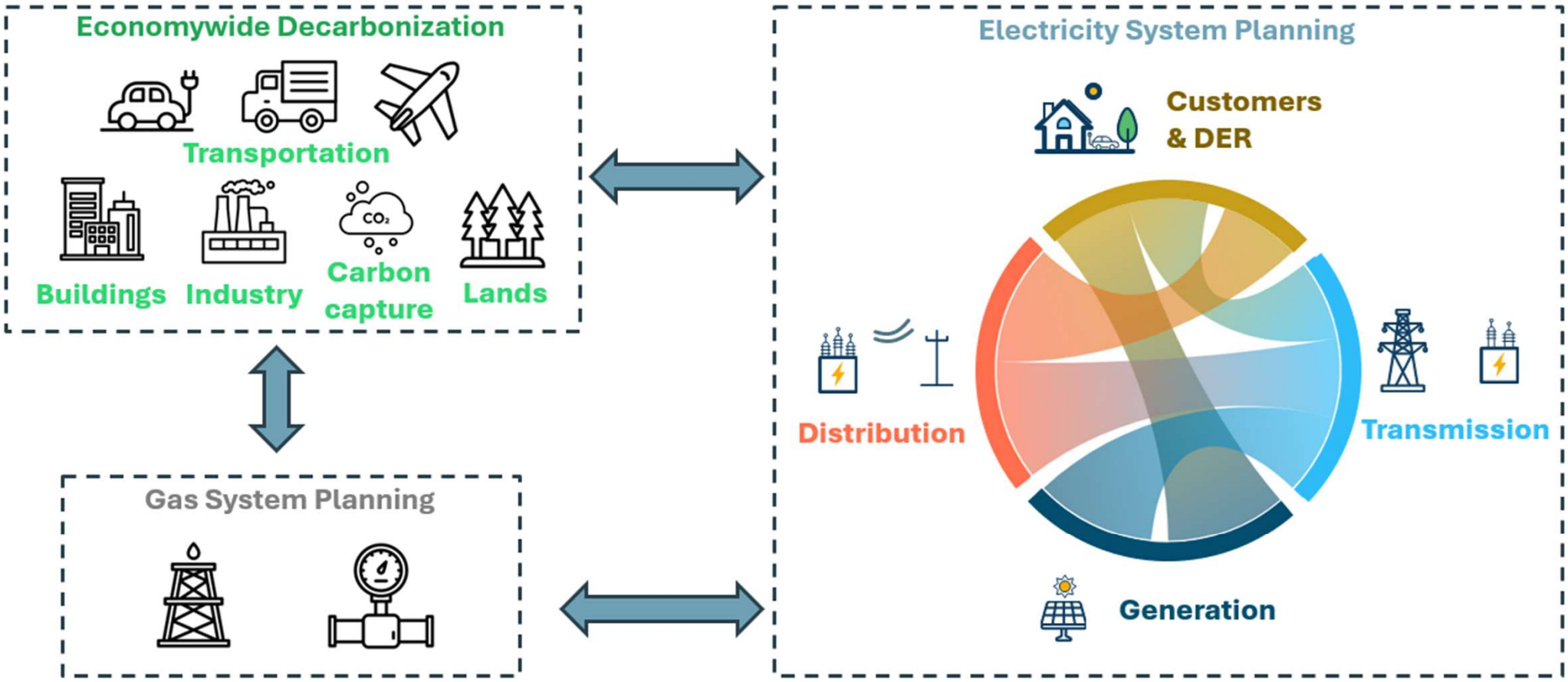
Traditional electricity planning has often been siloed

Siloed planning worked when investments in one planning domain had limited impact on other planning needs – this is no longer the case

Integrated planning is a holistic planning approach to develop affordable, reliable, and robust investment plans by integrating traditionally siloed planning processes

Integrated planning is coordinated across electric generation, transmission, distribution, and customer loads + DERs, and may also consider interactions between the electric system and other energy systems

Integrations span beyond just electric sector planning



The shift towards integrated system planning will require a staged, iterative approach that allows for learning and adaptation



