



City of Columbia Emissions Study

- July 17, 2006 US Mayors Climate protection agreement was passed by City Council
- Goal: reduce carbon emissions by 5.2% compared to the 1990 levels
- Columbia Water and Light conducted the baseline emissions study



City of Columbia Emissions Study

- Report includes emissions from energy, transportation and waste
- Joined ICLEI for guidance and technical support
- 1990 levels were not available
- Similar to other cities, used 2000 levels
- Energy numbers included figures from Columbia Water and Light, Ameren UE (natural gas), University of Missouri and Boone Electric

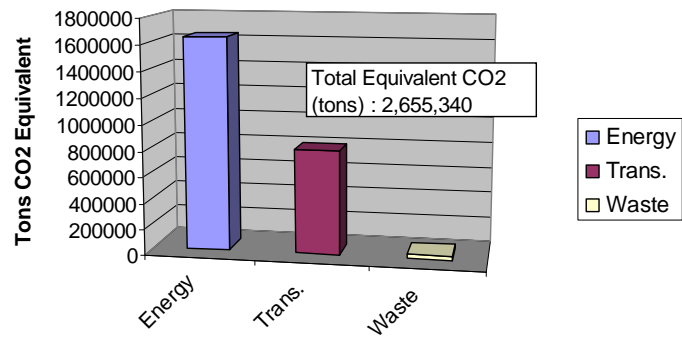


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- The inventory only considers carbon dioxide and methane (majority of climate influencing emissions)
- Data Sources: Water & Light, Public Works, Planning, UM, MoDOT, DNR, AmerenUE and Boone Electric

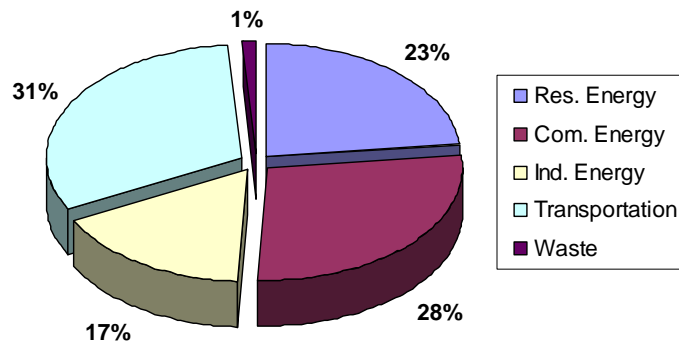
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Emissions by Sector



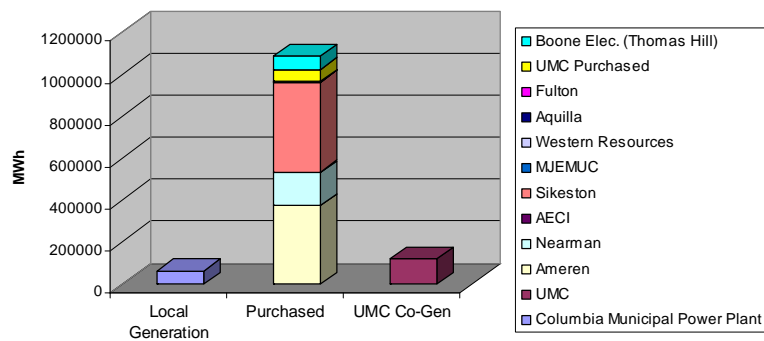
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Columbia CO2 Emissions Breakdown



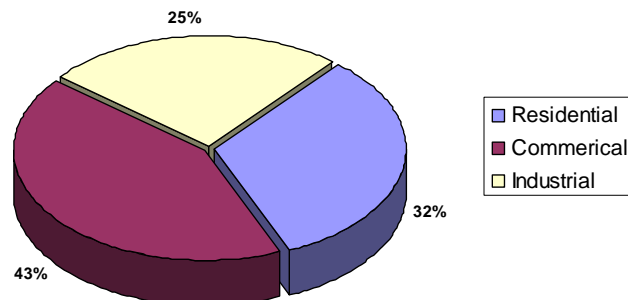
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Columbia Total Electric Consumption by Source



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CWL Customer Class Usage





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- Next step will be for Council to formulate an action plan
 - Transportation
 - Energy
 - Waste
- Action plan needs to take into consideration:
 - Economic impact
 - Population growth



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Areas of consideration:

- Policy, research, planning and market outreach
- Energy resources
 - Renewable energy standard
 - Net metering ordinance
 - Incentives/rebates for renewable projects
 - Future power supply – consider biomass



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Areas of consideration:

- Transportation
 - Increase fuel efficiency
 - Improve traffic flows
 - Incentive program for public transportation
- Energy efficient buildings
 - New codes
 - Energy Star equipment for City use
 - Continue existing rebate programs for efficiency
 - LEED certified City Hall



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Areas of consideration:

- Carbon offsets
 - Tree Power program
 - Maintain open areas and create wooded landscapes
 - Tree preservation
 - Street tree ordinances
 - Water efficient landscapes



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Existing Water and Light programs

- Energy audits
- Energy efficiency loans
- Load shedding/Load Management
- Peak warnings
- Educational programs
- Efficiency programs for businesses
- Compact fluorescent bulb rebate program
- Tree Power



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Goals for Water and Light programs

- ½ of industrial customers use the ultrasonic leak detection program
- Exceed 18,000 customers on Load Management
- Will exceed the renewable energy standard
- Commercial lighting retrofits – 125,000 kWh of savings
- Loan over \$5 million for energy efficiency improvements
- Energy Star Homes
- Rental property improved to Energy Star standards
- AC Rebate will provide \$50,000 for upgrades



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Programs to meet goals

- Distributed energy technologies
- Load response programs
- Continue participating in MEEA programs
- Market research and outreach
- Customer surveys
- Incentives for reducing load factor
- Tracking system for energy efficiency programs



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Programs to meet goals

- Customer energy use awareness
 - Pay as you go meters
 - Online energy audits
 - Billing programs to track energy use
 - Time-of-day rates
 - Energy efficiency 'store' for customers