Green Building Action Plan – For Implementation of Executive Order B-18-12

(Detailed implementation direction and actions that accompany Executive Order B-18-12)

Greenhouse Gas Emissions

1. State agencies, departments, and other entities under the governor's direct executive authority (State agencies) shall take actions to reduce entity-wide greenhouse gas emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.

Energy

2. All new State buildings and major renovations beginning design after 2025 shall be constructed as Zero Net Energy facilities with an interim target for 50% of new facilities beginning design after 2020 to be Zero Net Energy. State agencies shall also take measures toward achieving Zero Net Energy for 50% of the square footage of existing State-owned building area by 2025.

    2.1. The State shall identify at least three buildings by January 1, 2013, to pursue Zero Net Energy as pilot projects. These shall include at least one new building to be designed and constructed, one major renovation, and one existing building.

    2.2. New and major renovated State buildings and build-to-suit leases shall be designed and constructed to exceed applicable version of CCR Title 24, Part 6, by 15% or more, and include building commissioning, for buildings authorized to begin design after July 1, 2012.

3. New and renegotiated state building leases shall reduce energy and resource use to the extent possible and economically feasible.

    3.1. New building leases shall, where economically feasible, include sub-meters and provide energy use data into Energy Star's Portfolio Manager.

    3.2. Renegotiated State leases for buildings where the State is a sole tenant shall provide energy use data into Energy Star's Portfolio Manager.

    3.3. New and renegotiated State building leases shall encourage landlords to participate in utility sponsored energy conservation measures, using alternative financing.

4. State agencies shall continue taking measures to reduce grid-based energy purchases for State-owned buildings by at least 20% by 2018, as compared to a 2003 baseline, and reduce other non-building, grid-based retail energy purchases by 20% by 2018, as compared to a 2003 baseline.

    4.1. Energy purchase reductions shall include and combine all forms of energy, including electricity, natural gas, propane, etc., and convert energy purchased into common units of energy (kBtu). Onsite renewable energy generated is not included in total energy purchases, and counts toward reductions.

    4.2. The Department of General Services shall establish an interim benchmark target for December, 2014, for the achievement of these reductions by State agencies.

    4.3. The provision shall not apply to retail electricity purchases for water management activities directly associated with water conveyance and flood control that are highly variable depending on weather conditions.

5. State agencies shall participate in "demand response" programs to obtain financial benefits for reducing peak electrical loads when called upon, to the maximum extent that is cost-effective for each State-owned or leased facility, and does not materially adversely affect agency operations.

On-Site Renewable Energy Goals

6. Any proposed new or major renovation of State buildings larger than 10,000 square feet shall use clean, on-site power generation such as solar photo-voltaic, solar thermal and wind power generation, and clean back-up power supplies, if economically feasible.

    6.1. Facilities with available open land shall consider large scale distributed generation through various financing methods, including third party power purchase agreements.

Building Design & Construction

7. New and major renovated State buildings and build-to-suit leases larger than 10,000 square feet shall obtain LEED "Silver" certification or higher, using the applicable version of LEED.

    7.1. Certification to an equivalent or higher standard is acceptable when approved by the Sustainable Building Task Force.

7.2. Buildings smaller than 10,000 square feet authorized to begin design after January 1, 2013, shall meet applicable California Green Building Standard's Tier 1 measures.

Building Commissioning

8. New and existing buildings shall incorporate building commissioning to facilitate improved and efficient building operation. Actions shall include:

   8.1. The Department of General Services with the concurrence of the California Energy Commission and other State agencies shall establish energy use intensity (EUI) threshold targets to trigger a requirement for commissioning of existing buildings, based on building type and use, and submit these target EUI thresholds to the Governor's office by January 1, 2013.

   8.2. State agencies with jurisdiction over state-owned buildings shall pursue monitoring-based commissioning for facilities over 5,000 square feet with energy use intensities exceeding thresholds determined by the Department of General Services, to the extent possible.

   8.3. New construction or major renovations greater than 5,000 square feet for offices or other energy intensive spaces shall be commissioned.

Existing Buildings

9. All existing State buildings over 50,000 square feet shall complete LEED-EB certification by December 31, 2015 (including meeting an Energy Star rating of 75, or alternate energy standard established by the California Energy Commission), to the maximum extent cost-effective.

10. The Department of General Services shall work with other State agencies to develop by no later than July 1, 2013, policies and guidelines for the operation and maintenance of State buildings to achieve operating efficiency improvements and water and resource conservation, and to continually update and incorporate these into the State Administrative Manual (SAM). These will include, but are not limited to the following areas:

    10.1. Reducing plug loads;

    10.2. Building and grounds maintenance;

    10.3. Commissioning, retro-commissioning, monitoring-based commissioning;

    10.4. Water efficiency;

    10.5. Recycling and waste diversion practices;

    10.6. Environmentally Preferable Purchasing (EPP);

    10.7. Information technology management;

    10.8. Energy use;

    10.9. Monitoring;

    10.10. Indoor environmental quality

Indoor Environmental Quality

11. State agencies shall implement relevant and feasible voluntary measures from Divisions A4.5 and A5.5 of the California Green Building Standards Code, to ensure healthy indoor environments for occupants.

