



*In the Community to Serve®*

# Washington Integrated Resource Plan Targeted Technical Advisory Group Meeting #6

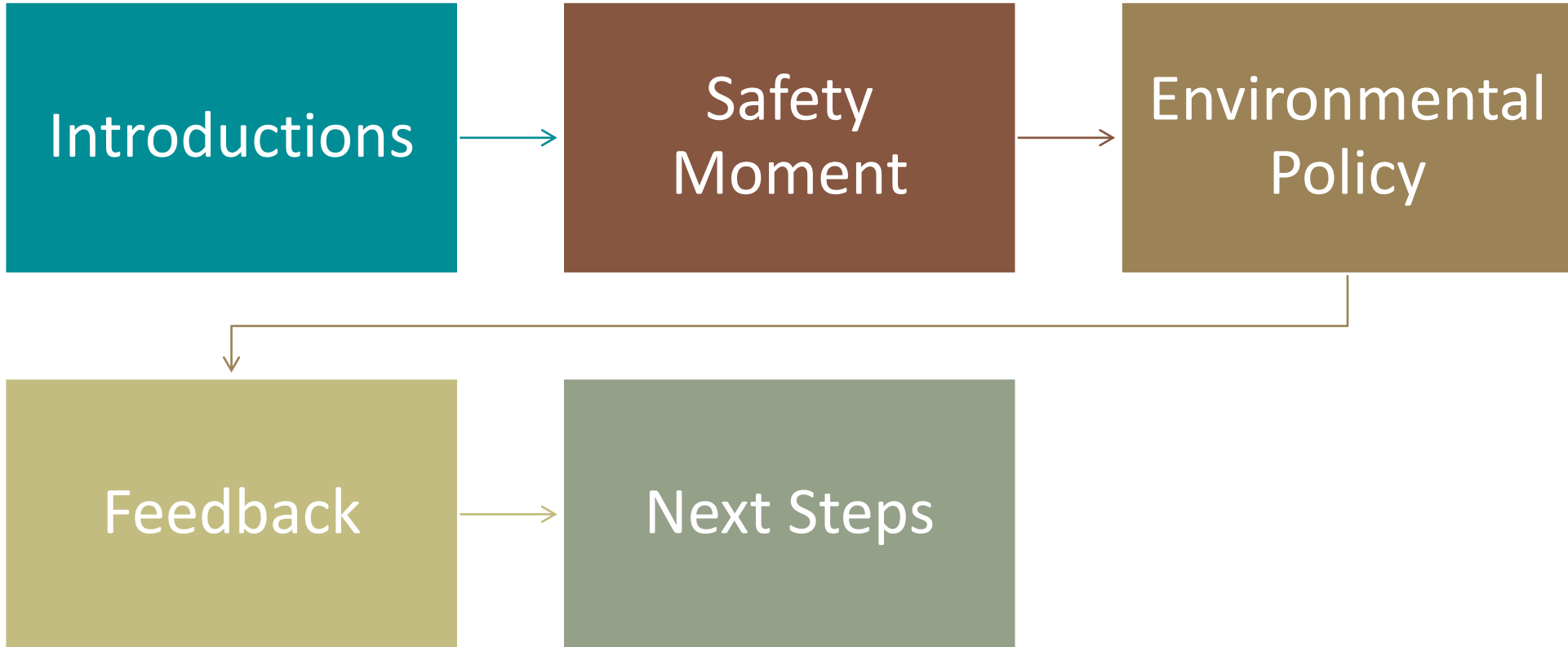
MAY 7, 2024

MICROSOFT TEAMS/TELECONFERENCE



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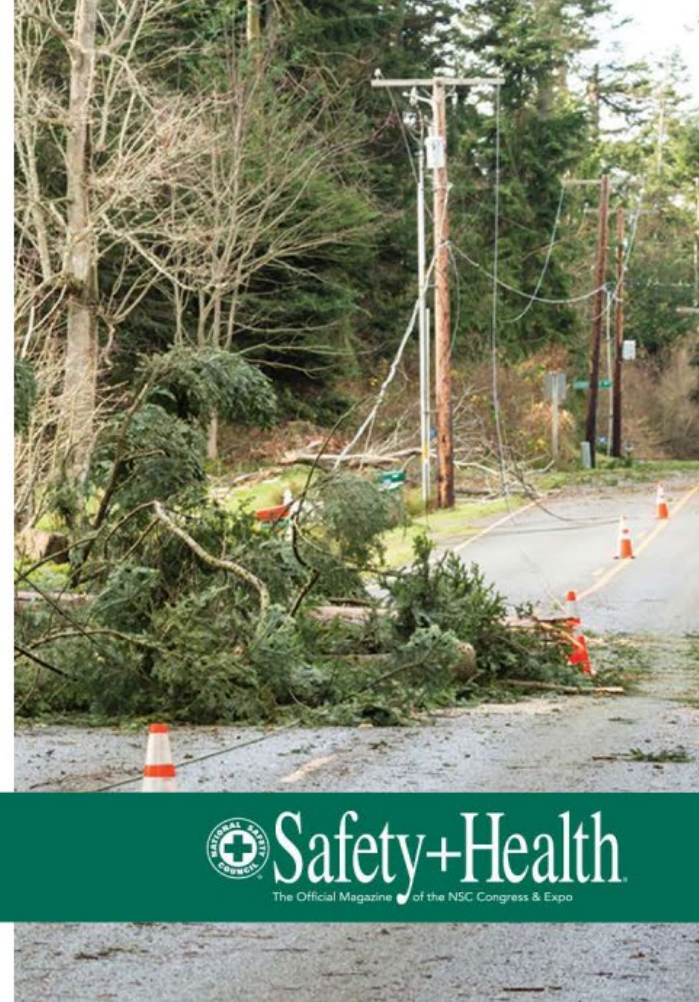
# Agenda



# Safety Moment

## Be cautious around power lines

- Keep workers and equipment at least 10 feet away from overhead power lines.
- Never touch anything in contact with a power line.
- Always assume downed lines are dangerous.
- Don't step in water near a downed line.



 **Safety+Health**  
The Official Magazine of the NSC Congress & Expo

# Cascade's commitment to reducing emissions

As an energy provider proudly serving Washington and Oregon, Cascade Natural Gas has an important role to play in securing a lower carbon future for the Pacific Northwest. This means keeping Cascade's system reliable and affordable for customers while helping communities meet their GHG emission reduction targets.

