CITY OF BOULDER
CITY COUNCIL AGENDA ITEM

Meeting Date: July 6, 2010

AGENDA TITLE:

Consideration of implementation options for the SmartRegs proposal. The second reading of the SmartRegs related ordinances is tentatively scheduled for the August 3, 2010 City Council meeting.

PRESENTERS:
Jane S. Brautigam, City Manager
Paul J. Fetherston, Deputy City Manager

Department of Public Works
Maureen Rait, Executive Director
Neil Poulsen, Chief Building Official
Kirk Moors, Senior Plans Examiner

Department of Community Planning and Sustainability
David Driskell, Executive Director
Mary Ann Weideman, Acting Deputy Director of Operations
Kara Mertz, Local Environmental Action Manager
Yael Gichon, Residential Sustainability Coordinator
James Hewat, Historic Preservation Planner

Department of Housing and Human Services
Karen Rahn, Director
Jeff Yegian, Community Development Program Manager

EXECUTIVE SUMMARY:
The purpose of this memo is to provide a brief summary of the May 18 and June 1 City Council meetings related to the SmartRegs proposal, provide information on revised implementation options, address clarifying questions, outline next steps, and obtain Council direction. The SmartRegs proposal includes recommended changes to Boulder's Housing Code and Rental License Code and incorporates energy efficiency requirements as part of the code updates to address Climate Action Plan (CAP) objectives.

MAY 18 AND JUNE 1 MEETING SUMMARY:
On May 18, City Council introduced three ordinances to update the general provisions of the Housing Code and Rental License Code, as well as to add an energy efficiency requirement to the rental licensing program. The May 18 first reading materials are located at www.bouldercolorado.gov/smartregs (select the "public process opportunities" link). Staff presented information related to the three ordinances and Mary Young, Planning Board representative, presented the Planning Board's unanimous recommendation. The public hearing was opened and 46 speakers addressed this item. After the public hearing was closed, Council requested a staff response to clarifying questions and approved a motion to continue this agenda item to June 1.

At the continuation on June 1, council provided additional comments and requested a staff response to clarifying questions. Additional first reading questions were posted through the council hotline. Staff organized all of these first reading questions into common themes and on July 6 will address these themes as well as seek feedback from council on revised implementation options. The response to the first reading questions, organized by themes, is provided in Attachment A. Following the July 6 meeting, staff will incorporate the feedback on implementation options and return with ordinance language at the second reading tentatively scheduled for August 3. However, a significant number of leases are renewed in August and classes resume for the University of Colorado on Monday, August 23, 2010. In order to reduce impacts to tenants, property owners and property managers, and continue to effectively partner with stakeholders, the date for second reading of the proposed ordinances may be revised to September 7.

COMMUNITY SUSTAINABILITY AND ASSESSMENT IMPACTS:
The community sustainability impacts were addressed in the May 18 first reading memo and can be found at: www.bouldercolorado.gov/smartregs (select the "public process opportunities" link).

BOARD FEEDBACK:
Board feedback was included in the May 18 first reading memo and can be found at: www.bouldercolorado.gov/smartregs (select the "public process opportunities" link).

COMMUNITY WORKING GROUP FEEDBACK:
Community Working Group feedback was included in the May 18 first reading memo and can be found at: www.bouldercolorado.gov/smartregs (select the "public process opportunities" link).

Implementation options were discussed with the Community Working Group on June 24; this feedback is presented on page 9.

PUBLIC FEEDBACK:
Public feedback was included in the May 18 first reading memo and can be found at: www.bouldercolorado.gov/smartregs (select the "public process opportunities" link). Additional public feedback received after June 1 is included in Attachment B.

STAFF RECOMMENDATION:
Staff requests council feedback on the revised implementation options and recommends Option C, described on page 8, which would require all rental properties to comply with SmartRegs by December 31, 2018. This would include a 3-year implementation phase within which staff will track data relating to the number of properties that comply and the cost and results of this compliance. The full list of proposed data to be gathered during the implementation phase is included on pages 5-6.

Suggested Motion Language: A motion to direct staff to prepare ordinance language for a second reading that would implement Option C incorporating a compliance date for SmartRegs of December 31, 2018 for all rental properties in the City of Boulder.

BACKGROUND:
Based on the public hearing and feedback received from Council at its May 18 and June 1 first reading meetings, staff has provided four revised implementation options as described below and has responded to clarifying questions in Attachment A. Based on the outcomes of the July 6 council discussion, staff will include draft ordinance language for the second reading tentatively scheduled for August 3.

ANALYSIS:

Revised Implementation Options

Central to the SmartRegs proposal, staff is seeking council feedback on four phase-in options described in this section. Based on council feedback, staff will return with a draft ordinance for consideration at second reading.

At the first reading, staff proposed five phase-in options, recommending the option labeled 2b (Options 1, 2a, 2b, 3, and 4 can be found at: www.bouldercolorado.gov/smartregs (select the "public process opportunities" link). Staff proposes retaining option 2b and adding three other phase-in options, which have been modified from the original proposal, based on first reading feedback:

OPTION A. **Two Rental Cycles** *(formerly Option 2b.)* – Ordinance effective January, 2011; Larger investment at end of the phase in period.
OPTION B. **1-Year "Implementation Phase"** – Ordinance in effect January 2012; same phasing as Option A (two rental license cycles).
OPTION C. **Date Certain** – All properties must comply by December 31, 2018; 3-year "Implementation Phase."
OPTION D. **Voluntary program** – No compliance deadline.

Staff is seeking feedback on these new phase-in options. Following a short discussion about spending caps and an implementation phase common to all options, each phase-in option is described.

SPENDING CAPS

Staff recommended a point cap in lieu of a spending cap for the first reading to preserve the integrity of the program design through targeting an energy performance level across all rental properties. A spending cap on its own does not ensure properties meet a target energy performance level. However, a spending cap could be combined with the point cap proposed in the ordinance to ensure that dollars spent towards the spending cap reach the same goals by achieving a consistent level of upgrades, thereby ensuring equity throughout the program. Further analysis would need to be completed to recommend possible spending cap levels. The seven case studies already completed would provide the initial data for such an analysis. Further case studies resulting from an initial implementation phase (see below) would also inform the appropriate levels for spending caps. Staff does not recommend implementing a spending cap *in lieu of* a point cap, as this would not preserve the integrity of the program goals. Each of the phase-in options in this section includes a statement about how a spending cap would relate to the option.

IMPLEMENTATION PHASE

Two Techs and a Truck (Two Techs)[1] will be available for at least three years (the length of time that funding is available through the Climate Action Plan tax and the County-wide Retrofit Ramp-up Grant) to help properties meet the requirements of SmartRegs. A description of the Two Techs program can be found in Attachment A. All of options A through D propose a robust implementation phase leading up to the effective date of the ordinance.

An implementation phase has been created in response to the first reading public hearing and council questions and comments about acquiring additional data and the request for information to support programmatic details. The intention of the implementation phase is to provide a period of time to implement the requirements, begin to meet the goals of the program, and acquire data to inform potential revisions to specific programmatic details such as spending caps or specific building types that should be accommodated through the hardship clause. Each of the options proposes a different effective date for the ordinance. Staff assumes the ordinance will be adopted in 2010.

At this point, staff anticipates that the compliance requirements proposed through the performance and prescriptive pathways will not change. Changes to the program that may result from the implementation phase would be limited to expanding exemptions or making changes to point requirements that are found to be unworkable. Any program changes will not penalize those properties that come into compliance during the implementation phase. Examples of programmatic changes that may result from data gathered in the implementation phase:

1. The definition of hardship – could include certain types of buildings that should be exempt from the requirements

[1] It should be noted that staff is currently investigating whether the program name used here, "Two Techs and a Truck," is trademarked and whether it may need to be changed prior to implementation. However, for the purposes of this memo and until a decision is made (expected within a month's time), we will continue to refer to this program as "Two Techs."

2. A recommendation for a spending cap that retains the program performance goals, or
3. Changes to other exemptions (e.g., based on the impact of the lead-based paint requirements).

Staff is proposing to dedicate 75 percent of city Climate Action Plan (CAP) tax residential program funds (~$300K annually) for rental property owners to participate in Two Techs as well as provide additional incentives for participation in the implementation phase (Attachment A). This would serve approximately 1,500 – 1,700 rental units per year. In addition, the Countywide Retrofit Ramp-up Grant funding will be available first come, first served basis for all Boulder County property owners (owner *and* tenant occupied). The 75% commitment of residential program funds to rental properties reflects both the fact that rental units comprise approximately half of the city's housing stock and the fact that the split-incentive issue—which has been a driving force for the SmartRegs proposal—creates a significant financial barrier to implementation of energy efficiency improvements in rental properties.

Goals of the implementation phase include:

1. Enroll a large sample of rental properties which are geographically distributed throughout the city and represent various ownership structures and building types over a one year period.
2. Gather data on costs for properties to comply with SmartRegs
3. Involve property owners in the process
4. Identify and remove barriers to rebate access and availability
5. Submit rebate ideas through Xcel Energy's Demand Side Management roundtable for measures where rebates are not currently offered
6. Support development of a rental rating system that lists properties' SmartRegs points and average utility bill costs
7. Identify specific building types or situations that could qualify for hardships or possible exemption
8. Assess impact of new EPA lead paint requirements
9. Determine levels for spending caps if necessary

Data will be collected on the following:

1. Number of properties that reach full compliance
2. Baseline points of existing properties
3. Estimated future SmartRegs compliance costs for properties that participate and don't reach full compliance at this time
4. Actual costs for properties that reach full SmartRegs compliance
5. Cost/benefit analysis on packages of measures
6. Cost increases due to lead paint mitigation
7. Utility bill data one year pre-implementation and three years post-implementation[2]

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[2] Utility bill data will only be collected for properties participating in Two Techs. Data will be collected by a third party and reported in aggregate by building type, neighborhood, etc. A solution will need to be arrived at for tenant turnover since Xcel ties data release to account number not property address and tenants often turn over every year.

8. Workforce capacity: number of properties retrofitted per week
9. Rent increases (if landlords are willing to submit this data)
10. Rebate money received (dollars and source)
11. Financing mechanisms employed
12. Barriers to accessing rebates and financing

ALTERNATIVE PHASE-IN OPTIONS

Staff has outlined four phase-in options. Option A is the staff recommendation from first reading. Options B and C include an implementation phase as a larger trial to collect data prior to the ordinance compliance deadline. Option D is a voluntary program that includes adding a lease disclosure related to utility bill costs. Options A, B, and C assume adoption of the proposed compliance pathways:

- Performance – Home Energy Rating System (HERS) 120
- Prescriptive – 100 points from list

Properties that participate in the implementation phase but do not reach compliance would still be able to renew their rental license so long as it is before the ordinance effective date. After the ordinance effective date, compliance would need to be achieved in order to renew a license. All options now include a requirement that property owners inform tenants that they can request from Xcel Energy past energy usage information for the property.

