

Results of Ashland Greenhouse Gas Inventory, 2011 - 2015

Presentation to Climate and Energy Action
Committee
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Overview of Presentation

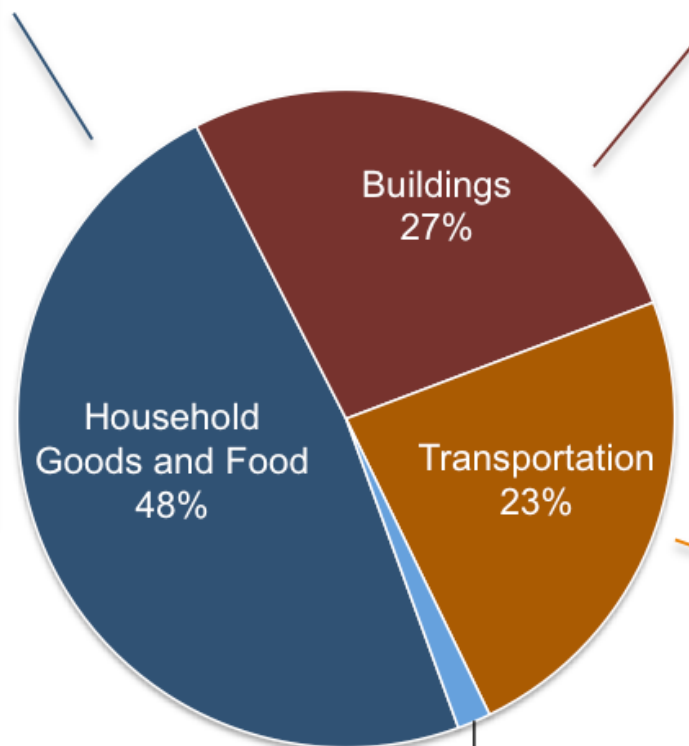
- Community Results
 - City Government Results
 - Electric Utility Supply Results
- Using the Results for the Climate Action Plan and Future Emissions Tracking

Overview of 2015 GHG Emissions

Goods and Food

160,000 MT CO₂e

- Manufacture of goods and food (from inside and outside the region) consumed by Ashland residents
- Freight transport of goods and food
- Waste management systems



Buildings

90,000 MT CO₂e

- Fossil fuels used to generate electricity consumed in Ashland
- Natural gas use by Ashland households and businesses
- Refrigerant leakage from air conditioning systems