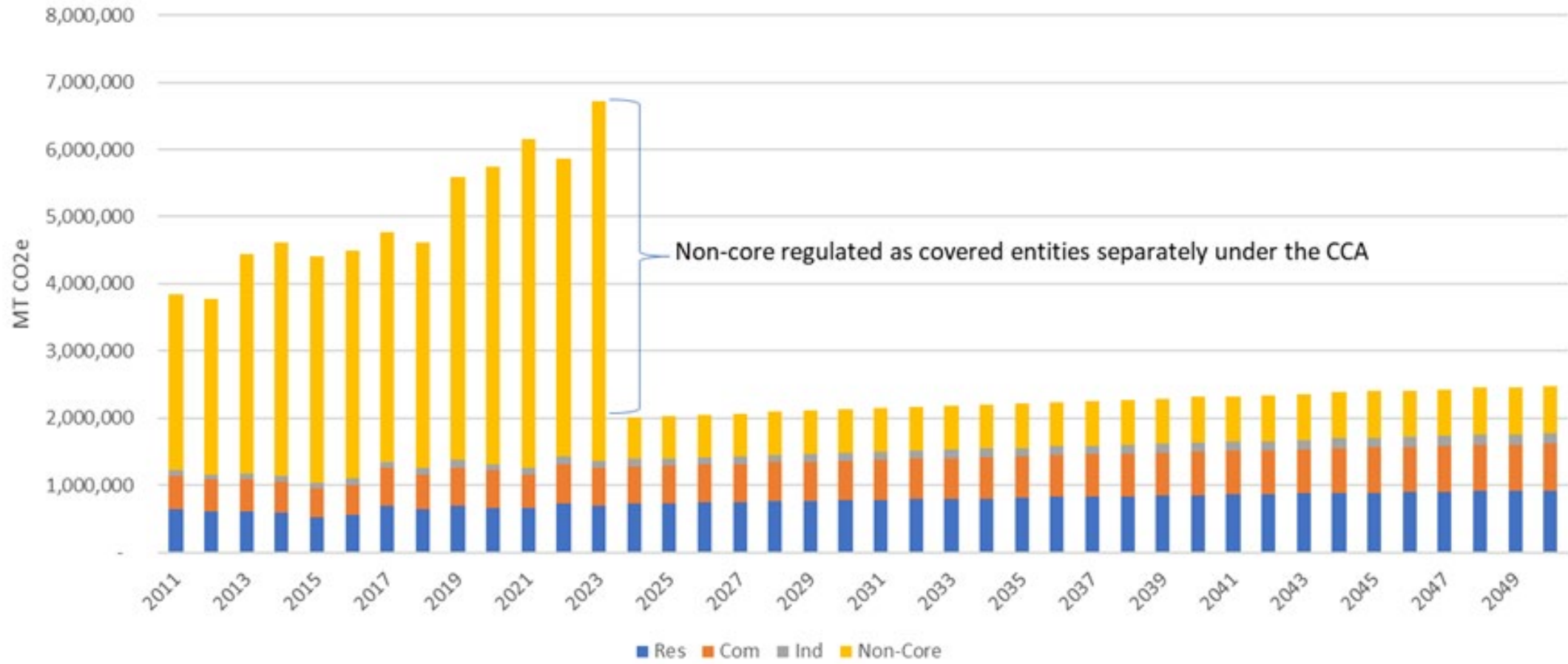
Cascade Natural Gas, along with MDU Resources Group's other natural gas companies, established a methane emissions reduction target of 30% by 2035 compared to 2022 levels.

## **Environmental Policy:**

*The Company will operate efficiently to meet the needs of the present without compromising the ability of future generations to meet their own needs. Our environmental goals are:*

- *To minimize waste and maximize resources;*
- *To be a good steward of the environment while providing high quality and reasonably priced products and services; and*
- *To comply with or surpass all applicable environmental laws, regulations and permit requirements*

### Projected Baseline Emissions



# Reducing Customer Emissions

## Energy Efficiency and Conservation/DSM

- Maximizing cost-effective therm savings for Residential, Commercial, and Industrial Customers
- Adaptive management for changing codes, standards, and forecasts

## Low-Income Weatherization Offerings

- Targeted outreach, increased participation in LI EE programs
- Funding 100% project cost

Annual EE and Conservation/DSM Savings	WA		OR	
	therms	MT CO2e	therms	MT CO2e
<b>2019</b>	760,956	4,038	499,135	2,648
<b>2020</b>	659,176	3,498	427,060	2,266
<b>2021</b>	1,243,223	6,597	525,372	2,788

# Emissions from Natural Gas Distribution Operations

## Cascade's methane emissions from pipeline infrastructure and GHG emissions from combustion equipment

- Distribution system methane emissions and compressor station emissions reported to the Dept of Ecology equals about 27,000 metric tons of CO<sub>2</sub>e.
- EPA announced amendments to Subpart W reporting in 2023, proposing emission factor updates and reporting of “other large release events” starting in reporting year 2025. EPA defines the release events as releases of ≥250 MT CO<sub>2</sub>e (~500,000 scf of pipeline quality natural gas).
- With other operational emissions added to our inventory, we expect total annual emissions between 35,000 to 48,000 metric tons of CO<sub>2</sub>e.
- Cascade's 2023 methane emissions rate is 0.047%(% of volume of methane emitted per total methane throughput volume).