Option A (first reading option 2b): Two Rental Cycles

Ordinance effective January, 2011; Larger investment at end of the phase in period

- At the time of the initial rental license application or first renewal, property owners must either:
  - Demonstrate a baseline of 50 points[3] on the prescriptive list. In the case that the property's baseline is less than 50 points, the property would need to get the amount of points needed to reach 50, OR
  - Comply with HERS 120 on the performance path
- At the time of the subsequent rental license renewal, property owners must:
  - Achieve the remaining points on the prescriptive list to reach 100.

Pros:

1. Spreads the cost out over a longer time period
2. Allows contractor workforce time to develop
3. Longer timeframe for upgrades could allow property owners to take advantage of tenant turnover or rehabilitation as a time to complete upgrades

Cons:

1. Smaller amount of greenhouse gas reductions by 2012
2. Most units upgraded by 2018
3. Timing of investment depends on when rental license expires

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[3] All of the case study properties' baseline points were at or over 50.

4. Compliance requirements overlap with implementation phase (data can be gathered but 50 points must be achieved at the time of the first rental license renewal)

Spending Cap:
In this option, a spending cap could be included at each rental license cycle. This could extend the compliance period beyond two rental cycles (2018) as staff would propose that the same energy target performance should be met.

Option B: 1-year "Implementation Phase"

Ordinance in effect January 2012; same phasing as Option A (two rental license cycles)

This option uses the same phase in requirements as Option A, but with an effective date of January 2012. Extending the effective date by one year would extend to the end of 2019 the date by which all rental properties would be compliant (two four-year rental license cycles). The first year of the program, 2011, is an implementation phase with the following timeline:

- January 2011 to December 2011: Implementation Phase
- July to September 2011: Analyze data from Jan. 2010 through June 2011[4]
- October 2011: Return to Council with results and any proposed code changes for implementation date of Jan. 2012

Pros:
1. Implementation phase can provide a larger number of trial properties
2. Data collected through the implementation phase will allow staff analyze and refine the program
3. Spreads the cost over a longer time period
4. Allows contractor workforce time to develop
5. Longer timeframe for upgrades could allow property owners to take advantage of tenant turnover or rehabilitation as a time to complete upgrades

Cons:
1. Risk of property owners not volunteering to participate in implementation phase
2. Smaller amount of greenhouse gas reductions by 2012
3. Most units upgraded to code by 2019
4. Timing of investment depends on when rental license expires

Spending Cap:
In this option, a spending cap could be included at each rental license cycle. This could extend the compliance period beyond two rental cycles (2019), assuming the same target energy performance is required (100 points or 120 HERS). The results of the

[4] Certain metrics will not be fully analyzed because by June 2011, one-year post-implementation utility bill data will not yet be available.

implementation phase could inform the spending cap levels.

Option C: Date Certain

All properties must comply by 2018; 3-year "Implementation Phase"

- All properties must comply by December 31, 2018
- Implementation phase of ~3 years (through June 2013; equal to current CAP and federal funding for Two Techs)
- Staff report to Council with any program refinements in April 2012, based on one-year of program implementation data
- If a property participates in Two Techs and does not reach compliance, rental license can still be renewed so long as it is before 2018. After 2018, full compliance would need to be achieved or a hardship approved to renew a rental license

Pros:

1. Longer implementation phase can provide an even larger number of trial properties
2. Data collected through the implementation phase will allow staff to analyze and refine the program if necessary
3. Spreads the cost out over a longer time period, providing flexibility for property owners
4. Allows contractor workforce time to develop
5. Longer timeframe for upgrades could allow property owners to take advantage of tenant turnover, scheduled equipment replacement or other property rehabilitation as a time to complete upgrades
6. Focuses on incentives (through current funding, rebates and "Two Techs") to encourage early compliance.

Cons:

1. Risk of property owners not volunteering to participate in implementation phase
2. Risk of property owners waiting until the last year to comply, potentially overloading the city's rental license program or passing off the requirements to future owners if the property sells.
3. Smaller amount of greenhouse gas reductions by 2012
4. Most units upgraded to code by 2018

Spending Cap:

This option removes the need for a spending cap since the compliance period is eight years. Property owners could determine the most appropriate timing for the required investments.

Option D: Voluntary Program
No compliance deadline

This option would encourage voluntary compliance through a rental rating system. A requirement would be added in the City of Boulder mandatory lease disclosures to inform tenants that they can obtain average utility costs for rental properties from Xcel Energy

Pros:
1. Allows contractor workforce time to develop
2. Tests the market-based approach for a rental rating system independent of regulation

Cons:
1. Unable to estimate the true impact and effectiveness
2. Approach depends solely on market transformation - renters valuing more efficient properties above other factors. It is likely that market transformation would be less effective in properties on the Hill in Goss-Grove and more effective in outlying areas.

JUNE 24 COMMUNITY WORKING GROUP FEEDBACK:
The majority of the Community Working Group members supported Option C: Date Certain – All properties must comply by 2018; 3-year "Implementation Phase."

The group favored this option since it includes a longer implementation phase allowing more data to be collected and decouples the timing of compliance requirements from the rental license cycle. Other comments from the Community Working Group related to ensuring that the sample size for the implementation phase included a sufficient distribution of properties by area and building age, a question on whether properties that come into compliance during the implementation phase would be "grandfathered" into possible future program requirements, and support for the inclusion of a mandatory lease disclosure in whichever option is adopted. Lastly, a request was made to research other point options on the prescriptive list related to common areas' energy and water usage. The feedback from the Community Working Group is reflected in staff's recommendation.

The Community Working Group agreed to partner with the city on enrolling properties in the implementation phase. Staff will continue to work with this group until the second reading on the remaining details of the proposal.

STAFF RECOMMENDATION:
Staff has developed a decision matrix (Attachment C) based on the following criteria:
1. Compliance with CAP goals
2. Phased GHG emissions reductions
3. Phased investments
4. Implementation period
5. Workforce capacity
6. Ease of implementation (city and property owner)

Options B and C rank closely in priority based on these criteria. Staff recommends Option C as it provides a longer implementation phase, allows staff to revise any program details based on the results of the implementation phase and decouples the time required for compliance from when the property's rental license cycle expires. Additionally, Option C was the most favorable option to the Community Working Group. Staff will return to council in April, 2012 with any program refinements.

COUNCIL QUESTIONS:

1. Does council agree with staff's recommendation for OPTION C which includes:
   - Three-year implementation phase
   - Data collection to inform program changes including the inclusion of a spending cap and appropriate levels
2. Are there elements from the other options that should be included in the draft ordinance?

NEXT STEPS:

Based on direction from council, staff will return with a draft ordinance for second reading tentatively scheduled on August 3, 2010. However, a significant number of leases are renewed in August and classes resume for the University of Colorado on Monday, August 23, 2010. In order to reduce impacts to tenants, property owners and property managers, and continue to effectively partner with stakeholders, the date for second reading of the proposed ordinances may be revised to September 7.

Approved By:

Susan Kohl for

Jane S. Brautigam,
City Manager

Attachments:

Attachment A: Response to First Reading Questions
Attachment B: Public Correspondence Received after June 1
Attachment C: Decision Matrix

Attachment A
Response to First Reading Clarifying Questions

Staff organized all of the first reading questions into common themes and provided responses below:

Energy Efficiency

1. Address Partnership with the Community

The majority of property owners have stated that they agree with the city's goal of improving the energy efficiency of the existing rental housing stock. However, opinions vary as to how much should be required versus be encouraged through voluntary programs and consumer preference driving the free market. Some property owners do not believe that regulating energy efficiency in rental properties is equitable or appropriate. In order to bridge any gaps that may exist between the city and property owners, the city is taking the following steps:

a. Developing user-friendly guides and technical assistance programs tailored to rental property owners to provide details on the incentives, rebates, and assistance programs that will reduce the costs and facilitate implementation of the proposed energy efficiency requirements in SmartRegs.
b. Held an additional meeting with the Community Working Group on June 24 to discuss new implementation options for SmartRegs. Feedback from this meeting is provided on page 9 of the memo.
c. Support the development and implementation of a rental rating system by a private sector company or non-profit organization. Staff will return to council at second reading with more details on how the city could support the development of a rental rating system.

2. Exemptions: Should ADUs be Exempt?

An Accessory Dwelling Unit (ADU) is a separate and complete housekeeping unit <u>within</u> a single family detached dwelling unit which complies with the city provisions of section 9-6-3, BRC, 1981. There are currently 141 licensed ADU's in the City of Boulder. An Owner's Accessory Unit (OAU) is a detached, complete housekeeping unit separate from a single family detached dwelling unit which complies with the city provisions of section 9-6-3, BRC, 1981. There are currently 18 OAU's in the City of Boulder. It would be difficult to upgrade the energy efficiency components of ADUs separate from the dwelling unit. The inclusion of ADUs in the energy efficiency upgrade requirements will be further reviewed by staff to determine if they should be exempted from the program due to the difficulty of making independent upgrades. A recommendation will be made at second reading.

3. Exemptions: Provide a Definition of Modular/Manufactured Homes

The International Residential Code contains a very complete definition for a Manufactured Home that will be incorporated into the IPMC. The essence of the definition is that modular and manufactured homes are both transportable, factory-built homes that are voluntarily constructed and inspected under state or federal regulations

and energy efficiency requirements. A mobile home is considered to be a manufactured home. Manufactured homes can be installed with or without a permanent foundation. Modifications to any of these manufactured homes could jeopardize the product certification and listing. With this concept in mind staff has determined that these unit types should not be part of the current energy efficiency upgrade program for rental housing in the City of Boulder.

4. Prescriptive List Requirements: Discuss Air Infiltration

The prescriptive list requirements for air infiltration were adjusted following the April 22 Planning Board discussion. To further adjust the points would move the prescriptive list away from the program design intent to target an energy performance level. While air sealing greatly serves to reduce energy loss through the thermal boundary of the house, if it is not done correctly (e.g. one critical leakage point is missed), the property owner may not achieve the desired air leakage reduction and savings. The points currently provided through the list are weighted to equal the impact in relation to the performance of the whole unit. The list will be adjusted to change the base level of two points from "1.00 natural Air Changes per Hour (nACH) or Greater" to "1.2 nACH or Less." This will encourage air leakage testing and does not compromise the performance target of the list.

5. Prescriptive List Requirements: Discuss Water Conservation

At second reading, staff will propose adding point values for all fixtures that are low-flow. Low-flow will also be defined at second reading. Additionally, staff will address the feasibility and connection to the legislative intent in relation to awarding points for outdoor water conservation (controllers, irrigation systems, and xeriscape).

6. Hardship: Discuss Offsets

The hardship clause is included to require offsets purchases (through a local investment fund) as part of the hardship provision since they are fairly low cost and contribute to the greenhouse gas emissions reduction goals of the program.

However, if staff's recommendation (Option C) is chosen, the hardship provision would not be in effect until 2018 and could be revisited through the refinement process in April, 2012.

