

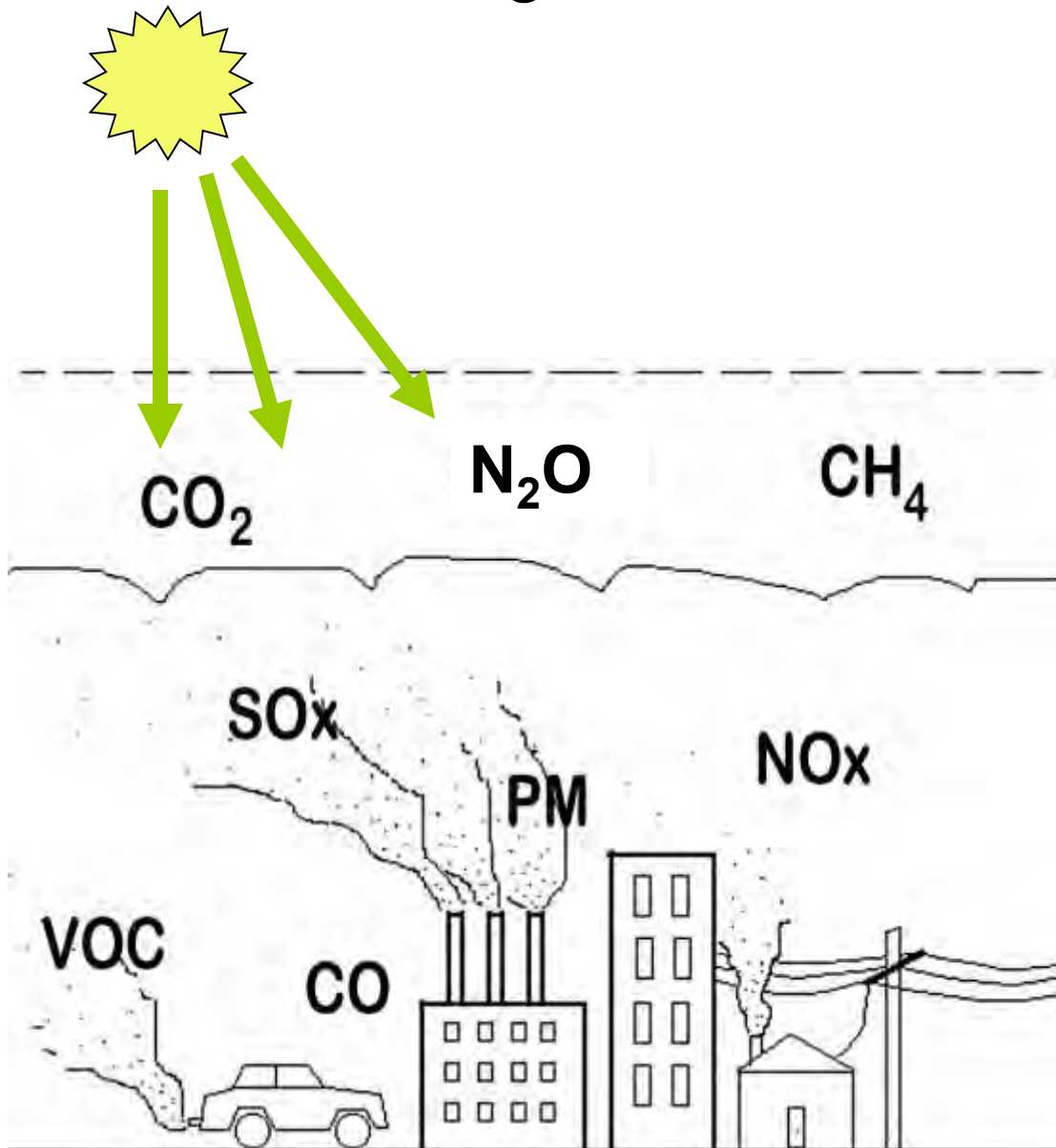
Greening of Fort Wayne, IN

Partners for Pollution
Prevention

June 6, 2007



Issues Surrounding Energy Source, Global Warming and Air Pollution are Linked



Burning fossil fuels release both:

- Heat trapping *greenhouse gases*

responsible for:

