UNDERSTANDING

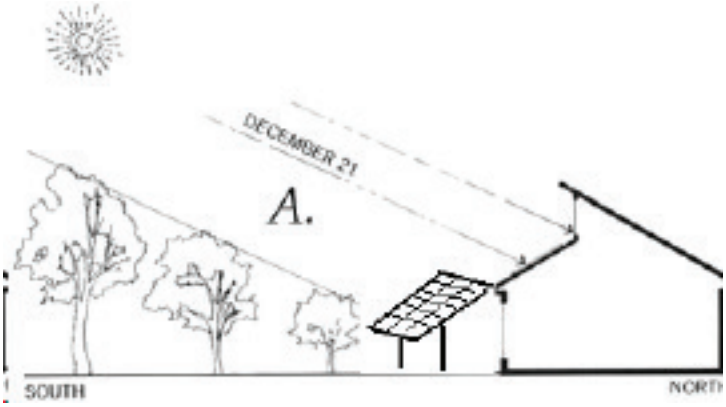
Solar Access Zoning

PURPOSE

To protect access to sunlight for all properties, and restrict shade due to structures and vegetation. Solar access zoning preserves the economic value of solar radiation falling on structures, investments in solar energy systems, and options for future uses of solar energy.

HOW IT WORKS

Solar access zoning preserves the economic value of solar radiation falling on structures, investments in solar energy systems, and options for future uses of solar energy. This is particularly important for the latter two; since their value is dependent on solar access and their installation require significant investment.



In Massachusetts, the state's Zoning Act, in Chapter 40A, Section 9B, provides that local zoning may protect solar access by regulation of the orientation of streets, lots and buildings, maximum building heights, minimum building setback requirements, limitations on vegetation, and other provisions. These height and setback requirements can be placed as a precondition for a permit by requiring a shadow analysis on the structure to be erected to make sure it does not block solar radiation on neighboring properties.

EXAMPLES OF WHERE STRATEGY HAS BEEN ADOPTED

In the Town of Cornwall, Connecticut, developers are "urged to consider solar access in the layout of features on the site plan" and are prohibited from locating buildings where they would cast shadows on the buildable part of an adjacent lot between the hours of 9 a.m. and 3 p.m. on December 21 of any year.

Boulder, Colorado protects solar access by delineating a 12 foot or 25 foot hypothetical "solar fence" on the property lines of the protected buildings. The ordinance is designed to protect access for a four hour period on December 21st. Under most circumstances, new structures are not allowed to shade adjacent lots to a greater extent than the applicable solar fence.

In Oregon, Eugene, Clackamas County and Ashland have adopted solar access zoning, which requires building setbacks to ensure that shadows are no greater than a specified maximum at property lines.

Ambitious jurisdictions can also protect solar access by requiring developers to consider solar access in entire subdivision lay outs. Already subdivisions in such widely disparate locations as Drake Landing, Alberta, and Davis, California, are being designed so that each lot receives maximum solar exposure. Fort Collins, Colorado, and Multnomah, Oregon have enacted regulations requiring that a specified percentage of lots in new subdivisions — 20 to 30 percent — must be oriented to take advantage of sunlight.

The City of Vancouver has developed and approved two passive solar design toolkits detailing ways to reduce energy use in new buildings, which are a major source of greenhouse gas emissions in Vancouver. The toolkits provide best practices for homes and larger buildings for passive design elements such as layout, orientation, insulation, landscaping and ventilation.

LINKS TO MODEL BYLAWS OR MORE INFORMATION

COMMUNITY SOLAR ACCESS INFORMATION FROM THE U.S. DEPARTMENT OF ENERGY. INCLUDES LINK TO A DOWNLOAD WITH EXAMPLES OF ADOPTED BYLAWS FROM AROUND THE COUNTRY.
http://www4.eere.energy.gov/solar/sunshot/resource_center/ask/question/question_6

A COMPREHENSIVE REVIEW OF SOLAR ACCESS LAW IN THE UNITED STATES:
http://www.solarabcs.org/about/publications/reports/solar-access/

FREQUENTLY ASKED QUESTIONS ABOUT PLANNING AND ZONING FOR SOLAR ACCESS, AMERICAN PLANNING ASSOCIATION
https://www.planning.org/research/solar/faq.htm

BOULDER, CO SOLAR ACCESS ORDINANCE:
http://www.smartcommunities.ncat.org/codes/boldera1_gb.shtml

CITY OF ASHLAND, OR SOLAR ACCESS ORDINANCE:
http://www.ashland.or.us/Page.asp?NavID=2788

CITY OF VANCOUVER PASSIVE DESIGN TOOLKIT:
http://vancouver.ca/sustainability/documents/PassiveDesignToolKit.pdf

FOR MORE INFORMATION, PLEASE CONTACT

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