7. Hardship: Discuss the Option of an Appeals Board

Staff recommends maintaining the appeals procedure detailed in the IPMC like other ICC codes currently adopted by the City of Boulder. A two-level appeals process is consistent on discretionary code determinations. The authority to administer this process is detailed in IPMC section 104, Duties and Powers of the Code Official. The initial determination for appeals is handled by the code official for IPMC 105.1, Modifications and IPMC 105.2, Alternate Materials. The determinations for exceptions to the energy efficiency requirements are currently considered to be "modifications" so the initial request for an appeal is determined through the code official. The next level of appeal for code official determinations within the IPMC is found in amended section 111, Means of Appeal (1-3, Quasi-Judicial Hearings Process, BRC 1981). Should there be an appeal to the code

official's determination, a hearing officer or board can be appointed to fill this need by the code official. Procedural regulations are already established to facilitate this process.
Pros:
1. The initial step of working directly through the code official is a simple process for the public to request an appeal for a modification.
2. The process contains a second level of appeal through a third party hearing officer.
3. Criteria are established in the code to address modification requests.

Cons:
1. System could be overloaded with too many appeals.
2. Using an appeal board first is complicated for staff and the public.
3. Must depend on the code official to be objective and fair.

8. Hardship: Address a Higher Income Level for Financial Hardship
The staff proposal bases financial hardship on a license applicant's income whether or not it is fixed. This approach was chosen to address concerns that the costs of compliance would reduce net property income enough to cause hardship for owners that count on rental income for their living expenses. Staff recommends setting an income limit for establishing eligibility for a financial hardship as it provides an objective standard for determining need and avoids the complications of selecting which types of income (e.g. pensions) or which categories of people (e.g. seniors) merit consideration of financial hardship. For example, a fixed income may be large enough to make the proposed requirements a minimal burden. Staff is unaware of financial hardship exceptions to other business license requirements to use as a model.

Some council members requested staff investigate the possibility of setting a higher income level for financial hardship. Staff's proposal is to use the low-income limit set by the United States Department of Housing and Urban Development (HUD). The HUD Low Income Limit (72% of Boulder's household median income) provides a nationally accepted presumption of financial need and definition of eligibility for assistance with housing costs. Although the HUD Low Income Limit has the broadest acceptance, the city may set any limit it chooses. Two alternative income limits could be the one defined by Boulder's Inclusionary Housing Ordinance (IHO), 82% of the median income, or 100% of Boulder's household median income. All three income caps are determined annually and dependent on household size.

	HUD	IHO	Median
1-person	$45,100	$51,400	$62,800
2- person	$51,550	$58,800	$71,700
3-person	$58,000	$66,100	$80,700
4-person	$64,400	$73,400	$89,600

Additional criteria proposed to consider in the determination of financial hardship include:
1. A corporation does not own the property; this exception is for individual owners only.

2. The owner pays the utility bill and can get a direct return on energy efficiency investments
3. The license renewal is within the first two years the energy efficiency program is in effect, which limits the time to make improvements
4. The availability of rebates, loans or federal weatherization grants to assist in the energy efficiency costs
5. Other reasons the owner demonstrates that limit the financial ability to make the upgrades.

If the code official determines there is a financial hardship an additional four-year rental cycle would be granted to meet the energy efficiency requirements. Qualifying, prorated, carbon offsets, which could fund the proposed local investment program, must be purchased until the required energy efficiency compliance is met. The offsets balance the property's contribution to the city's carbon reduction goal with the desire to reduce financial hardship. The requirement to purchase offsets is typical for all of the exceptions detailed in Appendix C but could be removed from this financial hardship exception since this is a low income exception.

9. Hardship: Address Additional Structures for Technical Hardship Exemption

The IPMC includes exception #6, Technical Infeasibility, to the energy efficiency requirements in Appendix C. As such, it would be considered a hardship if it is technically infeasible to make the energy efficiency upgrades to a rental property in accordance with IPMC section 105.1 Modifications, which states that:

> "Whenever there are practical difficulties involved in carrying out the provisions of this code, the code official shall have authority to grant modifications for individual cases upon application of the owner or owner's representative, provided the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire and safety requirements."

IPMC exception #6 also has a provision for structures that are in the land use review process to be demolished or substantially remodeled during the upcoming rental cycle to postpone or suspend energy efficiency compliance.

When it is determined that a building component cannot be upgraded because it is technically infeasible, qualifying, prorated, carbon offsets must be purchased for the upgrades which are deemed technically infeasible until such time as the condition changes through a remodel or demolition or energy efficiency can be achieved.

The intent of this exception is to address older buildings that could be very hard to provide energy efficiency upgrades to because the building components are so far out of code compliance. While some building components could prove to be technically infeasible to upgrade on a structure there may be other areas of the building that could

successfully be upgraded and that work would need to be upgraded to meet the energy upgrade requirements.

Individual units in condominium complexes could conceivably have certain upgrade options in common areas of the building be considered technically infeasible should it require home owner association approval and that approval could not be granted.

10. Hardship: Consider Owners with a Large Number of Rental Properties

To address the concern of owners with large numbers of rental units, staff is considering an amendment to the second reading document with an exception for owners that could demonstrate a financial hardship. The owner would need to appeal to the code official for a financial hardship determination. The burden of proof would be on the owner to show, on a form provided by the code official, by clear and convincing evidence, a financial hardship arising from exceptional and extraordinary circumstances. If it was determined that a financial hardship was found the owner would have three full rental cycles to upgrade the required energy efficiency of the units with an equal amount of units being upgraded in each calendar year throughout the 12 years. Qualifying, prorated, carbon offsets would have to be purchased on the unimproved units until the required energy efficiency compliance was met.

11. Program Implementation: Provide Information on External (Contractor) and Internal Workforce Capacity

External Workforce Capacity

The Governor's Energy Office (GEO) convened a working group to address various issues associated with scaling-up to meet the demand for energy efficiency retrofits in preparation for the Department of Energy Retrofit Ramp-Up Grant and the potential for the Home Star ("cash for caulkers") legislation passing at the federal level. A subcommittee of this working group recently administered a survey to contractors to better understand workforce capacity and the barriers that businesses face to scale up. The survey had 83 contractor respondents.

The table below provides an excerpt of responses related to the current number of jobs completed per week for certain energy efficiency retrofits:

Measure	1-2 jobs/week	3-5 jobs/week	6-10 jobs/week	11-20 jobs/week	21 + jobs/week
	Number of respondents performing work				
Air Sealing	16	15	5	1	3
Insulation	16	8	8	3	3
Duct Sealing	12	9	5	0	2
Heating/Cooling	13	7	4	0	2

While it is difficult to provide exact data on how many contractors are currently performing energy efficiency retrofits and their current capacity, staff has heard anecdotal information from many contractors in the field; the general theme is that there are many contractors being trained to provide energy retrofit services; they are awaiting the demand to scale-up. Additionally, a large national company, Masco, recently opened an

energy efficiency retrofit division called *Well Home* in Boulder County. Staff believes that contractor services are expanding and in the current economy, contractors are eager to serve the demand created by SmartRegs.

There are regional efforts to support the continued scaling-up of energy efficiency retrofit services in the Front Range. As these efforts advance, staff will provide more information on workforce capacity.

Internal Workforce Capacity
The issuance of rental licenses is administered by a .50 FTE. This is sufficient staffing capacity to address the current average cycle of 1,525 renewal licenses a year. If the program changed in a manner that would encourage all rental licenses to renew in the same year – as an extreme – the staffing resource for that year would need to increase by an equivalent .50-1.0 FTE. This would be anticipated by data tracking and accommodated through work program adjustments in a given year and/or the use of temporary resources.

Once adopted, SmartRegs could result in additional building permits for upgraded water heaters, whole house fans, photovoltaic and solar hot water heating systems. It is not anticipated that the volume of these permits will be elevated to the point where additional FTE's would be necessary to administer the program.

12. Program Implementation: Two Techs and a Truck

The following section outlines the goals, process, and program administration components of the Two Techs and a Truck (Two Techs) program. In addition, information on program capacity, costs, and subsidies is provided.

Goals
The *Two Techs* program seeks to:

1. Overcome barriers to residential investment in energy efficiency
2. Provide a simple, one-stop shop for energy efficiency retrofits
3. Offer solutions for all residential building types
4. Leverage available financial incentives

The program design includes detailed, comprehensive process maps that direct the work flow "behind the scenes" to facilitate the one-stop shop goal and ensure the program serves the variety of housing types and existing ownership structures. Below is a summary of the key program elements.

Process
Program features include:

1. Customer Intake – Detailed pre-screening process (age, building type, ownership structure) through call center and website to ensure property is directed to the appropriate services.
2. Energy Audits –

    a. Comprehensive audit includes air leakage testing and use of an infrared camera
        i. Audit report generated on-site as well as work order for insulation and air sealing services (if recommended and desired by property owner)
    b. Walkthrough audit for newer buildings
3. Energy Concierge[1] – Assigned to each customer at point of intake
    a. Acts as the customer's advocate
    b. Is present at audit, facilitates retrofits that result from audit
    c. Installs simple energy efficiency measures at time of audit (e.g. lighting, basic air sealing, low-flow showerheads)
    d. Customer education
    e. Facilitates customer investment including filling out rebate paperwork and providing information on financing options
    f. Facilitates SmartRegs compliance for property owners by designing a cost-effective approach to meet requirements
    g. Coordinates various actors in multi-family situations (e.g. property managers, owners, HOAs, tenants)
4. Efficiency measure installation:
    a. The bulk of this program focuses on insulation and air sealing. Standardized pricing will be offered through installers enrolled to provide these services in the program.
    b. The energy concierge will facilitate the installation of insulation and air sealing by walking the customer through a work order generated on-site and scheduling the services at the owner's convenience.
    c. Retrofits beyond insulation and air sealing (e.g. equipment replacement, windows, solar) will be offered through qualified contractors. The energy concierge can facilitate these processes in follow-up visits/phone calls.
5. Ongoing Engagement – Once the customer is in the program, they will receive ongoing engagement customized to their situation (e.g. when furnace is near the end of its useful life, customer will receive information about efficient furnace replacement).
6. Financial Support – Includes filling out rebate forms and connection to loans and other financing tools. The energy audit report generated on-site will include data on the cost-effectiveness of various measures, including rebate optimization.

Program Administration

Program administration will be coordinated through a single or multiple partnering organizations (RFPs are scheduled to be released by the end of June through Boulder County's Retrofit Ramp-up Grant). The program administration features include:

1. Contractor management – including recruitment, enrollment and work assignment
2. Quality assurance and control
3. Training (contractors, energy concierge and direct install personnel)

[1] There will be energy concierges with specialty areas such as SmartRegs compliance, HOAs, and multi-family buildings. The energy concierges are not city or county employees, rather a component of the *Two Techs* program and contracted through the program administration.

