Background Information

Abstract
A regional greenhouse gas (GHG) emissions inventory compiled by a metropolitan planning organization (MPO) is an important step in facilitating GHG mitigation planning across regional, county, and local levels of government. A regional inventory empowers regional, county, and local planners to:

- Understand sources of GHG emissions,
- Evaluate potential strategies for mitigating GHG emissions,
- Coordinate mitigation actions at the local and regional level,
- Effectively communicate with the public about mitigation actions and strategies, and
- Track progress towards mitigation goals.

MPOs in Action
- NJTPA and DVRPC carried-out GHG emissions inventories for their respective regions.
- Inventories inform the MPO's regional activities, including mitigation planning.
- Tools developed by the MPOs provide county and local planners with easy access to data, which inform county and local mitigation planning and action.

Lessons Learned
- Engage Stakeholders: Early tools and information can only achieve the goal of reducing GHG emissions if they are used by local planners and decision-makers. Both MPOs engaged stakeholders by forming advisory groups to provide feedback and input on inventory and tool development.

- Consider Consumption-based Emissions for Transportation and Land Use: Consumption-based emissions estimates can assist the transportation sector in GHG mitigation planning. Especially in the mixed transportation sector, where emissions are distributed to origins and destinations, rather than to geographies along the entire length of roadway, considering consumption-based emissions will inform local planners of the potential for reductions from measures like ride-sharing, mode shift, or telecommuting.

- Use Stable Data Sources: The data needed to complete a GHG emissions inventory is extensive and varied. A useful inventory can be repeated if regular intervals to track progress toward goals. For these reasons, regularly published and public available data is preferred wherever available.

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Agency Process

<table>
<thead>
<tr>
<th>Base Year</th>
<th>2005</th>
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<tbody>
<tr>
<td>Updates</td>
<td>2006</td>
</tr>
<tr>
<td>Gases</td>
<td>Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Hydrofluorcarbons (HFCs), Perfluorocarbons (PFCs) &amp; Sulfur hexafluoride (SF6)</td>
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<tr>
<td>Levels of Analysis</td>
<td>Regional, County, and Municipal</td>
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<tr>
<td>Accounting Method</td>
<td>Hybrid direct and consumption-based</td>
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<tr>
<td>Sectors</td>
<td>Stationary energy consumption; mobile energy consumption; agriculture; waste management; industrial processes; and land use, land use change, and forestry</td>
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<tr>
<td>Results</td>
<td>Energy and GHG Emissions Profile Tool; Users can access GHG emission estimates for each of the regions 34 municipalities.</td>
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Tools and Applications
- Energy and GHG Emissions Profile Tool: Users can access GHG emission estimates for each of the regions 34 municipalities.
- Connections 2040: Plan for Greater Philadelphia. Reducing greenhouse gas emissions by 60% from 2005 levels by 2040 is a goal of the long-range plan for the DVRPC region. A greenhouse gas reduction indicator measures progress towards this goal.
- Greenhouse Gas Management Tool: Users can access GHG emission estimates and forecasts for each of the regions counties and municipalities.

NJTPA Case Study: County of Passaic, New Jersey

GOALS AND STRATEGIES FOR A SUSTAINABLE PASSAIC COUNTY

Passaic County utilized the NJTPA Tool to provide an inventory of community-based greenhouse gas emissions at the county and municipal levels, which became the basis for setting goals and identify GHG mitigation strategies as part of an overall Sustainability Plan for the county.

GHC Mitigation Strategies

- Encourage the adoption of zoning regulations that promote transit-oriented development
- Promote the use of alternative fueled vehicles (AFVs)
- Deploy network-wide active traffic management strategies, including traffic signal synchronization and other intelligent transportation system technology