



Metro

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**FINANCE AND BUDGET COMMITTEE
JUNE 20, 2007
EXECUTIVE MANAGEMENT AND AUDIT COMMITTEE
JUNE 21, 2007**

SUBJECT: METRO ENERGY AND SUSTAINABILITY POLICY

ACTION: RECEIVE AND FILE

RECOMMENDATION

- A. Receive and file this report summarizing the proposed Metro Energy and Sustainability Policy.
- B. Adopt the proposed Metro Energy and Sustainability Policy (Attachment A).

ISSUE

During discussion of the Division 18 Solar Generation project at the October 2006 Board meeting, it was requested that staff report back to the Board with an energy policy for the agency. This report responds to this request and proposes a Metro Energy and Sustainability Policy for adoption by the Board.

DISCUSSION

In October 2006, the Board passed a motion requiring staff to prepare a draft Energy Policy, which is included within this report as Attachment A.

Metro spends approximately \$30 million per year on utility costs for electricity, gas, and water alone, with \$26 million of those costs being just for electricity. Of the \$26 million expended on electricity, \$20 million is for propulsion power for the Metro Redline and other light rail lines, whereas \$7 million is for operation of our bus and rail maintenance facilities, layovers, terminals, and headquarters building. As the years progress, Metro also expects that these costs will rise along with periodic utility rate increases that will occur in future years. Staff believes that in this volatile and costly energy market, embracing sustainability, energy efficiency, conservation, and renewable energy sources is a primary pathway towards gaining control of, and reducing, Metro's energy costs.

The business case for embracing sustainability and energy efficiency is strong, and there are many opportunities to make capital improvements that lower Metro's utility bills, as well as decrease our reliance on non-renewable energy sources. In an effort to make our operations

sustainable, and to control energy costs, Metro has already completed or is in the process of completing numerous energy efficiency and sustainability projects, such as:

- Division Lighting Upgrades (Divs. 1, 2, 3, 5, 8, 10, 15, 18, and RRC)
- Escalator Power Controllers
- HVAC Replacements (Divisions 5, 7, and 18)
- USG Parking Structure Lighting and Ventilation Modifications
- USG Building Motion Sensors and Lighting Controls
- USG 15th Floor Restroom and Water Conservation Retrofit
- Division 18 Water Conservation Retrofits
- Divisions 8 & 15 Solar project
- Division 18 Solar Project (contract awarded March 2007)
- Division 9 Transportation Building (LEED Silver Certified, Opening July 2007)
- RRC Public/Private Partnership for Solar Panels and Efficiency Upgrades (RFP July 2007)
- RFP for Facility-Wide Solar Power Purchase Agreements (RFP September 2007)

Although staff has already completed several energy efficiency and sustainability projects, there remain numerous energy efficiency, conservation, and sustainability possibilities at Metro. Staff concurs that adoption of an Energy and Sustainability policy is a wise and prudent recommendation, that will not only help to immediately lower our electrical and water bills, but will provide the baseline and business case to further our sustainability goals at Metro.

As staff began our response to the motion and formulation of the policy, we performed a review of energy policies for other federal, state, and local agencies to determine what other similar agencies had adopted, and also worked with internal departments to determine the goals and contents of the proposed sustainability and energy policy. The policy was then written to incorporate lessons learned from our interagency review, as well as the comments of Metro staff in affected departments.

The proposed Metro Energy and Sustainability Policy makes an agency commitment to responsible energy management, renewable energy sources, energy efficiency, water conservation, environmental stewardship, and general sustainability in our operations. The long-term objectives of the policy are to reduce, whenever possible, Metro's usage of fossil fuels through the use of ambient and renewable energy sources, and to use required fuels and electricity as efficiently as possible.

The immediate goals of the policy are to gain more control over our energy consumption and reduce costs by aggressively pursuing renewable energy sources and energy conservation projects, and to construct all new facilities using energy efficiency and conservation strategies. For buildings or structures over 10,000 square feet, projects must be constructed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification, at minimum. This certification level appears to be the most appropriate for Metro, and is similar to a policy recently approved by the Los Angeles County Board of Supervisors, which requires Silver LEED certification for new County buildings.

Although linear projects (such as subways, busways, and light rail lines) are not applicable to LEED certification, staff recommends that as new linear projects are designed and developed, the projects should also incorporate sustainable concepts and strategies, such as renewable energy, usage of recyclable materials, recycling of construction waste, stormwater retention and/or treatment, and energy efficiency upgrades.

As a further step in Metro's commitment to the proposed policy, staff is proposing to conduct all-inclusive energy audits on our facilities that use the most energy. Southern California Edison (SCE), Los Angeles Department of Water and Power (LADWP), and the Gas Company all offer free audits to commercial customers, which include field surveys and reviews of as-built drawings to determine systems that could be upgraded or retrofitted to reduce energy cost. The audits also evaluate Heating Ventilation Air Conditioning (HVAC) conditions within buildings, to determine whether the buildings and systems are sized, zoned, sealed and weather-stripped properly to ensure efficient system operations.