4. Workflow management and customer support
5. Direct installation management
6. Information systems
7. Energy Concierge
8. Evaluation (certain program and contractor evaluation components will be handled through an independent third-party)

Costs and Subsidies

The current program design provides estimated budgets and costs based on research of similar programs and the consultant's local analysis; however, there are many variable pieces to the budget that could impact the exact number of properties served and the subsidies available. The data presented here is a current high-level estimate of the program costs. The estimates are derived from an in-depth analysis by the consultants on market segmentation, building stock, potential for retrofits, and other factors.

As the program is implemented, budgets will shift to maximize the success of the program. For example, subsidies could be larger at the start of the program to encourage early participation and then scale down over the years as penetration rates increase. Or, the subsidies could shift based on demand of certain installation measures.

The following per-unit budget does not include program administration costs. The table below shows the estimated investment per unit for a typical unit that receives in the basic tier of Two Techs service, including:

1. An energy audit,
2. Energy concierge service,
3. Direct installation of energy saving devices (compact fluorescent light bulbs, low-flow shower head, programmable thermostat, smart power strips, etc.)[2] ,
4. Insulation and air sealing (at standardized rates in addition to the per unit cost below),
5. Facilitation of rebates and financing, and
6. Ongoing engagement.

Two Techs and a Truck: Estimated investments per unit				
	Total	**City/County**	**Xcel Energy**	**Property Owner**
Single Family	$450	$142	$188	$120
Multi-Family*	$2,974* + Xcel	$146/unit or $2,774/building*	varies depending on size of building	$200
Condominium	$450	$142	$188	$120
*Average building is 19 units				

[2] Some direct install measures are proposed to have a small co-pay in addition to the base property owner investment, such as $10 for a programmable thermostat.

Staff is proposing that 75 percent of the Climate Action Plan (CAP) tax residential budget be dedicated to SmartRegs compliance through Two Techs. This will accommodate 1,500- 1,700 rental units. While the Ramp-up Retrofit Grant countywide EECBG funds will be available to city of Boulder residents, it will be on a first come, first served basis. Dedicating CAP tax funding to SmartRegs rental properties ensures capacity for those needing to comply with SmartRegs. The following table shows three-year totals for participation rates and subsidies.

Two Techs and a Truck: Three Year Budget and Capacity Estimates				
Housing Type	**CAP tax for SmartRegs (City)**	**Grant funding (County)****	**Number of Rental Units**	**Number of Units County-Wide***
Single-Family	$191,700	$710,000	1,350	5,000
Multi-Family* (per unit)	$481,800	NA	3,300	NA
Condominiums	$225,000	$142,000	500	1,000
Total	**$898,500**	**$852,000**	**5,150**	**6,000**

* Both owner and tenant occupied properties can participate through the countywide grant money, but since the funding for this portion of the program is through county-wide funds it is available on a first come, first served basis. This table assumes 10% of county funds used in the City of Boulder is accessed by rental property owners.
* * This funding is an estimate on how much city of Boulder residents will participate in countywide program (approximately 33% of county-wide grant). This could fluctuate depending on uptake in the city and around the county.

Timeline

All the elements of the Two Techs and a Truck program are expected to be included in a County-released Request for Proposals (RFP) along with other components of the Ramp-up Retrofit Grant. The RFP is expected to be released at the end of June. The program will roll out in phases beginning in September, 2010.

13. Program Implementation: Availability of Retrofit Rebates and Details on the ClimateSmart Loan Program

The rebates listed in Attachment N of the May 18 first reading memo found at www.bouldercolorado.gov/smartregs (select the "public process opportunities" link) are currently available to rental property owners. Additionally, Attachment 5 includes rebates that are available to buildings with commercial energy meters (e.g. apartment buildings) through Xcel Energy. By their nature, rebates and financing amounts fluctuate since they often have finite corporate budgets and are often distributed on a first come, first served basis. Rental properties are eligible for commercial and/or residential rebates and financing, depending on the building and electric or gas meter type. The implementation phase of *Two Techs*, described on pages 4-6 of the memo, will allow for further analysis on the actual dollars captured through energy efficiency retrofits in Boulder. The table on the following page details the most current estimates for rebate funding and the source of that funding.

Rebates and Financing		
Source	**Budget**	**Explanation**
Recharge Colorado: City of Boulder/Boulder County	$134,000	Rebates are provided as matching funds to supplement the Governor's Energy Office Recharge Colorado program. This amount of funding is dedicated to Boulder County for furnaces, insulation and air sealing, and energy audits. Half of the funding ($67,000) is dedicated to the city of Boulder residents specifically through CAP tax funding. The majority of this funding is still available.
Xcel Energy: Demand Side Management (DSM)	$80 million	This amount is the 2010 state-wide combined electricity and natural gas budgets for both the residential and commercial sectors. In 2009, the residential sector in the city of Boulder used approximately 1% of the **number (not dollars)** of rebates available and the commercial sector used about 9% of the number of rebates available. Xcel is filing an extension of their 2010 DSM plan for 2011. In 2011 Xcel will file a new biennel DSM plan for 2012-2013 with new budgets.
Retrofit Ramp-up: Dept of Energy Grant	$1.1 million	This is combined residential ($250K) and commercial ($850K) rebate amounts that will be available in Boulder County beginning Fall, 2010.
Boulder County: ClimateSmart Loan Program*	$20 million	This is the combined residential and commercial budget amount
Boulder County: Micro-loans (Retrofit Ramp-Up Grant)	$2.3 million	This is the combined residential and commercial budget amount. These loans are being developed through the grant and will be administered as a revolving loan fund for 3-year periods. The loans will be for $500-$3,000 and will likely have very low or no interest rates.

* The residential ClimateSmart Loan is currently on hold. Staff will update council on the latest information at second reading. The commercial ClimateSmart Loan program is currently active with applications due on July 12.

14. Program Implementation: Energy Bill Disclosures and Rental Rating System

Staff does not recommend including energy bill disclosures as part of the city's rental license process as it will require considerable staff resources to collect and track the data and it would put the onus on the property owners to access the data through their tenants. The data belongs to the account holder, which in most cases is the tenant. Although, staff does understand the importance of capturing this data to measure savings generated through energy efficiency retrofits. Each implementation option includes a recommendation that would require all property owners disclose to their prospective tenants the availability of average utility costs for rental properties. There are three additional ways that staff is proposing this data obtained:

1. Data pilot: The City of Boulder is in discussions with the Colorado Public Utilities Commission and Xcel Energy to design and implement a data pilot that would make aggregated, anonymized electricity use data available to the city,

either from Xcel Energy itself or through a third party that is under contract to hold confidential individual premise data. The availability of this type of aggregated data will allow the city to both measure the effectiveness of the SmartRegs program as well as to allow a renter to compare the energy use of a property to others of its type.

2. Two Techs and a Truck: The program will include utility bill release and tracking.
3. Rental rating system: Staff is proposing to support the development of rental rating system that lists properties SmartRegs points and average utility bill costs. Tenants or property owners could add their actual data if available.

15. Program Implementation: Address a Sliding Scale for Prescriptive List Requirements

In order to assign point values for items/specifications that do not correspond directly with the points allocated for measures identified on the prescriptive SmartRegs checklist, graphs and/or equations will be provided in the Technical User's Guide. The user's guides will provide guidelines for inspectors on how to assign points for efficiency ratings that fall between the categories listed (e.g., furnace that has an 85% efficiency rating, as the current list has points for 80% and 90% efficiency).

16. Program Implementation: Create a Simplified User's Guide

Pending the adoption of SmartRegs, the implementation plan includes development of comprehensive program trainings and materials such as a user's guides (both technical and simple) and outreach materials for contractors, inspectors, tenants, and property owners/managers. In the interim, while the proposal is moving through the council process, staff has developed clarifying materials. These materials are included in attachments as follows:

- Attachment 1: Flow chart of the process presented at June 1st council meeting
- Attachment 2: Overview of the SmartRegs Process for Landlords
- Attachment 3: SmartRegs Prescriptive Pathway: Introduction to Determining Baseline Points and Improvement Options
- Attachment 4: Typical values for select measures on the prescriptive list

17. Other Proposed Ordinance Changes

Staff intends to revise the first reading ordinances to include the following:

a. Reformat ordinance so hardship falls under both the prescriptive and performance requirements
b. Move the rental license $250 investigative fee from the Rental License Fee section to the Administrative Remedy section of the code.
c. Identify all acronyms or shorthand within the ordinance especially in the Prescriptive Pathway
d. Rework the legislative intent language

International Property Maintenance Code

1. Public Availability of IPMC

The current Housing Code is proposed to be replaced by the IPMC. The IPMC is a nationally vetted, copyrighted document adopted by almost 700 local jurisdictions nationwide. With the current constraints of a copyrighted document staff has worked closely with the publisher to provide as much local document availability as possible.

The 2009 IPMC is currently available for review at the following locations:

- Planning & Development Service Center, 1739 Broadway, Park Central Building, 3rd Floor
- Central Records, 1777 Broadway, Municipal Building, 2nd Floor
- Library Reference Desk, 1001 Arapahoe, Main Library, 2nd Floor

The 2009 IPMC code is also available to anyone who orders it from the city's Service Center (1739 Broadway, Park Central Building, 3rd Floor, 303-441-1880) free of charge. Since the ICC codes are copy righted and licensed, they cannot be posted directly on the city's website. However, because of the city's license, the city may distribute the IPMC code directly to customers. The city is also working to provide web access to a form of this code (such as a PDF) from the Service Center and the Main Library in a manner that complies with its license. The local amendments to the IPMC will continue to be available on the city internet.

Pros:
1. The IPMC is a nationally vetted document.
2. It is consistent in form and content with several other adopted ICC codes in the City of Boulder.
3. The IPMC is an enforceable document in the city's legal process.
4. It is a good foundation for rental housing administration and energy efficiency requirements.
5. The IPMC supports the administration of public complaints on existing residential structures.
6. It contains inspection criteria for discernment and mitigation of dangerous Buildings not found in the housing Code.

Cons:
1, The IPMC is not accessible online since it is a copyrighted document.
1. It is written in code language and is not always as easy to understand as the existing Housing Code.
2. The IPMC was not initially formatted for a rental licensing program.
3. It references other ICC documents and doesn't contain all of the requirements from those other documents.

2. *Proposed IPMC Amendments:*

The amendments adding requirements to the IPMC address life-safety concerns, retain features of Housing Code which were not featured in the IPMC, attain consistency with state and federal requirements, and coordinate the proposed code with the rental licensing program.

The amendments deleting sections of the IPMC eliminate duplication with existing city requirements, retain a program scope similar to the existing program in an effort to maintain costs and staffing at current levels, and eliminate requirements which are more typically associated with commercial construction.

The complete list of IPMC amendments can be found in Attachment 6 and is compiled in the order of the code and contain explanations of the background and issues related to the change.

The proposed amendments strive to improve program effectiveness while managing costs.

Rental License Inspection

1. *Clarify the process for safety issues not on a checklist that are noted by an inspector*

The update to the Rental License Safety Checklist includes a checklist item designed to address this issue. It states: "Maintenance: equipment, systems, devices and safeguards required by the code in effect when the structure or premises was constructed, altered or repaired shall be maintained in good working order." This inspection line item gives the rental license inspector latitude to address code required health and safety issues that are not included in the Safety Checklist requirements for new or renewal licenses.

