



Tacoma Emissions Inventory

Mayor's Green Ribbon Task Force

April 16, 2007



Background

- Used ICLEI (Cities for Sustainability) Software to calculate
- ICLEI is the organization affiliated with the US Conference of Mayors
- Software that most other cities who are conducting baseline inventories are using
 - Doesn't measure all emissions
 - Measures those that local government can influence



Baseline and Target Years

1990-Original baseline year from the
Kyoto Protocol

2000- Interim year one decade later

2005-Interim year and latest year data was
available at the time

2010-Original Kyoto Target Year

2012 is current target year

Gives us two years to make changes if not on
track



Data Collected

- Energy Use Data
 - Buildings
 - Streetlights
 - Water/Sewage Treatment
- Transportation Data
 - Vehicle Miles Traveled
 - Employee Commute Data
 - Fleet Fuel Usage and Fleet Makeup
- Solid Waste and Recycling Data



Emissions Modeling

- Model results are estimates!
- Does not include:
 - Large electricity users that buy directly from Bonneville Power Administration
 - Emissions from large combustion point sources such as industrial boilers
 - Natural gas use (waiting for PSE data)
 - Port Emissions (PSCAA has some data)
 - Airport Emissions (Seattle estimated in their model)



Emissions Modeling – Sectors Analyzed

Sector	Government	Community
Energy Use	Buildings	Residential
	Streetlights	Commercial
	Water & Sewage	Industrial
Transportation	Vehicle Fleet Fuel Use	Overall Miles Driven
	Employee Commute	
Solid Waste		Tacoma's Solid Waste System



Data Sources

Energy Consumption

- Tacoma Power

Fleet Fuel Usage & Composition

- General Government and TPU Fleet

Passenger Vehicle Miles Traveled

- Washington State Department of Transportation (WSDOT),
- Puget Sound Regional Council (PSRC),
- Puget Sound Clean Air Agency (PSCAA)

