

**Commercial and Industrial (C&I) Energy Efficiency Requirements Working Group  
Meeting #3 – Friday, December 5, 2014  
Summary Notes**

**Working Group Participants**

Russ Chitwood, Nexant  
Andy Vissers, Covidian  
Amy Ellsworth, Cadmus  
Adam Knoff, Unico Properties  
Brad Queen, City of Boulder Environmental Advisory Board  
Traci DelReal, Tebo Properties  
Chris Riley, W.W. Reynolds  
Lauren Smith, Southwest Energy Efficiency Project  
Dan Powers, Boulder Tomorrow  
Nicole Hammer, WSP consulting  
Pam Milmoe, Boulder County Public Health  
Bill Hayes, Boulder County Public Health  
Sarah Linke, Boulder County Public Health  
Peter Salmon, Iconergy  
Doug Hargrave, Iconergy  
David Garabed, DBI  
Angelique Espinoza, Boulder Chamber

**City of Boulder staff and consultant**

Elizabeth Vasatka  
Kendra Tupper  
Colette Crouse  
Debra Kalish

**Next meetings**

Meeting #4: Friday, January 9, 2015 (1-3 pm): continue discussion on public disclosure and address enforcement

Meeting #5: Friday, January 23, 2015 (1-3 pm): discuss potential energy efficiency requirements and energy services that the city can provide to help with compliance of ordinance requirements, demand side management services you use today and services you would want from your utility provider.

**Agenda**

- Introductions and ground rules
- Dive into the details of the City of Boulder potential requirements
  - o Rating and Reporting (Today)
  - o Efficiency Requirements (Meeting #4)

## Summary of Options and Recommendations

- 1) What buildings should be required to rate and report energy use?
  - City will develop list of buildings and provide advanced notice to buildings required to rate and report, so that buildings have opportunity to dispute their inclusion.
  - Okay to not have public and private sector under the same requirements so long as it's fair. Could make need to comply based on energy usage. Here, using square footage as proxy for energy usage.
  - If city means to set an example, why wouldn't city rate and report for all facilities unless there are compelling reasons for an exemption.
  - Could use city buildings to test what is cost-effective and feasible for buildings in the private sector to rate and report
  - Building must be at least 5,000 sq ft to derive ENERGY STAR Portfolio Manager score
  - Is there a value in benchmarking parking structures?
    - o Yes, and there is value in rating and reporting, because lights and fans running 24/7.
    - o EV charging stations will impact energy usage, but possible to use credit card data to tease this out
    - o But parking structures don't represent low-hanging fruit, necessarily, in terms of emissions creep, and much of lighting needs to be in place due to safety
    - o Maybe parking isn't included in first phase of implementation
    - o City can explore with its own properties before including these structures in requirements for private sector
    - o Square footage of parking structure wouldn't count toward square footage of a mixed-use building
    - o Could also be useful to track the energy use of parking lot lighting, especially at car dealerships
  - Street lighting?
    - o City doesn't own much (owned by Xcel) and wouldn't yield an ESPM score
  - Going to develop case studies for city buildings to use as guides?
    - o Already have these through Energy Rating and Reporting Pilot Program
    - o Hoping to do a few more private sector case studies before launch of ordinance
  - Has city done analysis for city resources available to run program?
    - o Based on feedback from other cities, most of work is in establishing initial structure of the program, so the number of buildings needing to comply won't greatly impact resources unless requirements include buildings less than 10,000 sq ft
    - o Budgetary impacts of program will be presented to council before an ordinance is adopted
    - o For resources, the city may need to decide whether it can administer the program in house or may need to engage a contractor
  - City should focus on distinguishing itself by avoiding the "messiness" other cities have run into. Focus on quality and applying ordinance to a smaller group. Get support for program before expanding it and show success, especially with high compliance and a good enforcement process.
  - Could distinguish buildings based on owner-occupied versus tenants. This wouldn't need to be a guiding factor, but should play into requirement.
    - o City does not have list of owner-occupied versus tenant-occupied buildings
  - Multi-family units (townhomes, condos, apartment buildings)