# Reducing Operations Emissions

## Cascade is committed to methane emissions reductions

- Created a more robust inventory of GHG emissions in all operational areas for 2022 and ongoing
- Joined One Future Coalition and will be operating with entities nation-wide to reduce methane intensities and improve distribution operations.
- Cascade mitigates methane leaks and has adopted a program to quickly address even small leaks that are not considered a public safety concern.
- Exploring more ways to reduce emissions in normal operations, including the use of methane capture technology for pipeline blowdowns.
- Piloting an emission survey using Picarro and Advanced Mobile Leak Detection technology in 2024.



# Reducing Operations Emissions

## System Integrity Projects

- Since 2019, Cascade has replaced over 42 miles of early vintage steel pipe with new steel or polyethylene pipe in Washington.
- Cascade is better positioned than most US utilities as it has no unprotected steel pipeline and no cast iron pipe.

# Climate Commitment Act

*Program establishing a declining cap on GHG emissions from covered entities consistent with the limits established in RCW 70A.45.020, and a program to track, verify, and enforce compliance with the cap through the use of compliance instruments.*

## Anthropogenic GHG Emissions Reductions:

- Achieve 1990 levels (90.5 million metric tons) by 2020
- 45% below 1990 levels (50 million MT) by 2030
- 70% below 1990 levels (27 million metric tons) by 2040
- 95% below 1990 levels (5 million metric tons) by 2050

## Covered Entities:

- Fuel suppliers, natural gas distribution, electric utilities, and large facilities.
- Landfills and certain emissions intensive and trade exposed (EITE) entities are added in during 2nd and 3rd compliance periods.

# Climate Commitment Act

## Cascade's regulated emissions:

- Customer Emissions – about 1.9 million metric tons CO<sub>2</sub>e in 2023
  - All core customers
  - Non-core customers that are not covered entities under the CCA (=/ $<25,000$ ), and excludes customers that may "opt-in" to program individually or that may petition to be emissions-intensive and trade exposed (EITE).
- Operations Emissions – 26,922 metric tons CO<sub>2</sub>e
  - Methane leakage
  - Fuel combustion from  $>5$  mmbtu sources (e.g. compressor stations)

