

From: Miller, Elizabeth
Sent: Wednesday, November 02, 2011 4:57 PM
To: MacLean, Alex
Subject: For our meetings tomorrow
Attachments: Scan001.PDF; LEGISLATIVE List FOR 2012 SESSION Liz.docx

For our meetings tomorrow, the PDF is a set of material related to the Building Energy Disclosure Working Group (first sheet of which is outline of 'straw proposal' under consideration) and the word document is just a compilation by subject matter of possible legislative action, some arising here and others just gathered in various meetings along the way as ideas others may expect action on. Liz

-----Original Message-----

From: elizabeth.miller@state.vt.us [<mailto:elizabeth.miller@state.vt.us>]
Sent: Wednesday, November 02, 2011 5:54 PM
To: Miller, Elizabeth
Subject: Scan from a Xerox WorkCentre

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Building energy disclosure
Straw proposal
October 27, 2011

- Residential
 - Definition options to consider
 - One option - Single family, 1-4 units MF
 - Another option - “place where someone lives”
 - Issue - Condo issue
 - Issue - Owner vs. rental
 - 2-phase model (asset-based)
 - Phase 1 = low cost/free
 - Timing? point of first showing
 - Phase 2 = low cost/more detailed
 - In home, performed by contractor
 - Time of financing (and refi) – could lead to more retrofits, but potential regulatory issues if mandating adjustments to financing process
 - Make timing more generic ... between offer and closing ...
maybe tied to financing
- Commercial/large residential (5+ units MF) – operational tool, periodic benchmarking
 - EPA Portfolio Mgr
 - Frequency?
 - Owner vs. tenant issue – responsibility
 - Complexities in terms of tools and building types
 - Could be a need to subsidize for certain sectors (e.g., schools)
- Cost issues
 - End user cost – low income subsidy needed
 - Program costs
- Criteria for the tools
 - Process for tool selection
 - Separate the definition of the tool from the building type
- Program phasing
 - Residential vs. commercial?
- Exempt properties and transactions
- Data storage and availability – visibility for appraisers, etc.
- Enforcement
 - Could be comparable to ANR “environmental ticket”
 - Property transfer tax forms can help to track compliance

Building Energy Disclosure: Mission Statement

The task of the Building Energy Working Group is to study whether and how to require disclosure of the energy efficiency of commercial and residential buildings in order to make data on building energy performance visible in the marketplace for real property and inform the choices of those who may purchase or rent such property.

Context and Benefits

Building Energy Disclosure addresses the inability of the current marketplace to assign a value to energy efficiency in a home or building. Although energy-efficiency improvements have a tangible value in terms of energy savings and reduced annual costs, they are currently invisible in the marketplace because there is no widely used, consistent metric or method for quantifying and disclosing this information (as there is with the MPG sticker on a car). The success and fairness of such disclosure will depend in part on universal use of the same simple scoring method for each property.

Building Energy Disclosure will provide the following **direct benefits**:

- **Sellers** will see the value of their investment in energy efficiency improvements captured in the resale value of their buildings, encouraging investment in such improvements;
- Depending upon the timing of the disclosure, **buyers** may be able to consider building energy performance and related operational costs as part of their purchase decision, potentially rolling the cost of any needed improvements into long-term mortgage financing at the time of purchase; and
- **Building Operators** will be able to receive ongoing feedback about energy usage and costs if disclosure is made on an ongoing (e.g., annual) basis.

Building Energy Disclosure will also provide the following **indirect benefits**:

- **Lending institutions** will have a reliable method for considering energy costs as part of their underwriting criteria;
- **Appraisers** will have a tool for incorporating energy performance into building valuation; and
- **Contractors** will see an increase in demand for energy efficiency improvements due to their value in the marketplace, supporting job creation and economic development.

Building Energy Disclosure will also provide the following **statewide benefits**:

- It will help Vermont meet our **statutory goal** to improve the energy efficiency of 25% of our housing stock (or 80,000 homes) by 2020, saving Vermonters money and reducing greenhouse gases.

Building Energy Disclosure Working Group
Minutes for Meeting 1: Friday, August 12, 2011, Room 11, Vermont State House

I) Working Group Members Present:

Rep. Margaret Cheney	Robert Hadden
Sen. Robert Hartwell (by telephone)	Jennifer Hollar
Ami Milne Allen	Kelly Launder
Sarah Carpenter	Emily Levin
Bill Dakin	Eric Phaneuf
Richard Faesy	Steve Post
Jeff Forward	Ward Smyth
Richard Gardner	George Twigg

II) Other Participants:

Aaron Adler (Legislative Counsel)

III) Actions:

Co-chairs elected

- a. Mr. Adler convened the Working Group at 9:30 a.m. and requested nominations for one of the co-chair positions.
- b. Mr. Faesy nominated Rep. Cheney for co-chair. The motion passed unanimously. Rep. Cheney presided over the remainder of the meeting.
- c. Ms. Milne-Allen nominated Mr. Twigg to be co-chair. The motion passed unanimously.