- Smog,
- Health problems
- Reduce visibility
- Diminished quality of life

THIS ENERGY CRISIS IS NOT A TEMPORARY BLIP

THE MARKET FUNDAMENTALS HAVE CHANGED:

- **Oil** - growth in world demand
- **Natural Gas** - no supply relief in sight
- **Coal** - plentiful supply, BUT
- **No magic bullet**



Indiana Concerns

- Indiana uses a huge amount of energy
 - 2001 - \$17 billion per year
 - Now estimated at \$25 billion
- Indiana is extremely dependent on imported fuels (states and countries)
 - 100% of natural gas
 - 99% of petroleum products
 - 51% of coal



Senator Lugar

Called energy the “Albatross of U.S. national security”

The U.S. is 5% of the global population and uses 25% of the oil

If oil at \$60/ barrel through 2006 -\$320 Billion will be spent on imports

Our dependence on oil threatens our security and prosperity



Countries with natural gas reserves > 1 trill. m³



BGR

Reality Check



- Demand up
- Supplies Diminishing
- Vulnerable
- Our use is national security concern
- Cost is up 50% - 2001
- ++ Air pollution and climate change



City of Fort Wayne

- Population 250,000
- City of three rivers
- 1,200 linear miles of streets
- 3,000 + lane miles
- 92 square miles
- Water treatment averages 34 MGD
- Wastewater treatment average design flow 50 MGD
- Buildings
- Many parks



History

- Participating in
 - DOE Clean Cities
 - US Mayors Climate Protection Resolution
 - ICLEI's Cities for Climate Protection campaign
- Formed Green Ribbon Commission 2006
 - Focused on energy use and air quality
 - High level policy focus



Green Ribbon Commission Report

“Findings and Recommendations”

- There are 12 Policy Recommendations
 - Transportation
 - Buildings
 - City Operations
 - Policy and Regulations



Reduce dependence on traditional automobiles and trucks

Reduce amount of gasoline used by City Fleet 5% by Dec 2007

- alternative fuel vehicles
- trip reduction



Toyota's Prius G seats five and boasts world-leading fuel efficiency and performance.



Transportation

Idle Reduction Program

- Software installed on 277 trucks
 - Estimated savings \$72,000 per year (1 hour per day saved, 1 gal per hour of idling)
 - First month gas mileage increase 0.1mpg
- City Energy Policy for all others



Hybrids

- 22 hybrids – up 9 in 2007
- 1 dump truck on order –fuel savings 30-45%
- 7 year life cycle – estimated five year pay back now decreased to 4 years
- Driver training is critical to achieve maximum fuel savings



B20 – ASTM D 6751

- Use premium diesel for mileage increase
- Joint purchasing agreement
 - Citilink and Ft. Wayne, Southwest and Northeast Allen County public school buses
 - Allen County recently converted
- Change over
 - Cleaned storage tanks and changed pump filters
 - Fuel filter changes at 100 hours
 - No Cold weather problems except FWCS



B20

- Savings
 - Fuel costs none
 - Expecting some when local plants come online
- Emissions
 - NO_x + 1 – 2%
 - PM – 22%
 - CO -- 20%
 - HC -- 30%
 - Sulphates – 20%
 - Mutagenicity – 20%
- *New low sulfur diesel fuel will reduce CO and PPM further*



Increase availability of transportation choices



Increase funding for public transportation 20%

Increase bike lanes 25 miles by Dec 2009



Transportation

Improve energy efficiency of existing buildings

Reduce energy use in City buildings 10% by 2010

- Operations
- Lighting
- Building monitoring

MEET 2030 CHALLENGE



Buildings

Energy Efficiency Buildings

- Baseline completed
- Evaluating buildings for GESB
- Identified one building eligible for Energy Star label



Streets

- All Traffic lights to LED
 - 5,800
 - \$145,000 savings
 - Payback 2.4 years
- Christmas LED \$1400
- Testing LED Street Light



Support developers, homeowners and landlords in reducing energy use



Reduce community and commercial energy use 10% by 2010

- Existing home demonstration
- Program that encourages landlords to upgrade energy efficiency