2. *Address whether further revisions to the checklist inspection requirements are necessary*

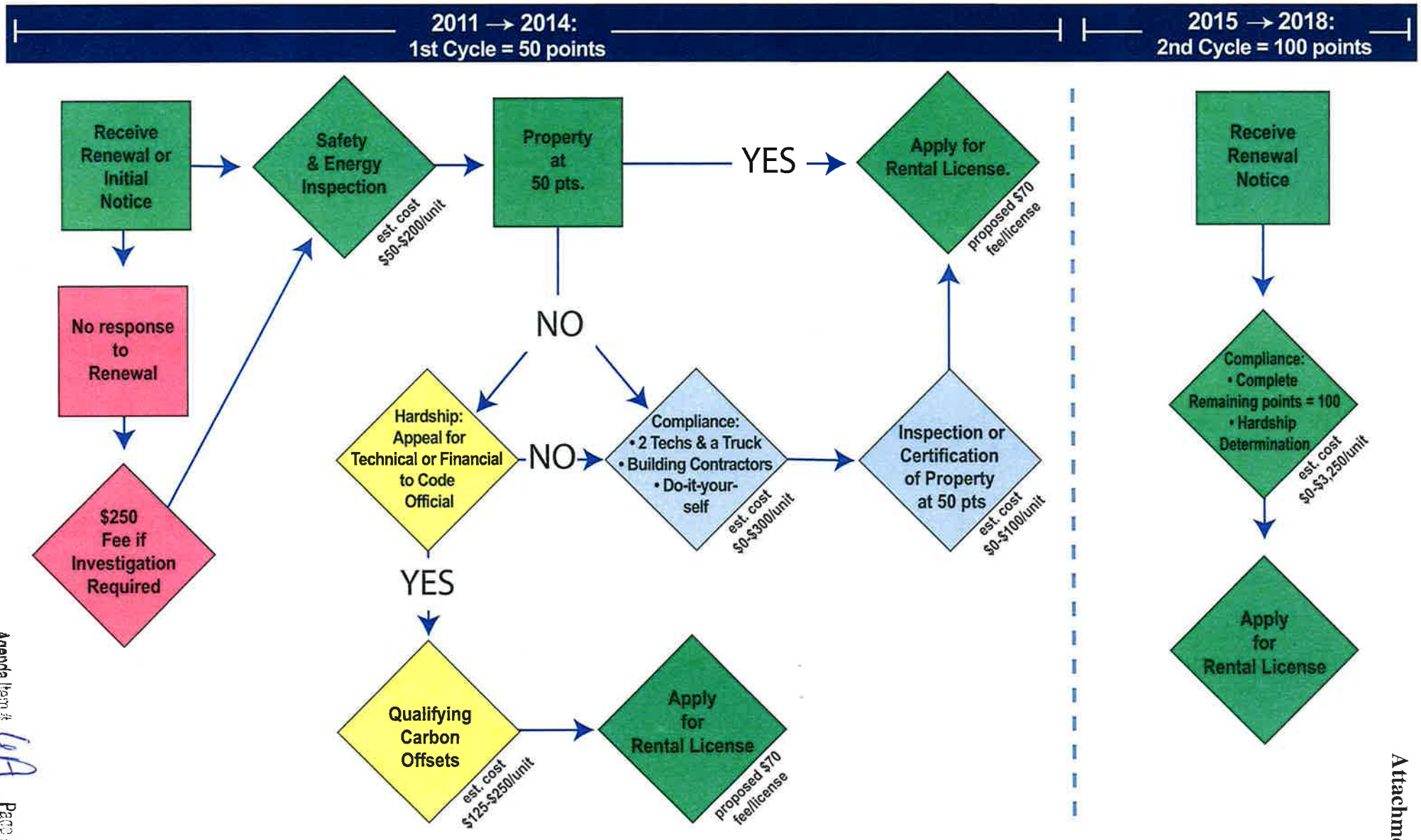
Currently a Baseline and Safety Inspection Checklist are required to be completed by a licensed rental housing inspector for a new license. A Safety Inspection Checklist is required to be completed by a licensed rental housing inspector to renew a rental license.

All of the items on both lists are health and safety related and it has been suggested that the lists be combined and used on all rental license inspections for new and renewal licenses. Staff will be reviewing this proposal for possible modification and will make a recommendation at second reading.

Attachments:

Attachment 1: SmartRegs Process Map
Attachment 2: Overview of Process for Property Owners
Attachment 3: Prescriptive Pathway Introduction to Determining Baseline Points
Attachment 4: Typical Values for Prescriptive Pathway
Attachment 5: Commercial Rebates
Attachment 6: IPMC Amendments and Deletions

SmartRegs Process Map



Attachment 1

Attachment 2

Overview of the SmartRegs Process for Property Owners

Step 1 - Schedule Inspection: Call a City of Boulder certified SmartRegs inspector or the City's "Two Techs and a Truck" program to schedule an inspection.

Step 2 – Inspection: The SmartRegs inspector or Two Techs energy auditor will visit your rental property and perform a walk-through audit to determine how many points your property can already claim for Smart Regs compliance due to existing measures. To earn as many points as possible, have the inspector test for air leaks around windows, doors, and duct work. This entire process should take about two hours, depending on the size and status of your rental unit. See Attachment F – Introduction to determining baseline points for more information.

Step 3 – Determine Necessary Improvements: If your unit already achieves 100 points on the Prescriptive Pathway you just need to renew your rental license and no other changes are required to comply with SmartRegs.

If you score below 100 prescriptive points, your inspector will recommend the improvement measures that can earn your property the additional points to achieve compliance by the next rental cycle. This might include changing light bulbs to compact fluorescents (CFLs) or adding insulation to attics or walls. There are many experienced companies available to perform this type of energy retrofitting. If you are working with the Two Techs and a Truck program, these services will be available as part of your one-stop-shop experience.

Step 4 – Improvements: After you determine your plan for earning the necessary 100 prescriptive points, the next step is to have the work performed. Except in rare cases, the energy upgrades to your property shouldn't take more than a few days to complete. For example, adding insulation should only take a day.

Step 5 – Certification: Your inspector will complete a quick follow-up visit to update your SmartRegs Prescriptive Pathway checklist to give you credit for the improvements you have made. If you are working with the Two Techs and a Truck program, your final documentation for SmartRegs compliance will be provided to you as part of the program.

SmartRegs Prescriptive Pathway – Introduction to Determining Baseline Points and Improvement Options

The City of Boulder's proposed SmartRegs Prescriptive Pathway is technical in nature and is designed for use by a City of Boulder certified third-party inspector who will receive training from the City on the proper application of the checklist. The City of Boulder intends to create a technical user's guide to assist in the implementation of the prescriptive pathway. The technical user's guide will provide detailed guidance that will assist inspectors in applying the prescriptive pathway criteria to various housing types and specific housing configurations.

In general, for each building component on the prescriptive pathway points are determined by rounding up or down to the nearest available increment.

For illustration purposes, this document provides an overview of the application of the prescriptive pathway to a single-family and multi-family unit.

Single-Family Residence Example

This is a single-story, ranch-style, Martin Acres home (about 1,200 square feet). The home has uninsulated 2x4 walls, single-pane aluminum framed windows (with no storm windows) and R-19 attic insulation (6-inch fiberglass batts). All of the ducts and HVAC equipment are located in the uninsulated crawlspace. Air leakage testing (with a blower door) showed that the home was very leaky (greater than 1 natural air change per hour) and duct leakage testing showed that the ducts were also very leaky (greater than 80 cubic feet per minute). The home is heated with an 80% efficient natural gas furnace and has a standard efficiency 40-gallon hot water heater (.59 EF). Cooling is provided by a direct evaporative cooler (or "swamp cooler") and a whole house fan. 60% of the lighting in the home is compact fluorescent (CFL). The home has a medium-sized non-ENERGY STAR refrigerator that was replaced in the last 10 years (appx. 600 kWh/yr). In addition, the home has a programmable thermostat. The home has no solar features (solar thermal or PV).

Addressing each of the prescriptive pathway categories in order:

WALLS: 100% of the walls have no insulation, so the home has a baseline of 0 points.

Improvement Option: Filling all of the wall cavities with blown cellulose insulation would earn this home 20 points (R-13).

Base: 0 Improvement Option: +20

WINDOWS: 100% of the home's windows are single-pane metal units, earning 0 points.

Improvement Option: Adding metal storm windows to all of the existing windows would earn this home 4 points, replacing the windows with ENERGY STAR windows would earn 14 points.

Base: 0 Improvement Option: +14

ATTIC: The attic is insulated to R-19 with 6-inch fiberglass batts, earning 24 points.

Improvement Option: Insulating the attic to R-41 by adding 6 inches of blown cellulose insulation.

Base: 24 Improvement Option: +2

INFILTRATION: The home earned 0 points due to high air leakage.

Improvement Option: Performing air sealing and caulking of the home to reduce air infiltration to .75 natural air changes per hour would earn 4 points, if .50 natural air changes were achieved, the home would earn 6 points. Reduced air leakage would likely occur simply by adding wall insulation.

Base: 0 Improvement Option: +4

FOUNDATION: For a crawlspace with mechanical equipment, the "Foundation Wall" category (rather than the "slab" or "floor" category) applies. The crawlspace/foundation walls have no insulation, so the home earns 0 points for R-0.

Improvement Option: Insulating the crawlspace/foundation walls to R-19 with draped fiberglass batts would earn this home 9 points in the "Foundation" category. Making this improvement would also bring the ducts within the conditioned space of the home, earning 7 points in the "Ducts" category in the next section of the checklist.

Base: 0 Improvement Option: +9 (earns an additional +7 in "Ducts" category)

DUCT LEAKAGE: The home's duct system was very leaky, earning 0 points.

Improvement Option: Reducing duct leakage by sealing the ducts with water-based mastic and/or foil tape would reduce duct leakage, earning between 4-17 points. The results will depend largely on the accessibility of the ducts and the thoroughness of the duct sealing performed.

Base: 0 Improvement Option: +9 (could be up to +17)

DUCTS: Currently the ducts are uninsulated, earning 0 points.

Improvement Option: If the home does not add crawlspace/foundation wall insulation, the home could earn 6 points by insulating the ducts to R-4. Alternatively, if the home adds

crawlspace/foundation wall insulation, the home automatically earns 7 points in this category by bringing the ducts into conditioned space.

Base: 0 Improvement Option: +7

HEATING: The home's 80% efficient furnace earns it 13 points.

Improvement Option: Switching to a high-efficiency 90% efficient furnace would earn 4 points.

Base: 13 Improvement Option: +4

COOLING: The home earns 6 points for having a direct evaporative cooler.

Improvement Option: Switching to 19 SEER air conditioning or an indirect evaporative cooler would earn 2 points.

Base: 6 Improvement Option: +2

FANS: The home earns 2 points for having a whole house fan.