# Climate Commitment Act

## Baseline

- 2015-2019 average

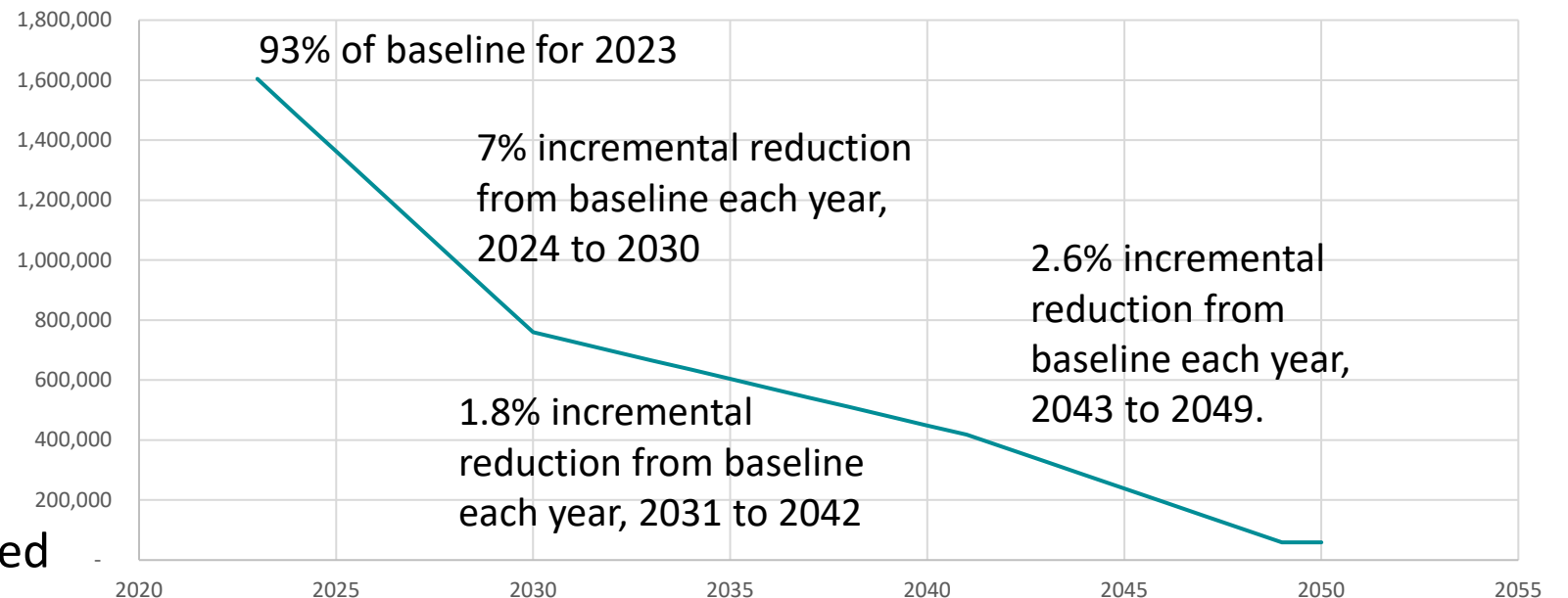
## No Cost Allowances for Natural Gas Suppliers

- See chart

## Allocation of No Cost Allowances

- 2024 and thereafter, allocations made in October of prior year
- Specific auction allocations decided 3 months prior to auction

Cascade's Projected Trajectory of No Cost Allowance Allocations (Metric Tons)



# Climate Commitment Act

Rule Requirements Commence on January 1, 2023

## 4 Year Compliance Periods

- 2023-2026, 2027-2030, 2031-2034, ...

## Compliance Demonstrations

- Full compliance demonstrations required by Nov 1 of the year following the end of a 4-year compliance period
- Interim compliance period demonstrations by Nov 1 annually of 30% of prior year's emissions.

# CCA Compliance Options

## Allowances

- Allowances are equal to one ton of CO2e emissions

## Energy Efficiency and Conservation/Demand-side Management

## Renewable Natural Gas

- One for one replacement of fossil gas emissions through renewable thermal credits

## Offsets

- Limit use to 8% of compliance obligation in first compliance period (3% from tribal), 6% thereafter.

## Other

- Hydrogen, Carbon Capture, Synthetic methane, etc.

# Thermal Energy Networks (TENs)

- TENs bill passed into law in 2024; takes effect June 6
- Identifies pathways for utilities to invest in networked thermal energy and associated pilot activities
- Funds will be available from Commerce to invest in qualified pilot projects
- LDCs have 12 months to identify available projects in writing to Commission and 30 months to deploy with potential option for extension at discretion of UTC
- Law also allows LDC obligation to serve to be met through networked thermal energy at request of LDC and with approval of UTC.

# Thermal Energy Networks (TENs)

- Networked thermal energy can come from multiple sources including geothermal, ground source heat, waste heat, etc.
- Cascade will explore a range of opportunities for integration of this technology as part of our ongoing decarbonization compliance planning efforts.
- Cascade will continue to participate in the Utility Networked Geothermal Collaborative and monitor emerging best practices for this promising combustion fuel alternative .
- Targeted pilots will help Cascade determine the scalability of different TENs technologies and applications to support future modeling.