Buildings

Add renewable energy sources



Implement renewable energy portfolio of 5% by 2010

Identify sources of renewable energy City operations by Dec 2006 and implement by 2010



City Operations

City's Energy Policy

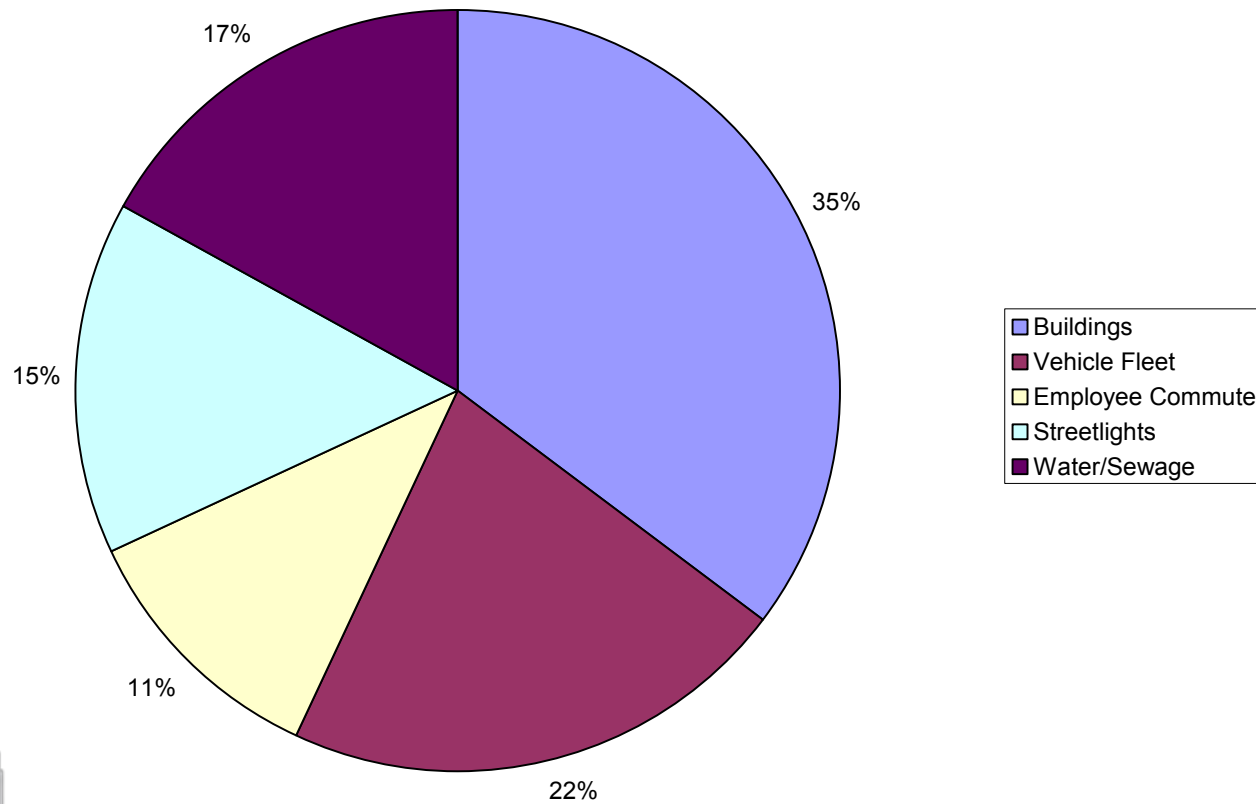
energy conservation, energy efficiency and use of renewable energy systems in all city operations and planning” . . . “The City will also work to educate and support citizens. . . .”

