Clean Heating Pathways Citations

Where Are Heat Pumps Being Used Today?

Rural & Suburban Northeast


Cities


Western U.S.

In rulemaking 13-11-005, the California Public Utilities Commission allowed gas to electric conversions in energy efficiency programs if they reduce energy consumption and greenhouse gases: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M310/K053/310053527.PDF


The Energy Trust of Oregon rebate information available here: https://www.energytrust.org/solutions/heating-and-cooling/

International

Canada heat pump installations: https://www.canada.ca/ga/nr/eng/mrkt/snpsht/2019/04-03grwnehtmpdptn-eng.html and
http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/showTable.cfm?type=CP&sector=res&juris=ca&rn=28&page=0

Denmark, see: https://ens.dk/sites/ens.dk/files/EnergiKlimapolitik/accelerating_green_energy_towards_2020.pdf

Norway, see: https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/58167_Norway-BR4-1-Norway_BR4%20(2).pdf
What are the Benefits of Heat Pumps?

Pollution Reduction and Improved Health and Safety


Winter Fuel Savings


Educate Consumers and Vendors

Table sources

- CT: 2019-2021 PlanConservation & Load Management Plan Update, March 1, 2019, available here: https://www.energizect.com/sites/default/files/FINAL%202019%202021%20Plan%20%281-19%29.pdf Other venues for consumer heat pump outreach include the CT GreenBank website, through their Smart-E loan offerings see e.g.: https://ctgreenbank.com/programs/special-offer-heat-pump-financing/
• NY: NYSERDA has provided $14.95 million in incentives for installers to pass on to customers: https://www.nyserda.ny.gov/All-Programs/Programs/Air-Source-Heat-Pump-Program. NYSERDA offers information about heat pumps on their website, see e.g.: https://www.nyserda.ny.gov/Residents-and-Homeowners/Heat-and-Cool-Your-Home/Heat-Pumps. NYSERDA also made $2 million available for its Cooperative Advertising and Training for Clean Heating and Cooling Partners: https://portal.nyserda.ny.gov/CORE_Solicitation_Detail_Page?SolicitationId=aort000000AHoZZA A1

Couple Heat Pumps with Home Weatherization and Integrated Controls

Table sources

• CT: 2019-2021 Plan Conservation & Load Management Plan Update, March 1, 2019
• ME: Proposed Triennial Plan for Fiscal Years 2020-2022, October 3, 2018
• NY: Information on NYSERDA’s heat pump incentive is available here: https://www.nyserda.ny.gov/All-Programs/Programs/Air-Source-Heat-Pump-Program.

Install Only Clean Electric Heating in New Homes


Table sources

• CT: 2019-2021 Plan Conservation & Load Management Plan Update, March 1, 2019
• ME: Proposed Triennial Plan for Fiscal Years 2020-2022, October 3, 2018
• NY: New York utilities and NYSERDA offer residential new construction efficiency incentives based on the Energy Star Homes standard, see e.g.: https://www.nyswda.ny.gov/All%20Programs/Programs/Low%20Rise%20Residential.

Decrease Operating Costs through Smart Electricity Pricing
Acadia Center, UtilityVision: https://acadiacenter.org/document/utilityvision/
Table sourced from state IOU rateinformation and filings.

