City of Davis Greenhouse Gas Emissions Inventory & Forecast Update

June 2008
1990 GHG Emissions Inventory

**Transportation** 53%
- Light Trucks 20%
- Heavy Trucks 17%
- Cars 15%
- Other 1%

**Buildings & Facilities** 45%
- Residential 33%
- Commercial/Industrial 9%
- City Facilities & Operations 3%

**Waste** 2%
- 6,152

**Transportation** 53%
- 131,916

**Buildings & Facilities** 45%
- 112,312
2006 GHG Emissions Inventory

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>53%</td>
<td>164,195</td>
</tr>
<tr>
<td>Light Trucks</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>Cars</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Heavy Trucks</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Buildings &amp; Facilities</td>
<td>45%</td>
<td>139,229</td>
</tr>
<tr>
<td>Residential</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Commercial/Industrial</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>City Facilities &amp; Operations</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Waste</td>
<td>2%</td>
<td>5,943</td>
</tr>
</tbody>
</table>
GHG Emissions by Source

1990
- Natural Gas: 52,784
- Gasoline: 119,941
- Electricity: 59,528
- Diesel: 12,363
- Other: 6,153

2006
- Natural Gas: 74,592
- Gasoline: 144,300
- Electricity: 64,637
- Diesel: 12,363
- Other: 5,943

The percentages of emissions by source are as follows:
- Natural Gas: 48%
- Gasoline: 21%
- Electricity: 24%
- Diesel: 2%
- Other: 5%

Comparing 1990 and 2006, the emissions have increased significantly, with a notable increase in Gasoline and Electricity.
Residential GHG Emissions

CO₂e (tons)

Year


Electricity

Natural Gas

Forecasted
GHG Emissions by Vehicle Type

- Passenger Car
- Light Truck/SUV/Pickup
- Heavy Truck
- Other

CO2e (tons)

Year

- 1990
- 1995
- 2000
- 2005
## Per Capita Emissions Comparison

<table>
<thead>
<tr>
<th></th>
<th>Davis’ 2006 Per Capita Greenhouse Gas Emissions (tons CO₂e per person)</th>
<th>National State &amp; other Cities 2005 Per Capita Greenhouse Gas Emissions (tons CO₂e per person)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct energy use plus airline and highway travel</td>
<td>7.5*</td>
<td>National: 24** California: 14***</td>
</tr>
<tr>
<td>Direct energy use (no airline and highway travel)</td>
<td>4.8</td>
<td>Other California Cities: 6.3 – 17.5**** Other U.S. Cities: 11.5 – 19.5*****</td>
</tr>
</tbody>
</table>

* Air and highway travel are added: Air travel - 1.4 tons CO₂e per capita. Highway travel - 1.3 tons CO₂e per capita.
**** Cities include Berkeley (6.3), San Francisco County in year 2000 (13), Menlo Park (16), and Contra Costa County in 2006 (17.6).
***** Cities include Portland County (Multnomah County Global Warming Progress Report 2005), Seattle (Seattle’s Community Carbon Footprint: an Update October 29, 2007), and Denver (19.5).
Other Emissions

Air travel: 1.4 tons CO$_2$e per capita
Highway travel: 1.3 tons CO$_2$e per capita
Community: 1990, 2007 BAU & 2015 BAU

Historic Emissions

2015 BAU

15% reduction by 2015
Where do we go from here?

1. Adopt an emissions reduction target for the forecast year.
3. Implement policies and measures.
4. Monitor and verify results.
http://www.cityofdavis.org/pgs/Sustainability/ClimateChng.cfm