



Electrified HVAC

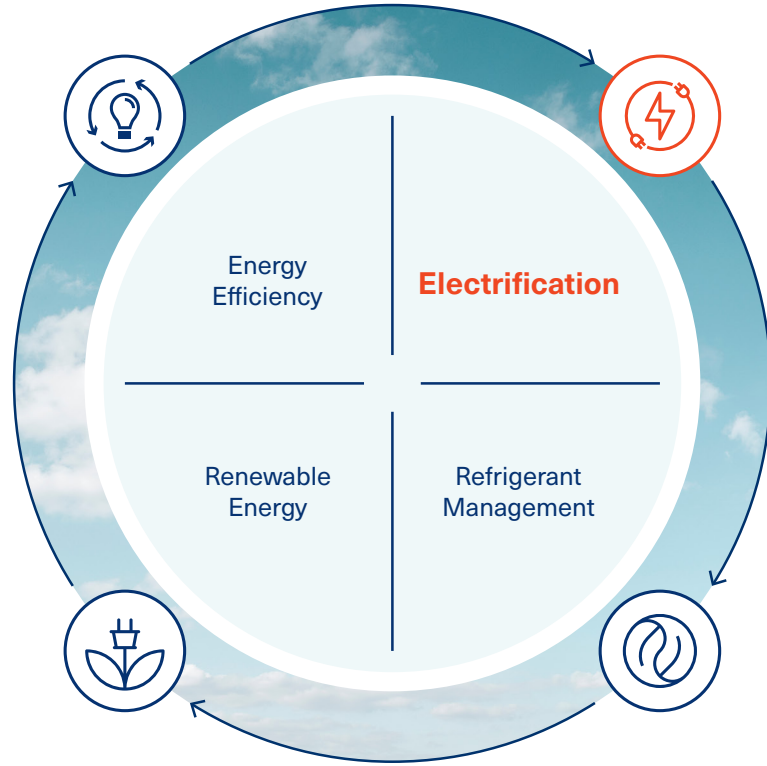
Efficient, low-carbon solutions
for the clean-energy future.



Decarbonize

Electrification is one of Trane's four approaches to decarbonization.

1. Improving energy efficiency
- 2. **Switching to electric HVAC**
3. Prioritizing safe refrigerant use
4. Supporting the transition to carbon-free energy



Plug in to decarbonize.

Electrification of buildings refers to the replacement of direct fossil fuel use (e.g., propane, heating oil, gasoline) with electricity in a way that reduces overall emissions and energy costs.¹ Much like the trend toward vehicles that are powered by electric batteries, buildings are moving towards electrification of heat.

As the nation's electricity grid evolves to using more renewable energy resources, institutions big and small are making the commitment to sustainability and must address public policy, local mandates and legislation to decarbonize.

Change is in the air

- Nearly half of states within the US have already committed to carbon reduction²
- Most states in the US and provinces in Canada have offered incentives to promote building efficiency and/or electrification of heat³

Trane can guide your decarb journey.

Electrified HVAC is a solid option for dependable, efficient comfort. When it's time to "go electric" Trane can help you make informed choices for your building today and into the future.

You have better and more electrified heating options than ever. Hybrid and all-electric heating systems using heat pumps, dual fuel and heat recovery technologies, plus thermal storage, make electrification practical and effective for a wider range of geographic areas and applications.

1. Environmental and Energy Study Group <https://www.eesi.org/electrification/be>

2. Source: Table of 100% Clean Energy States <https://www.cesa.org/projects/100-clean-energy-collaborative/guide/table-of-100-clean-energy-states>

3. Database of State Incentives for Renewables & Efficiency <https://www.dsireusa.org/>

Brush up on electrification of heat options.



Chiller-heater systems—Did you know that many chillers can provide cooling as well as heating by configuring them with heat pumps or heat recovery? These “chiller-heaters” makes electrification of heat possible in many types of buildings. Adding thermal energy storage to the chiller heater systems provides even more operational flexibility by capturing and storing reclaimed energy to heat the building efficiently or optimize heat pump capacity.



Variable refrigerant flow (VRF) systems— Trane® / Mitsubishi Electric VRF heat pumps and heat-recovery systems offer versatile electric zoned heating and cooling. VRF is popular for its reduced operational costs and reliable, energy-efficient comfort year-round—even in extremely cold climates. It can also be easily configured for a variety of buildings, new and existing.