Working with the LADWP, Metro has already completed two audits at Bus Divisions, as well as audits of Union Station Gateway (USG) lighting and parking structure ventilation. The results of these audits have been implemented as we have completed lighting upgrades and HVAC upgrades throughout the system, and have proved to be a valuable tool in determining the scope of retrofits and upgrades that are required at the divisions and facilities to reduce energy costs. The audits have also been a valuable learning exercise for facility engineers and other personnel, so that future capital projects and improvements are designed and constructed with energy efficiency and sustainability in mind.

Staff plans to complete energy audits at all rail and bus maintenance facilities, as well as the USG headquarters building (18 separate facilities), within three years of adoption of this policy (dependent on utility company resources). This equates to a yearly commitment of six audits per year. The results of these audits will be used to incorporate energy efficiency and conservation strategies in capital improvement projects proposed for the Divisions, and potentially for new projects that could be proposed in the future. The end goal of these audits will be to reduce energy at our facilities costs as much as possible through the use of energy efficient systems, conservation strategies, and the deployment of renewable energy sources.

FINANCIAL IMPACT

Adoption of the proposed Metro Energy and Sustainability Policy will have no immediate impact to the FY07 or proposed FY08 budgets. The energy audits proposed as part of this report are provided at no cost for commercial customers, and the results of the audits would be incorporated into existing capital projects or proposed capital projects as they are budgeted and constructed in future years.

However, the policy does require that all future Metro construction projects incorporate energy efficiency and conservation strategies in their design and construction. Further, for buildings or structures over 10,000 square feet, projects must be constructed to achieve LEED Silver certification, at minimum. Nationwide data provided by the United States

Green Building Council (USGBC) suggests that for buildings constructed to achieve LEED Silver Certification, the construction costs are typically between 2-5% higher than conventional construction. This range is also confirmed by Metro's direct experience with the Division 9 Transportation Building, where the additional cost to achieve LEED Silver Certification will be approximately 3% (or \$350,000). Nevertheless, staff supports this policy recommendation, since the investment in sustainability, energy efficiency, and conservation will immediately translate to lower operating costs for water, gas, and electricity. For instance, with the Division 9 Transportation Building, engineering analyses suggest that the investment in LEED Silver certification will be recovered in less than 4 years through lowered utility bills. Although this policy will result in the potential for increased construction costs, the policy makes good business sense as utility bills will be immediately lowered and the cost recovery period is short compared with the expected life of the facilities.

NEXT STEPS

If the proposed Metro Energy and Sustainability Policy is adopted, the following represents the next steps in complying with the policy:

- Staff's goal will be to complete audits of all our bus and rail maintenance facilities and USG headquarters within three years of adoption of the policy. This equates to six audits per year, and is dependent on utility company resources.
- All future Metro construction projects will incorporate energy efficiency and conservation strategies in their design and construction. Further, for buildings or structures over 10,000 square feet, projects must be constructed to achieve LEED Silver certification, at minimum.
- Staff will return to the Board with a yearly status report documenting our sustainability and energy efficiency efforts, including an update on audit results and capital improvements completed to date.

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ATTACHMENT A
PROPOSED METRO ENERGY AND SUSTAINABILITY POLICY

METRO ENERGY AND SUSTAINABILITY POLICY

JUNE 2007

COMMITMENT

Due to our core business practice of providing public transportation, Metro is a large user of energy, both in fossil fuels and electricity. As a part of Metro's environmental and sustainability strategy, we are committed to responsible energy management, and will practice energy efficiency throughout our offices and divisions wherever it is cost effective.

POLICY

Metro's policy is to control energy consumption and embrace energy efficiency, energy conservation, and sustainability to:

- Avoid unnecessary expenditure
- Help in protecting the environment
- Improve cost effectiveness, productivity, and working conditions
- Prolong the useful life of fossil fuels by using resources more efficiently

OBJECTIVES

Metro's long term objectives are to:

- Reduce, whenever possible, Metro's use of fossil fuels through the use of ambient and renewable energy sources
- Buy fuels and electricity at the most economic cost
- Use fuels and electricity as efficiently as possible
- Reduce the amount of emissions, especially carbon dioxide (CO₂), caused by our required consumption

Metro's immediate objectives are to:

- Gain more control over our energy consumption by aggressively pursuing renewable energy sources, take advantages of rebates and subsidies for energy and water conservation wherever feasible, conduct energy audits of Metro divisions and facilities, and implement energy conservation measures where they are feasible and fiscally prudent.
- Construct all new facilities and projects, including new transit corridor projects, using energy efficiency and conservation strategies. For buildings or structures over 10,000 square feet, projects must be constructed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification, at minimum.