	Walk Stage Get started	Jog Stage Increasing connections	Run Stage Full integration
Organizational Alignment	**Thought leaders drive integration** and increase cross-team coordination	Create an **integrated planning team**	**Fully integrate ISP function with other business units** (strategy, finance, rate design, etc.)
Scenario Planning	**Standardize scenarios and key inputs**	**Standardize planning process timelines and inputs** into an ISP cycle (data development, load forecasts, etc.)	Integrate scenario development across all planning processes
Technical Analysis	Improve each individual process to industry best practice Add connections between individual models	**Increase model + data connections** between processes	**Fully integrate modeling processes**
Procurement Integration	Increase planning to procurement connection (e.g., developing DER avoided costs using ISP preferred plan)	Initiate **new procurement pilots using ISP results** (e.g., flexible EV charging, non-wires alternatives, etc.)	**Fully integrate procurement processes** with feedback to and from the ISP process

Increasingly integrate planning over multiple planning cycles

Integrated system planning is not just about utilities

Utilities

Harmonize planning across all parts of the system

Regulators

Ensure system planning considers a holistic perspective

Developers

Anticipate system needs and favorable locations for projects

Stakeholders

Allows transparency + input on how the entire system is planned

Regional

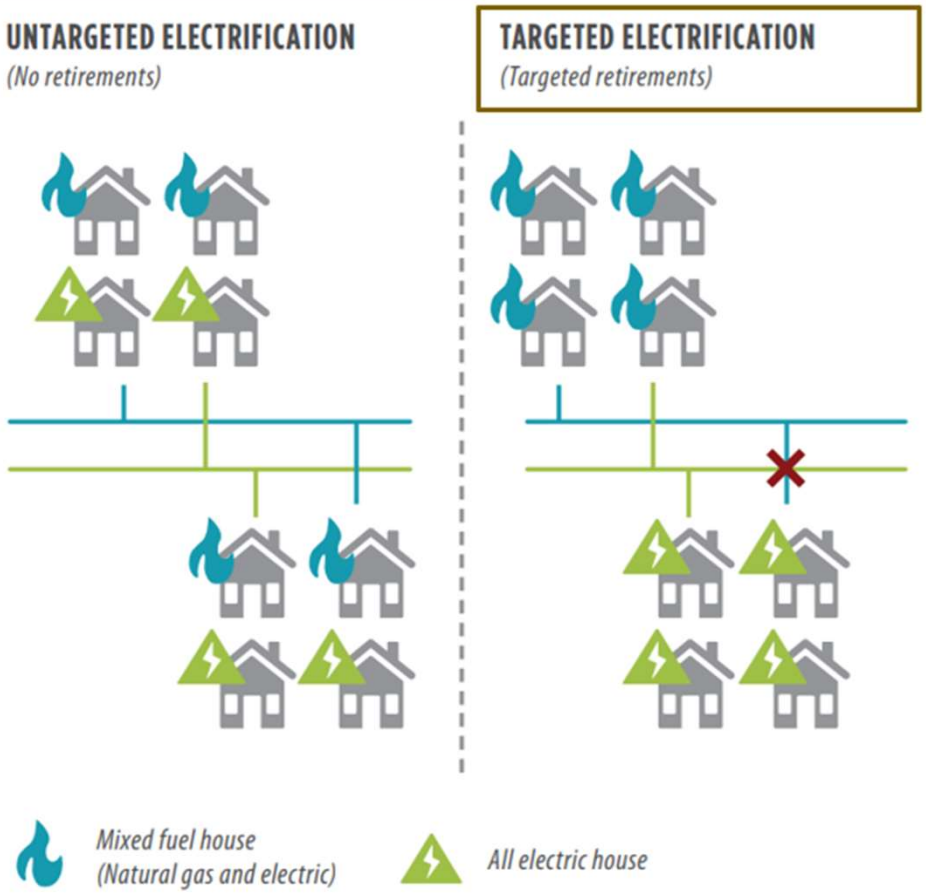
Proactively plan transmission to get ahead of grid needs

Integrated Gas-Electric System Planning

Energy+Environmental Economics

Introduction to targeted electrification

- **As building electrification advances, gas system costs will be spread across fewer customers and a lower volume of gas sales.**
  - As a result, remaining customers could face large increases in their gas rates.
  - Low-income homeowners, who cannot afford electric alternatives, and renters, who cannot elect these alternatives, will be most vulnerable to these gas rate increases.
- **One strategy that may help mitigate gas system cost impacts is targeted building electrification coupled with strategic gas system decommissioning.**
  - This approach could be part of a "managed transition" to reduce gas system spending and manage gas rates.