IV) Activities:

- 1) Mr. Adler reviewed the Working Group's charge as contained in Sec. 20d of Act No. 47 of the 2011 session.
- 2) The co-chairs facilitated a discussion of available resources outside of the working group that can be utilized. The following resources were identified:
 - a. Institute for Market Transformation (BuildingRating.Org)
 - b. European Union Heat Check (Bob Hedden will follow up with more information)
 - c. Valuation Resources (Ami Marie-Allen is available for more information)
 - d. Housingdata.org (town level data in VT)
- 3) Presentations:
 - a. *George Twigg*, Efficiency Vermont, on making energy efficiency more visible in the market place and benefits of building energy disclosure.
 - b. *Richard Faesy*, Energy Futures Group, Inc., providing background on building energy rating and technical issues, including: the importance of building energy disclosure; scope, terms, and concepts; the history of ratings, disclosure, and labeling; and Vermont's experience and infrastructure.

- c. *Eric Phaneuf*, Government Affairs Committee, Vermont Association of Realtors, providing a real estate industry perspective on building energy disclosure and whether it should be implemented.
- 4) The co-chairs facilitated a discussion regarding a work plan, staff and communication structure, and future meeting dates.
 - a. **Work Plan**
 - i. Deadline: The deadline for the working group report (with recommendations) is December 15, 2011.
 - ii. Vision statement: The co-chairs will draft a vision statement describing what a building energy disclosure program is supposed to achieve for presentation to and discussion by the Working Group.
 - iii. Sub-Group: Messrs. Faesy, Smyth, and Hedden, and Ms. Levin will form a subgroup to explore and research the different kinds of rating tools, including their cost and accuracy.
 - iv. Research: The Working Group requested that staff research statutes and ordinances in other jurisdictions. The Group also will review reports from the High Meadows Fund and the Regulatory Assistance Project (RAP) and research Massachusetts' program to glean transferable lessons from their experience.
 - v. Task: Set-up Teleconference with appropriate personnel from Austin, TX for the next meeting to review the city's building disclosure ordinance.
 - b. **Staff and Communications Structure:**
 - i. Department of Public Service (DPS)
 - Minutes will be prepared by the DPS (Matthew Walker)
 - ii. Agency of Commerce and Community Development
 - The ACCD will host a working group website
 - c. **Future Meeting Dates:**
 - i. September 19, 2011 (Room 11, State House)
 - ii. October 10, 2011 (DPS, GIGA Conference Room)
 - iii. October 27, 2011 (Room 11, State House)
 - iv. November 17, 2011 (DPS, GIGA Conference Room)

V) Adjournment:

The Working Group adjourned the meeting at approximately 4:00 p.m.

Draft MINUTES
Working Group on Building Energy Disclosure, Meeting #2
Monday, September 19, 2011
9:30am-3:37pm

In Attendance:

Members:	Attending	Absent
Rep. Margaret Cheney	X	
George Twigg	X	
Sen. Robert H. Harwell		X
Ami Milne Allen	X	
Sarah Carpenter	X	
Bill Dakin	X	
Richard Faesy	X	
Jeff Forward	X	
Richard Gardner	X	
Robert Hedden	X	
Jennifer Hollar		X
Kelly Launder		X
Emily Levin	X	
Eric Phaneuf	X	
Steve Post	X	
Ward Smith	X	

Staff:	Attending	Absent
Aaron Adler	X	
Rachel Levin	X	
Matthew Walker	X	

Meeting brought to order at 9:37am with Rep. Margaret Cheney and George Twigg presiding over the meeting.

1. Review and approve 8/12/2011 Meeting Minutes

- a. Robert Hedden motioned to approve the minutes which was seconded by Steve Post. The motion passed unanimously.

2. Presentations

- a. **Gaye Symington, Executive Director, High Meadows Fund:** Ms. Symington presented a review of the reasons for the state's goals for home energy efficiency; why home energy efficiency rating is an important component of meeting those goals; and how disclosure – making energy efficiency more visible and easily accessible – will help stimulate

demand for energy efficiency, which is a lacking component in the current market place for energy efficiency upgrades.