Employee Commute Trip Reduction

- Tacoma Commute Trip Reduction
- WSDOT

Recycling & Solid Waste Data

- Tacoma Solid Waste Management

Sewer and Wastewater Power Usage

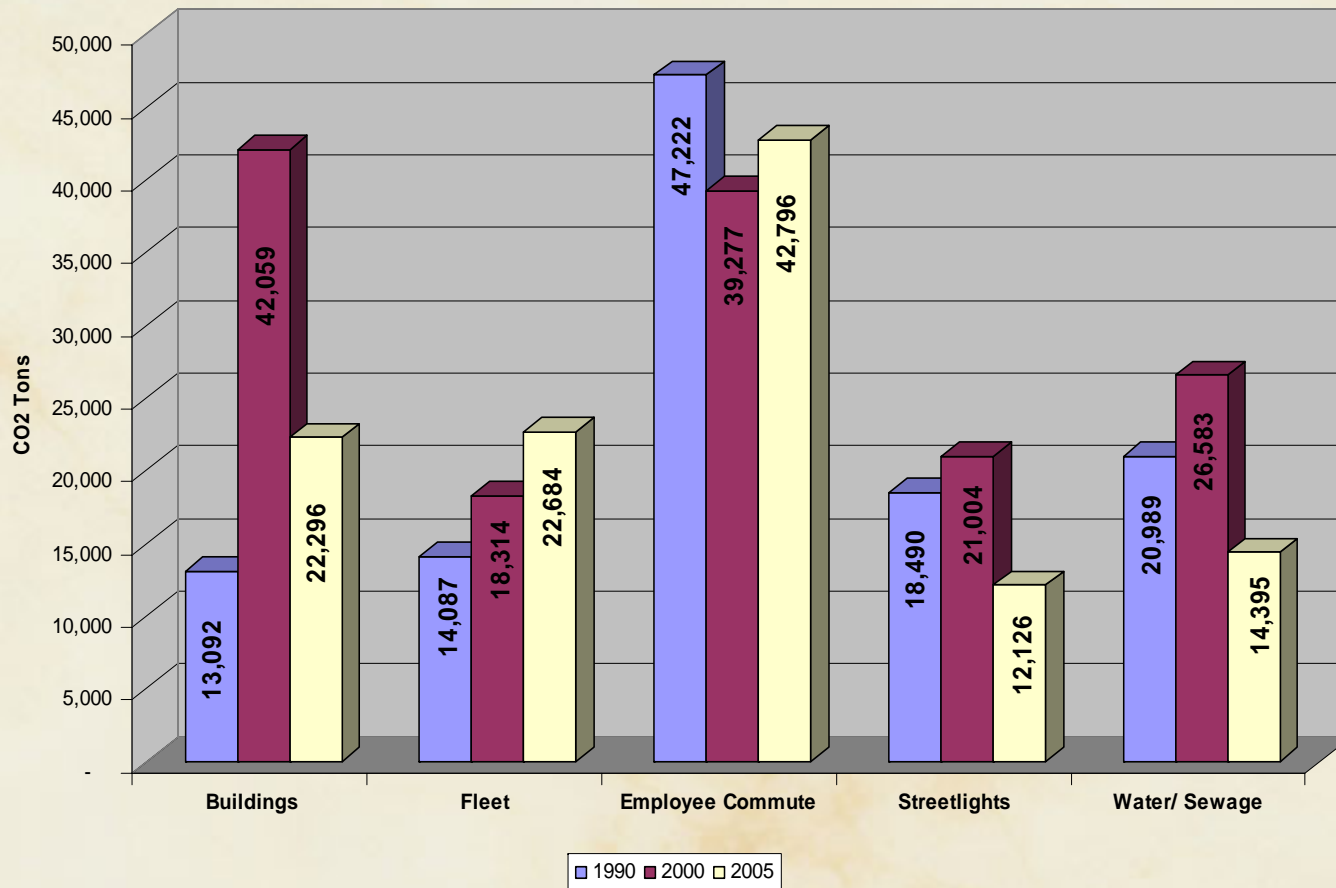
- Tacoma Power

Street Signals

- Tacoma Power
- Tacoma Public Works

Results Government

CO2 emissions 1990, 2000 and 2005





Government Measures 1990-2005

- Energy Sector
 - Sale of Centralia Steam Plant in 2000
 - Reduced CO2 emissions 106,000 tons per year
 - Central Treatment Plant Upgrade
 - Conversion of Streetlights to LED
 - Increased employee participation in Commute Trip Reduction Program
 - Flex Time/Compressed Work Week
 - Telecommuting

