

## Green Building Ordinances Research Summary

### Requirements for Public Projects

- According to the USGBC database, a total of 11 cities/counties and 2 federal agencies currently require LEED-Gold for public buildings including Asheville, NC; Costa Mesa City, CA; Dallas, TX; Fort Collins, CO, Kansas City, MO; Multnomah County, OR; North Miami, FL; Portland, OR; Scottsdale, AZ; Vancouver, BC. As King County is not listed in their database, it is likely that several more municipalities have adopted LEED-Gold ordinances but are not tracked by USGBC.
- Only one city, Greensburg, KS has passed a resolution to certify all new city-owned buildings to LEED Platinum. A discussion with staff at the city indicated that this applies to a very small number of buildings, 4 or 5, of which only 2 are currently certified. As a small city, they do not anticipate any more capital improvement projects that fall under this requirement.
- The State of Florida passed an executive order in 2007 stating “new construction projects must strive for Platinum certification” and for LEED-EB certification cross all buildings currently owned and operated by the department of management. In addition, agencies and departments were instructed to only enter into new leasing agreements for office space that meets Energy Star building standards, unless no other viable alternative exists.
- Asheville, NC ordinance states that public projects must “strive for LEED Platinum whenever project resources and conditions permit”.

### Requirements/Incentives for Private Sector Development

- City of Vancouver, BC has a requirement that all new homes must be carbon neutral by 2030.
- Several cities/counties required LEED certification or other 3<sup>rd</sup> party certification for private sector new construction- both residential and commercial. For example:
  - Battery Park, NY requires LEED-Gold for all private residential buildings.
  - Larkspur, CA requires new construction or major renovations of single-family & multi-family residences >500 sf to certified under Build It Green or LEED for Homes. New commercial development >5,000 sf must certify to LEED Silver.
  - Marin County, CA, new commercial projects >5,000 sf must certify to LEED Silver; projects > 50,000 must certify to LEED Gold.
- In addition to requiring 3<sup>rd</sup> party certification, some cities require additional performance metrics be met. For example:
  - Los Altos, CA, requires that all public and commercial buildings be 15% better than Title 24 of California Code of Regulations.
- A handful of cities require private sector buildings to benchmark and disclose energy use. For example:
  - San Francisco requires owners of commercial buildings >10,000 sf to annually measure their building's energy performance and report the findings to the SF Department of Environment. The ordinance also requires owners of commercial buildings >10,000 sf to have an energy audit conducted every five years, and to submit a report on those findings to SFDoe.

- A number of cities/counties have adopted financial Incentives for private sector development. For example:
  - Carbondale, IL projects that achieve LEED Platinum certification will have 100% of their water and sewer connection fees refunded. 50% and 75% refunds for LEED silver and gold, respectively.
  - Baltimore County, MD 100% tax credit for carbon neutral home for five years.
- Seattle, Bainbridge Island and Clark County, WA have all adopted ordinances that provide code flexibility and density incentives for projects meeting the Living Building Challenge.

### **Historic Preservation / Building Reuse**

- GSA target = 1/2 of all historic building renovations @ LEED Gold or better, by FY 2015.
- Los Angeles, CA Adaptive Reuse Ordinance includes land use ordinances that relax typical zoning requirements, and adjustments to fire and life safety measures to provide greater flexibility in the approval and permitting process.
- San Francisco, CA, decreases their mandatory LEED requirement a building must meet if the existing building is preserved, and increases the LEED requirement in the case of demolition.

### **Habitat Preservation, Restoration, Corridors, Etc.**

- Los Angeles County requires that all projects above certain sizes must plant trees on-site, with the number of trees required based on the developed portions of the lot.
- Copenhagen has a mandatory green roof policy. The policy makes vegetation and soils a mandatory obligation in planning. The policy covers all roofs with less than a 30 deg. pitch and also covers refurbishment of older roofs.

### **Universal Design**

- Sacramento, CA, has an ordinance that applies to new residential developments >20 units, consisting of 1 or 2 unit dwellings.
- The state of Vermont requires any spec-built home (SF or MF) to meet construction standards that include visitability requirements - the first program to require such standards in all housing state-wide, regardless of whether publically or privately financed.

### **Reporting Requirements**

- State and local governments have adopted energy benchmarking and disclosure requirements for public and private buildings. For example:
  - Washington, D.C. requires that all buildings owned or operated by the District or any of its instrumentalities that are at least 10,000 square feet be energy benchmarked.
  - New York City's benchmarking law requires that buildings larger than 10,000 square feet owned by the city or where the city regularly pays all or part of the annual energy bills, perform annual energy *and water* benchmarking.
  - Arlington County, VA is required to track energy use in all municipal buildings using report cards which publically display annual electric and natural gas use, site and source energy use intensity, carbon footprint and Energy Star Rating.
- State of Washington requires that agencies (a) monitor and document ongoing operating savings resulting from major facility projects designed, constructed, and certified as high performance buildings (LEED Silver or better); and (b) report this information annually to the Department of General Administration (GA).It also requires public school districts to monitor

and document for a minimum of five years the appropriate operating benefits and savings resulting from major facility projects designed and constructed as high performance buildings.

#### **LCCA**

- State of Florida DOE requires a Life Cycle Cost Analysis (LCCA) specific to certain building systems (i.e. HVAC).
- Federal GSA Facilities Standards state: "The project team must integrate the LCC analysis into the concept design process, and the analysis must be completed by the design development phase."

#### **Resiliency/ Passive Survivability/ Requirements for EOCs (emergency operations centers)**

- Research indicated that while there are a number of examples of EOCs that utilize green building (Hawaii, Seattle, Delaware, New York City), they were not called out separately in any ordinance or policy.

#### **International Examples**

- Stockholm, Sweden city's goal is to be climate neutral and fossil fuel free by 2050. In new buildings on land designated by the City, energy use will be at the most 55 kWh/m<sup>2</sup>.
- UNEP call to action. In anticipation that the text of a global climate change protocol being negotiated at COP15 will recognize the importance of buildings in tackling climate change, UNEP SBCI members, partners, and supporters commit to take the following actions to reduce the greenhouse gas emissions of the building industry:
  - Mandate net zero energy performance for all new public buildings & support the same process in developing countries and transitional economies with climate adaptive measures and goals through twinning programmes.
  - Develop climate change strategies and action-plans with strategic goals to be achieved by 2020 including making publicly owned buildings climate neutral.

Link to Google Doc spreadsheet with full list of resources and links:

<https://docs.google.com/a/cascadiagbc.org/spreadsheet/ccc?key=0AtMHXPnFcXzadFN1WmZ1Vodldo5rWmF2ZnhpNTZwTVE#gid=0>