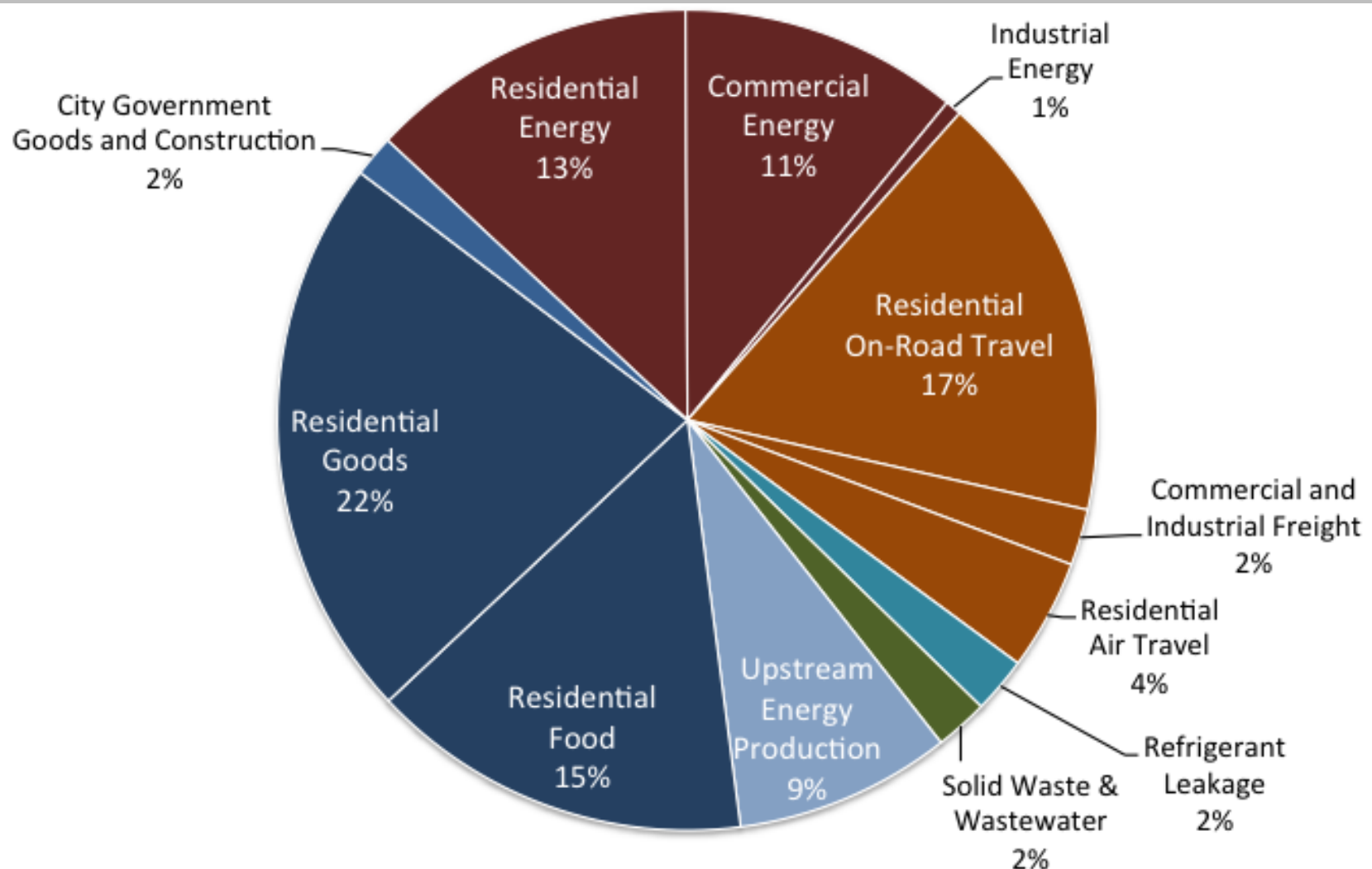
Transportation

80,000 MT CO₂e

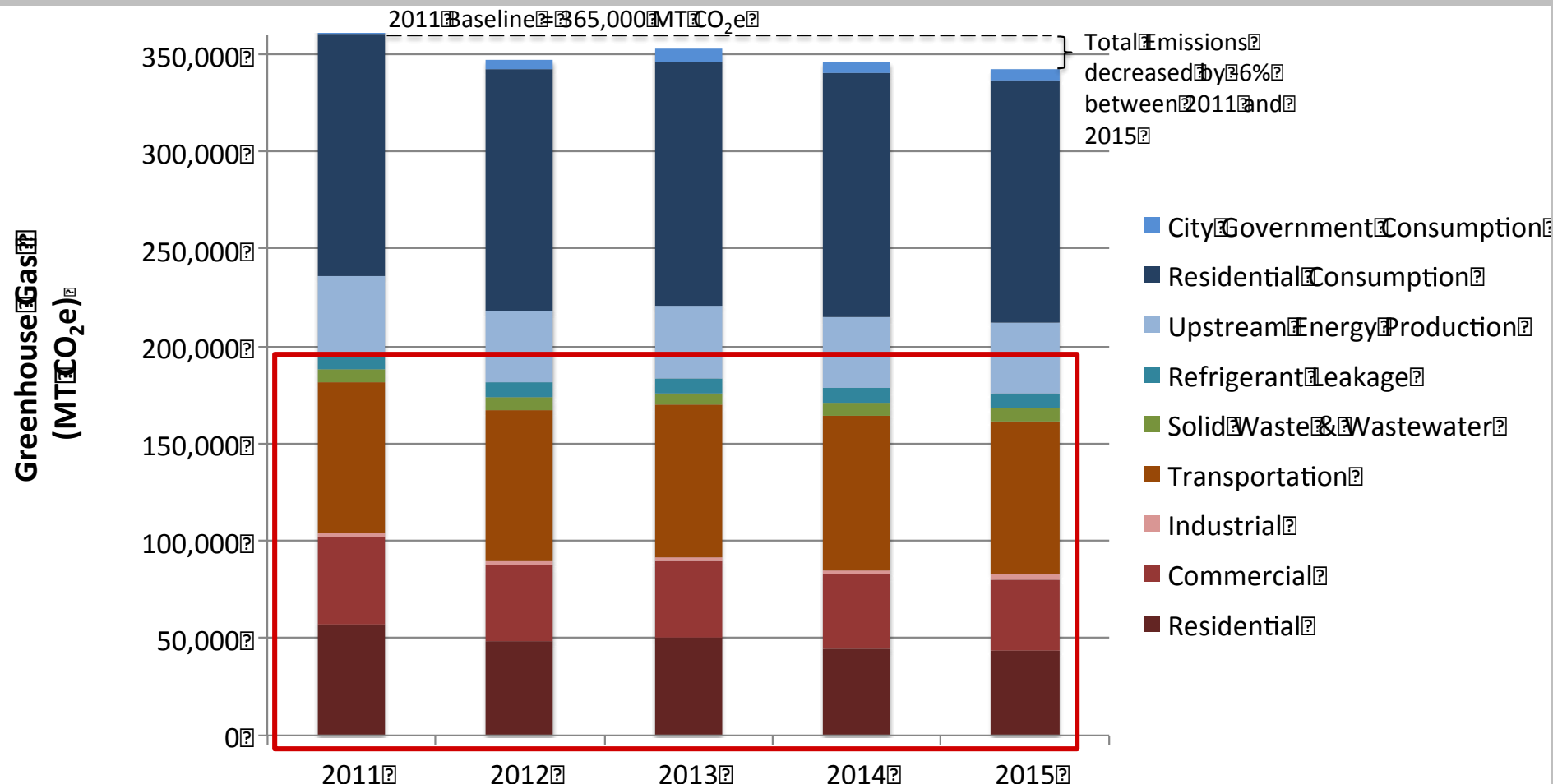
- Passenger vehicles
- Local freight
- Public transit (buses)
- Air travel

