Climate Action and Energy Efficiency Updates

Land Use & Environment Committee
August 19, 2021

Thurston Climate Mitigation Plan

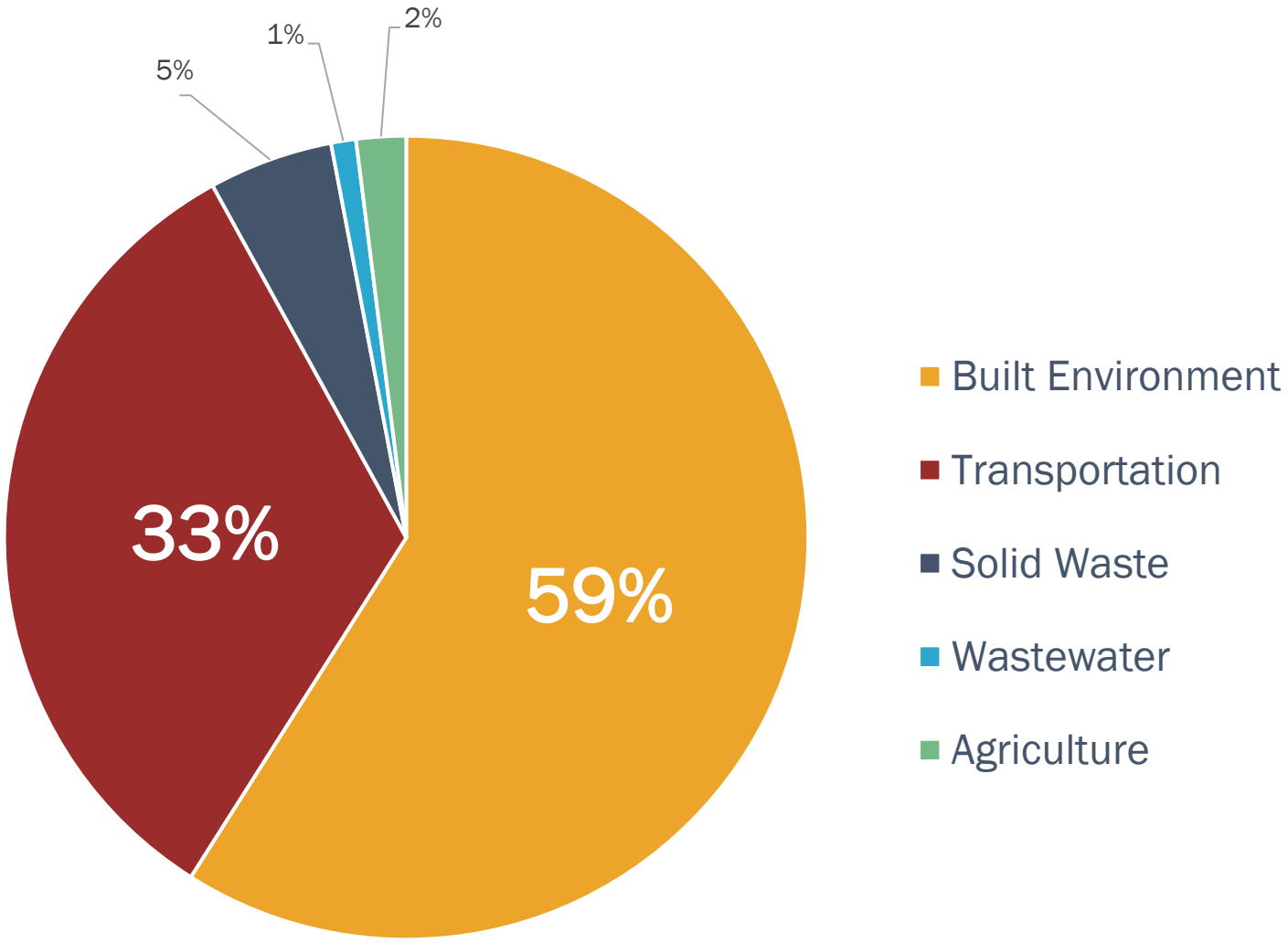
Regional framework for climate action.

Climate Mitigation

Total Emissions:

3.2 million

metric tons of carbon dioxide equivalent ($MTCO_2e$)



THURSTON CLIMATE MITIGATION PLAN

THURSTON REGIONAL PLANNING COUNCIL

Climate Mitigation

Reduction Targets:

45% below 2015 levels by 2030

85% below 2015 levels by 2050

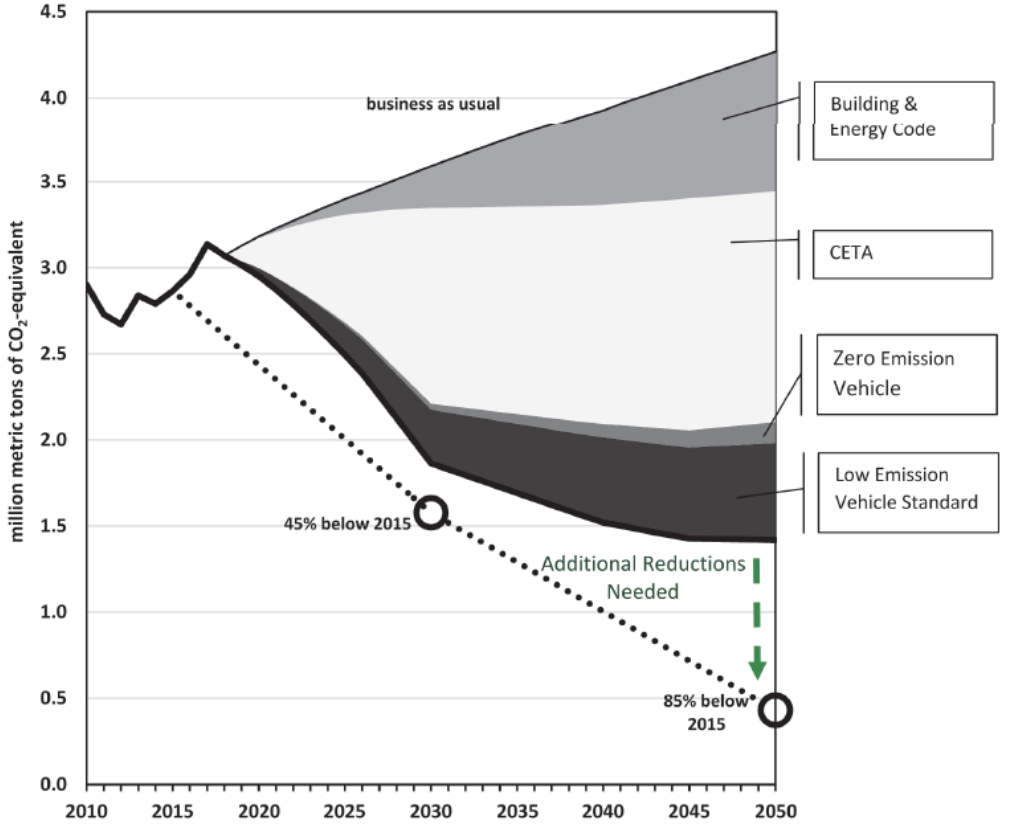


Figure 10. Potential Reduction in Thurston County Emissions from State Policies. The dotted line shows the adopted emission reduction targets. *Source: Hammerschlag 2020*

THURSTON CLIMATE MITIGATION PLAN

THURSTON REGIONAL PLANNING COUNCIL

Climate Mitigation Framework

Equitable distribution of costs and benefits

Green our Grid

- Support state-level action to generate electricity with 100% renewable sources
- Increase energy efficiency of homes and businesses
- Make it easier to install renewables on homes and businesses

Shift Energy Sources

- Switch more appliances, heaters, and vehicles to electricity
- Make it easier to charge electric vehicles in homes and around town

Live Lighter

- Create denser urban neighborhoods where more people can opt to drive less
- Make it easier to telework, walk, bicycle, and ride transit
- Reduce food and other waste

Store Carbon

- Plant trees and preserve tree canopy
- Preserve farmland and increase regenerative agriculture practices
- Preserve and enhance prairies

Build Local Capacity & Resilience

- Provide coordinated leadership on climate action
- Monitor greenhouse gases and assess progress
- Develop expertise in climate-forward practices
- Factor climate impacts into funding and decisions
- Support the development of a green economy
- Further understand and address social equity issues related to climate change

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BUILDING DECARBONIZATION

Energy Efficiency

- Prioritize high-efficiency building envelopes.
- Increase efficiency of appliances.

Electrification

- Phase out fossil fuels for heating and cooking.

On-site Solar

- Increase the production of local solar energy.

Increase Energy Efficiency

Increase energy efficiency of existing residential buildings.

In progress

- **Residential energy performance ratings.** Require home energy performance ratings/audits and disclosure at time-of-listing (B1.1, B1.2).
- **Coordination with Community Development Block Grant.** Support energy efficiency upgrades and energy audits for low-moderate income households.

Increase energy efficiency of existing residential buildings.

Possible actions

- **Rental housing energy efficiency incentives.** Provide property tax breaks for energy conservation measures in rental housing (B1.4).
- **Rental housing energy efficiency baseline.** Require rental units to meet baseline levels of energy efficiency (B1.6).

Increase energy efficiency of existing commercial buildings.

In progress

- **Washington Clean Buildings Act.** State energy performance standard for commercial buildings greater than 50,000 sq feet.
- **Thurston County C-PACER Program.** Enables commercial property owners to finance energy efficiency, renewable energy, water conservation, and resilience improvements.