- b. **Riley Allen, Research Manager, Regulatory Assistance Project (RAP) & Ajith Rao, Research Policy Analyst, RAP:** Mr. Allen and Mr. Rao presented the recommendations in RAP's *Affordable Heat: Whole-Building Efficiency Services for Vermont Families and Businesses (June 2011)*. This report provides information on the costs and benefits of making energy efficiency improvements, in the context of the state's goal of substantially improving the energy fitness of 80,000 Vermont homes by 2020.

3. Sub Group Report

- a. **Rating and Audits: Richard Faesy, Emily Levin, Robert Hedden, Ward Smyth:** Sub Group presented a report on the options for residential building energy rating tools and auditing measures that may work well for Vermont, as well as possible core principles to guide choosing a rating tool.
- b. Jeff Forward motioned to charge the rating sub-committee to incorporate the core principles and to make recommendations as they are written. Ami Milne Allen seconded the motion. The motion passed with 12 votes in favor and 1 against.

At 12pm members broke for lunch. The meeting reconvened at 1pm for the afternoon session.

4. Review and Discuss Department of Public Service Draft Energy Plan

- a. Sarah Hoffman, Deputy Commissioner, Vermont Department of Public Service, presented the building energy disclosure recommendations from the 2011 Vermont Comprehensive Energy Plan Public Review Draft. There was a discussion about when and where building energy disclosure might be inserted; how disclosure and required audits might affect the real estate market and sellers; code compliance; and what "residential building" definition would be used in a building energy disclosure program.

5. Statutes and Ordinances from Other Jurisdictions: (This will be discussed in the next meeting.)

6. Review and Discuss Draft Mission Statement

- a. The co-chairs presented the working draft mission statement of the Working Group, which they had been asked to co-author. After brief discussion, they were asked to make revisions and present a revised draft at the next meeting.

7. Aaron Adler, Legislative Council, reviewed the applicable Vermont statutes (Section 266) regarding building energy standards, including the definition of "residential buildings".

8. Two sub-groups were created to focus on specific policy issues, with reports due back at the next full meeting.

- a. Group 1 was created to consider the following issues from legislation that created the working group: To whom should disclosure be made? When should it be made? Who

Draft Minutes of the Working Group on Building Energy Disclosure 9/19/11 Meeting

should pay for it? This group includes members Twigg, Phaneuf, Post, Forward, Gardner, and Milne-Allen.

- b. Group 2 was created to consider the following issues: to which types of properties should disclosure apply? Which, if any, properties should be exempt? This group includes members Cheney, Carpenter, Dakin, Gardner, and Milne-Allen.

Meeting adjourned at 3:37pm.

Draft DISCUSSION NOTES

Working Group on Building Energy Disclosure

Rating Tools Sub-Group

Presentation: *Rating Tools Options (and Possible Core Values for Choosing Rating Tools)*

Monday, September 19, 2011

Note: These notes capture the questions, answers, statements and overall discussion that ensued during the Sub-Group Presentation.

General Discussion:

1. **Are multi-family buildings “residential” or “commercial”?** (See “residential buildings” definition in the Vermont Statutes re: building energy standards handout, that was distributed at the last meeting)
2. **Rating Tools:**
 - Consistency from one state to another is important.
 - Is their one tool that is most useful for VT?
3. **Project Manager:** EPA is updating the current PM and rolling out a new PM that includes multi-family buildings in November '11.
4. **Would an audit be mandatory or voluntary? What type of rating tools would we choose for residential vs. commercial buildings?**
5. **Where is the link between residential and commercial rating (tools?)(buildings?)?**
6. **The point of sale is the most important factor. There are two different points of sale: 1) selling a multi family building as a building owner; and 2) selling a unit in a multi family building as a condo owner (however there would be very little control as a condo owner).**
7. **How many single family residences vs. multi-family buildings are in VT?**
8. **Is the buyer or the seller the end user? The buyer is the ultimate end user.**
9. **Policy decisions would affect the rating tool decision. It would be helpful to have the policies in place to make these decisions.**

Core Principles:

Core Principle #2:

Draft Discussion Notes from the *Rating Tool Options and Core Values for Decision Making Presentation* by the Rating Tools Sub-Group of the Working Group on Building Energy Disclosure (9/19/11)

- Does a single number reflect the operational cost value? It doesn't have to exclude it.
- How much would the seller be required to disclose? How much is the buyer entitled to know?
- The rating system would have to be easily understandable. A single rating number is better.
- The more numbers (e.g. 1-100 v. 1-10) the better. You need a scale as a point of reference.
- Should consider a simple (coarse filter) initial measure when the house goes up for sale, and a more granular (fine) measure – upon the buyer's request - when the potential buyer looks at the house to buy.
- Skepticism of loans for energy efficiency upgrades at the time of sale
- We could incorporate energy efficiency audits with home inspections and HVAC tune ups.

