

San Francisco Better Roofs Policy

Phase 1: Solar Requirement for New Construction

Overview

Roofs are an underutilized urban resource: space that can supply energy, manage stormwater, support urban agriculture, enhance biodiversity, and supply publicly accessible open space. A Better Roofs Policy for San Francisco would develop roofs for these public and private benefits.

The 2013 California Building Standards Code already requires new construction to reserve 15% of roof area as “Solar Ready”, i.e. unshaded and free of roof penetrations, to ensure that solar generation is not precluded by the design of the building.

Staff recommend San Francisco simply require installation of a solar photovoltaic and/or water heating system in the Solar Ready zone on new residential, commercial, and municipal construction. Summary of the concept:

- Single family homes: Install a solar array no smaller than 250 square feet
- Commercial and multifamily of up to ten stories: Install solar collectors on 15% of total roof area.
- For flexibility, the requirement may be met by installing renewable energy generation on-site with equivalent output. (I.e. the array may be located on walls, shade structures in open areas, etc.)
- Buildings over 10 stories or which are shaded: Exempt. Space constraints and competing uses limit available area for energy generation.

Background

San Francisco has set aggressive goals of achieving a 100% greenhouse gas-free electric system by 2030 and reducing greenhouse gas emissions to 80% below 1990 levels by 2050. While the City recently met the milestone of a 23% reduction below 1990 levels by 2012, substantial measures will be necessary in order to meet the 2050 goal. Fortunately, solar has become increasingly affordable and cost effective for building owners. As the industry has grown, panel prices have fallen, and financing options have expanded. In addition, the public largely understands and values the environmental benefits of solar.

Two California cities have recently passed similar legislation. In March 2013, Lancaster became the first US city to require solar installations on new residential construction. Sebastopol passed a policy in May 2013 requiring solar on new residential and commercial construction, as well as residential alterations.

Better Roofs Policy Framework

Future policy components that may be developed through coordination of the San Francisco Department of the Environment, Planning Department, and Department of Building Inspection may include:

- Green roofs (in areas not occupied by solar, fire access, skylights, mechanical equipment or elevator penthouses)
- Open space
- Energy storage
- Solar shading protection or insurance
- Requirements for existing buildings (i.e. re-roofs, major alterations)

Projected Timeline

