Regional Greenhouse Gas Emissions Inventory
1990 - 2012

Pima County Environmental Advisory Council

January 21, 2015

Susanne Cotty, Sr. Air Quality Planner
Pima Association of Governments
Background

Tucson

- **2006:** Mayor’s Climate Protection Agreement
  - **Goal:** By 2012, greenhouse gases (GHG) at 7 percent below 1990 levels (community and government operations)

Pima County

- **2007:** Board of Supervisors' Sustainability Initiatives
- **2008:** Sustainable Action Plan for County Operations
  - **Goal:** By 2020, GHG emissions will be equal to or lower than 2007 emissions (government operations)
Regional environmental and transportation planning agency

2007: PAG’s Regional Council Resolution

Initial inventory in 2008; subsequent inventories 2010/11, 2012 and 2014

Data contributors: utilities, transit providers, Tucson, Pima County governments

Jurisdictions use data to develop plans and monitor progress toward reaching GHG reduction goals

Inventory focus: Emission generation under citizens and/or government operations management
I. Community Inventories

Eastern Pima County: emissions from unincorporated Pima County, Tucson, surrounding towns, tribal areas and their governments’ operations

- Subset: Tucson: contains emissions from city and its government operations

II. Government Operations Inventories

- Subset: Pima County
- Subset: City of Tucson
Community Inventories - Emission Sources

- Electricity and natural gas use
  - Residential
  - Commercial
  - Industrial
- Vehicle travel
  - Private and commercial vehicles
  - Public transit
- Community-generated waste
E. Pima County GHG Emissions 1990-2012

Emissions increase: 32 percent
Population increase: 48 percent
E. Pima County GHG Emissions by Sector
2012

- Residential Energy Use: 31%
- Commercial Energy Use: 18%
- Transportation: 28%
- Industrial Energy Use: 21%
- Waste: 2%
<table>
<thead>
<tr>
<th>Source</th>
<th>Emissions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>63%</td>
</tr>
<tr>
<td>Gasoline</td>
<td>22%</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>7%</td>
</tr>
<tr>
<td>Diesel</td>
<td>6%</td>
</tr>
<tr>
<td>Alt. Fuels</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Waste</td>
<td>2%</td>
</tr>
</tbody>
</table>
E. Pima County Community Inventory

- 1990-2012: 32 percent increase
- 2010-2012: 3 percent decrease
- Major Sources: Electricity use, gasoline
- Largest Contributors: Residential energy use and private/commercial vehicle travel
2012 Per Capita GHG Emissions

Data sources:
Tucson, Eastern Pima County (PAG, 2014)
United States (PBL Netherlands Environmental Assessment Agency, 2013)
Government Inventories: Emission Sources

- Electricity and natural gas use
  - Facilities
  - Water delivery and reclamation
  - Street and traffic lights

- Vehicle travel
  - Government fleets
  - Employee commuting

- Government-generated wastes
Pima County Government Operations 2000-2012

Emissions increase: 52 percent
County Govt. GHG Emissions by Sector 2012

- Facility Energy Use: 48%
- WWR: 29%
- Employee Commute: 12%
- Vehicle Fleet: 7%
- Public Lighting: 1%
- Waste: 3%
County Govt. GHG Emissions by Source 2012

- Electricity: 66%
- Natural Gas: 13%
- Gasoline: 17%
- Diesel: 1%
- Waste: 3%
Pima County Government Inventory

- 2000-2012: 52 percent increase
- 2010-2012: 1 percent increase
- Major source: Electricity use
  - Primarily: Wastewater reclamation, facilities
Next Steps


- **Baseline:** Fiscal year 2013/14

- **Targets:** GHG reduction in facilities and wastewater reclamation energy use, County fleet

- **Targets:** Renewable energy and energy efficiency in wastewater reclamation, facilities

- **Targets:** Potable water and reclaimed water use, recyclables, waste generation
QUESTIONS?

Inventory Report:


Contact:
Susanne Cotty, PAG, 495-1465
scotty@pagregion.com