Core Principle #4:

- Any energy efficient upgrade, that takes place after an audit, should focus on high priority areas.
- How do you define a high priority area?
- This is good if the burden is on the purchaser, but detrimental if the burden is on the seller.
- We would need to know the cost of the upgrade to a high priority area in order to make the most of an investment. It needs to be cost effective.
- A standard list of recommendations at first with a simple rating number would allow a lender to more easily consider it.

Core Principle #5: Requiring a rating causes more problems than recommending one.

Core Principle #6: Residential Asset Rating: Everything under 3-units (multi-family buildings) is considered residential. Do we like this?

Core Principle #7: Commercial/Institutional Rating: How do we deal with commercial buildings that are vacant for a long time period?

Core Principle #8: HERS Compatibility: If a rating tool is not compatible with HERS, can there be a way to translate or link it to HERS in some way? This would be challenging.

Core Principle #10: Ability to customize and control for VT

- Would we do something VT specific? Conservation Services Group's suite ties nicely with the Home Performance Score.
- Concern about being locked into a national system that doesn't work for VT
- What standard does energy efficient mortgage use?
- What about national standards that don't factor wood?
- If we use a national tool we can't customize it.

- New England uses oil for heating, while the rest of the country (for the most part) doesn't. Therefore VT would be at a disadvantage using a national rating tool that doesn't account for regional differences. Also, VT has the second oldest housing stock, which further puts it at a disadvantage.
- When Bank of America looks at it, lenders become an important factor in this whole equation. Lenders would want to see the audit report. This would depend on if it's required or recommended, and if it is seller or buyer focused.

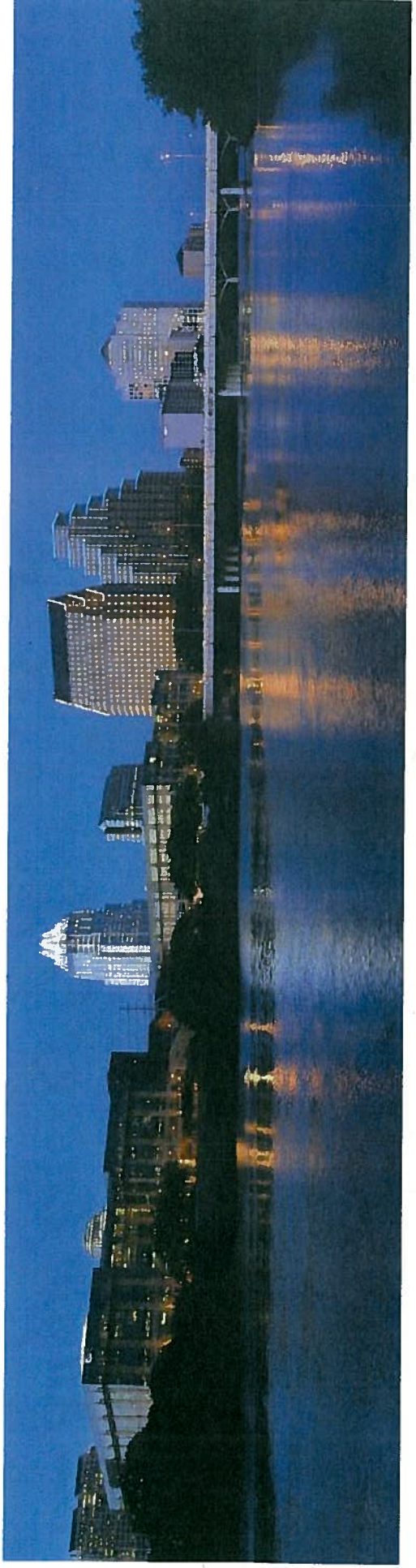
Next steps for the Rating Tools Sub Group:

- How would someone get lending for energy efficiency upgrades? What factors would this program need to have to make lending work? We need to value efficiency. It has to retain its value.
- It would help the appraisal community to attach a number/value to the upgrade.
- Would the appraisal be the point of entry or would the disclosure need to happen before the appraisal?
- The information is lacking on how to value such upgrades.
- What would the score format look like? 1-10? 1-100? A-F? Aligned with DOE? Would we use an absolute score, like an MPG? Or should we cater the rating to account for individual patterns of use? The former.
- Need more information about the actual dollar amount of these rating options.
- Need a better reflection of the Working Group's buy in of the core principles.
- Could a local inspector learn how to do a HERS rating? Yes, 6 days of training.
- Why would the sale be considered the trigger point? Why not during the financing or assessment time? The rating tool could be used at any point. Is there a time when the disclosure would be less adversarial?
- We need to look at more tools and recommend at what point the tool would be used.
- Are we going to recommend disclosure or not? We need to talk about this in an open format.
- We need to look at the tools closely in order to make a recommendation.