Base: 2

LIGHTING: 60% of the lighting is CFL, which rounds down to 50%, earning 4 points.

Improvement Option: Upgrading to 100% CFL lighting would earn 3 points.

Base: 4 Improvement Option: +3

HOT WATER: The home earns 1 point for a 60 EF water heater.

Improvement Option: Switching to a tankless hot water heater or direct-vented tank water heater (appx. 78 EF) would earn this home 5 points.

Base: 1 Improvement Option: +5

REFRIGERATION: The refrigerator uses 600 kWh/yr of electricity, which rounds to 650 kWh/yr, earning 2 points.

Improvement Option: Switching to a new medium-sized ENERGY STAR refrigerator (350 kWh/yr) would earn this home 2 points.

Base: 2 Improvement Option: +2

SOLAR THERMAL / PV: The home has no solar thermal or PV.

OCCUPANT: The home earns 1 point for a programmable thermostat.

Improvement Options: Providing tenants with a real time energy monitoring device or an operation/training manual would each earn 1 point. If the tenant attended an energy conservation class, an additional 1 point could be earned.

Base: 1 Improvement Option: +3

- **TOTAL BASELINE POINTS = 53**
- **ADDITIONAL POINTS NEEDED = 47**
- **TOTAL IMPROVEMENT POINTS AVAILABLE TO CHOOSE FROM = 84**

AN EXAMPLE OF A COMPLIANCE PATHWAY FOR THIS HOME:

- 20 Points: Insulate 2x4 walls with blown cellulose insulation ($840)
- 9 Points: Insulate crawlspace/foundation walls to R-19 with draped fiberglass batts ($500)
- 7 Points: Adding crawlspace wall insulation puts ducts in conditioned space (no additional $)
- 9 Points: Seal ducts with water-based mastic and/or foil tape to reduce leakage (could be as high as 17 points) ($230)
- 4 Points: Insulating above grade walls and sealing ducts is likely to reduce air infiltration to 0.75 natural air changes per hour (no additional $)

Estimated Cost $1,570 (assuming no rebates or subsidies)

Multi-Family Residence Example

This is a second story unit in a large 3-story multi-family apartment building. Half of the unit's walls are shared with other units, the rest of the walls are exposed to the outside and are insulated with fiberglass in a 2x4 cavity. The unit has cathedral ceilings, which are insulated to R-26 with fiberglass insulation (compressed R-30 batt) in a 2x8 cavity. Most of the unit (90%) is located above another unit in the building and the remaining 10% of the unit is over the shared community garage and insulated to R-30 with fiberglass batts. All of the windows are double-pane, wood-framed units.

The unit has a programmable thermostat. The refrigerator is 24 years old and consumes approximately 650 kWh per year. None of the lighting in the unit is high-efficacy CFL or LED.

The home has radiant baseboard heating, served by a 25-year old, 80% efficient boiler that supplies heat to the entire complex. Domestic hot water is also provided to the entire complex by the 80% efficient boiler with a sidearm tank. Cooling for the unit is provided by a 10 SEER window unit air-conditioner that is permanently installed through the wall.

A blower door test of the home indicated that the unit was moderately tight, with 0.5 natural air changes per hour.

The home has no solar features.

Addressing each of the prescriptive pathway categories in order:

WALLS: The unit earns 13 points for 50% shared walls and 10 points for 50% insulated 2x4 walls (equivalent to R-13).

Improvement Option: The exterior walls already have fiberglass insulation, so the improvement options are limited. Exterior foam insulation is not practical since this is a multi-family building and there are no plans to replace the wood siding.

Base: 23 Improvement Option: 0

WINDOWS: The unit earns 6 points for 100% double-paned non-metal (wood) windows.

Improvement Option: Replacing all of the windows with ENERGY STAR .30 U-value windows would earn 4 points.

Base: 6 Improvement Option: +8

ATTIC: The cathedral ceiling is insulated to R-26, which rounds up to R-30, earning 26 points.

Improvement Option: The cathedral ceiling already has fiberglass insulation, so the improvement options are limited.

Base: 26 Improvement Option: 0

INFILTRATION: The home earns 6 points for its baseline air leakage (0.50 nACH).

Improvement Option: Performing air sealing and caulking of the home to reduce air infiltration to .35 natural air changes per hour would earn 2 points.

Base: 6 Improvement Option: +1

FOUNDATION / SLAB / FLOOR: Since 90% of the unit is over another unit, this would round up to 100% and the unit earns 15 points for a "shared floor."

Improvement Option: No options available.

Base: 15 Improvement Option: 0

DUCT LEAKAGE: The home has baseboard heating and has no ducts, thus the home earns the highest points in the category, 17 points.

Improvement Option: No options available.

Base: 17 Improvement Option: 0

DUCTS: The home earns an additional 7 points for having no ducts.

Improvement Option: no options available.

Base: 7 Improvement Option: 0

HEATING: The unit's 80% efficient boiler earns it 13 points.

Improvement Option: Replacing the 25-year old boiler for the entire complex to a 90% efficient boiler would earn each unit in the complex 4 points, plus an additional 2 points in the "Hot Water" category.

Base: 13 Improvement Option: +4

COOLING: The home earns 0 points for a SEER 10 window unit.

Improvement Option: Removing the air conditioner or replacing with a direct evaporative cooler would earn this unit 6 points.

Base: 0 Improvement Option: +6

FANS: The home does not have a whole house fan so it earns 0 points.

Improvement Option: Adding a whole house fan would earn 2 points.

Base: 0 Improvement Option: +2

LIGHTING: 0% of the lighting is CFL or LED, earning 0 points.

Improvement Option: Replacing all of the lighting with CFL or LED bulbs would earn 7 points.

Base: 0 Improvement Option: +7

HOT WATER: The home earns 3 points for an 80% efficient gas boiler side arm.

Improvement Option: Replacing the 25-year old boiler for the entire complex to a 90% efficient boiler would earn each unit in the complex 2 points, plus an additional 4 points in the "Heating" category

Base: 3 Improvement Option: +2

REFRIGERATION: The refrigerator uses 650 kWh/yr of electricity, earning 2 points.

Improvement Option: Switching to a more efficient ENERGY STAR refrigerator that uses 350 kWh/yr or less would earn this unit 2 points.

Base: 2 Improvement Option: +2

SOLAR THERMAL / PV: The home has no solar thermal or PV.

OCCUPANT: The home earns 1 point for a programmable thermostat.

Improvement Options: Providing tenants with a real time energy monitoring device or an operation/training manual would each earn 1 point. If the tenant attended an energy conservation class, an additional 1 point could be earned.

Base: 1 Improvement Option: +3

TOTAL BASELINE POINTS = 118

COMPLIANT – NO ADDITIONAL POINTS NEEDED

Attachment 4

SmartRegs Prescriptive Pathway: Overview of Typical Values

Walls:

The following table lists examples of wall configurations typically found within the housing stock in the Boulder area. The top row lists the categories presently included in the prescriptive SmartRegs checklist (with the addition of an R-11 column), including a range of equivalent U-values for each assembly. When confronted with an atypical wall type, auditors would be trained to calculate the wall assembly's U-value, then award points according to the range in which the calculated value falls.

No Insulation (U-value = 0.37-0.18)	**R-3 Continuous** (U-value = 0.17-0.13)	**R-5 Continuous** (U-value = 0.12-0.10)	**R-11** (U-value = 0.10-0.09)	**R-13** (U-value = 0.10-0.09)	**R-19 or better** (U-value ≤ 0.08)
2x4 Framed wall with no cavity or continuous insulation	2x4 Framed wall with EPS insulated siding (at least 0.75" average thickness) and no cavity insulation	2x4 Framed wall with 1" of continuous XPS insulation behind drywall or siding	2x4 Framed wall with 3.5" mineral wool batt in cavity (common in 1950's)	2x4 Framed wall with 3.5" standard density fiberglass batt in cavity (common in 1970's - 80's)	2x6 Framed wall with 5.5" standard density fiberglass batt in cavity (mid-1990's -present)
2x4 Framed wall with asphalt impregnated insulated sheathing (Celotex or similar) and no cavity insulation	2x4 Framed wall with 0.5" continuous XPS rigid insulation behind siding or brick and no cavity insulation	Double-wythe brick wall with 1" of continuous XPS insulation behind drywall or stucco	2x4 Framed wall with 3.5" low density fiberglass batt in cavity (common in 1960's)	2x4 Framed wall with 3.5" low density fiberglass batt in cavity and asphalt impregnated insulated sheathing (Celotex or similar)	2x4 Framed wall with low density fiberglass batt in cavity and 1" of continuous XPS insulation behind drywall or stucco
Double-wythe brick wall with no interior or exterior continuous insulation	Double-wythe brick wall with 0.5" continuous XPS rigid interior or exterior insulation behind drywall or stucco	Double-wythe brick wall with 1.5" interior EPS rigid insulation between 2x4 interior furring	2x4 Framed wall with 2" mineral wool batt in cavity and EPS insulated siding (at least ¾" average thickness)	2x4 Framed wall with cavity filled with blown cellulose insulation	2x6 Framed wall with cavity filled with blown cellulose insulation

Ceiling:

The following table lists examples of ceiling configurations typically found within the housing stock in the Boulder area. The top row lists the categories presently included in the prescriptive SmartRegs checklist (with the addition of an R-13 column), including a range of equivalent U-values for each assembly. When confronted with an atypical ceiling type, auditors would be trained to calculate the wall assembly's U-value, then award points according to the range in which the calculated value falls.

No Insulation (U-value = 0.599 - 0.106)	**R-13** (U-value = 0.105 - 0.068)	**R-19** (U-value = 0.067 - 0.050)	**R-30** (U-value = 0.049 - 0.033)	**R-38 or better** (U-value ≤0.032)
Attic with less than 3.5" of fiberglass, cellulose or mineral wool insulation on top of ceiling drywall	Attic with 3.5" medium density fiberglass batt on top of ceiling drywall	Attic with 5.75" of blown cellulose insulation on top of ceiling drywall	Attic with 10" medium density fiberglass batt on top of ceiling drywall	Attic with 10.5" of blown cellulose insulation on top of ceiling drywall
2x6 Framed cathedral ceiling with no insulation	2x6 Framed cathedral ceiling with 3.5" medium density fiberglass batt in cavity	2x6 Framed cathedral ceiling with 5.5" medium density fiberglass batt in cavity	2x10 Framed cathedral ceiling with 9.25" medium density fiberglass batt in cavity	2x12 Framed cathedral ceiling with 11.25" medium density fiberglass batt in cavity

Refrigerators:

The list below illustrates a simplified application of the prescriptive SmartRegs checklist for refrigerator performance based on vintage. These values were gathered from the EPA's ENERGY STAR program literature. Calculated energy consumption for many newer refrigerators can be found on manufacturer's websites and other resources such as this site: http://www.appliances.energy.ca.gov/AdvancedSearch.aspx

- Standard model manufactured prior to 2000 – 750 kWh/yr or more
- Standard model manufactured in 2000 or later – 650 kWh/yr
- ENERGY STAR qualified model manufactured prior to 2000 – 650 kWh/yr
- ENERGY STAR qualified manufactured in 2000 or later – 450 kWh/yr
- There are currently models on the market that consume only 350 kWh/yr

Air Infiltration: (per LBNL Study)

The average air infiltration values given below (according to vintage) are taken from a study performed by the Lawrence Berkeley National Laboratory. This is, however, a gross over-simplification as air infiltration

values can vary dramatically between otherwise identical appearing homes from the same period. The best way to establish an accurate infiltration rate for a given home would be to perform a blower door test.