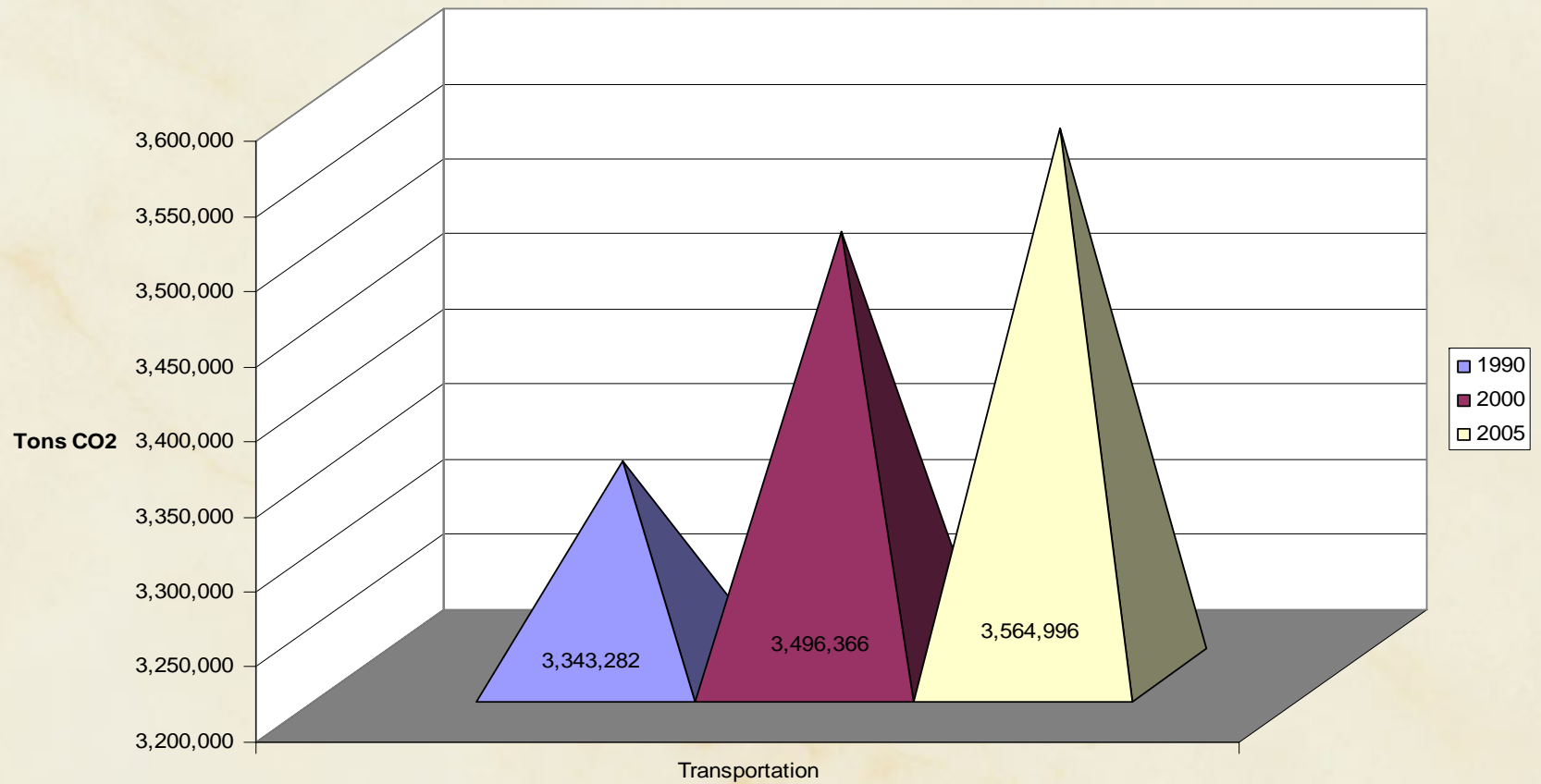


Government Measures 1990-2005

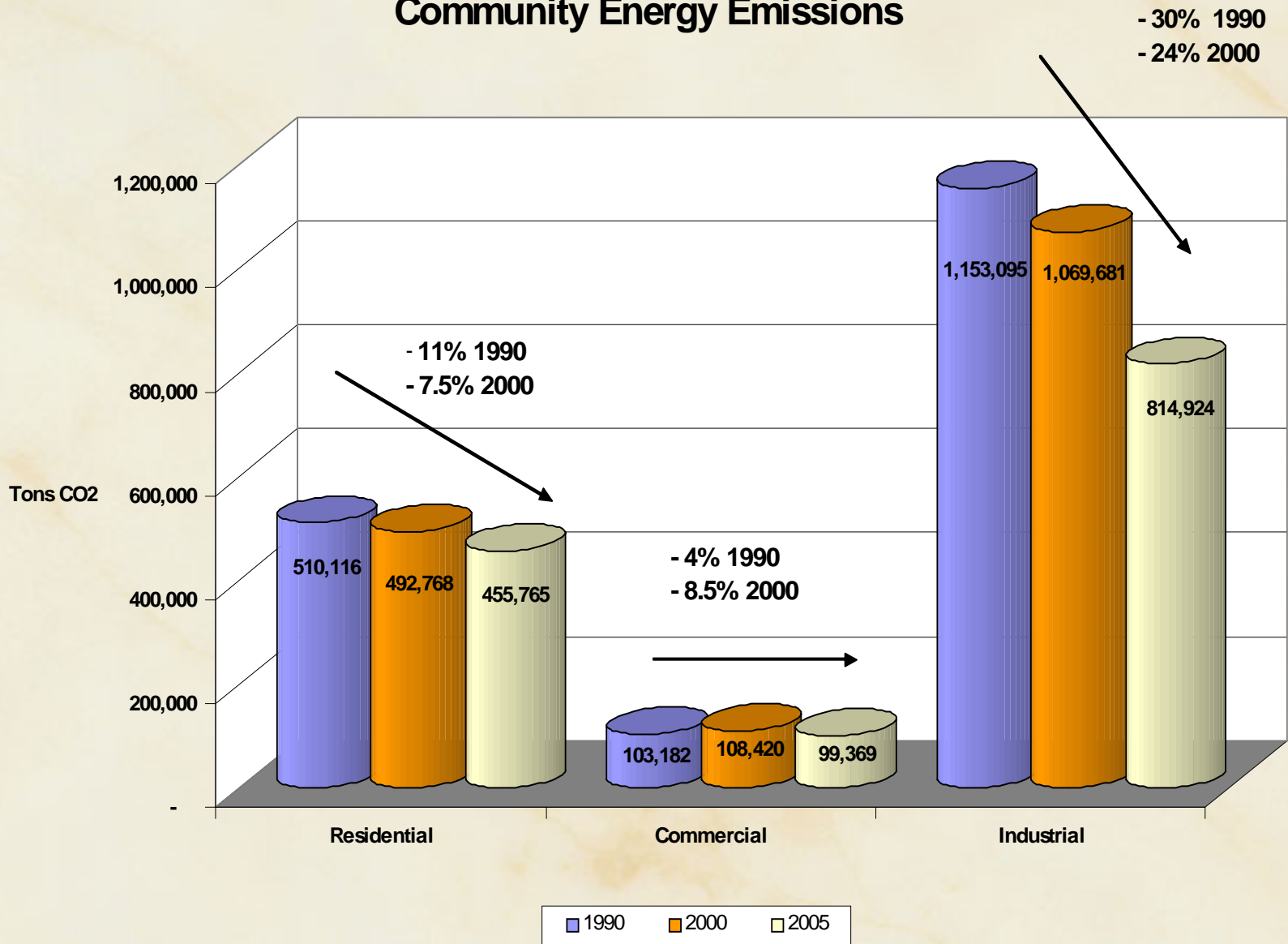
- Transportation Sector
 - TPU Fleet switch to B20
 - Tacoma Rail switches to ULSD
 - Tacoma Rail installs idling motors on locomotives
- Solid Waste Sector
 - Steam Plant closure in 2001
 - Solid Waste Fleet switches to B20