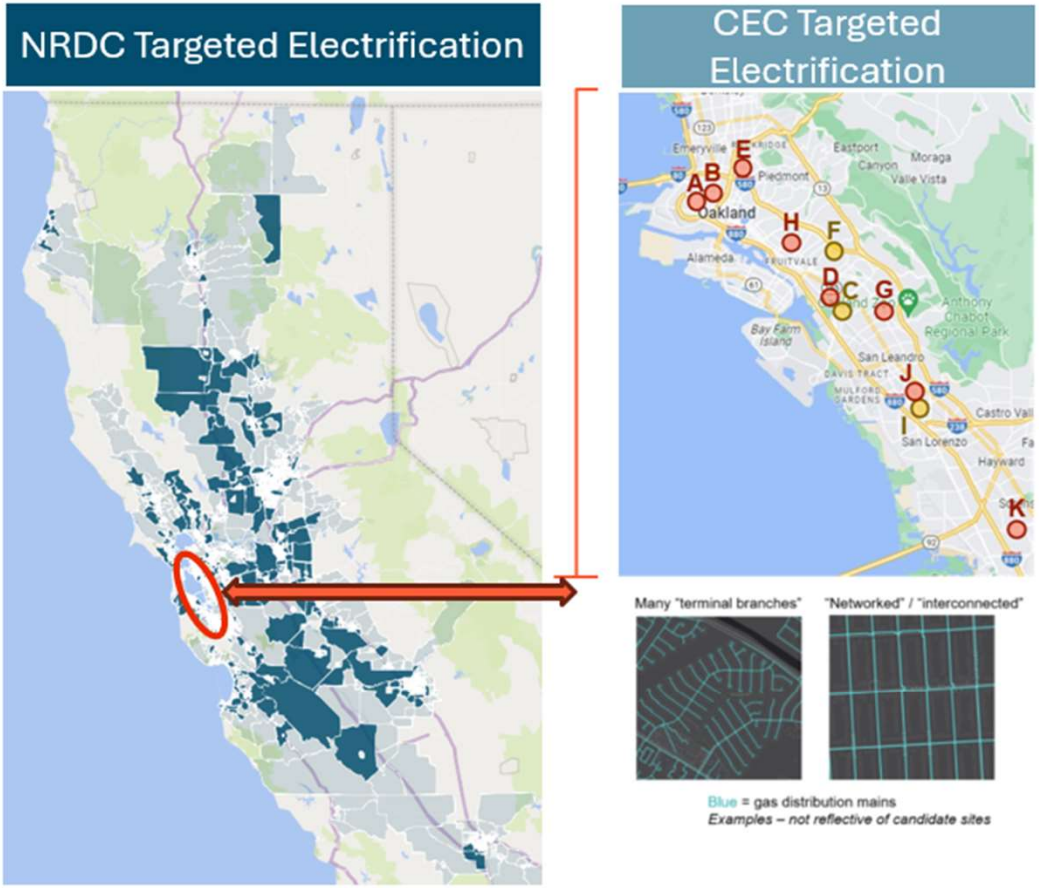
E3 has recently completed two projects in CA that assess targeted electrification to avoid gas infrastructure

