Custom Requirements for Large Industrial Campuses

Large industrial or manufacturing campuses where multiple buildings are served by a central plant or single utility meter are subject to the following custom requirements.

Rating and Reporting Requirements

1. Annually provide a written narrative to the City of Boulder that will be shared with the public. The narrative should include:
    - Campus energy usage reduction goals and emissions reduction goals, both at the site and at the corporate level; and
    - A summary of energy efficiency or on-site renewable energy projects implemented in the reporting year that the owner would like to share with the public.

2. Annually provide an oral report to city staff members* that includes:
    - A qualitative comparison of energy usage in the reporting year with the preceding year and an explanation of the reason for any substantial changes (more than 2.5 percent); and
    - A calculation of the percentage of total energy savings during the reporting year. (See *Calculate the Percentage of Total Energy Savings* below). Supporting documentation for this calculation must be disclosed to the city during this annual meeting.

Energy Assessment Requirements

1. **Every ten years,** conduct an ASHRAE Level II or equivalent energy assessment that covers at least seventy-five percent of the total energy usage on the large industrial campus.
    - If the campus does not have the monitoring systems necessary to identify where seventy-five percent of the total energy usage is being consumed, the entire site should be included in the assessment.
    - For large industrial campuses, an electrical utility's process efficiency assessments and studies can meet this requirement, if the scope is approved by the City Manager.

2. **Within two years of the assessment,** implement recommended measures with a one year or less payback (which means the length of time required to recover the capital cost-less rebates and incentives of an investment through operational savings).

Lighting Upgrade Requirements

Affected building owners must complete one-time lighting upgrades that meet specific energy codes for interior and exterior lighting power, controls and sensors as outlined below.

Lighting Requirement	Code	Code Section
Occupancy Sensor Controls	2017 COBECC	C405.2.2.2
Time-switch Controls	2017 COBECC	C405.2.2.1
Exterior Lighting Controls	2017 COBECC	C405.2.4
Interior Lighting - Power	2017 COBECC	C405.5
Exterior Lighting - Power	2012 IECC	C405.6

2012 IECC= 2012 International Energy Conservation Code
2017 COBECC = 2017 City of Boulder Energy Conservation Code

1. Review the **Lighting Compliance Checklist** to prepare for compliance.
2. Submit your lighting compliance through this **submission form**. More information on required documentation can be found in the **Efficiency Requirements How-to Guide**.

Deadlines

The large industrial campus deadlines are below.

REQUIREMENT	DEADLINE
Rating and Reporting	**June 1, 2016**
Energy Assessment	**June 1, 2019**
Implement Cost-Effective Measures	**June 1, 2021**
Lighting Upgrades	**June 1, 2025**

Calculate Percentage of Total Energy Savings

To calculate the percentage of total energy savings for the purpose of developing a plan, follow the steps below:

1. Calculate/measure the calendar year energy savings* in electricity consumption = X1 kWh
2. Calculate/measure the calendar year energy savings* in fuel (oil & gas) consumption = Y1 MMBtu
3. Get the total actual calendar year electricity consumption = X2 kWh
4. Get the total actual calendar year fuel consumption = Y2 MMBtu
5. Get the total actual calendar year energy cost = A $K
6. Get the total actual calendar year electricity cost = B $K
7. Get the total actual calendar year fuel cost = C $K

The energy savings as a percent of the total energy (electricity and fuel) consumption for "xxxx" year is calculated by the following formula:

{(B/A) * (X1)/X2 + (C/A) * (Y1/Y2)} * 100 = Percent Energy Conservation for the Year

** The energy savings from a project can be counted for 12 months. For example, a project saving 12,000 kWh annually (1,000 kWH/month) that is implemented on Nov. 1, 2015 would have 2,000 kWH in 2015 and 10,000 kWH of "carryover" savings in 2016.*

*** This calculation can be annualized over four years to account for significant investments and savings that may have been made in prior years.*

Exemptions

Owners of large industrial campuses may be exempt from the energy assessment and lighting upgrade requirements if:

1. The owner submits proof acceptable to the city manager demonstrating that energy efficiency measures or on-site renewable energy sources produced a reduction of total energy usage of at least two and a half percent, annualized over four years; or
2. If in the opinion of the city manager, the large industrial campus has established an energy or emission reduction goal that is equivalent to that established by the city and the large industrial campus is making adequate progress toward that goal after at least two years of compliance with the rating and reporting requirement outlined above.

If you think your campus qualifies for an exemption, contact the Program Administrator.