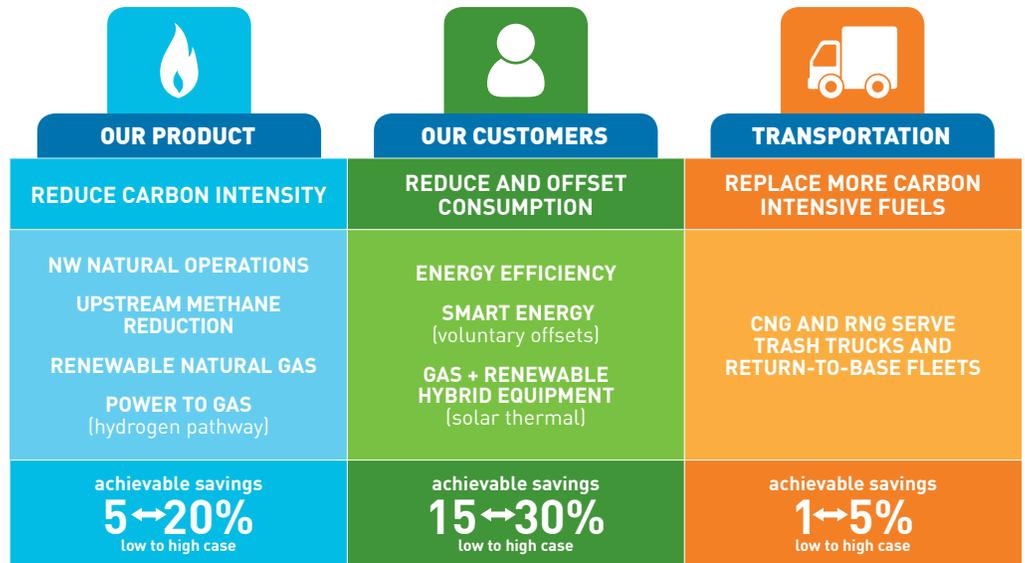


OUR LOW-CARBON PATHWAY

CONSERVING, OFFSETTING, INNOVATING TO ADDRESS CLIMATE CHANGE.



NW Natural's pipeline system—one of the newest, tightest in the country—can help achieve our region's carbon reduction goals affordably. Using a bottom-up approach, NW Natural identified known technologies to develop an aggressive, but attainable, carbon savings goal. NW Natural customers' natural gas use represents 8% of Oregon's greenhouse gas emissions.* Through voluntary action and collective engagement we can drive that number down further.



CARBON SAVINGS GOAL: 30% BY 2035

Our goal addresses the full value chain of natural gas—from production at the wellhead to use at the burner tip in homes and businesses.



WHY A SAVINGS GOAL?

Allows a societal look at carbon savings—adding up emission reductions from the production of natural gas to customer use to diesel displacement in heavy-duty vehicles.



AFFORDABLE SAVINGS

We prioritize the lowest cost savings first, and will work to drive down the cost of newer, cutting-edge technologies through pilots, partnerships and R&D.

WHAT WE'RE WORKING ON TODAY



DECARBONIZING THE PRODUCT

Leverage National Resource Defense Council best practices to target production emissions and engage in partnerships to integrate renewable natural gas onto the system—starting locally with municipal waste water from treatment plants—and expanding over time to include other waste streams.



DRIVING DOWN CUSTOMER USE

Partner with Energy Trust to help customers conserve and be more comfortable through energy efficiency. By 2035, we can save enough energy to heat 230,000 homes annually—about the same amount of homes Oregon expects to add over the next decade. Increase participation in our Smart Energy program, which allows customers to offset emissions by funding renewable energy projects.