Austin's Early Experiences with Conservation Code's Disclosure Laws

State of Vermont - General Assembly
Working Group on Building Energy Disclosure
October 27, 2011



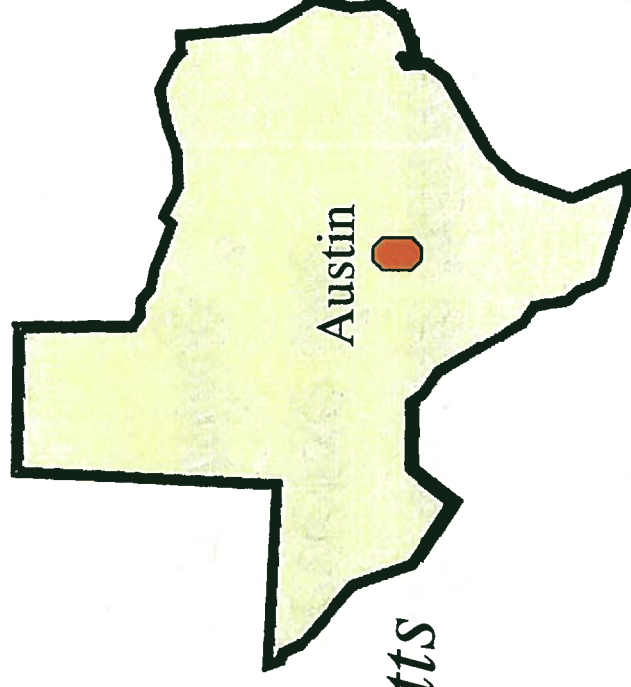
Presentation



- *Austin Energy Profile*
- *Austin Climate Protection Plan*
- *Energy Conservation Audit & Disclosure Ordinance Including April Code Amendments*
- *Lessons Learned*
- *Next Steps*
- *Question & Answers*

Utility Profile

- *Municipally-owned*
- *900,000 population*
- *Area > 400 square miles*
- *Generation 3,000 megawatts
of energy*
- *370,000 electric customers*



Climate Protection Plan



Resolution on February 15, 2007

“Make Austin the leading city in the nation in the effort to reduce and reverse the negative impacts of global warming.”

Includes 5 components to reduce GHG emissions

Climate Protection Plan



- *Municipal Plan* – make all COA facilities, fleets, and operations carbon-neutral by 2020
- *Utility Plan* – 800 MW of energy savings, 30% renewable energy, carbon neutrality on new generation, and set CO₂ cap and reduction plan for utility emissions
- *Homes and Buildings Plan* – Later
- *Community Plan* – reduce green house gas emissions community wide in transportation, land use etc.
- *Go Neutral Plan* – provide mechanisms for businesses and individuals to reduce green house gas emissions

Homes and Buildings



- *All new homes zero net energy capable by 2015*
- *All new non-residential construction 75% more efficient by 2015*
- *Disclosure of historic energy use and facilitate energy improvements in existing homes and buildings*
- *Enhanced incentives for Green Building and Carbon Neutral rating systems*

Timeline



- *February 15, 2007* *Austin Climate Protection Plan approved by Austin City Council*
- *December 13, 2007* *Austin City Council appointed City Manager to form a Task Force*
- *November 6, 2008* *Ordinance No.20081106-047 approved by Austin City Council*
- *June 1, 2009* *City Code takes effect for single family homes, multifamily & commercial*
- *April 21, 2011* *Proposed Code Amendments approved*
Ordinance No. 20110421-002
- *October 5, 2011* *Promulgate Update of Rules*

Stakeholders



- *City Resource Management Commission*
- *City Electric Utility Commission*
- *Original Energy Efficiency Task Force Members*
- *Austin Board of REALTORS®*
- *Austin Apartment Association*
- *BOMA and affiliate members*
- *Residential and Commercial Building Inspectors*
- *Home Performance Contractors*
- *HERS Companies*
- *Title Companies*
- *Lending Companies*
- *Real Estate Company Groups*
- *Property Management Groups*
- *NEW-ECAD Auditors*

