Today’s Agenda

1. Introductions
2. Overview of building and energy sectors
3. Small Group Exercise
4. Discussion
5. Public Comments
Mitigation addresses the cause

Mitigating the effects of climate change by reducing human output of heat trapping gases into the atmosphere

• Actions that include:
  • Reducing the sources of these gases
  • Reducing demand
  • Enhancing the sinks or sequestration that store these gases

The goal is to avoid significant human disruptions to the climate system to stabilize greenhouse gas levels in a timeframe sufficient to allow ecosystems to adapt naturally to climate change
Phase 1 Overview

- Thurston County, Olympia, Lacey, Tumwater, and TRPC agreed in April 2018 to complete Phase 1 of a plan to reduce regional emissions that contribute to global climate change.

- **Phase 1 entailed:**
  - Assessing each jurisdiction’s climate goal or target.
  - Adopting a common emissions baseline and targets.
  - Assessing actions each jurisdiction has adopted or implemented.
  - Approving an Interlocal agreement and scope of work for Phase 2: Develop a Thurston Climate Mitigation Plan.
Thurston Climate Mitigation Plan
Project Schedule

**Summer 2019**
- Public Outreach
  - Fairs & Festivals
  - Online Survey
  - Interviews & Briefings
- Develop Communitywide Action lists

**Fall 2019**
- Analyze actions for identified criteria
- Develop scenarios

**Winter 2020**
- Complete analysis
- Draft Plan
- Begin developing jurisdiction-specific strategies

**Spring 2020**
- Public review of Draft Plan
- Community Open Houses

**Summer 2020**
- Monitoring Framework
- Final Plan
- Final jurisdiction-specific strategies

**Fall 2020**
- Adopt Plan
- Implementation

* Project schedule dates are estimates and subject to change.
Adopted Emissions Targets
Thurston County, Lacey, Olympia & Tumwater

• Reduction Targets:
  • Reduce communitywide emissions
    45% below 2015 levels by 2030
    and
    85% below 2015 levels by 2050.

• 2015 Baseline:
  • 2015 inventory of countywide emissions ≈ 2.84 million MT CO₂ equivalent
  • Incorporates real energy, solid waste, agricultural, and transportation data from PSE, TRPC, and other sources.
QUESTION 3 – FROM THE LIST BELOW, WHAT TOP 2 AREAS DO YOU THINK THE THURSTON MITIGATION PLAN SHOULD FOCUS ON?

- Shift from fossil fuels to more renewable and clean electricity sources (e.g., from coal to wind/hydro/solar energy)
- Increase the use of alternative forms of transportation, such as riding the bus, walking, carpool, vanpool and biking, as well as more fuel-efficient vehicles
- Store more carbon in trees, plants, and soil, for example by preserving large trees, increasing tree canopy, and managing soil for carbon storage in addition to other benefits
- Increase urban density, for example with accessible public transportation, mixed use buildings and affordable housing.
- Reduce consumption and waste by recycling and composting more, avoiding single-use items, and repairing or retrofitting instead of buying new
- Make our homes, businesses, and other buildings more energy-efficient and carbon-smart, for example through energy retrofits, energy-saving appliances, and sustainable building materials
QUESTION 4 – ENERGY & TRANSPORTATION ARE THE TOP CONTRIBUTORS TO CARBON POLLUTION IN THURSTON COUNTY. DOES THIS CHANGE THE TOP TWO AREAS YOU THINK WE SHOULD FOCUS ON?

No: 74%  Yes: 26%

Of those who said yes:

- Shift from fossil fuels to more renewable and clean electricity sources (e.g., from coal to wind/hydro/solar energy)
- Increase the use of alternative forms of transportation, such as riding the bus, walking, carpool, vanpool, and biking, as well as more fuel-efficient vehicles
- Store more carbon in trees, plants, and soil, for example by preserving large trees, increasing tree canopy, and managing soil for carbon storage in addition to other benefits
- Increase urban density, for example with accessible public transportation, mixed-use buildings, and affordable housing.
- Reduce consumption and waste by recycling and composting, more, avoiding single-use items, and repairing or retrofitting instead of buying new
- Make our homes, businesses, and other buildings more energy-efficient and carbon-smart, for example through energy retrofits, energy-saving appliances, and sustainable building materials

- 79%
- 41%
- 17%
- 13%
- 7%
Q7 – HAVE WE MISSED ANY KEY AREAS THE THURSTON CLIMATE MITIGATION PLAN SHOULD FOCUS ON?

KEY THEMES: Buildings
- Require solar for new development; incentivize and/or create retrofitting programs for solar on existing buildings
- Retrofit existing buildings to be more energy efficient

KEY THEMES: Energy
- More active programs for installing solar energy
- Explore nuclear power options
Source of Emissions (2016) for Thurston County, Lacey, Olympia, & Tumwater

From Thurston Climate Action Team, August 2018
Built Environment

Figure 7: Built Environment Emissions by Building Type (2016)
- Commercial, 38.5%
- Residential, 56.0%
- Industrial, 5.2%
- Lighting, 0.4%

Figure 8: Built Environment Emissions by Energy Source (2016)
- Electricity, 80%
- Natural Gas, 18%
- Other Fuels, 2%

Source: TCAT, 2018
Energy

• Senate Bill 5116
  • 2026: Eliminate coal-fired resources
  • 2030: Greenhouse gas neutral sources, with credits
  • 2045: Greenhouse gas neutral sources, without credits

2017 Electricity Fuel Mix

Diverse resources powering your home and business

The electricity generated for you uses a diverse mix of resources. The PSE fuel mix for electricity delivered to customers in 2017 is detailed in the chart and graph below.

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>38%</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>33%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>21%</td>
</tr>
<tr>
<td>Nuclear</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Other*</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Wind</td>
<td>6%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

* Biomass, non-biogenic and petroleum.

Source: Published by the Washington Department of Commerce, October 2018, with data reported by PSE in August 2018.
Built Environment

Source: US Census Bureau, ACS 2015
Questions?
Small Group Exercise
buildings & energy

Objectives

• Review/Brainstorm actions to reduce greenhouse gas emissions from buildings and energy
• Identify opportunities
• Identify barriers to implementing actions

Guidelines

• List actions regardless of scale, cost, or feasibility
• Formulate each idea to be as measurable as possible.
• Maximum creativity. Minimum judgement.
Strategies for buildings & energy

1. Reduce energy use in existing construction
   a. Residential
   b. Commercial, industrial, municipal

2. Reduce energy use in new buildings
   a. Residential
   b. Commercial, industrial, municipal
Strategies for buildings & energy

3. Increase the portion of energy used from renewable sources.

4. Increase the use of less carbon-intensive energy sources.

5. Cross-cutting issues
   a. Financing
   b. Workforce development
   c. State or federal policy
   d. Other
Objectives

• Review/Brainstorm actions to reduce greenhouse gas emissions
• Identify opportunities
• Identify barriers to implementing actions

Guidelines

• Designate a secretary
• List actions regardless of scale, cost, or feasibility
• Formulate each idea to be as measurable as possible.
• Maximum creativity. Minimum judgement.
• What opportunities exist for this sector?
• What barriers exist for this sector?
• Other thoughts?
Thank you!

Contact

Allison Osterberg, Senior Planner
Thurston Regional Planning Council
360.956.7575
osterberga@trpc.org

www.trpc.org/climate