- 1950 or older ~ 1.0 ACH
- 1960 or older ~ 0.9 ACH
- 1970 or older ~ 0.82 ACH
- 1980 or older ~ 0.74 ACH
- 1990 or older ~ 0.68 ACH
- 2000 or newer ~ 0.62 ACH

Duct Leakage to Outside:

Duct leakage to outside is measured by pressurizing both the home and the duct system to the same test pressure, then measuring the volume of air that is required to be forced into the duct system to maintain this equal pressure. Testing in this manner allows the auditor to quantify the impact of those leaks that allow conditioned air to escape the duct system before being delivered to the home's living space. Like air infiltration rates, duct leakage rates vary dramatically between homes and depend greatly on the materials and quality of installation. However, the single largest factor affecting duct leakage to outside is the location of the duct system (it is worth noting that the prescriptive pathway awards points for duct location even when duct testing is not performed). Like air infiltration rates, the best way to establish an accurate duct leakage to outside rate for a given home is to perform testing.

Water Heaters:

The following values are based on Federal minimum water heater efficiency standards by year:

- Manufactured prior to 1990 – 0.56EF
- Manufactured in 1990 or later – 0.59EF
- There are currently models on the market that achieve 0.64EF or better

Furnaces:

- Atmospherically vented unit manufactured prior to 1980 – 65% AFUE
- Induced draft unit manufactured in 1980 or later – 80% AFUE
- Direct vented unit – ≥90% AFUE
- There are currently models on the market that achieve 96% AFUE or better

Cooling:

The following values for window unit and central AC units are based on Federal minimum air conditioner efficiency standards by type and year. The evaporative cooler values (which are far more dependent on relative humidity and outdoor temperature) are based on EPA statements of efficiency for our climate.

- Window unit – typically 10 SEER or worse
- Central AC manufactured prior to 2006 – 10 SEER or worse
- Central AC manufactured in 2006 or later – 13 SEER or better
- Direct Evaporative Cooler – 15 SEER
- Indirect Evaporative Cooler – 19 SEER
- There are currently central AC units on the market that achieve 20 SEER or better

SMART REGS

SMART REGULATION FOR SUSTAINABLE PLACES

Commercial Rebates as of May 2010

This list does not include future rebates and incentive programs being developed through the Department of Energy's Ramp-up Retrofit grant, EnergySmart@Work, or pending federal legislation. Dollar amounts on these rebates vary widely so are not included on this list.

CATEGORY	MEASURE	AVAILABLE INCENTIVES
Whole-Building Energy Efficiency	Energy Analysis Energy Audit/Assessment Recommissioning Performance Contracting Multiple-Measure Implementation	**Federal Energy Efficient Commerical Buildings Tax Deduction** **Governor's Energy Office** High Performance Building Program Performance Contracting Program **Xcel Energy** Online Energy Assessment On-Site Energy Audit Engineering Assistance Study Recommissioning Rebate Business New Construction Business New Construction: Energy Efficient Buildings Commercial Real Estate Efficiency (Office Buildings) Standard Offer Rebate (Performance Contracting) Self-Direct Custom Rebate
	Energy Management Systems Process Efficiency	**Governor's Energy Office** **Xcel Energy** Energy Management Custom Rebate Process Efficiency Custom Rebate
Building Envelope	Roof Walls Doors Windows Skylights	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy Custom Rebate**
Electric Efficiency	Lighting Efficiency Daylighting	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy** Small Business Lighting Program Lighting Redesign Study and Rebates Prescriptive Lighting Rebate Custom Lighting Rebate
	Cooling Efficiency Cool Roofs Heat Pumps Energy Recovery	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy** Prescriptive Rebate Custom Rebate
	Motor and Drive Efficiency Transformer Efficiency Elevator Efficiency Appliance Efficiency Printing Equipment Efficiency Ventilation	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy** Prescriptive Motor and Drive Rebate Custom Rebate
	Compressed Air Efficiency	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy** Prescriptive Rebate Custom Rebate

	Refrigeration Efficiency Food Service Efficiency	*(also see Whole-Building Energy Efficiency, above)* **Federal Energy Efficient Commerical Buildings Tax Deduction** **Xcel Energy** Refrigeration Recommissioning Prescriptive Rebate Custom Rebate
Space Heating and Water Heating	Boiler Efficiency Furnace Efficiency	*(also see Whole-Building Energy Efficiency, above)* **Xcel Energy** Prescriptive Rebate Custom Rebate
	Water Heaters	*(also see Whole-Building Energy Efficiency, above)* **Xcel Energy Custom Rebate**
Water Use Efficiency	Indoor water use Outdoor water use	**City of Boulder** Water Use Audits Equipment Rebates
Solar	Solar Hot Water (Solar Thermal)	**Federal** Business Energy Investment Tax Credit (ITC) OR Renewable Energy Grants Modified Accelerated Cost-Recovery System (MACRS) **Colorado Sales and Use Tax Exemption** **Governor's Energy Office Solar Rebate** **City of Boulder** Solar Sales and Use Tax Rebate ClimateSmart Solar Grants
	Solar Photovoltaics (PV, solar electric)	**Federal** Business Energy Investment Tax Credit (ITC) OR Renewable Energy Grants Modified Accelerated Cost-Recovery System (MACRS) **Governor's Energy Office Solar Rebate** **Colorado Sales and Use Tax Exemption** **Renewable Property Tax Assessment** **City of Boulder** Solar Sales and Use Tax Rebate ClimateSmart Solar Grant **Xcel Energy Solar Rewards**
Other Renewable Energy	Fuel Cells Small Wind Geothermal Microturbines CHP/Cogeneration …and others	**Federal** Renewable Electricity Production Tax Credit Business Energy Investment Tax Credit (ITC) OR Renewable Energy Grants Modified Accelerated Cost-Recovery System (MACRS) **Governor's Energy Office Wind Rebate** **Renewable Property Tax Assessment: (wind only)**
		Xcel prescriptive measure cap: 60% of project cost Xcel custom measure cost: 1-year payback.

Attachment 6
Proposed IPMC Amendments and Deletions

PROPOSED IPMC AMENDMENTS:

1. **101.2.1 Application of Rental Licenses Code.** New reference added to coordinate the rental licensing provisions of chapter 10-3, BRC, with the IPMC.

2. **104.7 Clerk and Recorder Notices.** Added Section 10-2-24 of the existing Housing Code, "Manager may Record Notices with Clerk and Recorder," B.R.C. 1981, allowing certain violations to be recorded on the property, through the county clerk and recorder, in order to transfer an effective enforcement tool from the present Housing Code to the IPMC.

3. **104.8 Authority to Issue Rules.** Added Section 10-2-25 of the existing Housing Code, "Authority to Issue Rules," B.R.C. 1981, allowing the code official to adopt reasonable rules to implement the IPMC.

4. **309.6 Pre-Application Pesticide Notification.** Added reference to Section 6-10-7, "Notification to Tenants and Employees of Indoor Application," B.R.C. 1981 in order to make the IPMC consistent with the current BRC pesticide notice requirements.

5. **310 Floodplain Safety Signage.** Added Section 10-2-20 (j), "Operator's Responsibility," B.R.C. 1981, to satisfy federal flood requirements.

6. **605.2 Non-Grounding-Type Electrical Receptacles.** This section was added to the IPMC to provide clarification for how new outlets added to existing residential structures with two-wire (ungrounded) electrical outlets must be installed. The amendment is an excerpt from the National Electrical Code (NEC) which requires that replacement outlets either have the protection afforded by a ground fault circuit interrupter, or that two-prong non-grounding type outlets be reinstalled so that the outlet and type of wiring are consistent.

7. **605.4 Branch Circuits in Buildings with More Than One Occupancy.** Section added to IPMC to provide clarification on required residential rental occupant access to circuit breakers (excerpted from NEC). This section helps ensure that each tenant has access to the circuit breakers for their unit so that if a hazardous electrical circuit situation develops, the tenant is able to shut the power off quickly.

8. **605.5 Flexible Cord Uses Not Permitted.** Section 10-2-19 (h) through (k), "Occupant's Responsibility" B.R.C. 1981 added to IPMC this amendment retains the existing housing code prohibition of unsafe extension cord use.

9. **608 Carbon Monoxide Alarms.** New section added to address recently passed state law requiring installation of carbon monoxide alarms in residential rental units.

10. **704 Fire Protection Systems.** Sections 10-2-22 and 23, "Smoke Alarms", B.R.C. 1981 were added to the IPMC so that the proven life/safety benefits of smoke alarms are continued with the IPMC.

11. **705 Portable Fire Extinguishers.** Section 10-2-23 (f), "Buildings Containing Multiple Units," B.R.C. 1981 and ICC International Fire Code requirements were added to the proposed code so that consistency between the IPMC and the Fire Code and local fire department policies are attained. Extinguishers are required in common areas of multifamily dwellings so that the extinguishers are available when needed, but are not as likely to be maintenance issues as when the extinguishers are installed within dwelling units.

12. **Appendix B Rental Housing Inspection and Licensing.** Added to end of the IPMC to provide code requirements for rental housing program administration.

13. **Appendix C Existing Residential Rental Structures Energy Conservation.** Added at the end of the IPMC to incorporate rental housing energy efficiency program administration.

PROPOSED CONTENT TO BE DELETED FROM THE IPMC:

1. **101.2 Scope.** Deleted the non-residential (commercial) reference in order to make the IPMC scope similar to the existing Housing Code.

2. **103.4 Liability.** Deleted the IPMC liability definition and replaced it with Section 10-2-2, International Building Code, B.R.C. 1981 so that the term is defined consistently with the other city adopted building codes.

3. **107.6 Transfer of Ownership.** This section was removed. This is the section of the IPMC which has been the subject of media coverage in Arvada due to the city requiring that current codes apply to existing buildings. The city of Boulder will continue to require compliance with the code under which a structure was built.

4. **111 Means of Appeal.** Deleted most sections of the IPMC on means of appeal and modified IPMC section 111.1, Application for Appeal, to refer appeals to Chapter 1-3, "Quasi-Judicial Hearing" B.R.C. 1981, in order to make the appeals process more manageable for public and staff. Appeals can be heard through other venues besides just an appeals board such as a hearing officer with this reference.

5. **202 Definitions.** Modified definition of Code Official to mean City Manager as detailed in all other city adopted ICC codes. While the City Manager is given the title to be the code official the responsibility is normally delegated through the

Executive Director of Public Works to the Chief Building Official and to other designated employees as necessary.

