

CITY OF SAN DIEGO, CALIFORNIA
COUNCIL POLICY

Draft
12-13-02

SUBJECT: SUSTAINABLE BUILDING POLICY

POLICY NO.: 900-14

EFFECTIVE DATE:

BACKGROUND:

~~Buildings consume approximately 36% to 40% of total energy produced in this country. As energy reliability and costs continue to challenge California, the City of San Diego is committed to reducing the energy and environmental impacts of building design, construction and maintenance both within the public and private sectors.~~

~~The City Council previously adopted two policies that address sustainable building practices, otherwise known as “Green Building” practices. City Policy 900-14 “Green Building Policy” was adopted in 1997, and City Policy 900-16 “Community Energy Partnership” was adopted in 2000. The purpose of this revision is to combine and update Policies 900-14 and 900-16 to provide a more comprehensive and coherent framework for City building projects as well as residential and commercial development within the City of San Diego.~~

~~The concept of Sustainable Building “Green Building” practices is designing, constructing and operating buildings that give a high level of environmental, economic and engineering performance. They are designed to consider occupant health, energy and transportation efficiency, resource and material conservation (air, water, land, fuel), as well as reuse and recycling during building construction, operation and demolition. The Environmental Services Department administrative headquarters is the City’s first example of a “Green Building”, and consumes 50% less energy than the 1998 edition of California’s Title 24.~~

Existing buildings and the building development industry consume nearly half of the total energy used in the United States. The City of San Diego’s commitment to become increasingly efficient with resources, including energy, water, and materials associated with construction projects, is demonstrated in Council Policy 900-14 “Green Building Policy” adopted in 1997, City Policy 900-16 “Community Energy Partnership,” adopted in 2000, and the updated City Policy 900-14 “Sustainable Buildings Expedite Program” adopted in 2001.

On April 16, 2002, the Mayor and City Council adopted CMR-049 which requires City projects to achieve the U.S. Green Building Council’s LEED silver standard for all new buildings and major renovations over 5,000 square feet. This places San Diego among the most progressive cities in the nation in terms of sustainable building policies.

As a participant in the International Council for Local Environmental Initiatives (ICLEI) Cities for

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Climate Protection Program, **as a Charter member in the California Climate Action Registry and as an active member of the US Green Building Council.** the City of San Diego is committed to reducing greenhouse gas emissions by implementing more sustainable practices, including green building technologies.

PURPOSE:

The purpose of this policy is to reassert the City's commitment to green building practices in City facilities, and to provide leadership and guidance in promoting, facilitating, and instituting such practices in the community.

POLICY:

~~The following principles will guide construction and renovation activities of both City facilities and private residential and commercial buildings:~~

- ~~1. The natural environment and built habitat are interdependent; ways have to be found for both to coexist in harmony.~~
- ~~2. High environmental quality, outdoors and indoors, is essential for the City's long-term health and welfare.~~
- ~~3. Innovative methods and up-to-date technologies should be used in the design, construction, and renovation of buildings within the City of San Diego in order to bring our consumption of energy and natural resources in line with the goals of sustainability.~~

ENERGY EFFICIENCY:

- ~~1. The goal is to meet the most current criteria set forth in nationally recognized programs, e.g. US EPA "Energy Star for Buildings" and US DOE "Sustainable Buildings Program".~~
- ~~2. Buildings will be designed to take the maximum advantage of passive and natural sources of heat, cooling, ventilation and light.~~
- ~~3. Mechanical and electrical systems will be designed and constructed to achieve the maximum energy efficiency achievable with current technology. Computer programs such as DOE-2, Energy Pro, MICROPAS, EQuest, Power DOE, and HAP 3.22 will be used where feasible to analyze the effects of various design options and select the set of options producing the most efficient integrated design. Energy efficiency measures will be selected to achieve energy~~

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~~consumption at 25% below California's current Title 24 standards, to the extent such measures are economically justified.~~

- ~~4. Creative design and innovative energy sources and uses will be encouraged to reduce the consumption of energy from non-renewable sources. A deliberate effort will be made to convert to renewable energy sources to the extent that such options are feasible.~~
- ~~5. All new or significantly remodeled City facilities shall be designed and constructed to achieve energy consumption levels at least 25% below the then current Title 24 standards. An average payback period of five years will be used as a guide for the aggregate of all energy efficiency measures included in a project. In order to maximize energy efficiency measures within these guidelines, projects shall combine energy efficiency measures requiring longer payback periods with measures requiring shorter payback periods to determine the overall project period.~~

The following principles will be required for all newly constructed facilities and major building renovation projects for City facilities:

LEED (Leadership in Energy and Environmental Design):

The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution.

