

Our clean energy vision

A fossil-free future for cleanly heating homes and businesses

Executive summary

National Grid's vision is to fully eliminate fossil fuels from both our gas and electric systems, enabling all homes and businesses we serve to meet their heating needs without the use of fossil fuels by 2050, if not sooner.

We are proposing specific actions to achieve fossil-free heat fairly, affordably, and reliably for all our customers and communities.

Winning the fight against climate change requires us to collectively achieve emissions reductions across multiple sectors of the economy – electricity, transportation, buildings heat, and industry. Reducing emissions from the buildings sector is one of the most important and challenging problems that must be solved to achieve net zero. **Heat is essential to life, and keeping it affordable and reliable is critical for economic development and wellbeing.**

Our fossil-free vision rests on four pillars of action:

Pillar one **Energy efficiency in buildings**



We will continue to provide programs for our customers to accelerate energy efficiency improvements to buildings, including deep retrofits and measures that reduce peak gas and electric demand; and support more rigorous building codes for new buildings.

Pillar two **100% fossil-free gas network**



We will eliminate fossil fuels from our existing gas network no later than 2050 by delivering renewable natural gas and green hydrogen to our customers.

Pillar three **Hybrid electric-gas heating systems**



We will support our customers by providing them strategies and tools to capture and maximize the benefits of pairing electric heat pumps with their gas appliance.

Pillar four **Targeted electrification and networked geothermal**



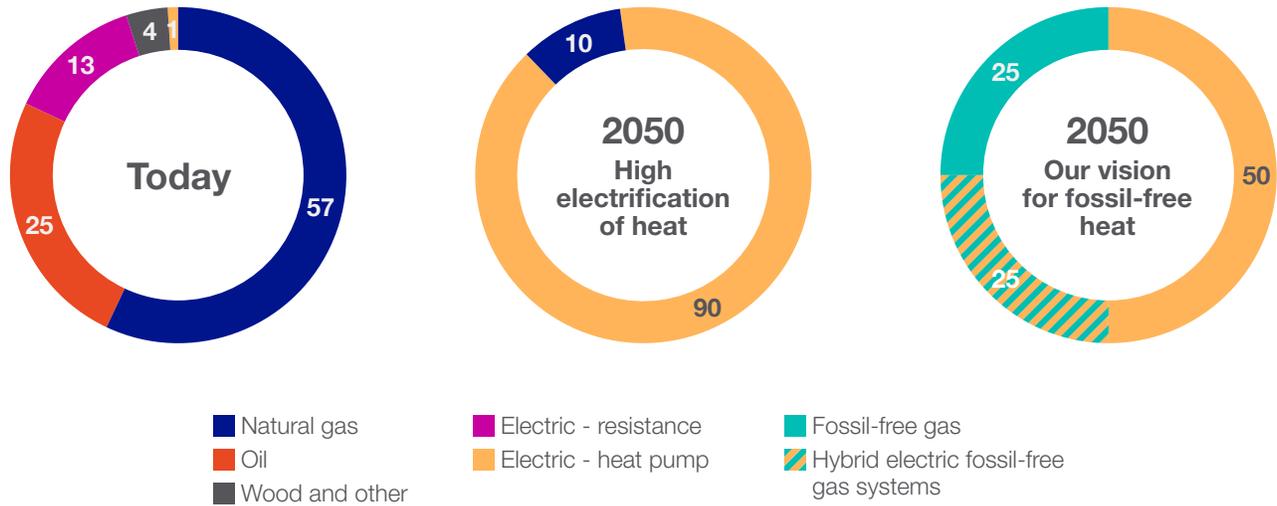
We will support cost-effective targeted electrification on our gas network, including piloting new solutions like networked geothermal. We will support customers who heat with oil and propane with strategies and tools to convert to heat pumps.

For more information, please visit:
nationalgrid.com/fossilfree

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Climate action plans from New York and Massachusetts agencies propose that nearly all households change their heating systems to electricity by 2050. **Our vision proposes a hybrid approach that enables customers to have more affordable and more practical choices in how to become fossil-free.**

Buildings heating systems in Massachusetts and New York (% of total).



What our vision means for Massachusetts and New York

How does our vision meet state and regional decarbonization goals?

- **It fully eliminates reliance on fossil fuels for heat** and achieves this at lower cost and hassle for customers than high electrification proposals under consideration in Massachusetts and New York.
- **It improves our likelihood of achieving our climate goals** by reducing the amount of new infrastructure required and enabling customers to have multiple options for clean energy and heating their homes and businesses, instead of being mandated to switch to all-electric.

How does our Pathway better achieve the climate goals of the region?

- **Lower heating costs:** It delivers 15-20% lower home heating costs than a high-electrification approach. This will help keep energy costs more affordable.
- **Leaves no customer behind:** It supports equitable outcomes for disadvantaged communities. By avoiding large upfront investments, our vision enables all customers to have access to clean energy.
- **Preserves customer choice:** Our vision is a practical approach that gives customers choice in their heating options to reach net zero, and suits the diversity of buildings in the region. Under our pathway, customers will not have to purchase all new appliances.
- **Leverages existing Infrastructure:** It requires significantly less generation, transmission, and distribution infrastructure. By leveraging existing infrastructure, it reduces the challenge of achieving net zero.

- **Puts the existing workforce at the heart of the clean energy transition:** Our workforce is uniquely skilled to transform our existing gas system to deliver RNG and green hydrogen, as well as install new technologies such as networked geothermal.
- **Strengthens resiliency and reliability:** Our vision is a more resilient and reliable solution. A high electrification approach puts all our eggs in one basket, relying on one system for power, transport, and heating. By decarbonizing the gas system in parallel with the electric system, it creates a more resilient energy system.
- **Practical and achievable pathway to net zero:** Our vision includes tangible and near-term milestones to make clean heat solutions accessible to all our customers.

What we will do in the near-term to enable a fossil-free future?

- **Provide input to Massachusetts and New York state climate plans.** We will engage in the public feedback sessions for our state climate action plans, highlighting the benefits of our fossil-free vision for all residents and businesses.