6. **302.4 Weeds.** Deleted IPMC text and replaced with reference to Chapter 6-2, "Weed Control" B.R.C. 1981, as the existing code sufficiently addresses this item.

7. **302.5 Rodent Harborage.** Deleted IPMC text and replaced with reference to Chapter 6-5, "Rodent Control" B.R.C. 1981, as the existing code sufficiently addresses this item.

8. **302.6 Defacement of Property.** Deleted IPMC text and replaced with reference to Section 5-4-14, Graffiti Prohibited, B.R.C. 1981, as the existing code sufficiently addresses this item.

9. **304.2 Protective Treatments, 304.9 Overhang Extensions and 305.3 Interior Surfaces.** Deleted patch and paint requirements in order to maintain a program scope similar to the existing housing code. The first sentence of 304.9 will be reviewed by staff to be retained in the IPMC due to health and safety concerns.

10. **304.7 Roofs and Drainage.** The gutters and downspouts portion of this section is proposed to be deleted in order to maintain a program scope similar to the existing housing code.

11. **304.11 Chimneys and Towers.** This section is proposed to be deleted since it repeats the information that is in IPMC, 304.1.1, #13, Unsafe Conditions, which better addresses the health and safety concerns.

12. **304.13.1 Glazing and 304.13.2 Openable Windows.** This section will be reviewed by staff to be retained in the IPMC due to health and safety concerns.

13. **304.13 Insect Screens.** After further consideration, this is not proposed to be deleted since openable windows and screens may lead to reduced air conditioning use.

14. **304.16 Basement Hatchways.** This section is in the IPMC to control rodent access to the structure. It is proposed to be deleted since the existing requirements of Chapter 6-5; "Rodent Control" B.R.C. 1981 sufficiently addresses this item.

15. **304.18 Building Security.** This section was proposed to be deleted since other city adopted ICC building codes address safe egress and appropriate latching devices for buildings. However, after considering the importance of building security to the safety of occupants, the ordinance is proposed to be changed to retain this section.

16. **308 Rubbish and Garbage Control.** This section is proposed to be deleted and Chapter 6-3, "Trash, Recyclables and Compostables," B.R.C. 1981, referenced in order to retain existing requirements.

17. **403.2, 403.3, 403.4 and 403.5 Ventilation.** Deleted since the requirements are detailed in the currently city adopted ICC International Mechanical Code.

18. **602.2 Heating Facilities.** Deleted, and replaced with IPMC 602.3 which is amended to match the 68 degree standard heating temperature criteria of the currently adopted ICC International Mechanical Code.

Public Correspondence Received after June 1

From: SmartRegs@bouldercolorado.gov [mailto:SmartRegs@bouldercolorado.gov]
Sent: Thursday, May 27, 2010 1:25 PM
Subject: SmartsRegs Web Comment Form Submission

name: Ken Bonetti
category: Renter
comments:

I support the new energy efficiency for rental properties. They make sense seem fair have a number of hardship provisions and provisions for affordable and historic structures. Energy efficiency in rental housing is long overdue. Even if my rent rises to offset energy savings it's a net positive for renters landlords the public and most significantly the environment.

Having been an owner and landlord in Fort Collins and now renter in Boulder I can categorically state that most landlords can afford the terms set up under the new energy efficiency proposal. For years most rental owners have been extracting profits from renters without a thought to the environment energy security or the public good. This kind of destructive individualistic capitalism has to yield a more enlightened market that accounts for all costs including environmental externalities that heretofore have been ignored.

From: SmartRegs@bouldercolorado.gov [mailto:SmartRegs@bouldercolorado.gov]
Sent: Tuesday, June 01, 2010 9:23 AM
Subject: SmartsRegs Web Comment Form Submission

name: Davide Del Vento
category: Renter
comments:

Attic fans are a great and effective way of cooling the house. Cheap to install, very cheap to operate with negligible energy consumption and thus incredibly "green". I found silly that air conditioning systems deserve a tax credit, but attic fans don't. You should consider changing something in the code.

Thanks and Regards,
Dav

From: SmartRegs@bouldercolorado.gov [mailto:SmartRegs@bouldercolorado.gov]
Sent: Monday, June 07, 2010 2:00 PM
Subject: SmartsRegs Web Comment Form Submission

name: William
category: Landlord
comments:

Rents will go UP and you will LOOSE votes with this forced legislation. Tenants can complain to the city if there is a problem with the unit...isn't that what rental licenses are for in the first place? Remember when the Federal Government bailed out the banks and we(taxpayers customers employees) had higher tax paid more fees and worked harder for less? Well this is what happens when the Govn't gets involved in business. The rich hire an attorney to find loop holes in your legislation and the rich get off with out a scratch and average citizens pay for the whole thing.
Stay out of our business and focus on yours - CLEANING UP OUR CITY. Trash is all over the place as a result of poor enforcement and inadequate containers supplied by Western Disposal. In a city where high winds are such a factor rubish containment is critical! What GOOD is a carbon FOOTPRINT reading when plastic and paper blow through our STREETS and STREAMS??? Seriously!!! Go walk next to a creek or stream in the city and COUNT the pieces of trash that you see!

From: SmartRegs@bouldercolorado.gov [mailto:SmartRegs@bouldercolorado.gov]
Sent: Monday, June 07, 2010 2:24 PM
Subject: SmartsRegs Web Comment Form Submission

name: Emmorette Strand
category: Landlord
comments:

My current rental license is due for renewal on 10/27/2012. I've read Attachment C p.2 10-3-3 Terms of Licenses (a) (2) (d) which says that a license issued before January 2 2011 shall expire on January 3 2011.

Does that mean that the 10/27/12 expiration is no longer valid?

From: SmartRegs@bouldercolorado.gov [mailto:SmartRegs@bouldercolorado.gov]
Sent: Monday, June 21, 2010 9:34 AM
Subject: SmartsRegs Web Comment Form Submission

name: Sean Dolan
category: Renter
comments:

Boulder is an expensive place to live. No question. Rents are high. This plan will put hundreds of people out of reach of rents will inevitably rise due to landlords/residential companies passing the cost onto US.

Boulder's favorite wish is for diversity. This plan is just another reason why you will never have it. Is it the city's intention to ensure ALL working class people will find it impossible to live in the city they work at?
Or will you all be buying us Prius' to go to work in since we will have to live somewhere else.

Attachment C

Phase In Option Decision Matrices

The options proposed are as follows:

Option A (first reading option 2a): Two Rental Cycles–Larger investment at end of the phase in period; Ordinance effective January, 2011

- At the time of the initial rental license application or first renewal, property owners must either:
  - Demonstrate a baseline of 50[1] points on the prescriptive list. In the case that the property's baseline is less than 50 points, the property would need to get the amount of points needed to reach 50, OR
  - Comply with HERS 120 on the performance path
- At the time of the subsequent rental license renewal, property owners must:
  - Achieve the remaining points on the prescriptive list to reach 100.

Option B: 1-year "Implementation Phase", ordinance in effect January, 2012, same phasing as Option A – Two rental license cycles

This option uses the same phase in requirements as Option A, but with an effective date of Jan, 2012. Extending the effective date by one year would extend the implementation of the program to the end of 2019 (two four-year rental license cycles). The first year of the program, 2011, is an implementation phase (memo p. 4-6) with the following timeline:

- January 2011 to December 2011: Implementation Phase
- July to September 2011: Analyze data from Jan, 2010 through Jun, 2011[2]
- October 2011: Return to Council with results and any proposed code changes for implementation date of Jan, 2012

Option C: Date Certain – All properties must comply by December 31, 2018; 3-year "Implementation Phase"

- All properties must comply by 2018
- Implementation phase – 3 years (current funding for Two Techs)
- Staff report to Council with any program refinements in April 2012, based on one-year of program implementation data
- If a property participates in Two Techs and does not reach compliance, rental license can still be renewed so long as it is before 2018. After 2018, full

[1] All of the case study properties' baseline points were at or over 50.

[2] Certain metrics will require one-year post utility bill data which will not be available at this time.

compliance or an approved hardship would need to be achieved to renew a rental license

Option D: Voluntary program, require lease disclosure.

- This option would encourage voluntary compliance through a rental rating system
- A requirement would be added in the City of Boulder mandatory lease disclosures to inform tenants that they can obtain average utility costs for rental properties from Xcel Energy

Decision Matrices

The following tables show the criteria and their associated rankings based on various criteria. A description of the criteria can be found below the tables.

	Primary Criteria				
	Compliance with CAP goals - by 2012	Phased GHG reductions	Phased Investment	Implementation Period	total
Option A	1	3	1	1	6
Option B	1	2	2	2	7
Option C	1	1	3	2	7
Option D	1	unknown	unknown	NA	1

	Secondary Criteria			
	Workforce Capacity	Ease of Implementation (City)	Ease of Implementation (Customer)	total
Option A	1	2	2	5
Option B	2	3	2	7
Option C	3	1	3	7
Option D	3	3	3	9

1= low performance
2 = medium performance
3= high performance

Description of Criteria

The primary criteria are weighted more heavily in staff's decision-making process due to the direct relationship to the goals of the program.

Primary Criteria

1. Compliance with CAP Goals by 2012 – Refers to the amount of GHG reductions, as a percentage of this sector's contribution towards the CAP goal, achieved by 2012 as a result of this program.
   - Low performance = less than 50%
   - Medium performance = 50%-75%

- High performance = greater than 75%

2. Phased GHG reductions – This program has an assumed capacity for achievable GHG reductions once all licensed rental units are upgraded. Most of these options are designed that all buildings will be upgraded by 2018-9. Some options require investments in earlier years, so the options received a ranking according to the following.
   - Low performance = reductions not required until the end of the phase in period
   - Medium performance = reductions required beginning in 2012 and phased in throughout the implementation period
   - High performance = reductions required beginning in 2011 and phased in throughout the implementation period
3. Phased Investment – This criteria refers to the amount of time property owners will have to make investments in their buildings as well as when the investment will be required (towards the beginning versus towards the end of the time period). It is assumed that all options would require at the total investment in building upgrades by 2018-9.
   - Low performance = Some investment required by 2011 - 2015
   - Medium performance = Some investment required by 2012 - 2016
   - High performance = Investment required by 2018

1. Implementation Phase – This criteria refers to the inclusion of an implementation period to include a larger trial with the goal of gathering data to inform any program changes needed before the ordinance effective date.
   - Low performance = Does not include an implementation phase
   - Medium performance = Includes an implementation phase

Secondary Criteria

1. Workforce capacity – Refers to the time frame over which the upgrades will take place and the estimated ability of the workforce to handle to scale of work. The longer phasing options have a higher performance rating.
2. Ease of Implementation (city) – Refers to the city's administrative burden to implement the option. Higher performing options are ones that have more distributed points of interaction with the city.
3. Ease of Implementation (customer) – Refers to the customer's impact financially over time. Options with higher performance have the investment weighted towards the end of the implementation phasing (2018).