



# Update of Metro Sustainability Project Implementation

A Report to the Ad Hoc Sustainability and Climate Change  
Committee

September 2, 2009

# Outline

- **Baseline Sustainability Report**
- **Renewable Energy and Energy Audits**
- **Environmental Management Systems**
- **Sustainability-Related Capital Projects**
- **Other Related Efforts**
- **Questions/Discussions**

# Baseline Sustainability Report

## Analyzes seven-year trend in Metro's environmental impacts and costs

- Eight major indicators: ridership, fuel use, rail propulsion power, facility electricity use, water use, greenhouse gas emissions, air quality, and waste)
- Significant positive trend for ridership, air quality, and liquid waste
- Most environmental impacts and economic costs are growing
- Emphasizes the importance of a coordinated strategy and reduction targets.

# Baseline Sustainability Report

## Key Recommendations

1. Create **Sustainability targets** for Board adoption
2. Annually **Report** Sustainability Performance
3. Establish **Green Teams**
4. Develop Climate and Water **Action Plans**
5. Develop metric to **measure** greenhouse gas reduction and **transit benefits**

# Renewable Energy and Energy Audits Update



213KW



213KW



417KW



1000KW

- **Metro Solar Panel Portfolio**
  - More than 1,850 KW installed at FOUR Divisions
  - About 10,000 Metric Ton Yearly Carbon Dioxide Emissions Reduction
- **Agency-wide Energy Audits are being planned for all of FY10**

# Potential TIGGER Capital and Other Projects

Metro has applied for Federal ARRA (stimulus) Funding over to continue to implement our sustainability and energy efficiency programs. Projects will include:

- **More Solar Panel Installations/Efficiency Upgrades at Rail/Bus Divisions**
  - Division 20, Green Line Yard, and Division 3
- **Solar Panel Installations in Commuter Parking Environments**
  - Gold Line Sierra Madre Station
- **Regenerative Braking Technology at Metro Gold Line**
- **Solar Panel Installations Along Freeway Soundwalls**
- **Red Line Tunnel Lighting Retrofits**

# Division 20 Solar Feasibility Study

- **Potential to generate 1.3 MW of Solar Power**
  - Combination of rooftop and carport configurations
  - Potential for Solar Thermal Systems
  - Potential for Hybrid Solar Lighting Systems
  - Implement Energy Conservation Measures
- **Implementation Cost: ~\$13M**
- **Anticipated Incentives: \$3.5M**
- **Anticipated Annual Energy Savings**
  - \$198,000 per year
- **Feasible project in a Private Public Partnership**



# Environmental Management Systems

- **Environmental Management System (EMS) Pilot**
  - Completed eight of the 17 elements needed to have a functioning EMS at Red Line Yard
  - Environmental Management Information System prototype specific to Division 10 underground storage tank information completed
  - Developing other projects as a result of lessons learned from Division 10 EMS pilot
    - Reduced Discharge Bus Wash Retrofits at Various Divisions
    - Use of Hydrolyzed water for cleaning



# Sustainable Capital Projects

- **Metro Orange Line Extension**
  - Implementation of sustainability principles during preliminary engineering phase
  - Explore the feasibility of renewable energy along the alignment
  - Potential Earmark for 2.3 MW solar farm at MOL Park and Ride Station
- **Commitment in the Measure R Implementation and other agency-wide programs to incorporate sustainability-related criteria**
- **Explore I-405 Soundwall Solar Panels**

# Other Efforts: Greening of Gateway Headquarters

- Gateway Headquarters uses the most facilities electricity
- Focus of LEED-Existing Buildings Operations and Maintenance (LEED-EBOM) certification is energy efficiency
- Goal: LEED-EBOM Certified
  - We are already observing best practices required by LEED-EBOM
  - Need formal documentation for certification
- Focused Efforts
  - Water Conservation
  - Energy Conservation Measures (Non-Capital)
  - Solid Waste Management
  - Indoor Air Quality Management
  - Green Cleaning Practices
  - Sustainable Purchasing: Green Products



# Other Related Efforts

- **Implement Water Efficiency and Conservation Policy**
- **Organized Sustainability Summit with MWD in May 2009**
- **Sustainability Awareness Training: Trained about 300**
  - Will provide customized training program to department and divisions
- **Additional Activities Post 2<sup>nd</sup> Annual Sustainability Summit**
  - Quarterly Workshops and Roundtables
- **Los Angeles Regional Collaborative**

# Questions/Discussions