- *Includes some quick wins*



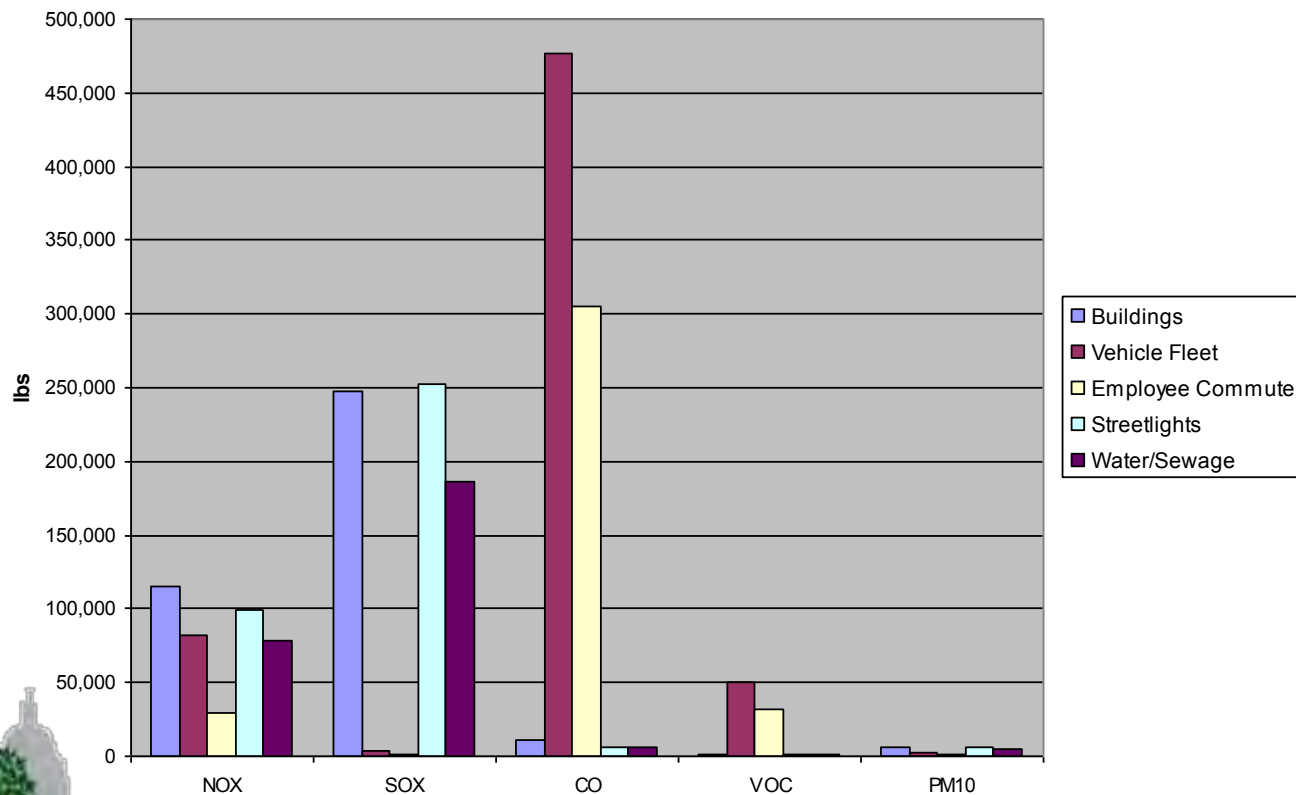
Government Baseline

Government Energy Use by Sector



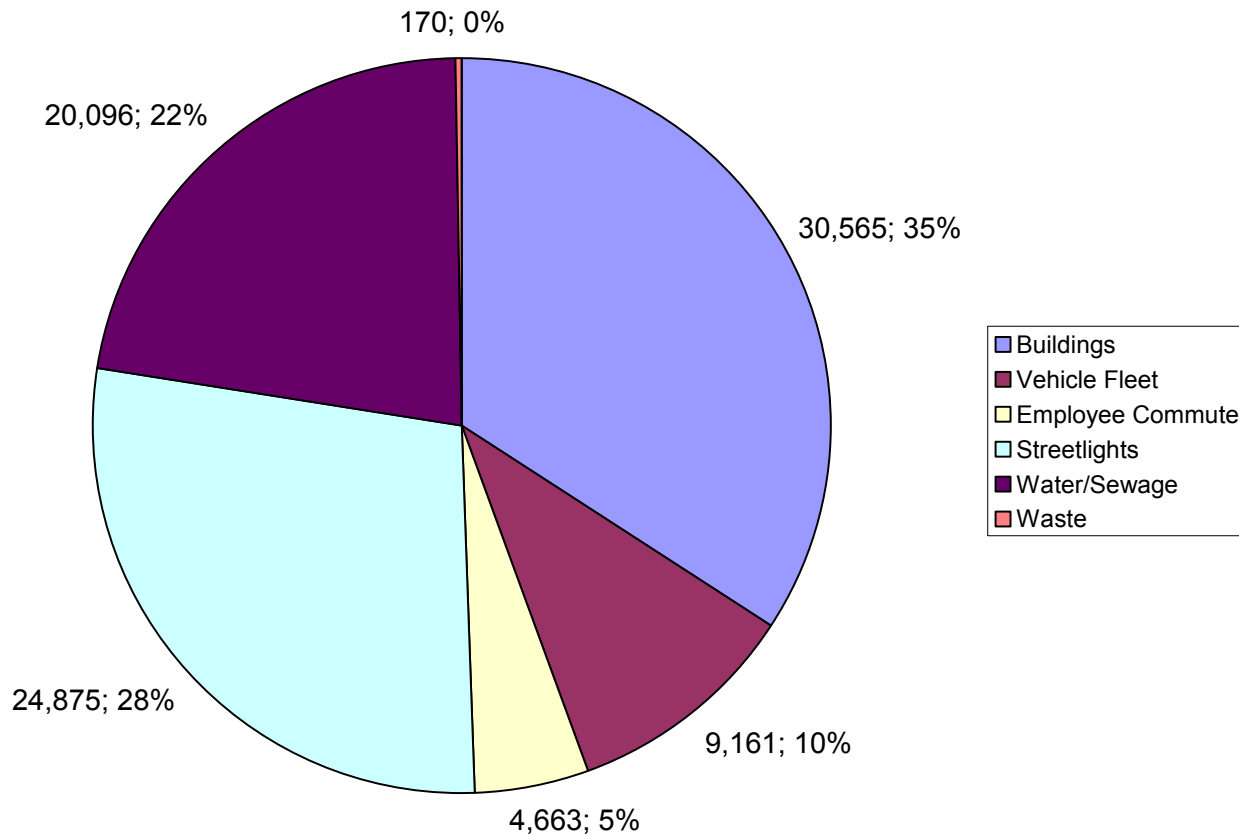