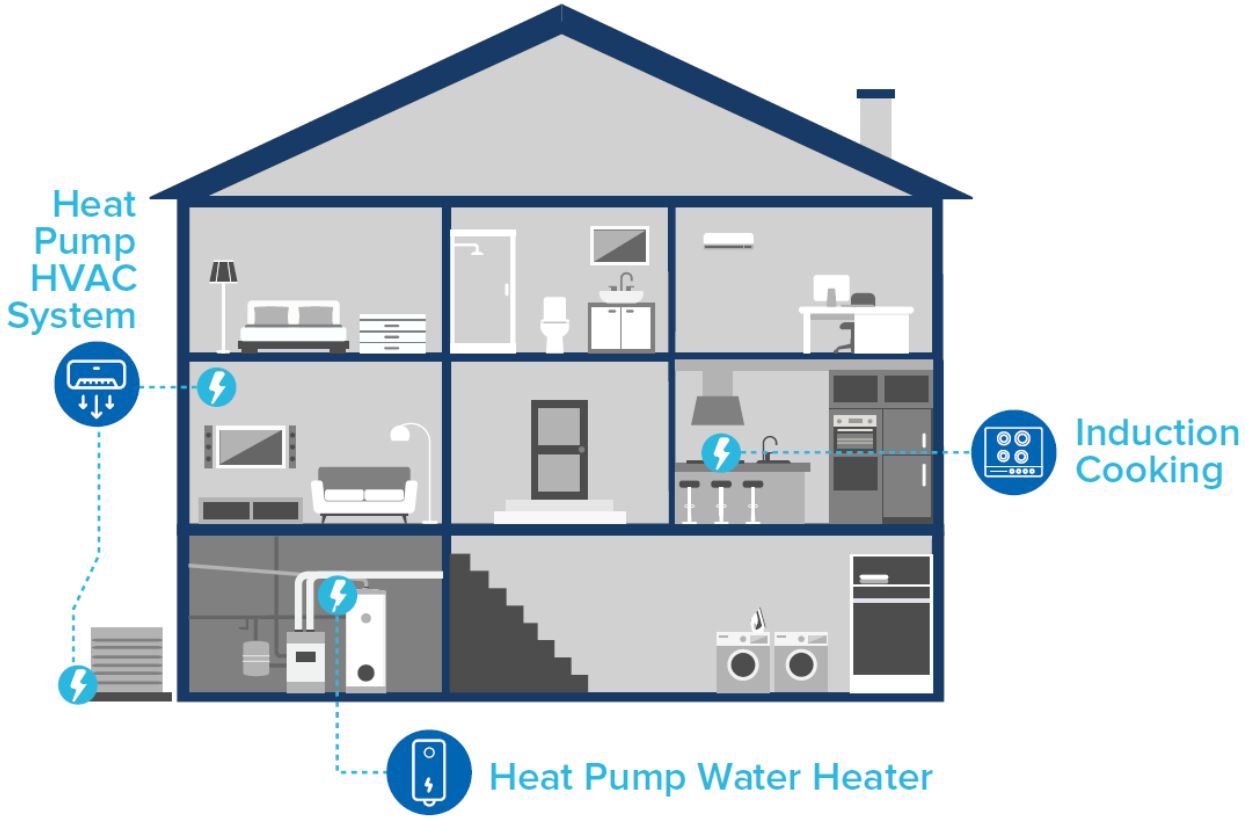
Increase energy efficiency of existing commercial buildings.

Possible actions

- **Commercial energy benchmarking and disclosure.** Require commercial energy performance ratings/audits and disclosure (B2.1).
- **Energy efficiency performance standard.** Set energy performance standard for commercial buildings less than 50,000 sq feet (B2.8).

Electrify Buildings

All-electric Building Technology



Estimated cost of new construction for a single-family home in Seattle:

(Rocky Mountain Institute, 2020)

- All-electric home saves $4,300 in net present costs over 15-year period.
- Avoids 28 tons of CO2 emissions over 15-year period.
- Results in 2% higher annual utility costs ($30 per year).

Electrify new and existing buildings to phase out fossil fuels.

New Buildings

Possible actions

- Require electric appliances in new construction (B6.2).
- Ban all new natural gas connections in new buildings (B6.3).

Electrify new and existing buildings to phase out fossil fuels.

Retrofit Existing Buildings

Possible actions

- Develop educational resources and outreach campaigns (B6.1).
    - Provide heat pump training for installers and contractors.
    - Support a group purchase program (e.g., HeatSmart).

Electrify new and existing buildings to phase out fossil fuels.

Next Steps

- Conduct an electrification impact assessment to evaluate local costs and savings of all-electric construction.
- Evaluate recent fuel-source trends in new construction.
- Commit to electrify all new city-owned buildings and phase out natural gas infrastructure in existing buildings.

Increase on-site Solar production

Increase the production of local renewable energy.

In progress

- Pursue SolSmart designation (B5.5).
- Support group solar purchasing program (B5.10).
- Install solar on city buildings (B5.3).

Possible actions

- Require solar-ready construction (B5.8).

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