

ENERGY EFFICIENCY IN BUILDINGS GROUP

The City should be a leader and a model. It is difficult to successfully challenge others to be more efficient when your own buildings are not optimized. The City currently does very little new construction or major renovation but it does do a lot of ‘smaller’ things that can add up. Funds to make large scale efficiency improvements are currently scarce so an incremental approach is suggested along with procedures in place for any new construction or major renovation/retrofit projects.

Objective 1 (Government Actions)

Reduce greenhouse gas emissions from City of Burlington facilities to 20% below 2007 levels by 2020 through energy-efficiency measures.

Action Items

1. **Work with BED and others to write and implement a policy to improve energy efficiency** in existing City facilities by a minimum of 20% total for all energy types.
2. **Require all City construction projects to exceed energy code by 25%** on new construction and a minimum of 15% on major renovations and recommissioning.
3. **Put a purchasing policy in place** that requires all appropriate products meet ENERGY STAR or LEED (or Green Seal) requirements.
 - For example, any new printers, copiers or computers must be ENERGY STAR. If carpet is to be replaced, then it must meet the criteria for “green carpet” listed in LEED. We are not suggesting whole – building LEED certification in these cases just use LEED or Green Seal for purchasing guidance.
4. **Have BED Energy Services sign-off** on any replacement or renovation to a building component covered by the energy code.
 - For example, one of the fire stations needs to replace a piece of heating and cooling equipment. BED can provide them with specification upfront before they go out to bid or review the contractor proposal(s) to see if efficiency gains can be made before the PO is signed. Often there will be incentives from BED or VGS to install high efficiency equipment. A lot of HVAC equipment replacement needs to happen quickly after a sudden breakdown so BED will be able to respond quickly. EVT and BED incentives locale HVAC (and lighting) suppliers to have higher efficiency equipment quickly available.
5. **Inventory City buildings** in order to assess current energy performance and develop a priority list for high use buildings and equipment reaching end of life. This could give decision-makers an idea of where limited dollars should be target. This work includes:
 - Benchmark all City building using the tool on the ENERGY STAR website.
 - Rank the buildings by kWh/square foot and CCF/square foot.
 - Compile all the energy audit and project completion information (electric and gas) that we have on each building.
 - Where needed, inventory the age of all major equipment (HVAC, DHW, lighting ballasts and any control systems).

- List those buildings that have maintenance and service agreements with HVAC firms.
- Find out who makes decisions for the various buildings about how and when major equipment is replaced.

Objective 2 (Community Initiatives)

Reduce forecast greenhouse gas emissions in the residential sector by 20% by 2020.

Action Items

1. **Develop incentives for property owners** to exceed code in weatherization of residential properties at time of sale. The existing Time of Sale ordinance should undergo regular technical review and upgrades to include best available practices, and should be expanded to include owner-occupied dwellings.
2. **Develop a consortium of local and state support**, including BED and EVT, for more stringent federal efficiency standards for furnaces, refrigerators, water heaters, air conditioners, other appliances and lighting products.
3. **Require green building and energy-efficiency measures**, including Energy Star or equivalent appliances, lighting and heating equipment in city-funded affordable housing and other development projects.
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5. **Implement neighborhood-based outreach efforts** to combine and promote energy and water conservation, solid waste reduction, safety and livability.
6. **Improve the efficiency, effectiveness and control** of residential outdoor lighting through regional educational efforts and retail promotions.
7. **Improve the maintenance of residential heating, ventilation and air-conditioning equipment** by educating consumers and schoolchildren.
8. **Support a Planning and Zoning ordinance requiring LEED standards**, with emphasis on energy efficiency.
9. **Provide green building design assistance** and technical resources to Burlington residential developers, designers, homebuilders and residents.

Objective 3 (Commercial, Industrial, and Institutional Initiatives)

Cut forecast greenhouse gas emission in the commercial, industrial, and institutional sectors by 20 percent by 2020.

Action Items

1. **Help small businesses**, non-profit organizations and public agencies gain access to energy-efficiency services.

2. **Investigate sliding-scale building permit fees**, with rebates for high-performance green buildings, and higher fees for conventional buildings.
3. **Promote opportunities to improve operations and maintenance practices** in local buildings, including resource-conservation managers.
4. **Review City Ordinances** to remove any barriers to the installation of co-generation and distributed generation systems in order to facilitate low-cost interconnections and to encourage increased efficiencies.