Water Efficiency and Conservation

12. State agencies shall reduce water use at the facilities they operate by 10% by 2015 and by 20% by 2020, as measured against a 2010.

    12.1. The Department of Water Resources shall develop and propose no later than January 1, 2013, water use guidelines and criteria, as well as recommend the use of an appropriate 3rd party database for reporting and monitoring state facilities' water use to improve water use efficiency in state-operated buildings and landscapes.

        12.1.1. State agencies shall begin using the water use reporting database no later than January 1, 2013 to monitor annual water use and submit annual water use reports into water use database beginning January 1, 2014.

        12.1.2. State agencies shall benchmark and collect 2010 water use data or earlier, if available, for each facility they operate to develop baseline water use from which to calculate the agencies 2015 and 2020 water use targets, and measure progress.

12.1.3. New and renegotiated state leases shall encourage including provisions for reporting water use and installation of sub-meters where appropriate.

12.2. All new and renovated State buildings and landscapes shall utilize alternative sources of water wherever cost-effective. Sources may include, but are not limited to: recycled water, graywater, rainwater capture, stormwater retention, and other water conservation measures.

12.3. Landscape plants shall be selected based on their suitability to local climate and site conditions, and reduced water needs and maintenance requirements.

Electric Vehicle Charging Stations

13. State agencies shall identify and pursue opportunities to provide electric vehicle charging stations, and accommodate future charging infrastructure demand, at employee parking facilities in new and existing buildings.

14. The Department of General Services, in conjunction with other appropriate State agencies and outside entities, shall develop an electric vehicle charging station infrastructure plan including the following:

14.1. Evaluate existing state-owned parking structures and parking lots and install plug-in electric vehicle charging infrastructure where most cost-effective and appropriate.

14.2. Plan for and install appropriate cost-effective levels of plug-in electric vehicle charging infrastructure in the new construction of state-owned parking structures and parking lots.

Environmentally Preferable Purchasing (EPP)

15. State agencies shall purchase and use environmentally preferable products that have a lesser or reduced effect on human health and the environment when compared with competing goods that serve the same purpose whenever they are applicable, perform well and are cost-effective per Public Contract Code 12400 including, but not limited to:

15.1. Purchase, install and operate EPA Energy Star rated equipment or appliances when cost-effective, meeting purchasing specification requirements, and available for the type of use. In addition, for statewide contracts, where multiple products are available for purchase, the Department of General Services shall set specifications for purchasing equipment or appliances that are the most cost-effective over their life.

15.2. Consider purchase and use of recycled paint from State Contracts for appropriate exterior applications, providing users with a quality product comparable to virgin paint while offering significant cost savings.

15.3. Consider use of low or zero VOC paint in building interiors, improving indoor air quality.

15.4. State office printers, copiers or related equipment shall use quality remanufactured ink and toner cartridges to the extent possible and to the extent that the Department of General Services determines that such equipment reduces costs and waste. ,

15.5. State agencies shall purchase, install and operate WaterSense or equivalent industry standard labeled fixtures and equipment (including irrigation equipment) whenever cost-effective, meeting quality requirements, and when available for type of use.

Financing

16. State agencies shall identify and pursue available financing and project delivery mechanisms to achieve these goals including, but not limited to:

16.1. State revolving loan funds, utility on-bill financing, power purchase agreements, GS $Mart, energy service contractors (ESCO's), or other available programs.

Monitoring and Executive Order Oversight

17. State agencies shall measure, monitor, report and oversee progress on measures in this Order as follows:

17.1. State agencies shall verify data entries into Energy Star Portfolio Manager including energy use by facilities and individual buildings (if metered separately) that they own, or leased space where the State pays utilities.

17.2. State agencies shall submit an annual report of this energy use to the Department of General Services by March 1st each year, including energy use, individual building square footages (if metered separately), and building types.

17.2.1. State agencies shall include separately in the report annual on-site renewable energy generated and used at State-owned facilities.

17.3. State agencies shall prepare annual inventories of greenhouse gas emissions generated in their course of business and enter these inventories into The Climate Registry's CRIS database.

17.4. The Department of General Services shall provide this energy use information to the general public on an easily accessible website and submit an annual report commencing July 2012, on the energy use by State-owned facilities, GHG reductions as well as LEED registered and certified projects.

17.5. A Sustainable Building Task Force shall be formed to provide executive level oversight to meet quarterly and oversee progress on this order.

17.6. A Sustainable Building Working Group shall be formed of technical representatives of State agencies to oversee implementation of measures in this order, meet monthly, measure results, and report findings to the Sustainable Building Task Force.