Building Segments



Effective June 1, 2009

- Residential Facilities (*4 or fewer*
units for multi-family)
 - *Energy audit performed before the time of sale*
(the date of the recording of the deed).
- Multi-Family Facilities (*5 or more*)
 - *Energy audit performed before June 1st, 2011 on all bldgs.*
- Within the Austin City Limits, and Receiving Electric Service from Austin Electric Utility

Code Amendment



Residential Homes Segment

- “Time of Sale”

Stakeholders Groups: ABoR, ECAD Auditors,

AE Home Performance Companies

City Code Amendments included in all Stakeholder Group Outreach to encourage home sellers & buyers energy efficiency conversations earlier in the home sales

transaction. (although original language didn't require ^{pull off} end of sale) - decided that practically needed by time bldg. was "in option" for purchase.
* Discussed having at time of listing, but sellers wanted "escape clause" to not have to do it (pull off ^{marker}).

Code Amendment



Multifamily Property Segment

* have very MF rebate
program - \$2 mil
success

• Energy Utilization Index (EUI)

Stakeholder Groups:

*Austin Tenants Council,
Austin Apartment Association
Texas ROSE*

City Code Amendments for MF High EUI Usage
Property Article engaging stakeholder group in
development of Rule's disclosure requirements.

Code Amendment



Condominiums

- Building Type vs. Type of Ownership
 - Owners with 5 or more units at the same property location will follow multifamily model.
 - Individual Owners to follow residential model.

Improvements Created



- Auditors certification and training

- RESNET & BPI Affiliates: *- can use either for certification - also provide training on city code/forms*

- Private Training Centers
 - Community College
 - Grant Funded Programs

- ECAD database

- Educational Campaigns

- Website, marketing collateral, advertising, press briefings, real estate group presentations, and 311/AE call center



Residential Homes



1st Year Statistics

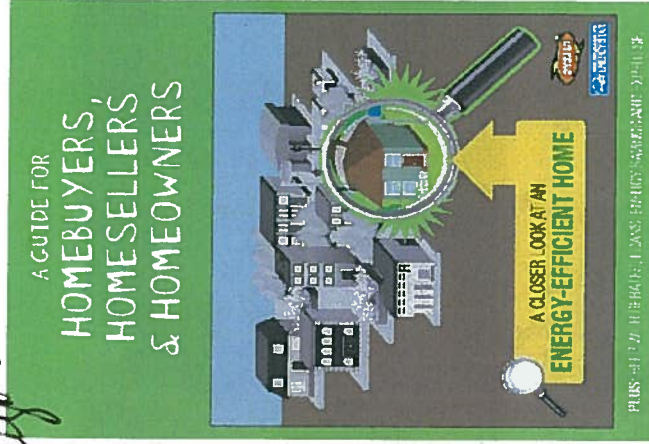
- Austin home sales: 9,549 - *some are exempt, audit. some are voluntary through their program*
- 4,862 ECAD audits received *that didn't go through*

— Energy audit: \$200 - \$300 cost of audit

- Weatherization
- Duct Leakage
- Attic Insulation
- Window Shading

- Identifying opportunities for upgrading HVAC systems, home appliance, Austin Water qualified conservation measures

* Doesn't include scope of work, gives recommendations; general range of costs to implement



** Don't do power door*

Expected Savings

- 4,862 Audited Homes
- Potential annual savings:
 - 7,788,000 kWh/yr
 - \$723,650 per year
 - 3.9 MW saved
 - Equivalent to powering 650 homes
 - Emissions:
 - 4,897 Tons of CO₂/yr



AUSTIN ENERGY'S CLEAN ENERGY ACCELERATOR

Market Transformation



City Council Resolution Goals

Residential Homes

1st Year: 25% of homes sold receive improvements ^{equal} before or within 12 months after the sale.

- Home sales and retrofits tracking over 12%
- Barrier: Disclosure is too late in the transaction; recommend changing; 6 months remaining

2nd Year: 45% of homes sold receive improvements before or within 12 months after the sale.