# City of Bellingham

Bellingham City Council passed an ordinance on Feb 7, 2022, which requires electric space and water heating equipment for new commercial and large (4+ story multifamily buildings) buildings. It also requires incremental improvements in EE (building envelope, lighting, insulation) and solar installation or readiness in new buildings.

The electric-only mandate for space and water heating does not apply to single family construction, detached houses, duplexes, townhomes or row houses.

The ordinance takes effect August 7, 2022.

The City of Bellingham continues to work on the design of a Climate Action Fund. Preliminary drafts indicate that this would be treated as a property tax and would direct funds towards electrification, among other efforts. Following the City Council and Mayor expressing reservations about the design and timing of the plan it was announced they will delay putting the measure on the November ballot.

# Whatcom County

On July 27<sup>th</sup>, 2021, Whatcom County voted to ban the construction of new refineries, coal-fired power plants and other fossil fuel-related infrastructure.

This does not constitute a gas ban but may have impacts on distribution system enhance projects if needed in Whatcom County.

# City of Bend

Aspirational goal to reduce GHG by 40% by 2030 based on 4 areas of focus:

- Energy Supply
- Transportation
- Energy in Buildings
- Waste and Materials

There isn't a specific carve-out for what Cascade is required to do for this action plan. However, Cascade's representative on the original Climate Action Steering Committee (CASC) helped identify pathways for gas to support the City goals through development of an offset program and a biodigester plant. Regulatory is working on offset programs and Cascade was awarded Bend landfill RFP.

The City's current Environment and Climate Committee is having ongoing discussions about the role of gaseous fuels as part of a decarbonized future. Cascade intends to share information on its emerging RNG efforts and overall renewable gas potential as appropriate.



# National Focus

- The US Department of Energy published a final rule, 89 Fed. Reg. 24,340 in April '24, revising coverage determination rulemakings; the process for developing energy conservation standards; test procedures; and ASHRAE equipment. Cascade will continue to monitor for impacts to our programs in future.
- DOE recently published a Federal Register notice of Direct Final Rule (DFR) pertaining to energy conservation standards for consumer clothes dryers along with its previously updated residential water heater efficiency standards which would apply to new water heater models starting in 2029. Cascade's energy efficiency team will continue to assess impacts to baseline equipment used to determine the Company's Energy Efficiency portfolio.
- EPA has proposed adjusting standards for ENERGY STAR natural gas furnaces to AFUE 97%+ and is considering ENERGY STAR qualification for hybrid HP technologies. Cascade's energy efficiency team will continue to monitor these developments and potential EE program impacts/opportunities.
- The US Dept of Energy has also launched a notice of intent for funding opportunities for Clean Hydrogen Programs associated with the Bipartisan Infrastructure Law. Cascade is monitoring opportunities for partnerships in this sector across the states we serve.
- The Regional Clean Hydrogen Hubs (H2Hubs) will help accelerate and support the production, storage, delivery, and end-use of clean hydrogen.
  - Currently in the infancy of planning and funding. Cascade continues to monitor this future opportunity and researching results of ongoing pilot s nationwide.
- EPA recently announced amendments to Subpart W (O&G segment) operational GHG emissions reporting, proposing emission factor updates and additional reporting of "other large release events". These changes are proposed to be effective starting in reporting year 2025.
- EPA finalized a GHG regulation on April 25, 2024, requiring new high operation natural gas combustion turbines to install pollution controls equivalent to carbon capture. Also, existing coal units not installing controls would retire before 2032, opt to co-fire with natural gas and retire before 2039, or install carbon capture to operate past 2039. EPA is exploring GHG standards for existing natural gas combustion turbines.
- US Senate Bill - Inflation Reduction Act of 2022 was released in late July, which includes climate change investments to promote decarbonizing the economy. The company continues to evaluate opportunities and impact from the BIL/IIJA and IRA.