+ NRDC CA Targeted Electrification

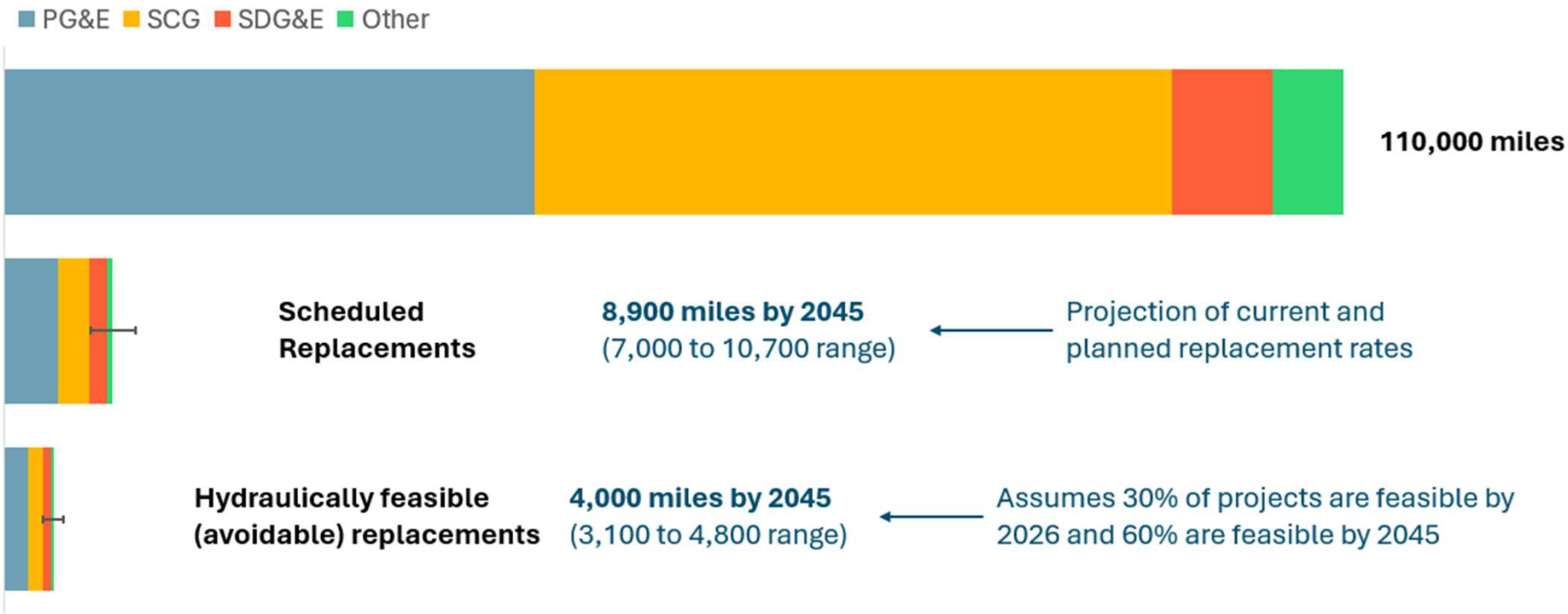
1. What is the potential scale of targeted electrification across California?
2. How much gas system cost might be avoided via targeted electrification?
3. How many customers might be impacted?

+ CEC Targeted Electrification

1. How can we identify specific sites that will be good candidates for targeted electrification?
2. What are the benefits and costs of pursuing targeted electrification at those sites?
3. How can communities and customers be engaged in targeted electrification efforts?



NRDC Statewide analysis: potential for avoiding gas distribution pipeline replacement by 2045

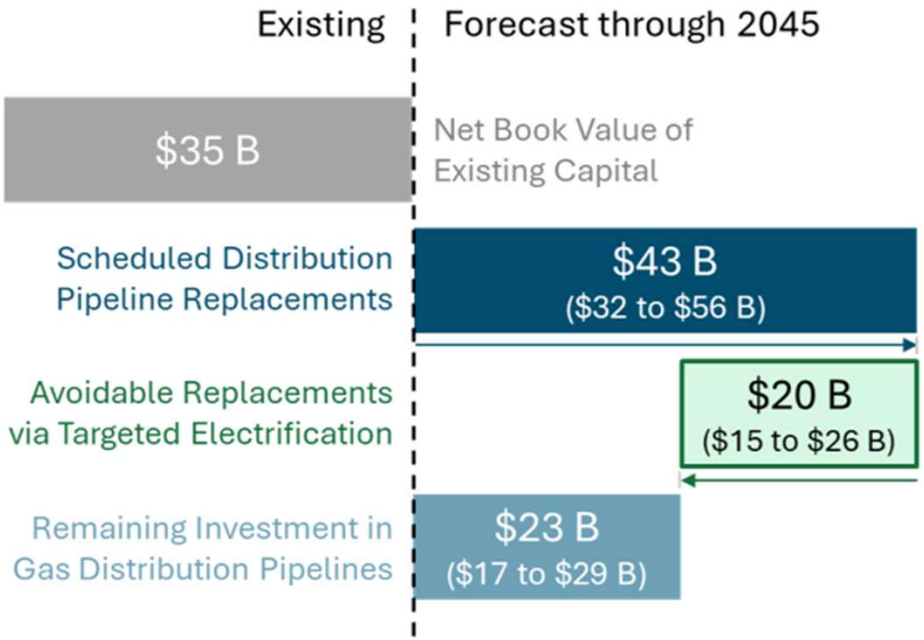


If targeted electrification was pursued for all hydraulically feasible (avoidable) main miles:

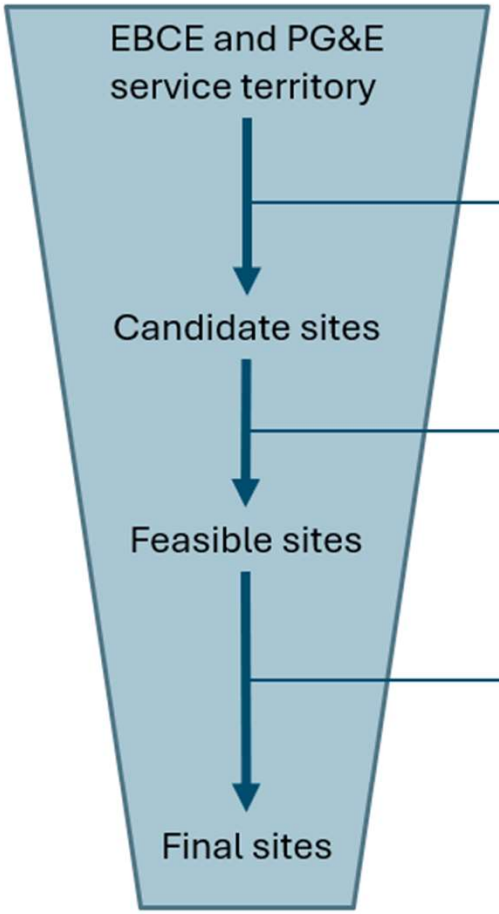
Sensitivity	Services Electrified	Customers Electrified	Share of Total Customers
Low	265,000	340,000	2.9%
Mid	**330,000**	**430,000**	**3.7%**
High	400,000	515,000	4.4%

Targeting a relatively small share of the gas system delivers significant potential savings through 2045

- **Without targeted electrification, California's gas utilities would spend $32 to $56 billion on gas distribution pipeline replacement by 2045**
- **Targeted electrification of between only 3.5% to 6% of customers could save $15 to $26 billion of these costs through 2045**



CEC Site Specific Analysis: Site selection framework



1. Candidate screen: Use Gas Asset Analysis Tool to filter candidate sites
   - Initial screening for hydraulic feasibility
   - High risk score (distribution integrity management program, DIMP)
   - Lead time: not identified for a pipeline replacement project in 2022-2024

2. Engineering review: Use hydraulic model to confirm hydraulic feasibility
   - Delete pipeline(s) in hydraulic model and check for infeasibility or capacity issues
   - If issues arise, consider changes in scope or other mitigation options

3. Site prioritization: prioritize final sites using site-specific information
   - Benefit / cost criteria
   - Building diversity criteria
   - Equity criteria
   - Community criteria

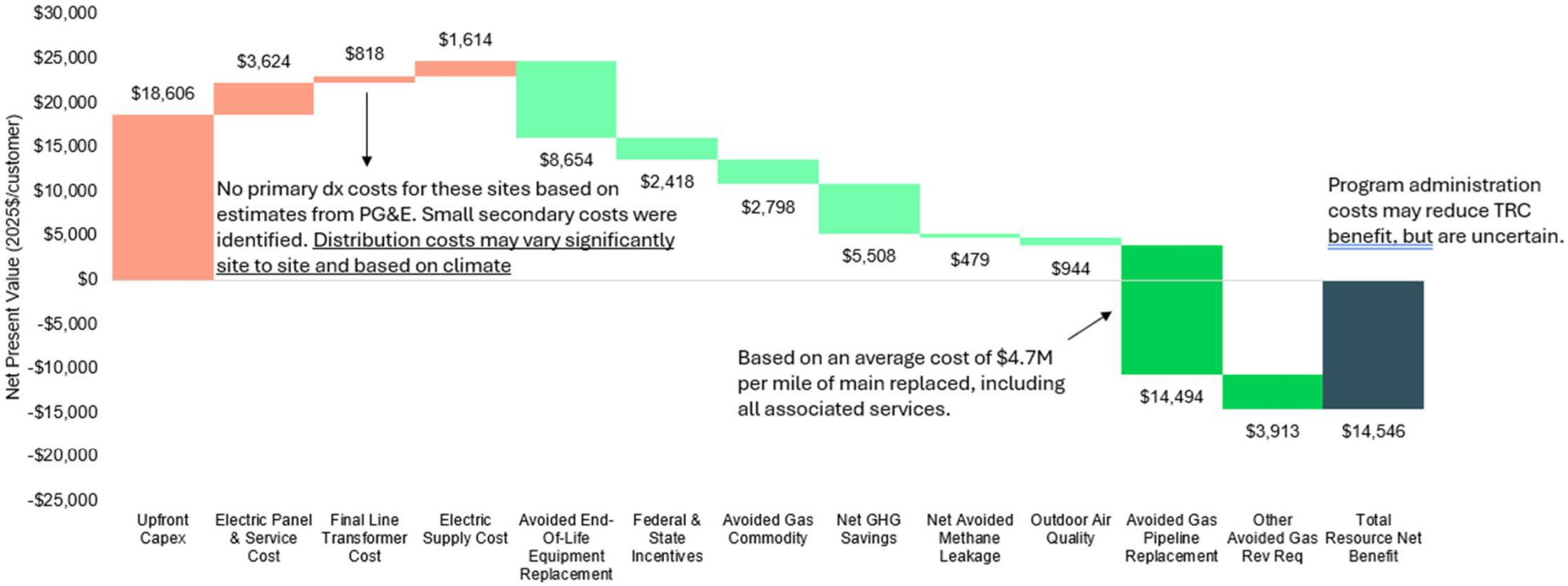
   Weighting of criteria may vary depending on case. *E.g.*, this research project may weigh criteria differently from large-scale program design