City Government
Operations
2%

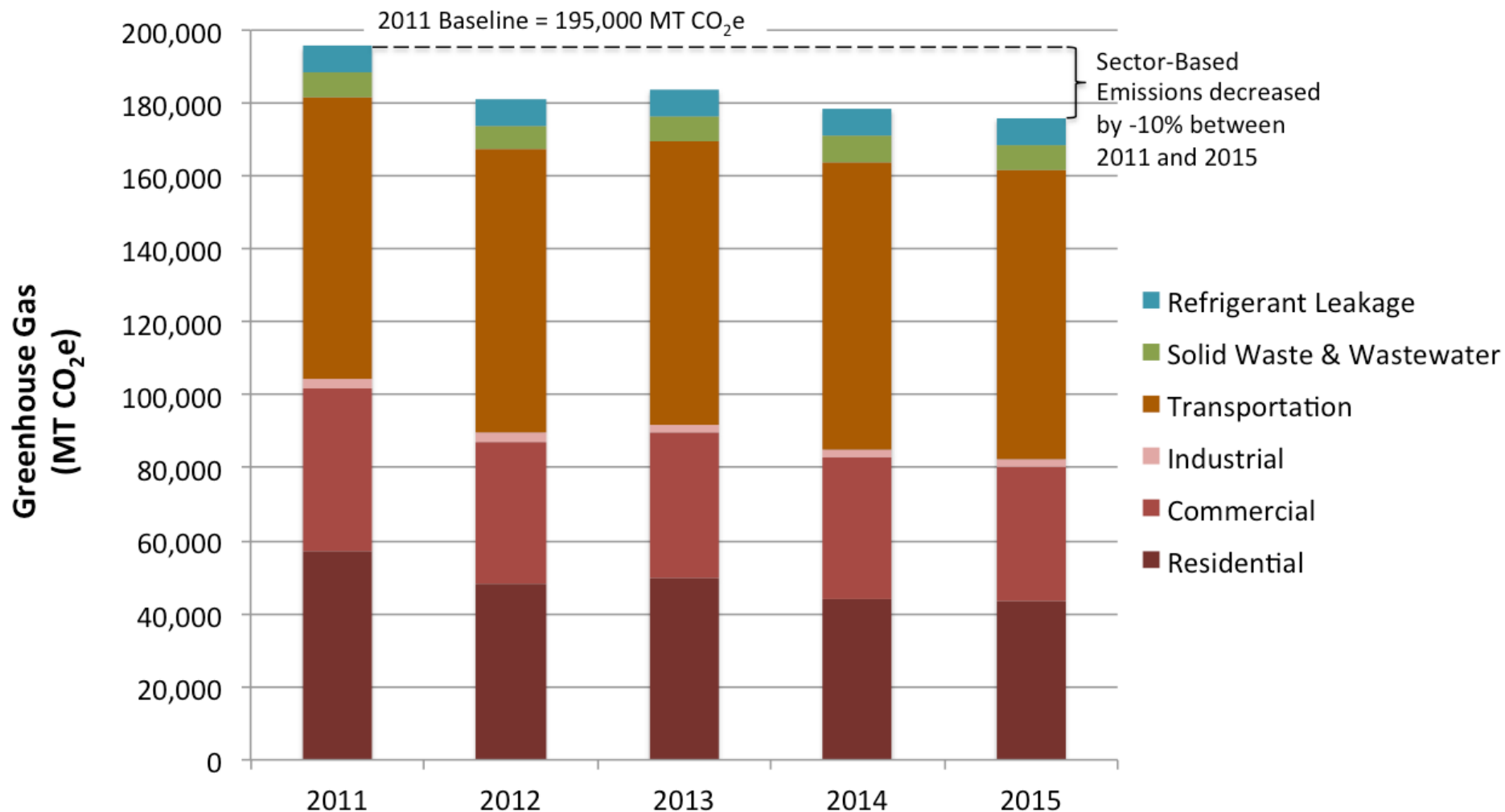
Details of 2015 GHG Emissions



Total GHG Emissions, 2011 - 2015



Sector-Based Emissions, 2011 - 2015

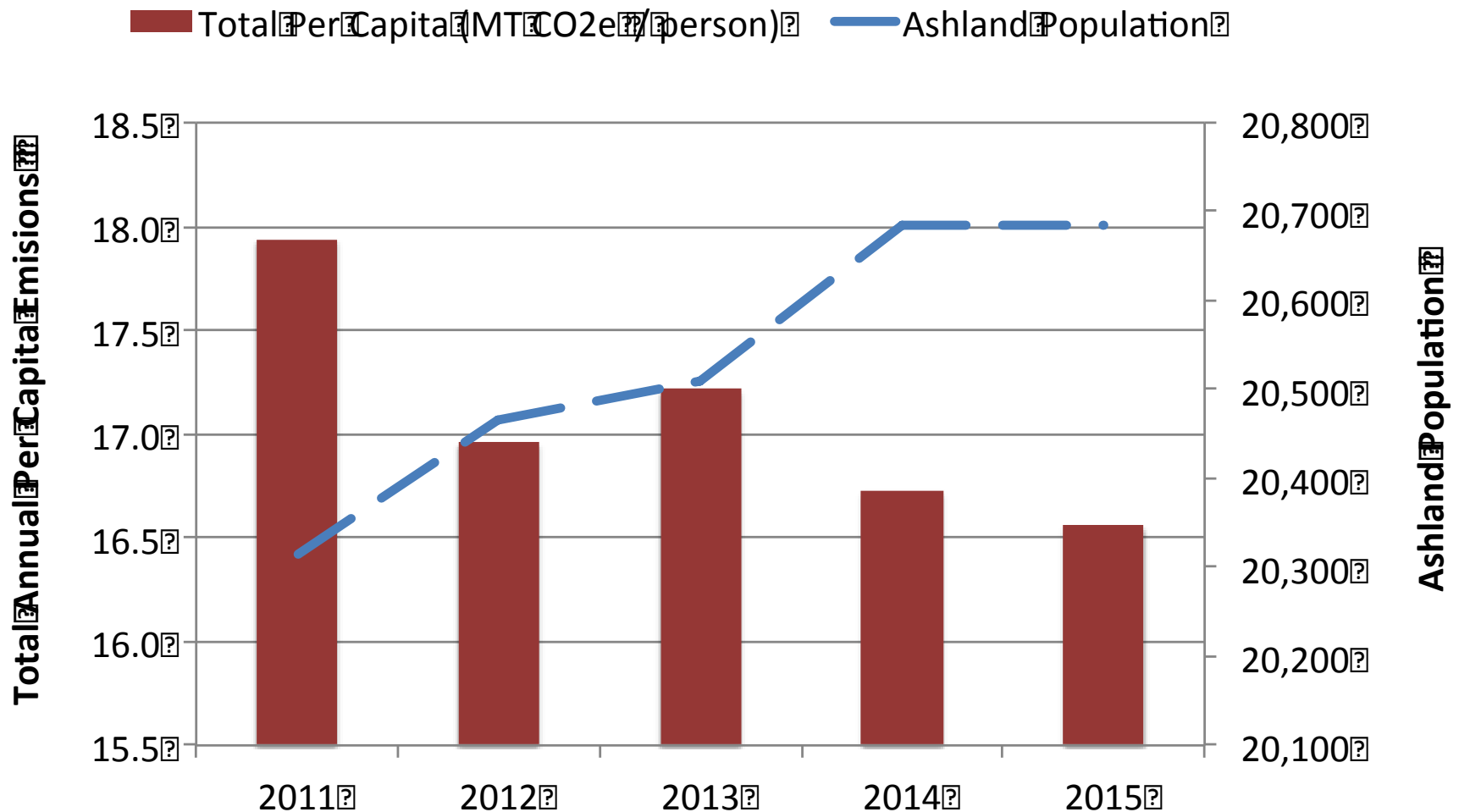


Greenhouse Gas (GHG) Equivalencies

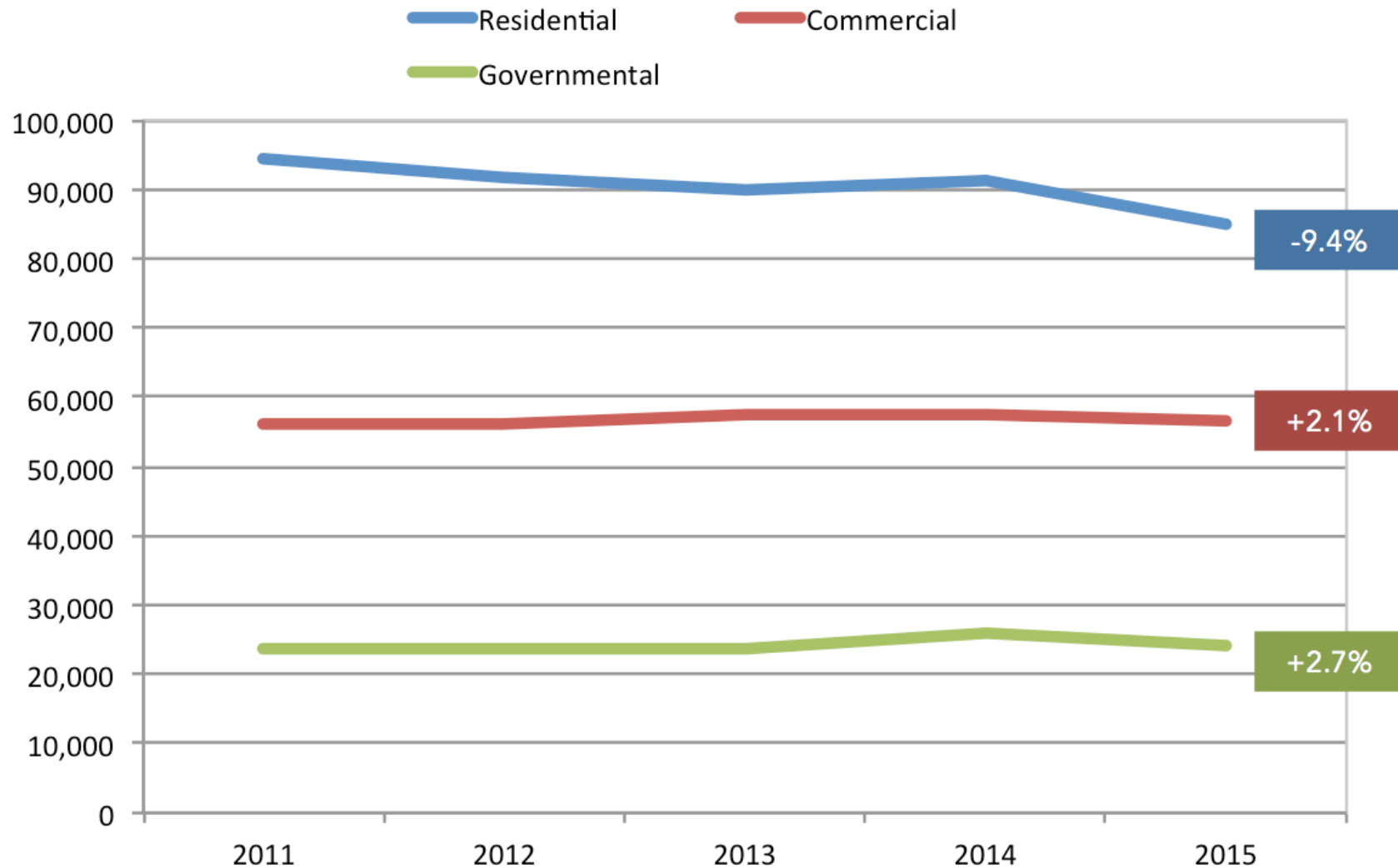
- **2015 GHG Emissions = 343,000 MT CO₂e**
 - Per Capita = 16.6 MT CO₂e / person
 - Per Household = 36.8 MT CO₂e / household
- **Equivalencies Per Capita**
 - Carbon Offset Cost (\$) = \$166 / year*
 - Tree Seedlings Grown for 10 Years = 426 / year
- **Equivalencies Per Household**
 - Carbon Offset Cost (\$) = \$366 / year*
 - Tree Seedlings Grown for 10 Years = 938 / year