# Feedback for Cascade?

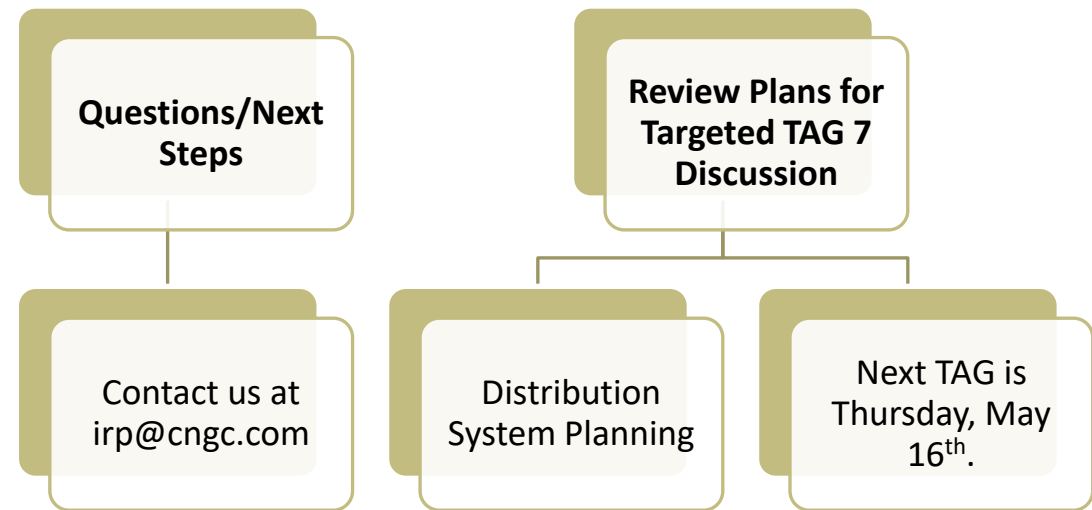
Do you have comments or ideas that Cascade should consider regarding Environmental Policy?

Process Item	Date	Process Element
Targeted-TAG	Thursday, January 25, 2024	What is an IRP and how to get involved
Targeted-TAG	Thursday, February 15, 2024	Avoided Cost
Targeted-TAG	Wednesday, March 6, 2024	Energy Efficiency
Targeted-TAG	Thursday, March 28, 2024	Equity in the IRP
Targeted-TAG	Thursday, April 11, 2024	Customer/Load Forecast
Targeted-TAG	Tuesday, May 7, 2024	CCA/Compliance Modeling
Targeted-TAG	Thursday, May 16, 2024	Distribution System Planning
Targeted-TAG	Thursday, May 30, 2024	Resource Integration
		Process, Key Points, IRP Team, Timeline, Regional Market Outlook, Planned Scenarios and Sensitivities, Stakeholder Engagement, Demand and Customer Forecast and Non-Core Outlook, Drilling down into segments of demand forecast.
TAG 1	Thursday, June 13, 2024	Upstream Pipeline presentation.
Receive feedback on TAG 1	Friday, June 28, 2024	
		Respond to TAG 1 Feedback, Distribution System Planning, Alternative Resources, Price Forecast, Avoided Costs, Current Supply Resources, Transport Issues, Carbon Impacts, Energy Efficiency, Bio-Natural Gas, Preliminary Resource Integration Results.
TAG 2	Thursday, July 25, 2024	
Receive feedback on TAG 2	Friday, August 9, 2024	
First Draft	Friday, September 6, 2024	
Comments Due	Friday, October 4, 2024	
		Respond to TAG 2 feedback, Final Integration Results, finalization of plan components, Proposed new 2- to 4-year Action Plan
TAG 3	Wednesday, October 30, 2024	
Final Draft	Tuesday, December 3, 2024	
Comments Due	Tuesday, January 14, 2025	
TAG 4 (if needed)	Thursday, January 30, 2025	
Final Complete By	Friday, February 14, 2025	
File	Monday, February 24, 2025	

# 2025 WA IRP Schedule



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