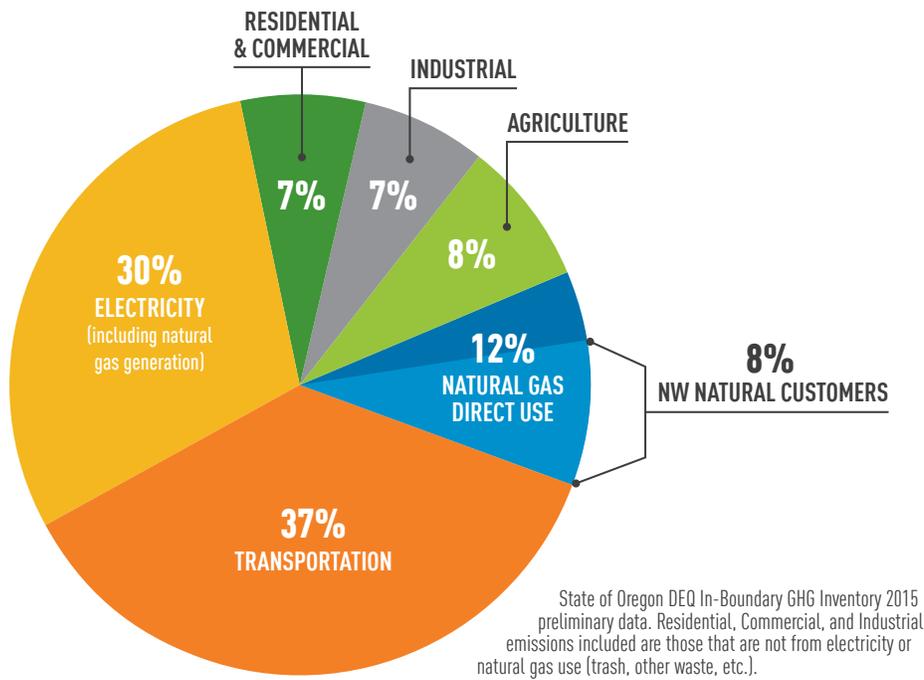
TRANSPORTATION OPPORTUNITIES

The transportation sector is the top contributor of carbon emissions in our region—and growing. Heavy-duty natural gas vehicles provide 20% carbon savings with compressed natural gas or 80% carbon savings with renewable natural gas—while emitting 90% fewer smog-forming air pollutants than the cleanest diesel.

*Oregon DEQ In-Boundary GHG Inventory, 2015 Preliminary Data.

DIRECT USE OF NATURAL GAS

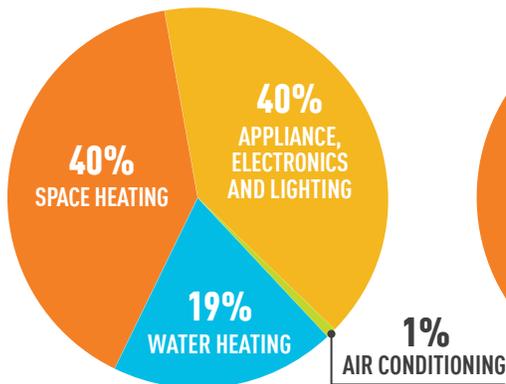
NW Natural's system plays a critical role serving our region's energy needs



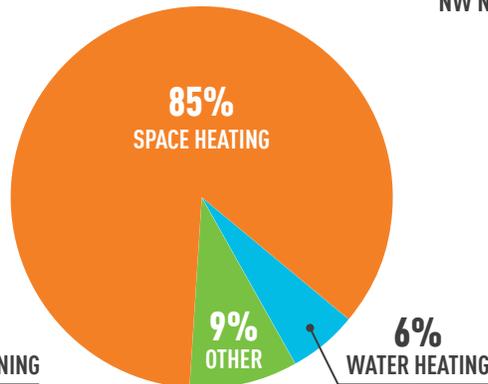
- The direct use of natural gas — in homes, businesses and industrial applications — makes up about 12% of Oregon's greenhouse gas emissions. NW Natural's customer and company use accounts for 8%.
- While that's a modest piece of Oregon's emissions pie, NW Natural can put our pipeline system to work in new ways to drive emissions down further. And we can do it with an existing modern system — making it more affordable for everyone.

ENERGY SYSTEMS ARE BUILT TO SERVE PEAK NEEDS

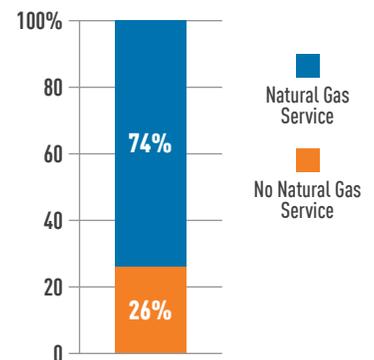
Average Annual Home Energy Use*



Winter Peak Hour Home Energy Use**



Share of Residential Square Footage in NW Natural Service Area with Natural Gas Service***



NW Natural's modern system is an efficient way to serve winter peak energy needs.

It takes a lot of energy to keep us warm during the cold, dark days of winter. And on those coldest winter mornings, natural gas provides 90% of our residential space-and-water-heat customers' energy needs.

To serve the current direct use of natural gas peak load with electricity, the Northwest's winter peak electric load would roughly double (increase by ~25GW).

- Assumes comprehensive adoption of high efficiency space and water heat pumps.
- Assuming adoption of today's commonly purchased heat pumps, the electric winter peak load would roughly triple (increase by ~50GW).

*USDOE 2009 Residential Energy Consumption Survey. **kWh Home Usage, 9.0 HSPF Heat Pump; 7 am in Winter, 7° F. ***2014 Residential Sites Database; On/near NW Natural mains.