*Assumes a carbon offset cost of \$10 / MT CO₂e

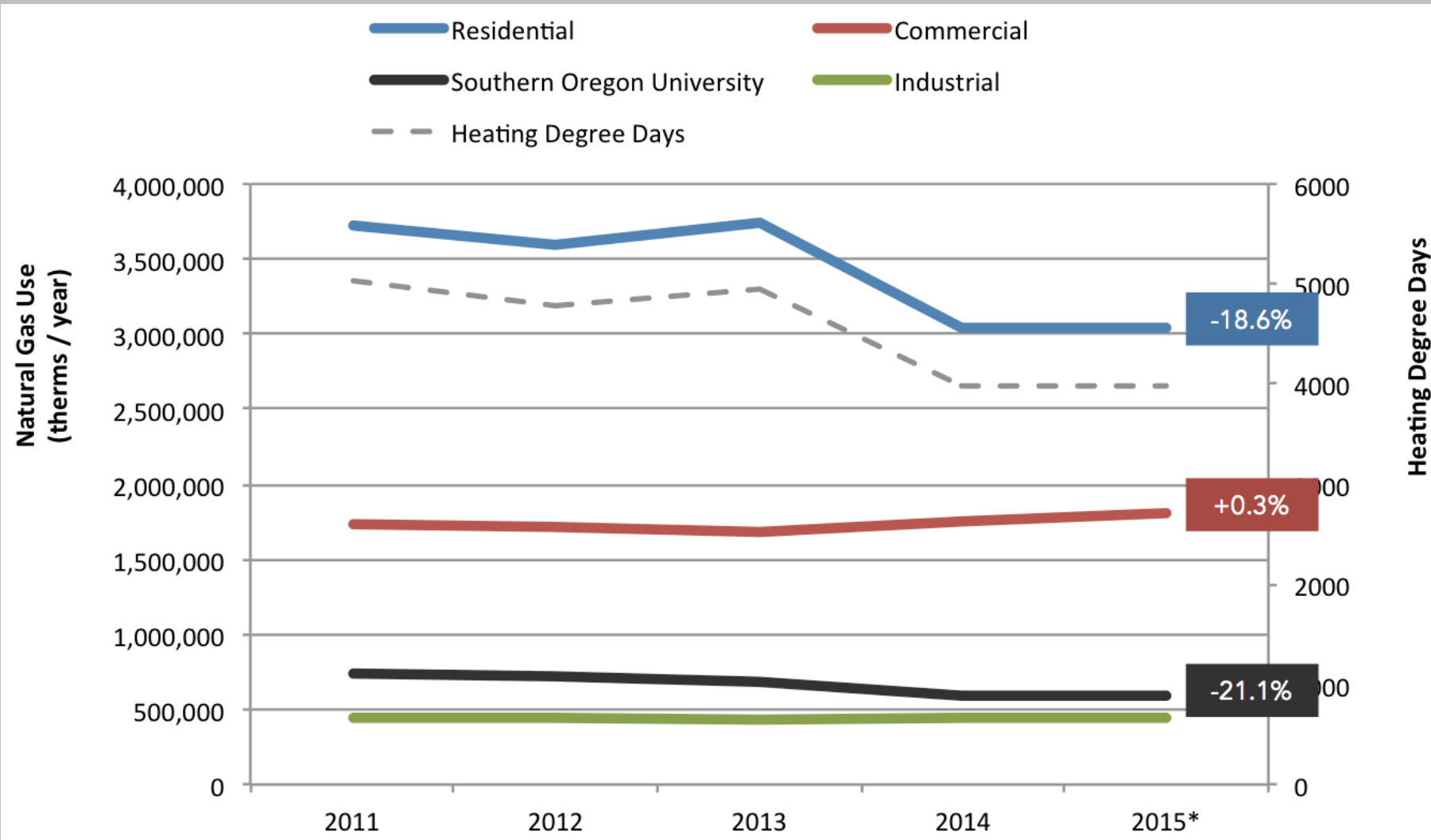
Per Capita Intensity Over Time



Electricity Use, by Sector

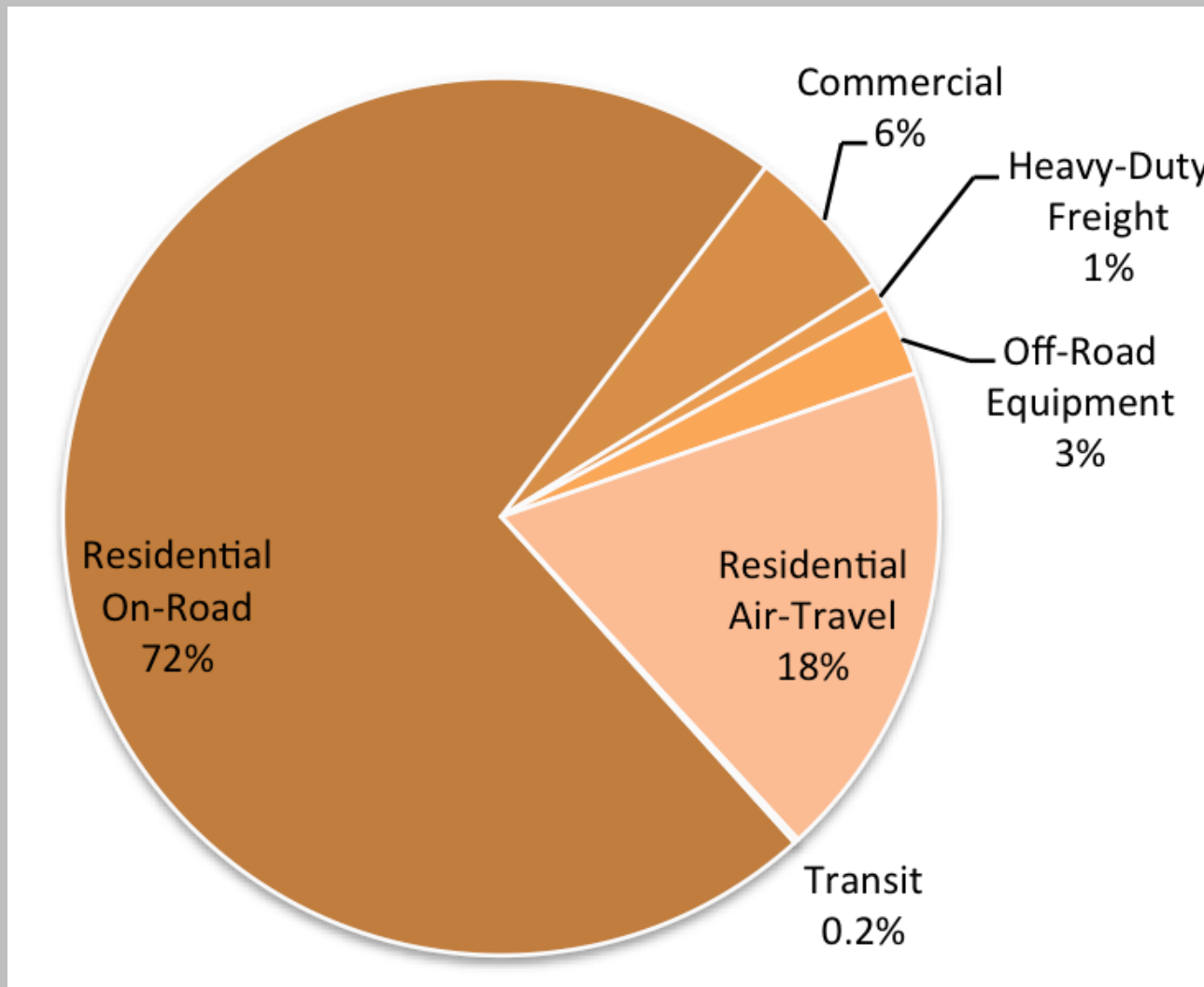


Natural Gas Use, by Sector

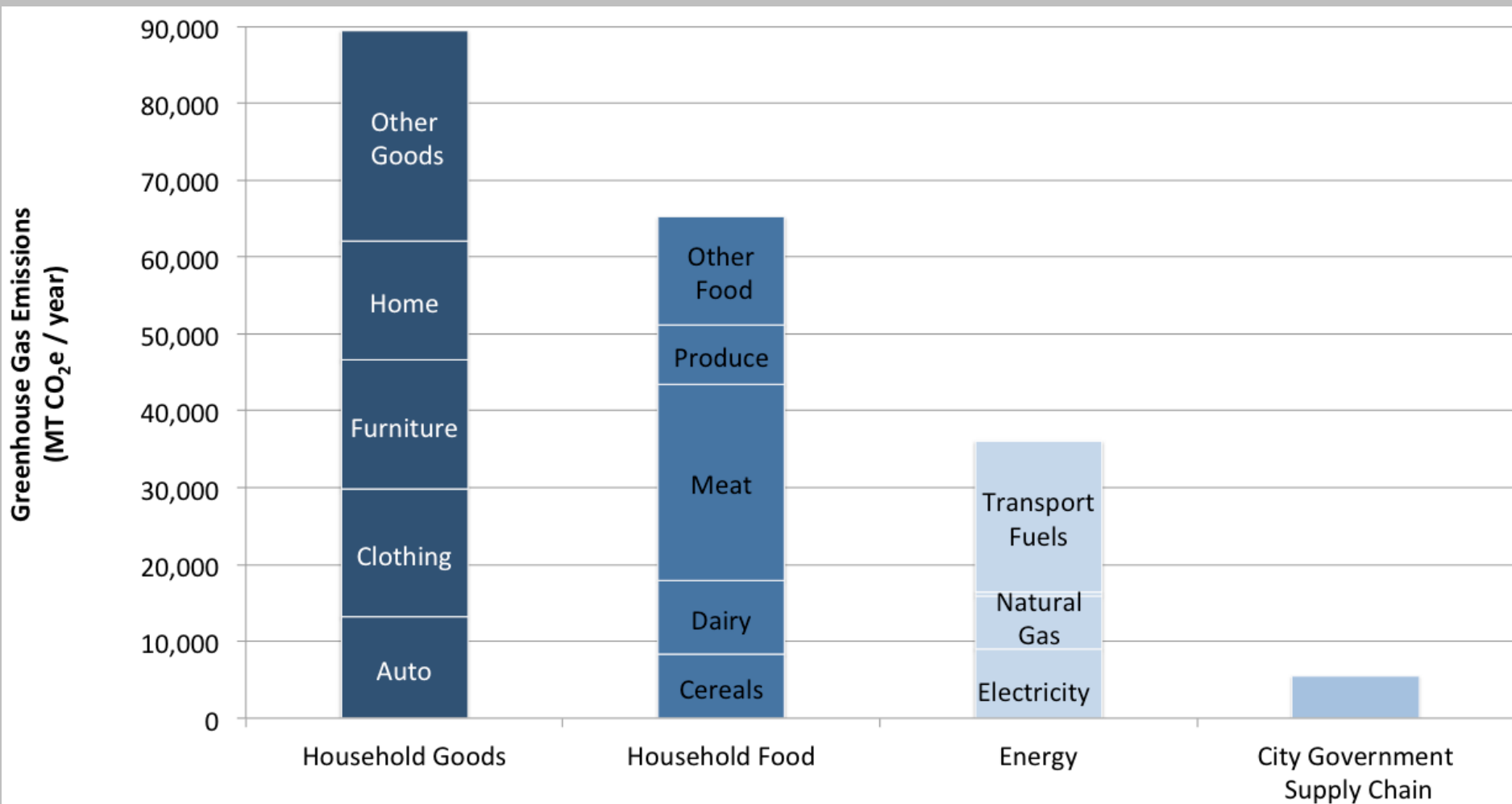




Transportation Emissions, by Source



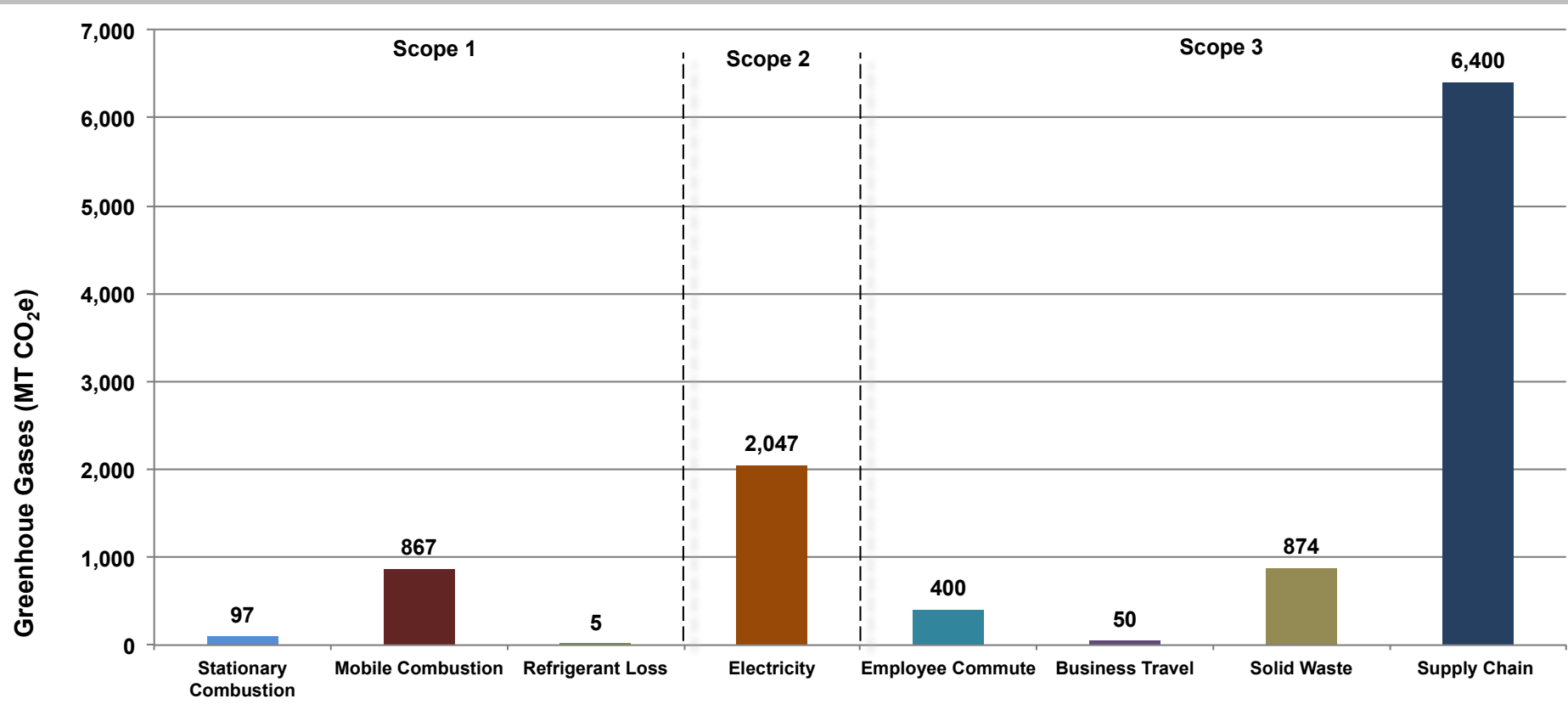