This framework was used to identify 11 candidate sites in the Bay Area, averaging 140 customers per site

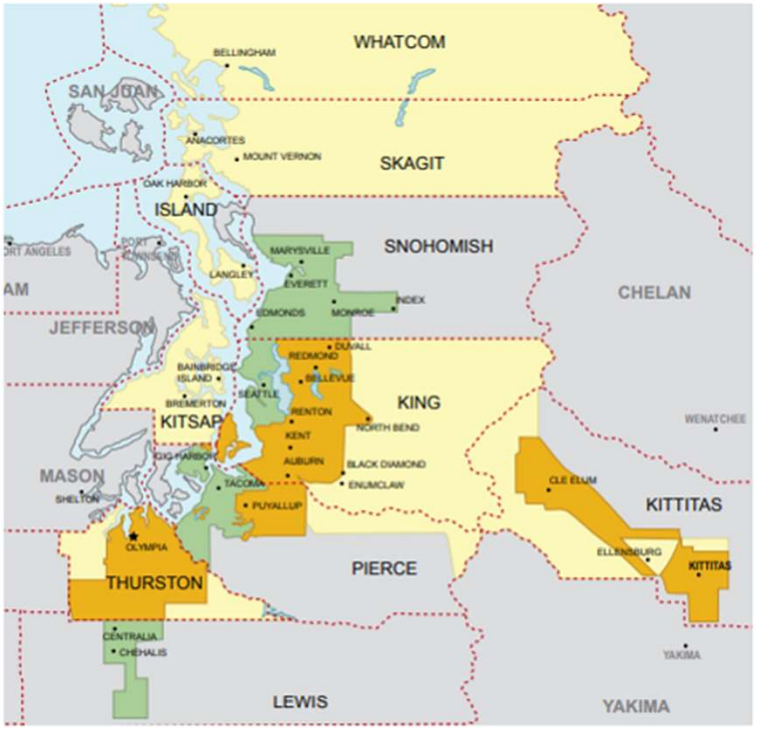
Site specific benefit-cost analysis (incl. gas avoided costs)

Total Resource Cost test (TRC)

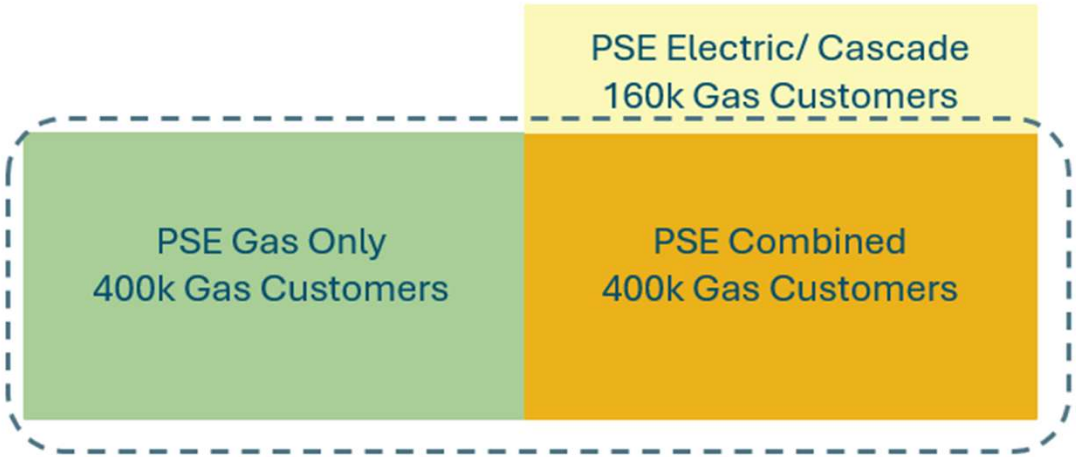
Average Lifecycle Costs and Benefits Per Customer Across 11 Candidate Sites (1,500 Customers)



