



**SF Environment**

**Our home. Our city. Our planet.**

A Department of the City and County of San Francisco



Edwin M. Lee  
Mayor

Melanie Nutter  
Director

## MEMORANDUM

To: Solar and New Construction Stakeholders  
From: Melanie Nutter, Director, San Francisco Department of Environment  
Subject: Consideration of a solar policy for new construction  
Date: December 2, 2013

### Background

San Francisco has set aggressive goals for communitywide greenhouse gas emissions reductions (25% below 1990 levels by 2017, 40% reduction by 2025) and renewable energy generation (carbon free electricity supply by 2030). Rooftop solar power can play a significant role in meeting these goals, reducing utility bills, and driving local economic development and green job creation. Fortunately, solar has become increasingly affordable and cost effective for building owners as the industry has grown, panel prices have fallen, financing options have expanded, and utility electricity rates have increased. In addition, the public largely understands and values the environmental benefits of solar.

In order to meet San Francisco's ambitious climate goals and California's rigorous energy code, the city will need increasingly efficient and sustainable buildings. The City's Green Building Code already requires that new commercial buildings greater than 25,000 square feet either: (1) generate 1% of total energy costs onsite with renewables, (2) buy Renewable Energy Certificates for 35% of the building's electricity use for the first two years, or (3) beat Title 24 energy efficiency standards by an additional 10% (for a total of 25% below 2008 California Energy Code). In addition, the state has established the goal to have all new residential construction be "zero net energy" by 2020, with commercial construction following suit by 2030, meaning that they will produce as much energy onsite as they use. Consequently, future versions of the state building code will probably require onsite renewable energy generation for new construction, although the exact timing is uncertain.

Designing buildings to be energy efficient and integrate renewable energy from the start is more cost-effective than retrofitting a building down the line, increases property value and rents, and reduces costs for occupants. Any building designed without considering renewable energy is an opportunity lost. Given both the private and public benefits of local, on-site renewable energy, the cities of [Lancaster](#) and [Sebastopol](#) have adopted solar requirements for new construction in the past year, and other jurisdictions are considering similar policies. Most recently, our Commission has asked us to explore such a policy for San Francisco. **We would appreciate your input in determining whether such a policy could make sense for San Francisco.**

There are a number of key policy design considerations that we have identified:

- What building types would be subject to such a requirement? All new construction could be subject to the ordinance, or the ordinance could be limited to subsets of buildings, such as multi-family residential, single-family residential, and/or commercial. The ordinance could also be limited to buildings of a certain size (e.g., based on square footage, floor-area ratio, etc). The requirement could also apply to properties undergoing extensive renovations.
- How much renewable energy would be required? The requirement could be based on expected energy use (e.g., X% of expected onsite energy use), floor space (e.g., X watts per sq. ft), roof capacity (e.g., system covering X% of un-shaded roof space), or some combination. What is a fair metric that works for different building types and uses?
- What renewable energy technologies would be eligible? Should the requirement be solar specific, or open to other renewable energy technologies? Should it focus on electricity, or thermal energy as well, or even deeper energy efficiency?
- When and how would the obligated party be required to demonstrate compliance? Varying forms of compliance (e.g., stating intent to include renewable energy system, providing designs for renewable energy system, showing an actual installed system, etc.) could be provided at different stages of the development process (e.g., site permit process at DBI, development approval process at the Planning Department, or final electrical inspection). Which would show a real commitment, without being overly onerous?
- Should there be exemptions and/or flexible compliance options? Conditions under which to consider exemptions to the ordinance might include:
  - Buildings that are unable to produce renewable energy onsite due to shading, inability to receive an interconnection agreement from PG&E, or other factors;
  - Buildings that are unable to cost effectively produce renewable energy onsite (e.g. due to very low on-site energy demand and thus system size);
  - Reduced requirements for buildings that are also installing green roofs;
  - Option to take part in green purchasing or community solar programs in lieu of on-site generation;
  - Other?

We look forward to exploring these policy considerations and other ideas further with you, your colleagues, and community stakeholders over the coming months. Feel free to contact myself or Danielle Murray, Renewable Energy Program Manager ([danielle.murray@sfgov.org](mailto:danielle.murray@sfgov.org), 415-355-3715) if you'd like to discuss.

Sincerely,

Melanie Nutter,  
 Director, San Francisco Department of Environment  
 415-355-3701  
[melanie.nutter@sfgov.org](mailto:melanie.nutter@sfgov.org)