- Home sales and retrofits tracking at over 7%

Residential Audit Results



- *Ducts Leak almost twice the code standard 10% or less*
- *Older homes need 10 inches of insulation*
- *98% of audited homes received at least one energy efficiency recommendation:*
 - *Over 60% need in-home weatherization*
 - *Over 50% need solar shading*
 - *Over 60% need HVAC air duct system renovation and sealing*
 - *Over 70% need additional attic insulation*

Multifamily Properties



- *Requires energy audit performed no later than June 1, 2011*
- *Multifamily property profile*
 - *Number of properties: 1,411*
 - *Number of properties needing audit: 1,196*



Multifamily Properties

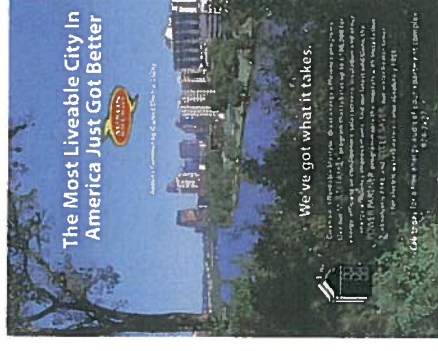


- *City Land Development Code:*
 - *Residential Zoning Districts (SF 1-6 & MF 1-6)*
- *Building Codes By Building Types:*
 - *One and Two Family, Buildings 3 or less and Buildings 4 or more*
 - *Impact of other Building Codes*
- *Utility Rate Structures*
 - *Demand, Non-Demand or Residential Rates*

Multifamily Properties

Audit Approach

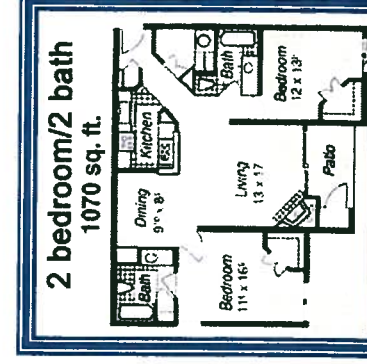
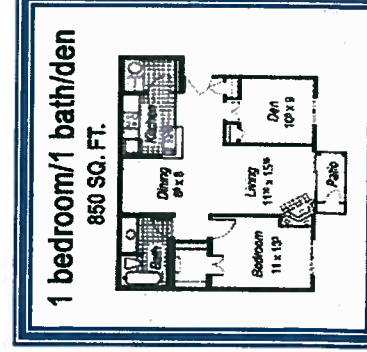
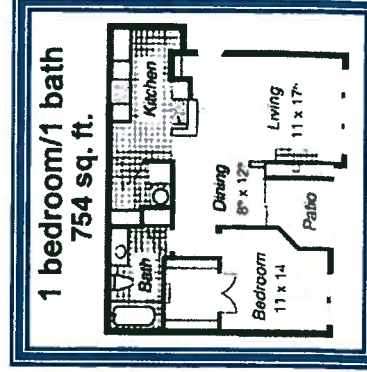
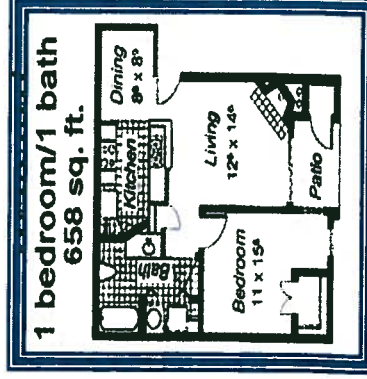
- *ECAD enhanced rebates to encourage participation*
 - *Audit data points similar to rebate data collection*
- *ECAD auditors training*
 - *Duct remediation/sealing*
 - *Attic insulation / Roof Coating*
 - *Window shading*
 - *Lighting*
 - *HVAC*
 - *Demand response: water heater timers, energymiser or thermostats*



Multifamily Properties



- *High usage properties must implement energy efficiency improvements*
- *Energy utilization index (EUI) benchmark*
 - *Six categories were created:*
 - *All Electric or Gas and Electric built prior to 1985*
 - *All Electric or Gas and Electric built between 1985 and 2001*
 - *All Electric or Gas and Electric built between 2001 and*



Lessons Learned



- *ECAD energy audit not onerous*
- *Outreach and awareness campaign - critical*
- *Audit form technical and difficult to interpret*
- *Point of violation difficult to enforcement residential*
- *Not all properties are clearly addressed*
- *Need more comprehensive database*

Next Steps

ECAD Market Transformation:

- *Implement new web-based tool*
 - *Exact implementation dependent on CC&B “go-live”*
- *Marketing campaign for Q4 of 2011*
- *Outreach Educational Workshops Planned for November*
with:
 - *ABoR & AAA*
- *Pecan Street Project - Doris Duke Foundation Grant*
 - *Collaboration research study for energy efficiency upgrades*
- *Workforce Development*





Contact Information:

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Thank You!