Criteria Pollutants Government

Government Criteria Air Pollutants by Sector

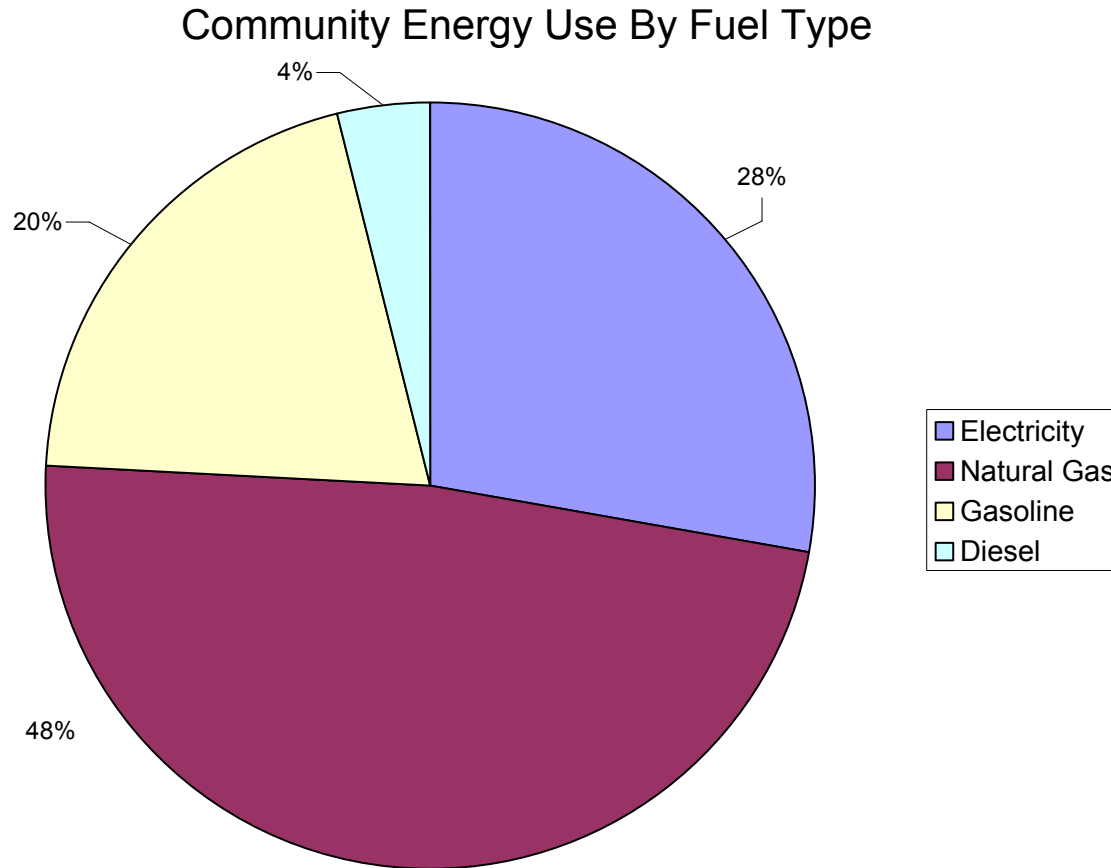


Government Baseline

Government Greenhouse Gas Emissions (Tonnes)