The City of San Diego is committed to achieving LEED "Silver" Level Certification for all new City facilities and major building renovation projects over 5,000 square feet.

SUSTAINABLE BUILDING MEASURES:

In addition to achieving LEED "Silver" Level Certification, Council Policy 900-14 encourages the following sustainable building measures for all newly constructed facilities and major renovation projects regardless of square footage:

- 1. Design and construct mechanical and electrical systems to achieve the maximum energy efficiency achievable with current technology. Consultants shall use computer modeling programs, (Energy Pro) to analyze the effects of various design options and select the set of options producing the most efficient integrated design. Energy efficiency measures shall be selected to achieve energy efficiencies at least 22.51% better than California's Title 24, 2001 standards for both new construction and major renovation projects.**
- 2. Incorporate self-generation using renewable technologies to reduce environmental impacts**

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associated with fossil fuel energy use. Newly constructed City facilities shall generate a minimum of 10%, with a goal of 20% from renewable technologies (e.g., photovoltaic, wind and fuel cells).

3. Eliminate the use of CFC based refrigerates in newly constructed facilities and major building renovations and retrofits for all heating, ventilation, air conditioning and refrigerant-based building systems.
4. Incorporate additional commissioning and measurement and verification procedures as outline by LEED 2.0 Rating System, Energy and Atmospheres, credit 3 and credit 5 for all projects over 20,000 sf ft.
5. Reduce the quantity of indoor air contaminates that are odorous or potentially irritating to provide installer(s) and occupant(s) health and comfort. Low-emitting materials will include adhesives, paints, coatings carpet systems, composite wood and agri-fiber products.
6. In order to maximize energy efficiency measures within these requirements, projects will combine energy efficiency measures requiring longer payback periods, with measures requiring shorter payback periods to determine the overall project period.
7. Comply with the storm water development requirements in the Storm Water Management and Discharge Control Ordinance (Municipal Code § 43.03), and the City's grading and drainage regulations and implementing documents (MC § 142.01 and 142.02, respectively).

In addition to achieving the minimum sustainable building measure this Council Policy encourages the following measures be incorporated into newly constructed facilities and major renovation project when ever possible:

8. Use high efficiency irrigation technology, drought tolerant native plants and recycled site water to reduce potable water for irrigation by 50%. Additionally, building water consumption should be reduced by 30%.
9. Limit disruption of natural water flows and minimize storm water runoff by minimizing building footprints and other impervious areas, increasing on-site infiltration, preserving and/or restoring natural drainage systems, and reducing contaminates introduced into San Diego's Bays, Beaches and the Ocean.
- 3 Facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills. Provide an easily accessible area that serves the entire building and is dedicated to the separation, collection and storage of materials for recycling. Recycling should include paper, glass, plastic and metals at a minimum.

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4. Incorporate building products that have recycled content reducing the impacts resulting from the extraction of new materials. Newly constructed City facilities will should have a minimum of 25% of building materials that contain in aggregate, a minimum weighted average of 20% post consumer recycled content materials.
5. Reduce the use and depletion of finite raw and long-cycle renewable materials by replacing them with rapidly renewable materials. Newly constructed City facilities should consider incorporating rapidly renewable building materials for 5% of the total building materials.
6. Establish minimum indoor air quality (IAQ) performance to prevent the development of indoor air quality problems in buildings, maintaining the health and well being of the occupants. Newly constructed City facilities will comply with IAQ by conforming to ASHRAE 62-1999.
8. City buildings will be designed to take the maximum advantage of passive and natural sources of heat, cooling, ventilation and light.