Stop Fossil Gas Companies from Expanding
Table sources

• MA: Eversource offers customers free line extension up to $5000, see e.g.: https://www.eversource.com/content/ema-c-residential/switch/choose-natural-gas/why-switch. Consumers are also able to spread their contribution in aid of construction (CIAC) over a 10 year period, minimizing their upfront costs, see e.g.: NARUC, Report of the NARUC Task Force on Natural Gas Access and Expansion, November 2017, available here: https://pubs.naruc.org/pub.cfm?id=8F38EF6F-D44F-80A0-578C-CF1610C47520
• RI: Most customers pay CIAC and must pay it before the start of construction, up to $6000. Amounts in excess of $6000 can be paid on a payment plan, see e.g.: https://www.nationalgridus.com/media/pdfs/billing-payments/rigas.tariff.pdf
• CT: New gas customers pay a 10% premium over existing distribution rates for 10 years if they live near a gas main or a 30% premium if they do not live near an existing main, see e.g.: NARUC, Report of the NARUC Task Force on Natural Gas Access and Expansion, November 2017
• NH: New Liberty Utilities customers get 100 feet of connection free, and the managed expansion program rates allow customers to pay for any expansion costs over time, see e.g.: https://www.puc.nh.gov/Regulatory/Orders/2016orders/25933g.pdf
• ME: Summit Natural Gas offers residents a construction allowance up to $6684, as well as promotional rebates, see e.g.: https://summitnaturalgasmaine.com/documents/SNG%20Maine%20Tariff%20as%20of%206.1.19.pdf and https://summitnaturalgasmaine.com/rebates. Until's Targeted Area Build-out program allows customers to pay a monthly surcharge on their gas bill instead of an upfront CIAC, see e.g.: NARUC, Report of the NARUC Task Force on Natural Gas Access and Expansion, November 2017
• VT: Vermont Gas Systems was allowed to recover $134 million in gas expansion costs across its ratebase, see e.g.: https://www.vpirog.org/wp-content/uploads/2016/01/PSB_Decision_1_8_2016.pdf
• NY: In New York utilities have been allowed to ratae the cost of gas expansion projects, and some utilities offer CIAC payment plans and rebates for gas conversions, see e.g.: NARUC, Report of the NARUC Task Force on Natural Gas Access and Expansion, November 2017

Align Energy Efficiency Program Incentives with State Policy Objectives

Table sources

• RI: National Grid 2018-2020 Energy Efficiency and System Reliability Procurement Plan, August 30, 2017. Rhode Island uses the Rhode Island test, which includes a $100/ton avoided cost of carbon, see e.g.: http://www.ripuc.ri.gov/eventsactions/docket/4684-NGrid-RITest-Tech%20Session[9-13-17].pdf
• CT: 2019-2021 Plan Conservation & Load Management Plan Update, March 1, 2019
• ME: Proposed Triennial Plan for Fiscal Years 2020-2022, October 3, 2018
• NY: Information on NYSERDA’s heat pump incentive at the time of publication is available here: https://www.nyserda.ny.gov/All-Programs/Programs/Air-Source-Heat-Pump-Program. In January 2020, the DPS approved new budgets for building electrification and ordered the utilities to develop proposals to accelerate building electrification and fuel switching, which will result in expanded incentives. The text of the order is available here: http://documents.dps.ny.gov/public/ Common/ViewDoc.aspx?DocRefId=06BoFDEC-62EC-4A97-A7D7-7082F71B68B8

Set State Targets for Beneficial Electrification

Table sources

• MA: Massachusetts Alternative Portfolio Standard includes heat pumps as eligible thermal generation units, see e.g.: https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application#-eligibility-criteria
• RI:
• CT: Public Act 18-50 requires the state to reduce energy consumption by at least 1.6 million MMBTU annually from 2020-2025, though not exclusively through heat pump expansion, see e.g.: https://www.cga.ct.gov/2018/ACT/pa/pdf/2018PA-00050-RooSB-00009-PA.pdf
• NH: New Hampshire has a thermal carve-out in its renewable portfolio standard, but heat pumps are not eligible, see e.g.: https://www.puc.nh.gov/Sustainable%20Energy/Renewable_Portalio_Standard_Program.htm
• ME: In 2019, Maine passed legislation requiring the state to install 100,000 heat pumps by 2025, see e.g.: https://www.maine.gov/governor/mills/news/governor-mills-signs-bill-promoting-energy-efficient-heat-pumps-maine-2019-06-14

• VT: Vermont’s Tier III Renewable Energy Standard requires utilities to reduce fossil fuel consumption and greenhouse gas emissions, see e.g.: https://puc.vermont.gov/electric/renewable-energy-standard.

• NY: New York is required to reduce energy consumption by 5 TBTU by 2025 through the installation of heat pumps, see e.g.: https://www.governor.ny.gov/news/governor-cuomo-announces-dramatic-increase-energy-efficiency-and-energy-storage-targets-combat