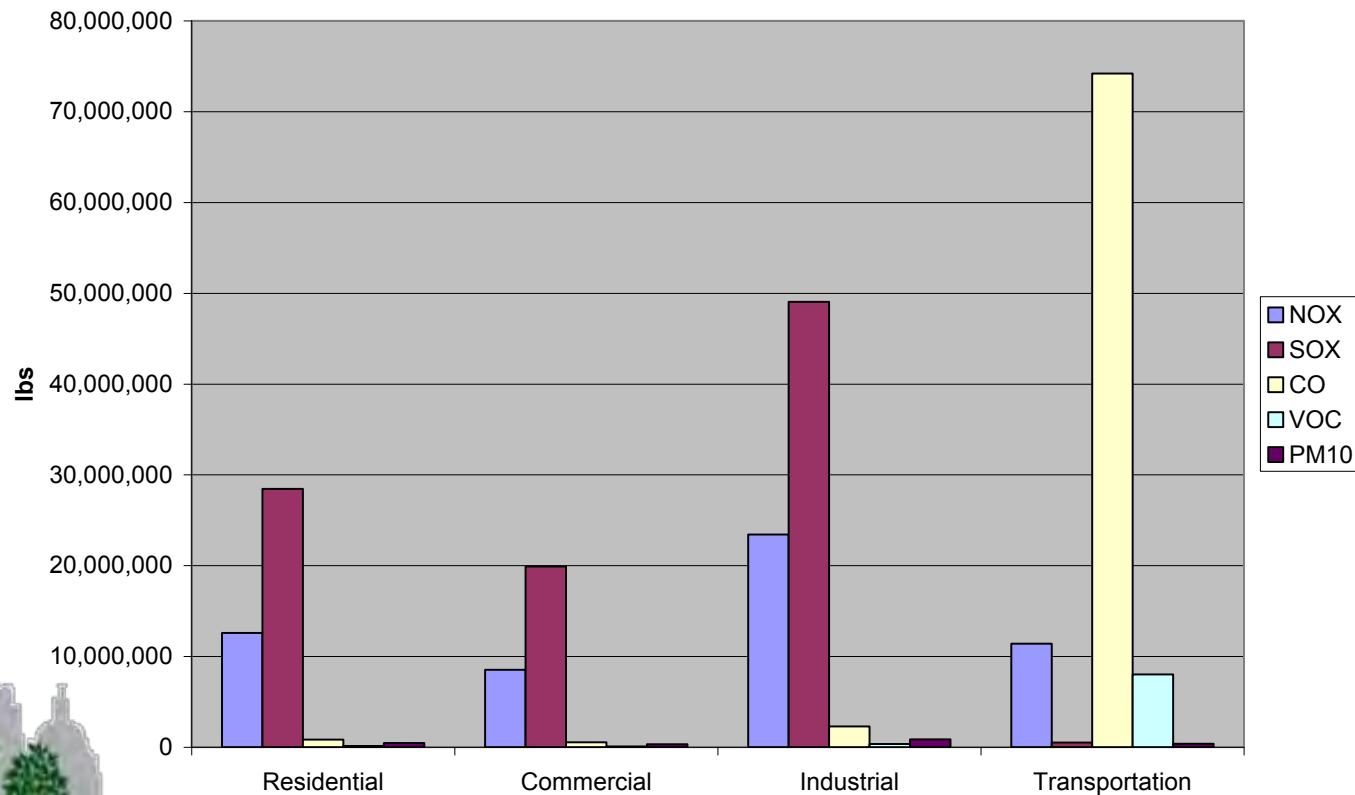


Community Baseline



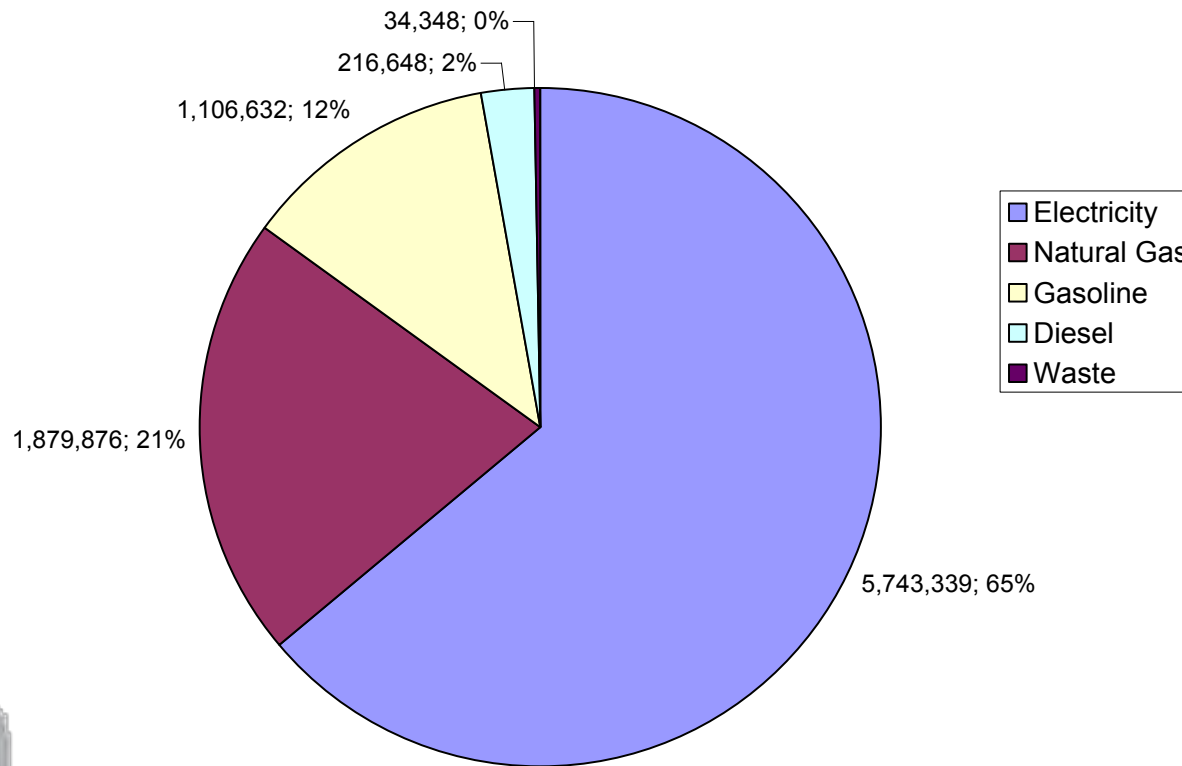
Criteria Pollutants Community

Community Criteria Air Pollutants



Community Baseline

Community Equivalent Tonnes CO₂ Emissions By Fuel Type or Source



Compact Fluorescent Bulbs

- 18seconds.org
- Every home in U.S. replaced just one
 - \$8 Billion in energy costs
 - 2 Million cars off the road
- Avg. home TWICE the emissions Avg. car



Home Energy Use