Considerations for WA: only approximately 50% of PSE's gas customers are also PSE electric customers



- **Integrated system planning across utility service territories presents challenges ranging from planning to execution to cost allocation.**
- **The Massachusetts DPU has ordered IOUs to develop integrated planning frameworks, but those are nascent.**
- **E3 is not aware of examples of IOUs coordinating with COUs on integrated gas-electric planning.**



Thank You

Energy+Environmental Economics

Discussion Framework

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Topic 1:
Clarifying Policy Goals

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Clarifying Policy Goals

- Legislative Intent from the Washington Decarbonization Act for Large Combination Utilities (RCW 80.86)
  - Recognize that gas & electric companies face transformational change
  - In order to meet the statewide greenhouse gas limits in the energy sectors,
    - The legislature finds that regulatory innovation may be need to remove barriers that large combination utilities may face to meet the state's public policy objectives and expectations
  - Large combination utilities are required to be compliant with these carbon reduction statutes:
    - Chapter 19.405 RCW, the Washington Clean Energy Transformation Act (CETA)
    - Chapter 70A.65 RCW, the Washington Climate Commitment Act
  - Support the transition by adopting requirements for large combination utilities to:
    - Conduct integrated system planning (ISP) to develop specific actions supporting gas system decarbonization and electrification, and reduction in the gas rate base
  - Encourages a robust competitive wholesale market for generation, storage, and demand side resources to serve the state's electrical companies, other electric utilities, and end-users that secure their own power supply

10 Minute Break

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Topic 2:
Content of an Integrated System Plan

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Topic 3:
Implementation & Reporting

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Wrap Up

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Procedural Matters and Next Steps

Upcoming Opportunities to Engage:

- Technical Conferences
- Informal Draft Rules

The Washington Utilities and Transportation Commission values your input. **Please continue to submit your comments!**

Rulemaking Phase	Dates*	Events/Activities
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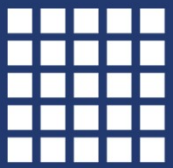

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Thank You!

Appendix - Notice Questions

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Question 1 – Content of an ISP

Please review Table 1.

a. Are there missing energy plans that should be included in the ISP, which are not currently identified in Table 1, above, or included in the draft rules?

a. For example, should the Biennial Conservation Plan (BCP) also be included in an ISP? c. What timing is most appropriate for both plans (ISP, BCP)?

Table 1: Proposed Consolidated Energy Plan Requirements for an Integrated System Plan (ISP)

Energy Plan	Included in ISP Rules?	RCW
Electric		
Integrated Resource Plan	Yes	19.280.030
Clean Energy Action Plan	Yes	19.280.030
Conservation Target (potential)	Partially. The draft rule includes evaluating all cost-effective conservation and planning to achieve the *two percent of electric load* threshold. Approval of an EIA conservation target remains in the current BCP process.	19.285.040
Biennial Conservation Plan	Partially. The BCP process is preserved. RCW 19.285.040 and associated methodologies are included in the ISP.	BCP not in RCW, only in WAC
Clean Energy Implementation Plan (CEIP)	Yes	19.405.060
Electrification of Transportation Plan	Yes	80.28.365
Multiyear Rate Plan (MYRP)	No, not at this time.	80.28.425
Gas		
Conservation Target (Potential)	Partially, rule includes evaluating all cost-effective conservation. Approval of the conservation target is kept in the current BCP process.	80.28.380
Pipeline Replacement Plan	Partially. The Pipeline Replacement Plan process is preserved, but replacement data must be considered within the ISP process. Plan approval remains within the current Pipeline Replacement Plan process.	80.28.130
Integrated Resource Plan	Yes	IRP not in RCW, only in WAC

Question 2 - Content of an ISP, long-term and implementation sections

a. WAC 480-95-030: Please identify any issues with the draft rule language and provide recommendations to address those concerns through comments or redline edits.

a. WAC 480-95-040: Please identify any issues with the draft rule language and provide recommendations to address those concerns through comments or redline edits.

