Citizen’s Time
AGENDA

Regular Meeting

Call to Order
Citizen’s Time
Old Business (10 Mins)
  • Meeting Minutes of October 27, 2022
  • Introduction of Admin Specialist to ESO/ Clerk for Sustainability Commission
  • Discuss meeting schedule for 2023
  • Update on standing up the Joint Environmental Task Force

New Business (75 Mins)
  • Process review- introducing resolutions and transmitting them to the BOCS; closing meetings
  • Introduction of new utilities representative on commission
  • AECOM methodology and key assumptions for CESMP
  • Status report to the BOCS on CESMP progress, due in December

Commissioner’s Time

Adjournment
Old Business

• Meeting Minutes of October 27, 2022
• Introduction of Admin Specialist to ESO/ Clerk for Sustainability Commission
• Discuss meeting schedule for 2023
• Update on standing up the Joint Environmental Task Force
New Business

• Process review- introducing resolutions and transmitting them to the BOCS; and closing meetings
• Introduction of new utilities representatives on commission
• AECOM methodology and key assumptions for CESMP
• Status report to the BOCS on CESMP progress, due in December
Welcome New Commission Members - Local Utilities Representatives

- Don Pannell, Prince William County Service Authority
- Brendon Shaw, Dominion
- Scott McGeary, Washington Gas
- Gilbert Jaramillo, Northern Virginia Electric Cooperative
- TBD, Virginia American Water
Development of GHG Forecast to 2050 for CESMP
Office of Sustainability
Estimated Reductions Needed to Hit 2050 GHG Goal from extrapolated MWCOG Forecast
Estimated Reductions needed to hit 2030 GHG Goal extrapolated from MWCOG Forecast
MWCOG Commercial Energy Methodologies

- Commercial building square footage: MWCOG uses software CoStar to run commercial real estate data, in combination with projected job growth data provided by the County planning office.
- Standard commercial energy intensity (kWh/sqft) from the Energy Information Administration (EIA) is then used to project the energy consumption of new commercial space. This is broken out by building type.
- Business As Usual scenario assumes current energy intensity is consistent in the future.

<table>
<thead>
<tr>
<th>EIA Commercial Building Energy Intensity (electricity)</th>
<th>EIA Commercial Building Energy Intensity (natural gas)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building Type</strong></td>
<td><strong>kWh/sqft</strong></td>
</tr>
<tr>
<td>Office</td>
<td>15.9</td>
</tr>
<tr>
<td>Retail (mercantile)</td>
<td>18.3</td>
</tr>
<tr>
<td>Flex Industrial/Warehouse</td>
<td>6.6</td>
</tr>
<tr>
<td>Other</td>
<td>28.3</td>
</tr>
</tbody>
</table>
Revised GHG Forecast with Key Assumptions

- Revisions are continuing to be made as the Draft 2040 Comprehensive Plan process has progressed.
- The County provided data on projected number of households, resident population and number of employees based off of long-range land use changes up to 2040, which were then extrapolated to 2050.
- The County provided Vehicle Miles Traveled (VMT) projections through 2040 using a travel demand model, which were extrapolated to 2050. This includes projection of VMT’s occurring in the jurisdiction’s boundary (trips that start, stop, and pass through jurisdiction with no stops).
- Revised forecast to include Digital Gateway projection of additional 27 million sq ft of data center development over time.
## Current High Level Revisions to GHG Forecast - DRAFT

<table>
<thead>
<tr>
<th>Emissions Source</th>
<th>Update</th>
<th>Resulting 2030 change from old forecasts to new forecasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential electricity and natural gas</td>
<td>Updated with PWC number of households growth rate (assuming electricity emissions factor remains constant, as outlined in MWCOG Forecasts)</td>
<td>Residential electricity and natural gas emissions increased 6%</td>
</tr>
<tr>
<td>Commercial electricity and natural gas</td>
<td>Updated with non-residential square footage growth rate derived from PWC employee and square foot per employee forecasts as well as the Digital Gateway commercial square footage addition of 27 million sqft of data centers not previously assumed in the staff-recommended long-range land use changes (assuming electricity emissions factor remains constant, as outlined in MWCOG Forecasts)</td>
<td>Commercial electricity and natural gas emissions increased 18%</td>
</tr>
<tr>
<td><strong>Note:</strong> This construction timeline is aggressive, will likely be revised</td>
<td></td>
<td></td>
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<tr>
<td>On-road transportation</td>
<td>Updated using the on-road emissions growth rate derived from PWC projected VMT and MWCOG projected emissions factor (PWC VMT increases but the MWCOG emissions factor decreases over time)</td>
<td>On-road transportation emissions increased 21%</td>
</tr>
<tr>
<td>Wastewater Treatment, Waste Generation, and HFCs</td>
<td>Updated with PWC resident population growth rate</td>
<td>Wastewater, solid waste, and HFC emissions increased 2%</td>
</tr>
<tr>
<td>Natural gas fugitive emissions</td>
<td>Updated based on the new residential and commercial natural gas forecasts (see above)</td>
<td>Natural gas fugitive emissions increased 7%</td>
</tr>
</tbody>
</table>

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Side by Side Comparison – DRAFT

<table>
<thead>
<tr>
<th>Year</th>
<th>MWCOG Approach</th>
<th>PWC Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>+2%</td>
<td>+16%</td>
</tr>
<tr>
<td>2050</td>
<td>+6%</td>
<td>+31%</td>
</tr>
</tbody>
</table>

- Process and Fugitive Emissions
- Solid Waste
- Agriculture
- Water and Wastewater
- Transportation and Mobile Emissions
- Commercial Energy
- Residential Energy
Substituting the PWC growth indicators in the identified sectors increased projected 2030 emissions by 13% from the initial forecasts using the MWCOG methodology and 2050 emissions by 23%. This is mainly due to:

- The **increase in on-road vehicle miles traveled**. These emissions are responsible for 24% of the 2030 emissions increase from MWCOG to PWC forecasts.
- The **increase in commercial electricity consumption**. These emissions are responsible for 22% of the 2030 emissions increase from MWCOG to PWC forecasts.
- There are also **smaller increases in the residential electricity and natural gas use** due to PWC’s projected household number growth rate (6% of 2030 emissions increase).

The revised forecasts help to further highlight two priority areas for action in the plan: **commercial electricity emissions and on-road emissions** (both of which were already identified as priority emissions sectors).
Planning Office incorporated two land use action strategies into current draft, expected to be released next week:

- **LU 19.8** Promote reforesting rural, semi-rural, and suburban areas to store forest carbon and restore watershed integrity, and promote tree planting to increase tree canopy in urban areas to combat the urban heat island effect.

- **LU 19.9** Encourage high density development and the majority of future growth to occur within adopted small area plans, activity centers and redevelopment corridors.

(Note: this language is modified from the resolution)
Commissioner’s Time
Adjournment