Details of Consumption-Based Emissions



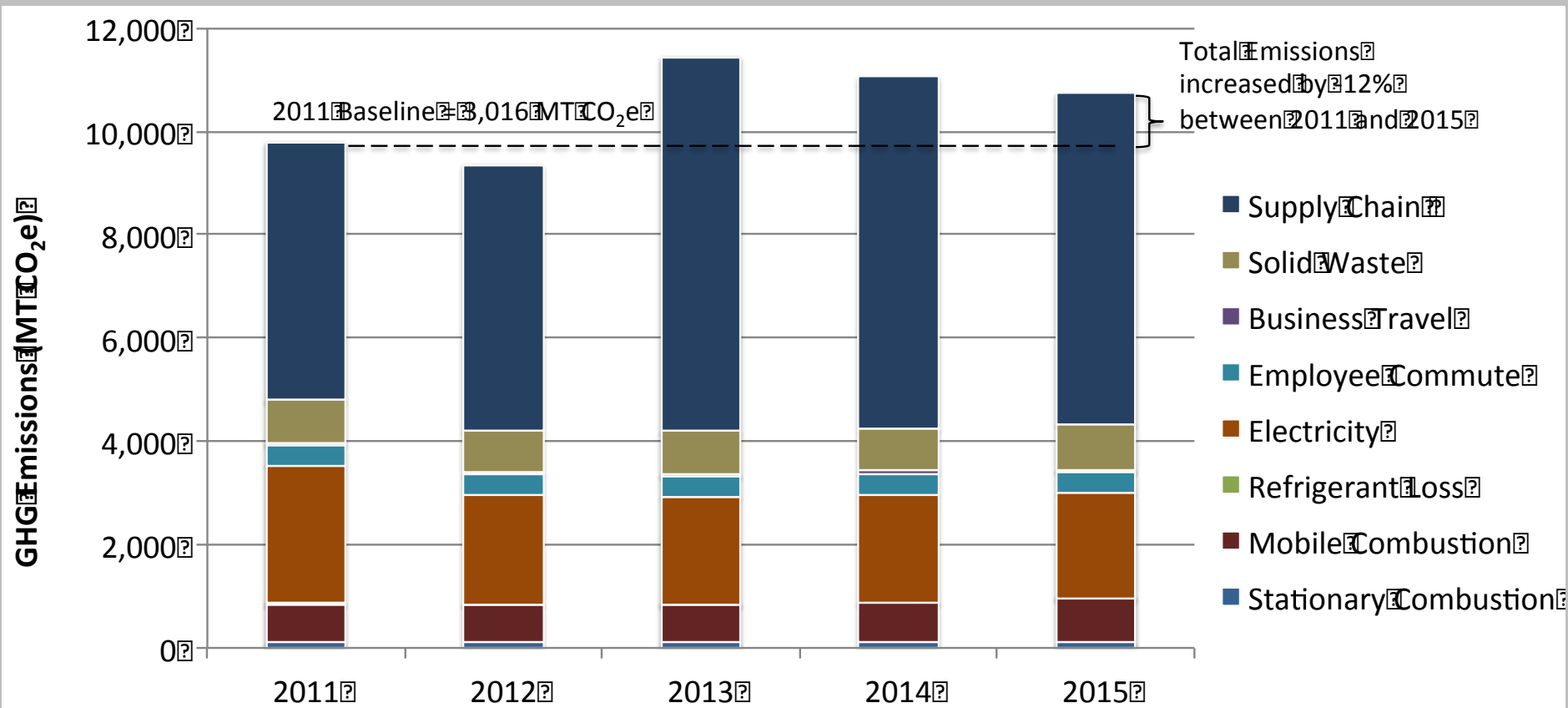
Conclusions

- Largest Emissions Sources
 - Residential On-Road Transportation
 - Residential Building Energy
 - Commercial Building Energy
 - Residential Consumption of Goods and Food
- -6% reduction in total emissions since 2011
- -8% reduction in per capita emissions since 2011

