Regional Greenhouse Gas (GHG) Emissions Inventory 2012-2017

Environmental Planning Advisory Committee
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Susanne Cotty, Sr. Air Quality Planner
Background & Goals

- 2007 PAG Regional Council Resolution
- Biennial report; 1st report in 2008
- Regional inventory to support jurisdictional partners; tracks GHG emissions and provides information to develop GHG reduction strategies
Scope of Inventory

- Eastern Pima County - community (unincorporated areas, cities, towns, tribal lands) and government operations
  - Subset: City of Tucson community and City government
  - Subsets: Pima County and City of Tucson government operations
Span - Geographic Area
Methods

• Local activity x Emission factor
• Models: ICLEI’s ClearPath, EPA’s MOVES mobile and WARM (recycling)
• Carbon dioxide, methane, nitrous oxide expressed as carbon dioxide equivalents (CO$_2$e)
Inventory Emission Sources

- **Stationary energy use**
  - Residential, commercial, industrial energy use

- **Transportation**
  - Onroad (transit) and nonroad vehicle use, rail, aircraft

- **Waste**
  - Solid waste, wastewater reclamation

- **Industrial Processes**

- **Central Arizona Project energy use (Other)**
E. Pima County Community

2012-2017 Summary

• Emissions declined by 11 percent
• Drop in most sectors; stationary energy showed largest decline
• Major sources: electricity use and private and commercial vehicle travel

2017 Results

- Stationary Energy: 57%
- Transportation: 34%
- Waste: 6%
- Industrial Processes: 1%
- Other: 2%
- Industrial Processes: 6%
- Other: 2%
2012-2017 Summary

- Emissions declined by 9 percent
- Declines in most sectors; waste showed largest decline
- Major sources: electricity use and private and commercial vehicle travel

2017 Results

- Stationary Energy: 64%
- Transportation: 32%
- Waste: <1%
- Other: 3%
2012-2017 Summary

- Emissions dropped by 21 percent
- Major source: electricity use
- Declines in most sectors; largest reduction in stationary energy
2012-2017 Summary

- Emissions dropped by 16 percent
- Major source: electricity use
- Declines in most sectors; largest reductions in stationary energy

2017 Results

- Stationary Energy: 95%
- Fleet: 2%
- Waste: <1%
- Employee Commuting: 2%
Summary

• Total regional GHG emissions declined 2012-2017

• Major sources: electricity use (residential) onroad travel (private and commercial vehicles)
  – Stationary Energy: Reductions likely due to shift toward cleaner fuel sources for energy generation and drop in consumption
  – Transportation: Reductions due to more stringent federal vehicle standards
Thank you to Contributors

Questions/Comments?

CONTACT: SUSANNE COTTY
SCOTTY@PAGREGION.COM
ADDENDUM
E. Pima County 2017

Stationary energy

- Residential: 45%
- Commercial: 24%
- Industrial: 31%

Transportation

- Private & commercial vehicle travel: 74%
- Aircraft: 13%
- Nonroad: 11%
- Locomotives: 2%
- Transit: <1%