- Other cities with benchmarking requirements include MFUs, but generally large (over 25 or 50 units), and coordination between property manager and/or HOA
- MFUs already subject to SmartRegs and subject to zero waste requirements
- MFUs with certain percentage of sq ft as commercial space would be affected by ordinance
- Mixed-use buildings would need to report their energy use, but wouldn't be able to provide an ENERGY STAR score
- Would use benchmarking as a phased in requirement after the conclusion (first compliance deadline) of SmartRegs in 2018. Such a requirement would be a next step for this building stock
- Owner-occupied MFUs, or MFUs with a large percentage of owner-occupied units, could be the easiest place to start. Building owner would be required to benchmark
  - EAB making recommendations to council that will address energy use of residential units
  - Why would non owner-occupied units be subject to a requirement if homeowners aren't?
- Metering and accessing data can be very messy. Need to do more research
- Develop list of covered buildings based on CoStar (rentable building area) or Tax Assessor? Used to identify businesses that would need to be compliant w/ code.
  - Can the building stand on its own and work on its own independently (e.g. no central HVAC on campus), then it should count as one building
  - CoStar data constantly being updated, but targeted at real estate professional. If buildings have never been for sale or lease, possibly missing from CoStar database
  - Likely, city will need to use both and compare.
  - Assessor database has high bar—not a marketing tool, so the data that is there is trustworthy. Can clean up assessor data w/ CoStar data

	Options	Recommendations
Municipal (City of Boulder Buildings)	1. 10,000 sf and above 2. 20,000 sf and above 3. 80% of building stock's energy use/cost	- All buildings above 5,000 sq ft excluding vacant, w/o mechanical systems - Yes, do include parking structures and parking lots (as a pilot) - Have exemptions for unconditioned buildings, and on a case by case basis
Private Sector Commercial and Industrial	1. ≥ 10,000 sf (90% of sf) 2. ≥ 20,000 sf (73% of sf) 3. ≥ 40,000 sf (52% of sf) 4. ≥ 50,000 sf (45% of sf)	- Start with a small number of buildings, and do it right (quality over quantity) from the start - Think about how to address owner-occupied versus tenant-occupied buildings - 1 <sup>st</sup> Phase: >50,000 sf
Private Sector Multi-family	1. SmartRegs exemptions? 2. Only require for predominately	- Phase in after 2018 - 1 <sup>st</sup> phase will include the commercial

	owner occupied?	portion of MFUs that trigger requirement based on square footage
Multiple buildings on one tax parcel or served by one HVAC system	<ol style="list-style-type: none"> <li>1. Sum of multiple buildings on one parcel <math>\geq 100,000</math> sf</li> <li>2. Sum of sf served by common HVAC system</li> <li>3. None – just use individual building limits</li> </ol>	

## 2) What Exemptions should there be for R+R?

**Overall Recommendation:** Have an exemption form that allows an owner to request an exemption and give a justification. Requests will be dealt with on a case by case basis, with standards exemptions for the following:

- Unconditioned buildings
- Financial Hardship
- New buildings (< 1 year of operating data)
- What buildings should be exempt from R+R?
  - New buildings (< 1 year of operating data)
  - Financial hardship/distress?
    - Good examples from cities that have adopted rating and reporting ordinances
  - Unoccupied buildings?
    - Want to track this so you can see fluctuation in a building when it's occupied, unoccupied, etc. This data can be very useful, and may unoccupied buildings use much more energy than they should
    - ESPM adjusts for occupancy
    - Differentiate between commercial building w/ no tenants and structures such as airport hangars. Could include percentage of building that is conditioned in definition, or include presence of mechanical systems
  - Parking structures?
  - Others?
- Industrial Buildings
  - Not required to disclose EUI publically if process loads are greater than x%?
    - Industrial marketplace should participate in this ordinance in a public way, and can report EUI, even though this doesn't mean much for industrial. Additionally, they are required to report to the city on three other metrics of their choice, and these metrics would not be disclosed publicly.
    - Certain businesses may not want to publicly note the location of their business for security reasons (e.g. marijuana growers)
  - Work to create unique metrics as proxy for EUI
    - Goal is to help city and industrial building owner track energy efficiency over time—self-comparison only