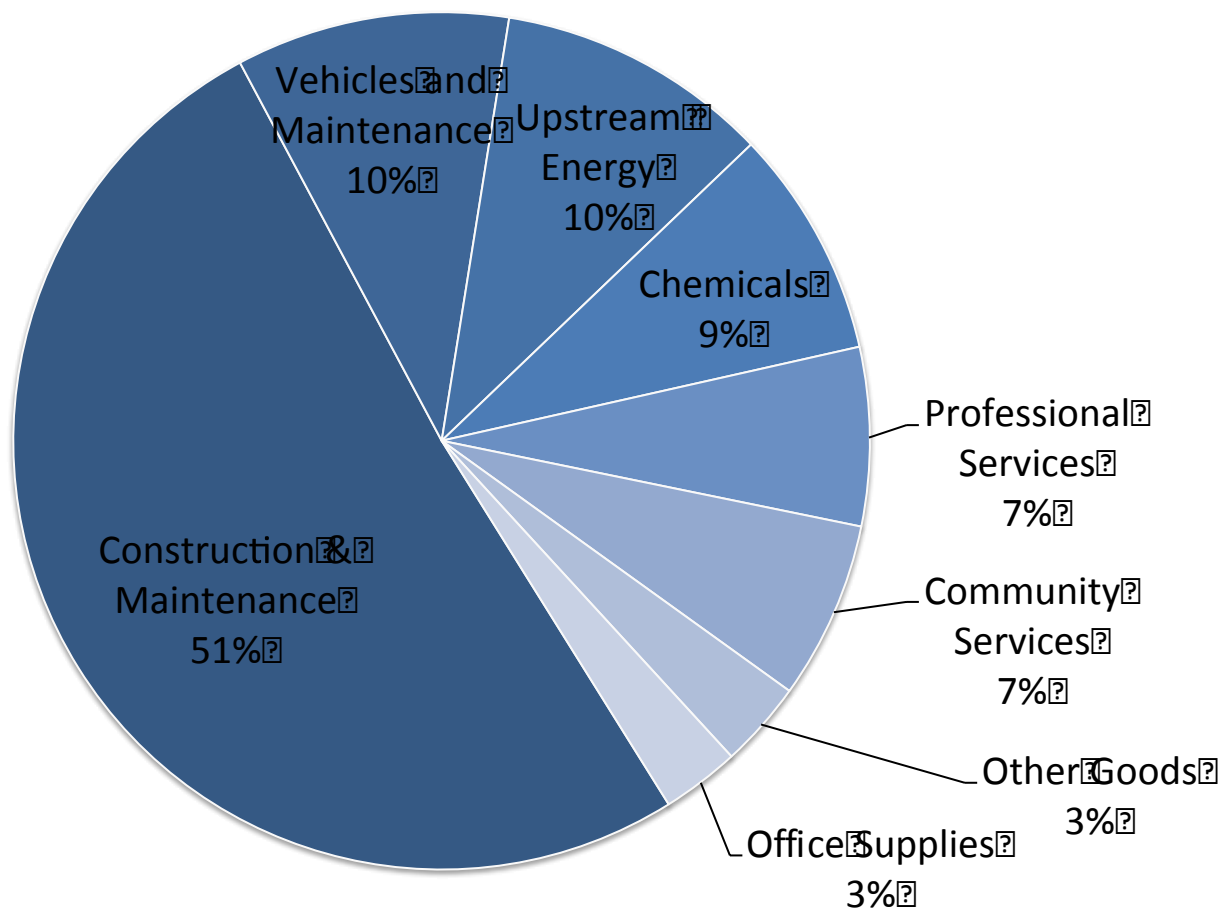
Details of 2015 GHG Emissions



Total Emissions, 2011 - 2015



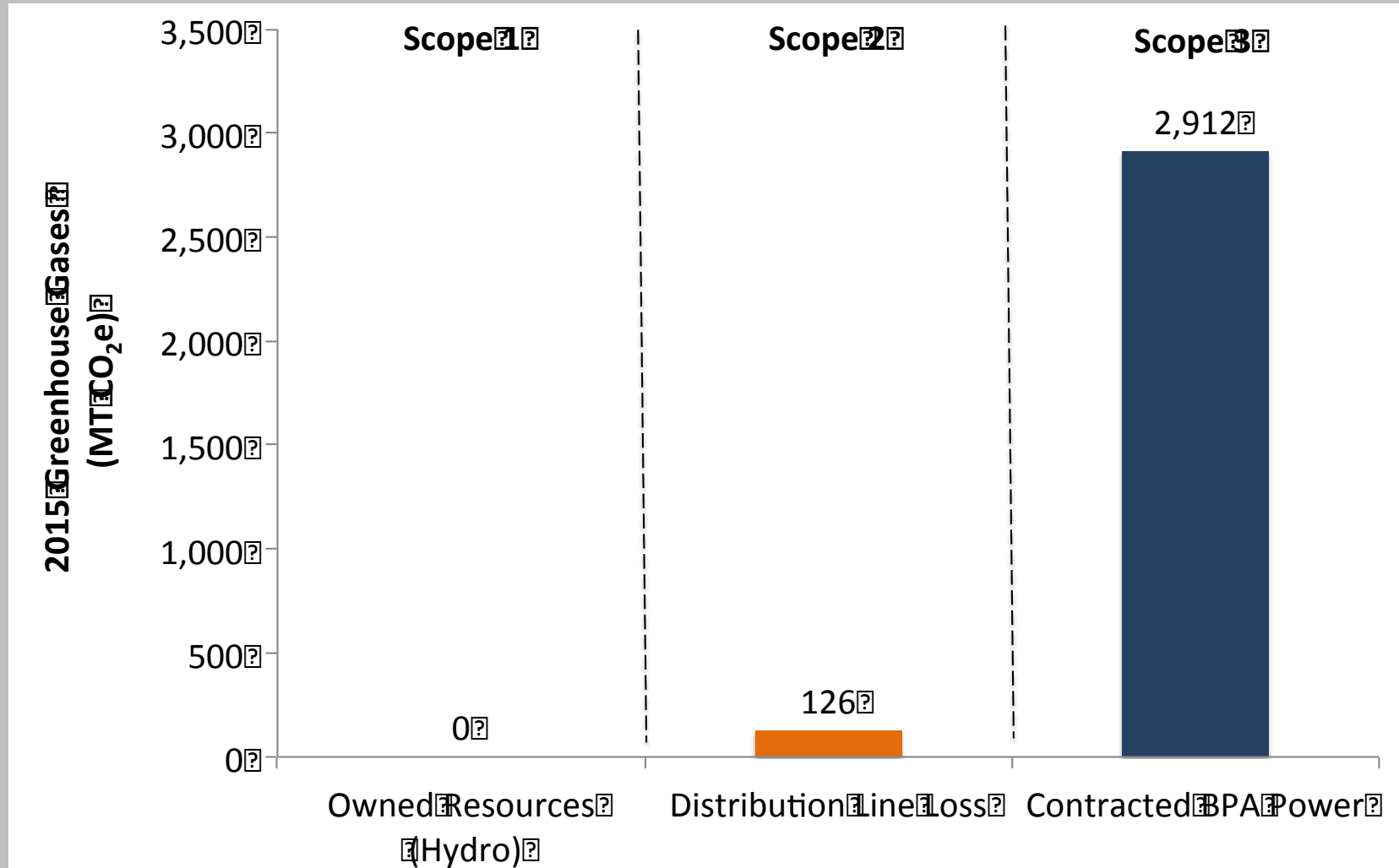
Calculating Supply Chain Emissions



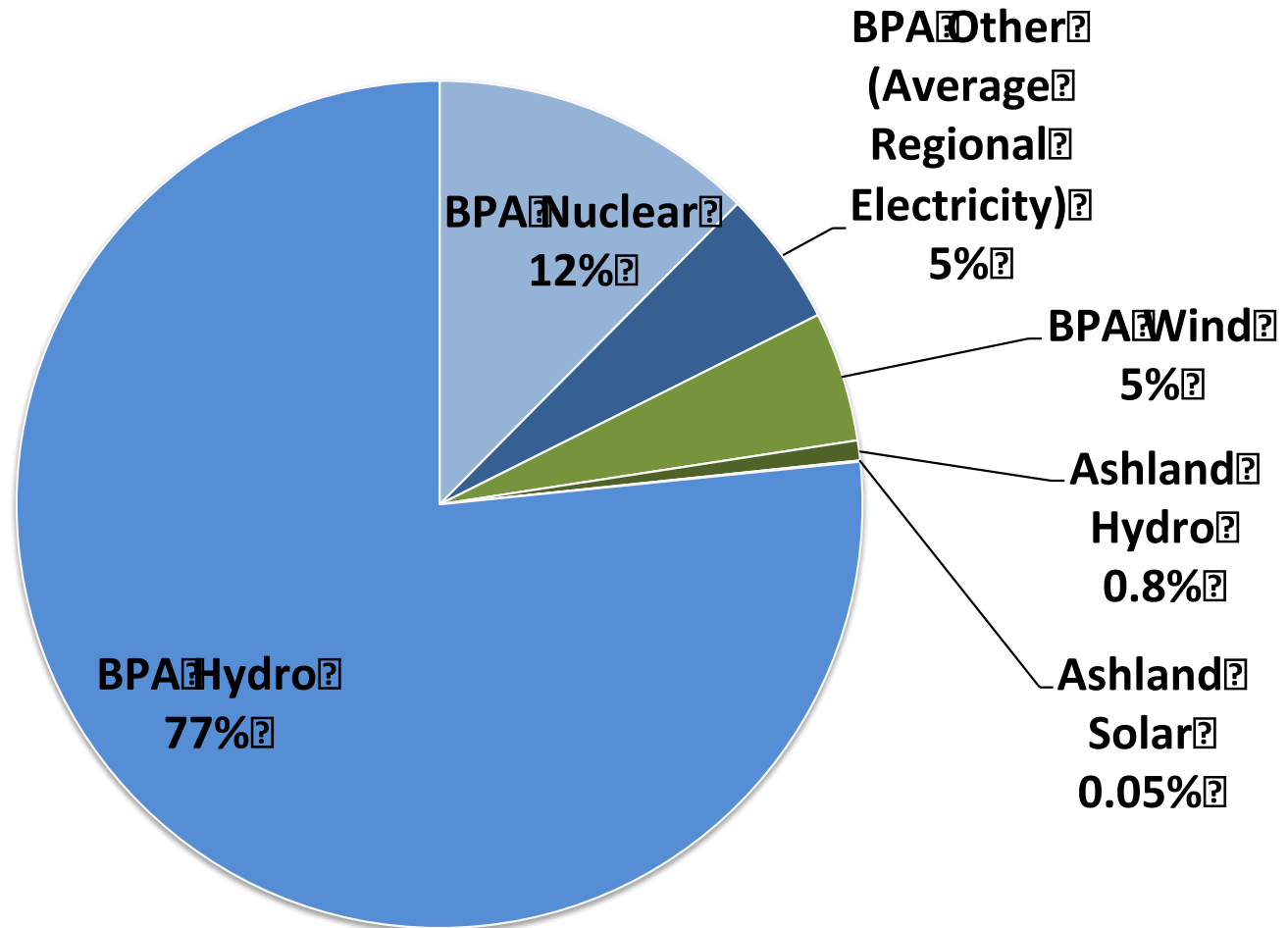
Conclusions

- City Government Emissions ~2% of Community
- Largest Emissions Sources
 - Building electricity use
 - Fleet vehicles and equipment
 - Landfilled biosolids
 - Embodied emissions in construction and vehicles
- 10% increase in total emissions
- -15% decrease in building-related emissions

Emissions from Ashland Electricity Supply

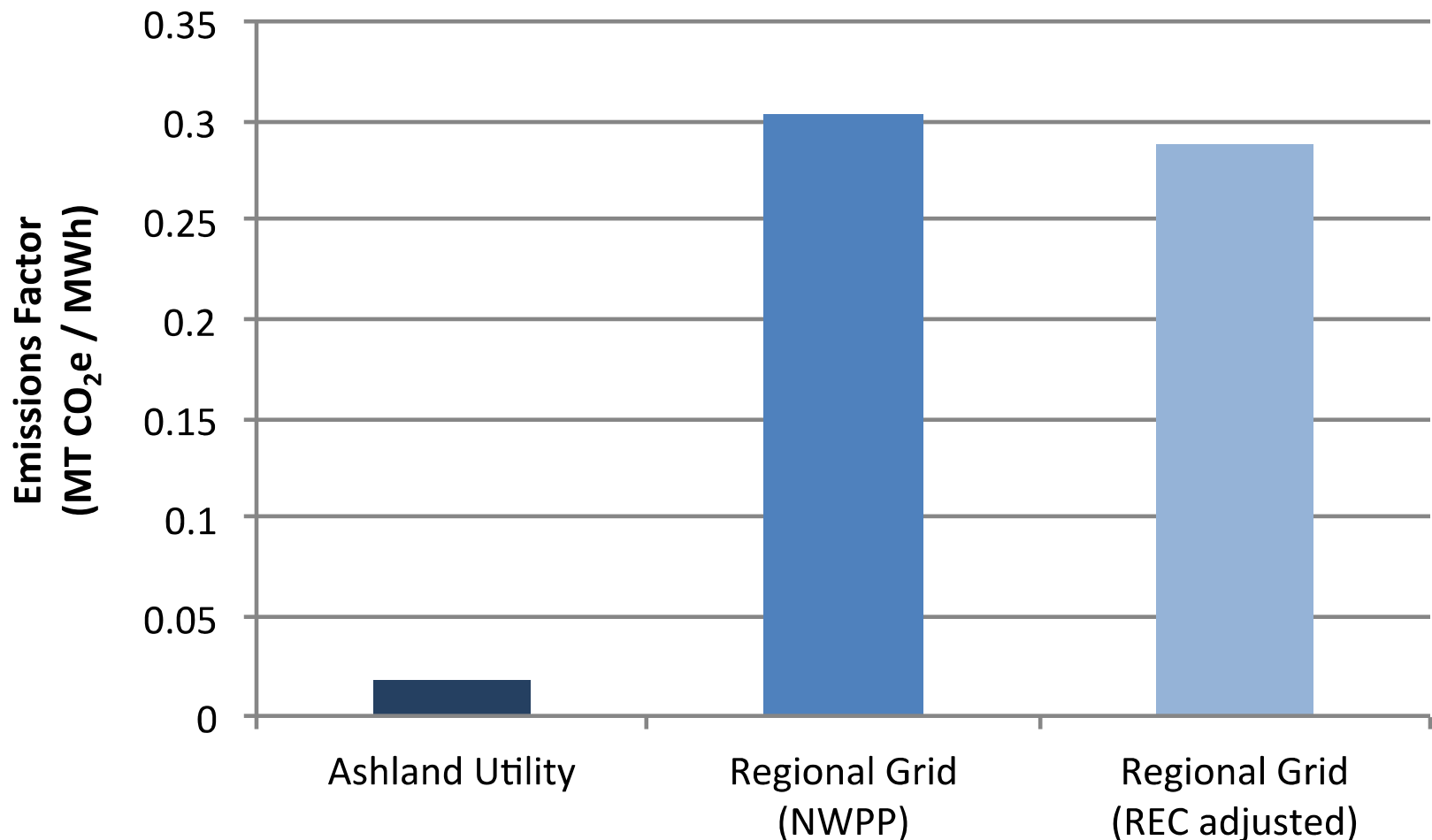


Resources that Supply Ashland Electricity





Comparing Electricity Emissions Factors



Conclusions

- Ashland's contracted and owned-electricity generation supply is low-carbon
- Contracted BPA power makes up 98% of Ashland's supply, but is not owned by the community
- The Utility and the community voluntarily purchase 5.7% of community electricity from new renewables
- Climate impacts of community electricity are best represented by the regional grid emissions factor, adjusted by community REC purchases
- Each kWh of local efficiency or renewable generation puts a kWh of BPA electricity back on the grid to displace fossil fuels

Using the Results and Future Tracking

- Community GHG calculator (ClearPath) has useful climate action features - forecasts, planning scenarios, & monitoring and tracking
- Track emissions with available data more frequently than modeled data / estimates
- Align modeling with state and regional efforts
- Consumption-based emissions are large, and therefore need to be addressed, but are currently difficult to track accurately over time
- Work with partners to improve data collection for transportation (ODOT, ODEQ) and refrigerants (local partners)

Thank you



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