Packaged units and split systems—For small to mid-sized commercial buildings, Trane offers multiple choices. Each one delivers efficient and effective heating with integrated heat pumps and hybrid systems.

Heat Pumps: Foundation for Efficient Electrified Heating

A key enabler for decarbonization, heat pumps use electricity to provide heating or cooling by moving heat to and from the building as needed, so there's no need to generate more heat energy. Trane offers both air-source and water-source heat pump systems within our wide portfolio of heat pump-enabled systems, which includes chillers, packaged units, split systems and variable refrigerant flow systems.



What about hot water for domestic use?

Domestic hot water accounts for roughly 25 percent of annual energy usage in typical multifamily buildings.⁴ Trane has a solution for that, too. Trane® / Mitsubishi Electric HEAT₂O™ is an all-electric heat pump water heater system designed to produce high volume domestic hot water for commercial facilities in any climate. Energy-efficient and environmentally friendly, HEAT₂O uses a natural CO₂ refrigerant with a global warming potential (GWP) of one and an ozone depletion potential (ODP) of zero.

4. U.S. Energy Information Administration

Complete transformation has three stages.

Reducing CO₂ emissions is an ongoing commitment. Trane can support you throughout your electrification journey.

1. Get the right system in place.

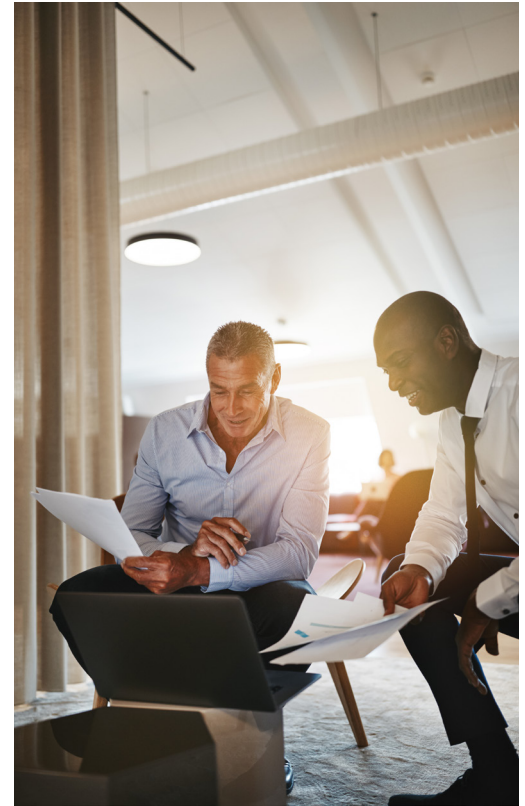
Electrification of heat requires rethinking historical practices when designing heating and cooling systems. That's why Trane collaborates with you to understand your entire system and identify application specific strategies, electrified heating and cooling equipment and controls based on your building type, climate, resiliency, operational cost targets. **Trane can support you on your decarbonization journey with a plan that makes the most sense for your building and your business**

2. Meet sustainable business targets.

Achieve electrification of heat with the right financial strategies in place. We have local energy experts to show you the financial incentives, rebates, loans and programs available. Post-installation, we can monitor performance: from how much energy you're using to the price you pay for electricity. We'll utilize connected HVAC equipment, controls and building automation systems and a suite of energy analysis tools. **Trane can help you navigate complexities of electrification projects to create an approach that meets your goals and fits your budget.**

3. Maintain reliable and efficient performance.

The penalties of an under-performing system range from uncomfortable spaces to efficiency losses to downtime. Maintenance done properly and at the right time helps you optimize uptime. Our factory-trained technicians can help keep the system operating efficiently. Connected systems enable a wide range of data-driven intelligent services that provide insights into energy use, real-time performance, and improvement opportunities while also tracking your carbon-reduction progress. **Trane can help you proactively sustain equipment life to provide greater peace of mind and maintain your decarb gains.**



Trane has the building systems knowledge, broad portfolio of electrified equipment and controls as well as energy and building services expertise you need—to electrify HVAC.

Contact your Trane Account Manager to get started today!



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit trane.com or tranetechnologies.com.

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