The Environmental Services Department, Energy Conservation and Management Division has been designated by this Council Policy as the clearing authority for issues relating to energy for the City of San Diego. The Energy Conservation and Management Division will enter into a Memorandum of Understanding with those City Departments who design, renovate and construction of new city owned facility to insure all new City facilities reflect the intent of Council Policy 900-14 .

PRIVATE-SECTOR/INCENTIVES:

1. ~~It shall be the policy of the City Council to expedite the ministerial process plan check for projects which meet the following criteria of the Community Energy Partnership Program. The criteria may include, but is not limited to~~

~~Compliance with EPA "Energy Star for Buildings" Program~~

~~Residential buildings must exceed Title 24 by 30%~~

~~Commercial buildings must exceed Title 24 by 15%~~

2. ~~It shall be the policy of the City Council to investigate further incentives to encourage energy efficiency in City operations, and in the private sector:~~

1. Residential projects that provide 50% of their projected total energy use utilizing renewable energy resources, (e.g., photovoltaic, wind and fuel cells).

2. Commercial and industrial projects that provide 30% of their projected total energy use

utilizing renewable energy resources, (e.g., photovoltaic, wind and fuel cells).

3. Residential and commercial and industrial projects that exceed the State of California Title 24 energy requirements by:
 - a. 15 % better than California's Title 24, 2001 for Residential Buildings
 - b. 10 % better than California's Title 24, 2001 for Commercial and Industrial Buildings.

It shall be the policy of the City Council to expedite the discretionary process for projects which meet the following criteria:

1. Incorporate the US Green Building Council, Leadership in Energy and Environmental Design (LEED) 2.0 Rating System "Silver" Level Certification for commercial development projects and;
2. Incorporated self-generation through renewable technologies (e.g., photovoltaic, wind and fuel cells) to reduce environmental impacts associated with fossil fuel energy use for commercial and industrial projects generating a minimum of 30% or more of the designed energy consumption from renewable technologies such as photovoltaic, wind and fuel cells.

HEALTH AND RESOURCE CONSERVATION:

1. Projects will be designed to avoid inflicting permanent adverse impact on the natural state of the air, land and water, by using resources and methods that minimize pollution and waste, and do not cause permanent damage to the earth, including erosion.
2. Projects will include innovative strategies and technologies such as porous paving to conserve water, reduce effluent and run-off, thus recharging the water table.
3. When feasible, native plants will be used in landscaping to reduce pesticide, fertilizer, and water usage.
4. Buildings will be constructed and operated using materials, methods, mechanical and electrical systems that ensure a healthful indoor air quality, while avoiding contamination by carcinogens, volatile organic compounds, fungi, molds, bacteria, and other known toxins.
5. Projects will be planned to minimize waste through the use of a variety of strategies such as: a) reuse of materials or the highest practical recycled content; b) raw materials derived from sustainable or renewable sources; c) materials and products ensuring long life/durability and recyclability; d) materials requiring the minimum of energy and rare resources to produce and use; and e) materials requiring the least amount of energy to transport to the job site.

OUTREACH / EDUCATION:

1. An education and outreach effort will be implemented to make the community aware of the benefits of “Green Building” practices.
2. The City will sponsor a recognition program for innovative Green Building projects implemented in the public as well as private sector in an effort to encourage and recognize out standing environmental protection and energy conservation projects.

IMPLEMENTATION:

The City will seek cooperation with other governmental agencies, public interest organizations, and the private sector to promote, facilitate, and implement Green Building and energy efficiency in the community.

LEGISLATION:

The City will support State and Federal legislation that promotes or allows sustainable development, conservation of natural resources, and energy efficiency technology.

REFERENCES:

Related existing Council Policies:
400-11, Water Conservation Techniques
400-12, Water Reclamation/Reuse
900-02, Energy Conservation and Management
900-06, Solid Waste Recycling

HISTORY:

Adopted by Resolution R-289457 11/18/1997
Amended by Resolution R-295074 06/19/2001