- Many industrial manufacturers produce multiple (up to thousands) of products, so measurement based on product doesn't make sense
- R&D may throw this too—different products being produced at any point in time
- Need to normalize data, regardless of the unit of measurement
- Doesn't make sense to track this based on value of product produced (e.g. medicine)
- EPA's Climate Leaders Program: Buildings select unit that they benchmark against. Can't compare apples to apples, but there are programs that work with business to select unit that's appropriate for them
  - Processes for normalizing data included in this program
- There are a number of businesses that are already very savvy and have created their own metrics to track efficiency over time; there are also a number of businesses prioritizing market share over efficiency
- Mandate retrocommissioning and/or energy audits periodically

- 3) Disclosure: what metrics make sense and what information should NOT be publicly disclosed?
- Some cities have faced opposition to public disclosure, but 8 out of 10 have ended up with public disclosure
  - GHG generated through ESPM (uses local mix). Interesting as a tenant to know both GHG and EUI
  - EUI doesn't credit buildings that generate renewable energy, purchase offsets, etc.
    - o Look into how ESPM handles RECs in GHG accounting
  - Disclosing at point of transaction is easy, because property management company will generally provide any data requested by interested parties. But less than 5% of the building stock is transacted per year, making this ineffective to drive marketplace.
  - Scary to have energy usage available in perpetuity to public, as building can have a bad year, etc.
    - o Buildings might miss out on potential lease space—big concern of being passed over by potential tenants based solely on EUI
      - If disclosure not required until point of transaction, then EUI does not play (as much) into decision-making
      - Likely small number of customers who would make leasing decision based solely on EUI
  - Data is more useful to city staff than to public. Maybe no need for public database. What's the end of a member of the public looking at this database?
    - o Efficiency occurs when data is made public knowledge, even if public isn't looking at it (e.g. San Francisco). 9 or 11 cities w/ benchmarking, and 2 states require public disclosure.
  - Option: Data available to public by request, and property owner made aware of request. Data is not completely public or private.
    - o Once city has data, subject to open records request...but the city can make special nondisclosure agreements. If municipal utility, not subject to same CORA requests
  - Could require education that accompanies this data, so those who access it know how to understand and process the data
  - Phasing process included in public disclosure as well

Disclosed to:	Options	Recommendations
City	Building info, ENERGY STAR Portfolio Manager (ESPM) rating and Statement of Energy Performance (SEP), Energy use Intensity (EUI), GHG, overall energy use, etc.	- Column that recognizes business as wind source participant, owner of PV system, etc. Recognition of business
Public	<ol style="list-style-type: none"> <li>1. Compliance status</li> <li>2. Aggregate energy metrics</li> <li>3. Individual energy metrics</li> </ol>	<ul style="list-style-type: none"> <li>- Need way of updating rating more often than once a year to avoid leasing space being excluded from search based on ESPM score</li> <li>- Provide an option for a building that is undergoing renovations to not disclose the current score</li> <li>- Do disclose compliance status and aggregate data, but don't reveal address with a specific score</li> </ul>

		- Make people go through an additional request step or query to reach the data for specific buildings
Potential buyers or leasers	<ol style="list-style-type: none"> <li>1. Requirement to disclose when advertising for lease or sale</li> <li>2. Disclose at point of transaction</li> <li>3. Disclose upon request</li> </ol>	- Disclosure at point of transaction already happens

4) Enforcement

	Options	Recommendations
Grace Period	<ol style="list-style-type: none"> <li>1. One year grace period for fines</li> <li>2. One year grace period for disclosing building specific energy use information - only compliance status will be shown on the disclosure site</li> </ol>	
Fines	<p>Governed by Boulder’s Municipal Code</p> <ol style="list-style-type: none"> <li>1. Issued after one written and one verbal warning</li> <li>2. \$x/day of violation</li> <li>3. Max fees per year?</li> </ol>	

- What fine is sufficient to encourage compliance?
- Is one written and one verbal warning sufficient?

5) Phasing/Timing

Recommendations

- What should be the first year for reporting for the private sector?
- What should be the annual reporting date? April 1st?