September 9, 2009
DRAFT Energy Efficiency Subcommittee of the Housing Code Working Group: Energy Efficiency Suggestions for Updated Rental Licensing Program

Program Scope:
The energy efficiency requirements shall apply to all rental units established through building permits applied for prior to July 17, 2001.

Program Initiation – Phase-in approach with off-sets or REC purchases:
Establish a requirement for a carbon off-set or renewable energy credit (REC) fee which must be paid prior to rental license renewal. Set a per square foot cost to offset carbon or a quantity of carbon per square foot.

- Example: At $0.03 per square foot a 1500 square foot apartment would invest $45 per year. Assuming carbon off-set costs of $20 per ton would result in just over two tons per 1500 square foot unit being off-set per year. Note: a 1500 square foot unit would have a fee of $180 ($45 x 4 years) due at each rental renewal.
- Rental license holders would have one rental license cycle (4 years) to invest in offsets before improvements would be required. Investment would be required at the beginning of the cycle.
- City of Boulder could be an aggregator for the Colorado Carbon Fund (CCF). As a result, 20% of the investments in offsets would be re-allocated back to the community for investment in energy projects. These funds could be directed to a grant or rebate program for rental housing.
- Costs for CCF are $20/ton/year; Xcel Energy's Windsource is currently ~$2/ton/year. Currently, Windsource needs to be purchased through utility bills, so this might not be a viable option for compliance, whereas the CCF could be purchased independent of utility bills.

Relationship to the Goal:

- Rental housing is 57% of housing stock, CAP goal for residential sector is 94,000;
- CAP has not designated a specific amount to rental housing, the GHG inventory does not allow for a sensitivity analysis to estimate the portion of emissions that are from rental housing.
- Estimate of 2 tons on average per unit was arrived at through high-level analysis and assumptions of possible emissions reductions from voluntary programs.
- If all rental dwelling units up for renewal in 2010-2012 choose the offset option at an average of 2 tons/unit, ~30,000 tons of reductions would result (there are 15,000 dwelling units up for renewal between 2010-2012)

Further research needed to develop option:

- Average size of rental units to develop per square foot approach; what cost per square foot should be set at.
- Develop options around change of ownership (i.e. how long offsets can be purchased for if ownership changes during 4 year period)

- Arrive at length of time offset purchases would be allowed before further investment would be needed in the property.

Pros:

- Allows time for property owners to plan for eventual capital investment in energy efficiency
- Achieves measurable GHG reductions towards CAP goal
- If CCF option is chosen, money reinvested in community

Cons:

- Philosophical controversy around "buying way out"
- Does not immediately address achieving efficient buildings and lower utility bills for renters
- Likely to result in higher rental costs for tenants

Requirement for Energy Efficiency Improvements

*****Note – Items highlighted in yellow do not represent a final recommendation, they are placeholders/examples of what this could look like.

Require energy efficiency improvements, up to the feasibility threshold determined - to be performed for each rental cycle until a set of prescriptive requirements are met or until a HERS rating of 115 is attained.

- Prescriptive requirements would be modeled after a "Green Points" type list to allow owners flexibility to choose options.
- Options would have to add up to 2 tons, with a spending cap at each rental cycle.
- Offsets could be purchased to make up the 2 ton gap until the improvements are made and/or a deadline is reached
- Once the prescriptive or HERS requirement is met, then offset requirement is discontinued
- "Two techs and a truck" option will be developed to meet this requirement.
- Prescriptive requirements can be verified by private certified inspectors or HERS raters.
- A set of prescriptive requirements would be developed so that the majority of different construction types are able to find a prescriptive option that fits the limitations of the various construction types and vintages of housing stock.
- Each prescriptive option will be designed to incorporate energy efficiency improvements that result in approximately 2 tons of greenhouse gas savings per year.
- The HERS 115 rating probably represents greater than two tons of savings. The required score can be adjusted up or left at 115 and justified by the greater marketing opportunities afforded by the HERS.

Relationship to the Goal:

- If phase-in option is allowed, average 2 tons/unit would be achieved towards the 2012 goal

Further research needed to develop option:

- What should the feasibility threshold (spending cap) range be?
- What HERS number should be used?

Pros:

- The energy efficiency improvement requirement would create a good opportunity for piggybacking local, state and federal energy efficiency incentive programs.
- Allows flexibility to property owners to choose path (prescriptive or performance) and options
- Improves efficiency of rental housing

Cons:

- Cost to property owners, difficult economic times, high vacancy in rental properties this season
- Difficult to measure GHG reductions
- Does not ensure improved performance due to occupant behavior variability
- Likely to drive renters out of the Boulder market as rental prices increase

Overarching: Market-based approach to dovetail with regulatory option

Create a market transformation campaign to "rate" the energy efficiency of rental housing (possibly all housing). Creates demand in the market for energy efficient rental properties. Could be based on an energy rating (more costly) or a prescriptive "Green Points" list

- Rental Energy Efficiency Data Base: Once the prescriptive or HERS requirement is met, then offset requirement is discontinued and the property is listed in a database that is sorted according to unit efficiency (RentSmart).
- Challenge Option: If a HERS of 115 is attained, then the city pays for the HERS rating and the property is eligible to be listed on the rental efficiency data base.
- Renter Energy Efficiency Incentive Program: Develop an incentive program to reward renters who use energy efficiently. If they can provide verification of living within a prescribed percentage of the unit's projected energy use, then the renter would be eligible for a credit or rebate. It may be possible to manage and verify this project with the capabilities of smart grid?