Question 3 – Compliance Timeline

While the current CEIPs are based on a 4-year compliance period, the multiple references to "emissions reduction periods" for ISPs [RCW 80.86.010(14); RCW 80.86.020(4)(e) and (g)] suggest that a 5-year timeline may be beneficial in harmonizing the Clean Energy Transformation Act, Climate Commitment Act, and 80.86 RCW requirements in a consolidated planning environment. This may especially be true when considering the practical compliance and reporting implications in RCW 80.86.020(4)(e) and (g). As such, the Commission requests feedback on both the compliance and associated timelines:

a. Could a 5-year compliance period be used for an integrated system plan and still meet the "statutorily required content" of a CEIP (RCW 19.405.060)? If yes, please explain.

a. In the alternative, if a 4-year compliance period were used, how would that impact the ability of the Commission and interested parties to assess a large combination utility's potential claim that a given level of conservation or demand response was DOCKET U-240281 PAGE 4 "neither technically nor commercially feasible during the applicable emissions reduction period" [RCW 80.86.020(e) and (g)]? Please explain.

Question 4 – Definition of "commercially feasible"

Commission Staff (Staff) interprets the term "commercially feasible" to be different from the term "cost-effective" as used in the EIA. Staff interprets "commercially feasible" as related to the Technically Achievable Potential as determined in utility Conservation Potential Assessments (CPA). Further, Staff believes the definition of "commercially feasible" may be an eventual compliance question regarding conservation achievement.

a. Should there be a definition of "commercially feasible"? If yes, please provide proposed definition.

a. How is "commercially feasible" different from "achievable" cost-effective conservation in the EIA?

Question 5 – Definitions – General

Are there other definitions within the proposed rules that are missing or need to be changed? If yes, please explain.

Question 6 – Pipeline Replacement Plan Data

To support safety and reliability, gas utilities plan for replacement miles of gas pipeline every year. Additionally, avoiding gas distribution pipeline replacement through targeted electrification must be considered within an ISP. As such, does the language outlined in WAC 480-95-050 adequately include costs without impacting safety and the approval processes for necessary repairs, improvements, changes, additions, or extensions?

Question 7 – Outreach to Customer-Owned Utilities

Is the language in WAC 480-95-050(2) adequate to ensure communication with consumer-owned utilities, while maintaining sufficient flexibility?

Question 8 – Plan Development & Timing

RCW 80.86.020 requires the Commission to approve, reject or approve with conditions an ISP within 12 months of filing.

a. Please describe the filing and review process that you envision for an ISP.

a. How does that differ from the current draft rules?

a. Further, should it resemble the existing IRP or CEIP process more?

Question 9 – Integrated System Plan Midway Progress Report

In the draft rules, the Commission proposes an ISP midway progress report that would update major long term planning assumptions, necessary implementation details, and significant changes in law or economic conditions.

a. Should the information provided in this document allow a utility to request changes to previously approved targets? If yes, what standards should be met for the Commission to change targets?

a. If so, please describe what an appropriate process would be for review of this document. Should this process be subject to adjudication or not? DOCKET U-240281 PAGE 5

Question 10 – Reporting & Compliance

What metrics are important to include in reporting and compliance filings to demonstrate progress towards electrification and emissions reduction targets?

Question 11 – Public Participation

Are there missing elements, or areas that need to be changed, in WAC 480-100-655 that should be included in a public participation plan for an ISP? If yes, please explain.

Question 12 – Named Communities in WAC 480-95-030(1)

Staff interprets vulnerable populations, highly impacted communities, and overburdened communities -- including customers of both electric and gas systems – to be considered and referred to as “named” communities, which should be considered within ISP. Do you agree? Further, are there any other places in the rules where this may also apply?

Question 13 - Enforcement

What enforcement mechanism should the Commission consider with the emission reduction targets and other aspects of the ISP? For example, should the Commission add language in a new enforcement section language modeled after WAC 480-100-665?

Question 14 – Amendment of IRP in WAC 480-107, Electric Companies – Purchases of Resources

Is there a nexus between acquisition rules and filings made in accordance with WAC 480-95-030, the new ISP? If yes, what additional revisions are needed beyond connecting the IRP and ISP requirements with acquisition processes? If no, please explain.