Community Transportation Emissions

Community GHG Emissions Transportation



Community Energy Emissions





Community Measures 1990-2005

- Energy Sector
 - Tacoma Power Conservation Measures
 - 30 million kwh in the residential sector
 - 52 million kwh in the commercial sector
 - 32 million kwh in the industrial sector
 - =52,000 pounds of CO₂ reduction

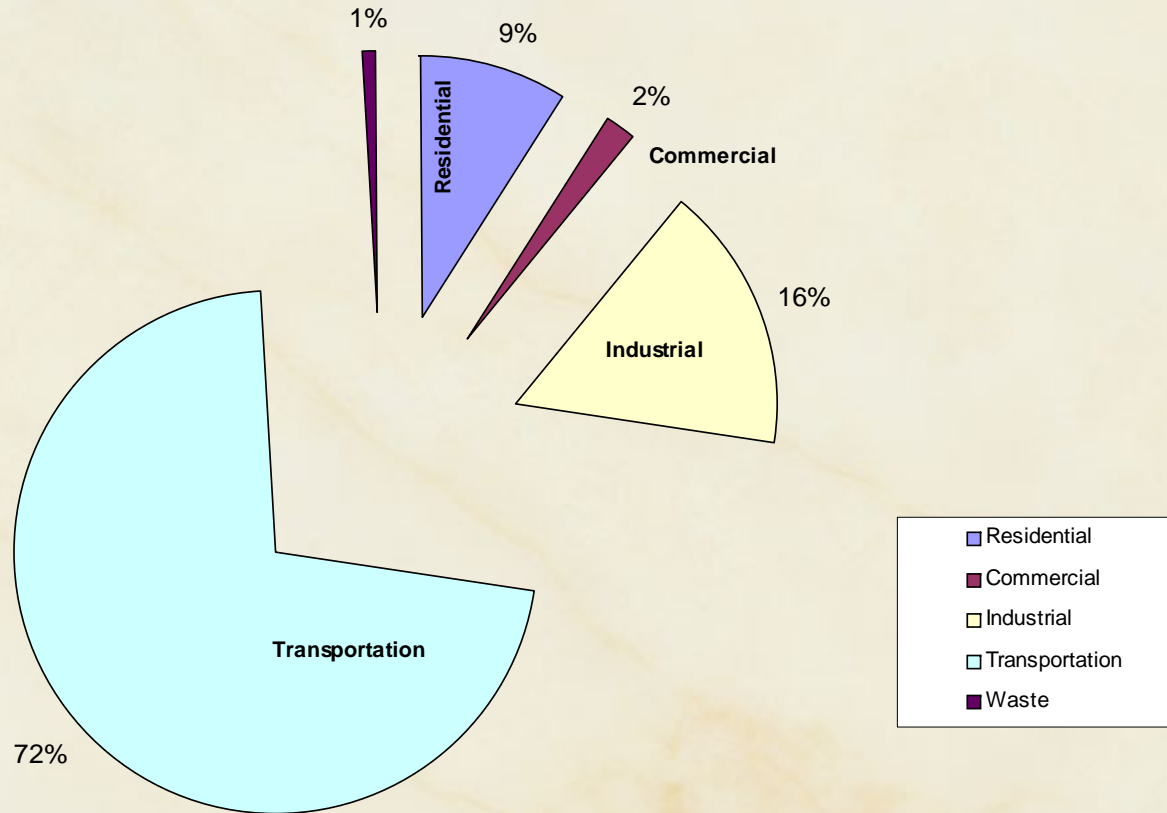


Community Measures 1990-2005

- Transportation Sector
 - Increased Vehicle Miles Traveled (VMT) but
 - Improved auto emission technology
 - Improved vehicle mileage per gallon beginning in the late 1990's
- Solid Waste Sector
 - Increased Recycling volumes

Where are the Emissions Coming From?

2005 Greenhouse Gas Contributions (CO2)





Next Steps

- That's Up To You!