Further research needed to develop option:

- Search for similar programs around the nation
- Where to set levels for rating system, how to sync with regulation
- Develop outline of components needed/budget to deliver

Pros:

- Voluntary, or could dovetail with mandatory approach
- Market decides and it will have better information for making these decisions.
- Can also address conservation/behavior through campaign

- If a mandatory program does come to pass, landlords can promote their properties as low (energy)-cost, possibly raise rents and have more competitive advantage when markets are difficult.

Cons:

- Cost to city
- Risky in terms of the CAP goal, if not coupled with a regulation
- Benefits not likely realized before 2012, unless tied with a regulatory option
- Money spent on ratings rather than improvements

Below is a list of questions that have come up in the Energy Subcommittee and staff's responses:

Q: Will HERS continue to be the going standard?

A: Yes, the information provided by consultants during the Green Points and Green Building Update process confirm that HERS is projected to remain the only process established to create a consistent means of providing comparison information or residential energy efficiency.

Q: How will we ensure that there is no penalty for landlords already meeting proposed efficiencies?

A: One concept discussed was to exempt projects with a building permit issued following a date when the 2000 International Energy Conservation Code (IECC) was adopted. Another solution discussed was establishing a HERS feebate based on the HERS meeting certain criteria.

Q: Is using rental licensing renewals the appropriate trigger for yielding a more energy efficient housing stock in Boulder especially when there is so much variability among tenants and how they operate the home.

A: The council has directed staff to update the building regulations for support of the CAP goals. To date the Green Building and Green Points program has been updated to achieve higher efficiency for new and existing residential buildings which undergo work requiring a building permit in more than 500 square feet of area. The IECC has been amended to require work within the scope of the IECC to be 30 percent more efficient than the baseline code. The regulations governing the energy efficiency for new construction, remodels and additions of both residential and commercial construction have already been updated to require efficiencies ranging from 30 to 75 percent better than baseline code. Following the rental license update work our plan is to continue to address energy efficiency for the remaining existing buildings.

Q: Will sub-metering options give the property owner more incentive to make energy efficiency changes to their rental property?

A: This option would allow for more transparency as to who the big energy users are, but is quite expensive and not currently being proposed for inclusion in an ordinance.

Q: RentSmart is a good market based approach to incentivize landlords to make energy efficiency upgrades, but it only reaches a portion of the rental community and it will take three to five years before it really takes hold in the community.

A: As discussed in a recent meeting the concepts regarding a RentSmart program would best be incorporated in support of the overall program for improving efficiency. Improving the information available to renters about the total cost of renting will help renters make the best decision for their finances while contributing to CAP goals. As the program becomes established the information may support landlord's abilities to differentiate themselves in the market by offering the benefits of higher performing units. The effort to establish and program and create brand recognition does take time and money to accomplish, for example the utility serving the Las Vegas market invested heavily to accomplish the high percentage of energy star residences there. The investment in such a campaign would not only help renters, it would lead to higher efficiency units having lower vacancy rates. Lower occupancy rates of inefficient housing may lead them to be updated, which would lead to improved greenhouse gas emissions, although there is no data to support this claim.

Q: The city should also use a rating system similar to what RentSmart is trying to do to maintain the market based approach to encourage energy efficiency upgrades.

A: The type of program described would support the goals of improving energy efficiency for rental housing, but is not directly related to updating the rental licensing and housing code update. The benefits of such a program could be relayed to the council who would make the decision about whether the city can devote resources to the program.

Q: Are rebates applicable per dwelling or per owner?

A: We believe that rebates are applicable per energy meter.

Below is a list of other comments from the subcommittee:

- There needs to be a level of exemption for landlords on properties that have already made improvements.
- Rental housing market fell apart this year, not a good time to initiate this ordinance. (although there is conflicting opinion about this and some subcommittee members suggested more objective analysis should be provided before final decisions are made based on the views of certain stakeholders)
- Rental housing industry has already had to fulfill other recent expensive legal mandates that required major expenditures.
- Increased allowable occupancy as an incentive for efficiency was proposed; staff is evaluating this and could include it as a comment in the updates to Council.
- Concerns about mandating compact fluorescent light bulbs due to liability issues.
- Incentives were seen as much more favorable over financing options (unless the interest rate was 0%). ClimateSmart Loan Program is not a viable option to fund these improvements.
- Rather than offer financing, allow much more to time to make improvements (10-20 years) so owners can spread the investment out over time.
- Committee explained how these investments would negatively affect income property values. Although, some subcommittee members stated that property values or rents could increase from Energy Efficiency improvements and that rents could be raised to recover investments.

- Perhaps include an option where the landlord is the "behavior" trainer to the tenant and could get points for this on the prescriptive list.
- Changing the rental cycle to five years would allow extra money to be spent on the property's energy improvements.
- Require insulation of pipes especially in boiler rooms, a lot of heat loss occurs here.
- Requiring energy efficiency improvements in rental properties will drive people out of the Boulder market.
- At Council budget hearings, resident surveys showed carbon reduction as their lowest priority use for city money.
- Although the phase-in carbon offset approach sounds appealing the reality is there will not be a lot of money to allocate back to the community given the numbers of properties that will be making improvements every year. There will be LOTS of demand for not much money, and therefore maybe a lot of sore landlords. Example: if there are 60,000 tons bought by 2012, there will be $240,000 available to about 15,000 units requiring compliance. This comes out to about $16/unit.
- Having the renewable credit purchase option helps with the ability to come into compliance.
- As codes are updates, triggers should be in place for things like siding: require a permit to re-side a building and require certain levels of insulation be added.
- Changes made to physical property may or may not decrease the actual energy use. (ex: efficiency property, tenant leaves windows open in winter). However, offset purchases guarantee carbon reduction benefits and more money will come back to the city for improvements.
- Council might also be interested in knowing the number of jobs and business taxes that could come from this relatively huge initiative. Likewise, a percentage of the money renters don't spend on Xcel bills will get spent locally.