



Summary of Metro's Completed Sustainability Efforts

Supplement to the Report to the Ad Hoc Sustainability and Climate Change Committee

January 23, 2008

Outline

- **Air Quality**
- **Energy**
- **Other Sustainability and Climate Change Initiatives**

Sustainability: Air Quality

Planning for Sustainable Transportation Corridors



- Integrated approach to improving air quality
- Metro Orange Line
 - Integrated transitway, bikeway & landscaped pathway
 - 1/3 of new riders former commuters along US-101

Integrated Planning and Management and Air Quality

- **Work with our Smart Growth partners to reduce our region's Carbon footprint**
 - Encourage comprehensive planning and development around station sites and along transit corridors
 - Reduce auto use and congestion through the encouragement of transit-linked development
 - **Metro Joint Development Group**
 - **Completed Projects**
 - Hollywood + Highland: Red Line, 2000
 - Hollywood + Western: Purple Line, 2004
 - Del Mar: Metro Gold Line, 2007
 - Sierra Madre Villa, Gold Line, 2007
 - Wilshire + Vermont Apts: Red/Purple Line, 2007
 - **~23 Other Projects in Construction or in Review**

Funding Sustainable Transportation Projects

- Over the last 10 years, Metro has allocated over \$300 million to Pedestrian, Bike, Transit Demand Management (TDM) & Transportation Equity Act (TEA) projects
 - These investments have enhanced accessibility and connectivity to Metro's transit system
 - Improve the efficiency of existing transportation infrastructure
 - Encourage alternative and green technologies

Metro's Expanding Transit Network Creates Opportunities

- **Metro's transit network continues to expand**
 - The Metro rail system increased from 22 miles in 1990 to 73 miles in 2003 with completion of the Metro Gold Line to Pasadena
 - In 2000, the Metro Rapid program operated along 42 miles. By 2008, Metro Rapid service will operate a network of 450 miles
 - Metro operates the second largest bus fleet in the nation
- **Cities have a unique opportunity to develop and implement smart growth planning by connecting and integrating with this expanding transit network**

Commuter/Employer Programs and Air Quality



- Rideshare partnerships with employers, businesses, colleges and universities and similar groups
- Promote “Green Thinking” through an increase in transit, carpooling, vanpooling, walking, biking, car-sharing & telecommuting opportunities for employees & students

Emission Reduction Efforts



- Nation's 1st and Largest Compressed Natural Gas (CNG) Fleet: Almost 2,500
- 97% cleaner than retired diesel buses (Low Carbon fuel)
- All diesel buses remaining use ultra low sulfur diesel fuel
- All buses have bike racks for multi-mobility

Sustainability: Energy

Current Energy Efficiency and Conservation Efforts

- **Energy and Sustainability Policy**
 - Adopted in June 2007 to make capital improvements that lower Metro's utility bills as well as decrease our reliance on non-renewable energy sources
 - Need to enhance policy to include other sustainability principles
- **Division Lighting Upgrades**
- **Division HVAC Upgrades**
- **Gateway Building Energy and Water Efficiency Upgrades**
- **Retrofitted escalators with power-saving motor controllers**

Energy Efficient and Sustainable Buildings



- Project uses 33% less Electricity & 50% less Water saving over \$75,000 annually in utility costs alone
- LEED Silver rating minimum on all new Metro projects and Transit-Oriented Developments

Renewable Energy Efforts

- Metro has built the largest solar generation facility in the transit business

- Saves \$165,000 in electricity costs per year

- Through incentives, Metro paid only 45% of capital costs

- Return on investment is less than 8 years

Cost Savings to Date

Division 8 & 15 Solar Panel Project

Cost of Electricity
[per month]

\$50,000
\$40,000
\$30,000
\$20,000
\$10,000
\$0

May 2005 July 2005 September 2005 November 2005 January 2006 March 2006 May 2006

Month/Year

■ Typical Cost of Electricity (no solar panels)
■ Metro's Cost of Electricity (with solar panels)
Expected return on investment - 8 years



Division 18 Solar Panel Project



- Largest solar installation (850 KW) in the transit industry
- Metro saves more than \$400,000 on electricity costs
- 417 kW or 1600 panels
- Completed November 2007
- Saves \$300K/year with 11 year return on investment

Sustainability: Other Sustainability and Climate Change Initiatives

Sustainable Transportation Corridors

- **Gold Line Transportation Corridor**
- **Del Mar Joint Development**
 - Completed in 2007
 - 347 apartments
 - 11,000 square feet of ground floor retail
 - Integrated Public Plaza
 - 600 Transit Parking Spaces
- **Sierra Madre Villa**
 - 188 apartments
- **Filmore Development**
 - Under construction
 - Medical Office Building
 - 160 transit parking spaces



Sustainable Transportation Corridors



- Orange Line Brownfields Redevelopment
- Integrated transitway, bikeway & landscaped pathway
- Use of recycled road base materials
- Planting and installation of trees & drought tolerant plants

Sustainable Transportation Corridor Design



- Continue redevelopment of brownfield sites
- Use of low emitting diode stoplights
 - Does not use as much electrical power as regular lights
- Installation of piping for future reclaimed water
- Stormwater absorbed back into ground
 - Reduce chemical pollutants and trash impacts on ocean