POSSIBLE LEGISLATIVE ISSUES FOR 2012 SESSION

This list is a conglomeration of ideas from the DPS and things we have heard about that may be raised in this session:

- I. Comprehensive Energy Plan Related Legislation
 1. RPS
 2. Total Energy Standard
 3. Whole building energy efficiency working group
 4. Expand standard offer. Issues for consideration include: a) what legislation would be needed to include market mechanisms; b) a percent efficiency standard?
 5. State energy implementation strategies
 6. Any legislation necessary to carry forward on-bill financing
 7. A green bank
 8. Solar ready building legislation?
 9. Unlimited net metering (doesn't go toward 4% cap) for all net metering under 5 kw.
 10. Registration process expanded from 5 kw to 10 kw for all solar net metering on a roof.
 11. Possibly exempt any state or federal gov net metering installation from the 500 Mw cap. Currently, the National Guard installation is exempted. Why not others?
 12. Interconnection costs of projects (including district heating) to be passed on to ratepayers if the project passes some sort of cost-effectiveness screening tool.
 13. Thermal efficiency measures. Issues for consideration include: a) customer access; b) funding; c) program design; d) education
 14. Synchronize timing of the various energy plans. One possibility is to have the CEP and 20 year electric plan due every 6 years with interim status reports in the DPS biennial. For the status report that takes place two years before the end of the sixth year, that status report would also outline the public engagement process for the CEP and 20 year plan due two years hence.
- II. Telephone/Broadband/SmartGrid
 1. Connect VT and VTA looking for a funding source. USF?
 2. User fee for fund (on mobile devices)
 3. Privacy issue – public records exemption for the munis.
 4. EDP distribution – allocation to program needs to be increased. Not enough to cover need. Increase to \$100,000. Also clean up language where it refers to “telecommunications equipment” to be broader to encompass more of what the deaf and hard of hearing community wants access to for communications. See § 218a(e).
- III. Energy
 - Renewable:**
 1. Revisit the definition of renewable energy under § 8002(2)(A)?

2. Possible sales tax exemption on biomass equipment? Sarah to talk with tax about revenue effect to state.
3. Address sustainable funding for CEDF?

Electric:

4. VELCO bill?
5. Change 30 V.S.A 218(e) from a low income definition to 185% of poverty from 150% of the fed poverty guideline. (“Notwithstanding any other provisions of this section, the board, on its own motion or upon petition of any person, may issue an order approving a rate schedule, tariff, agreement, contract, or settlement that provides reduced rates for low income electric utility consumers better to assure affordability. For the purposes of this subsection, "low income electric utility consumer" means a customer who has a household income at or below 150 percent of the current federal poverty level. When considering whether to approve a rate schedule, tariff, agreement, contract, or settlement for low income electric utility consumers, the board shall take into account the potential impact on, and cost-shifting to, other utility customers.”) This would make it consistent with other low-income qualified programs and thus decrease administrative resources necessary to implement the low income program for electric bills.
6. We may want to work with ANR to explore whether it makes sense to delete 10 V.S.A. § 1424a(d) from 248(b)(5) because they are largely redundant with the Act 250 criteria in 248(b)(5).
7. Harmonize the definitions of “least cost” to include whole economic benefit when the PSB reviews a project. See 218c, 202, 202a, and 248. Might be as simple as adding a “as defined in §218c” to the statutes that don’t have a clear or consistent definition.

Thermal:

8. Revise language from CBES statutes that says that commissioner of DPS shall amend and update the CBES every three years. This text should be changed to allow for some latitude to consider current conditions or the cycle of changes at IECC. The statute now says that the “The commissioner shall ensure that appropriate revisions are made promptly after the issuance of updated standards for commercial construction under the international energy conservation code (IECC) IECC or ASHRAE/ANSI/IESNA standard 90.1, whichever provides the greatest level of energy savings.” Perhaps we omit the “three year” language and add on to the language quoted above that revisions are made at least every five years.”
9. For CBES we should lengthen the time between adoption and effective date. The 3 months between adoption and effective dates is too short because for bigger projects plans and specs and budgets have been set, and could need to be significantly revised if construction has not yet commenced. Some states set an effective date upon adoption, while also allowing for a period of time, when either the old or new code can be used. Other option is to just lengthen the time between adoption and the effective date.

Transportation:

10. Transportation fee or rebate of some sort depending on efficiency of vehicle or miles driven? Or at this point collect information on mileage reported when yearly inspection occurs?

Misc.:

11. Municipal sewer and water to belong to the DigSafe system? **Louise** to look at.
12. Board jurisdiction over customer owned natural gas pipe and facilities?
13. Confidentiality for fuel survey – only compilation info public not the individual calls to dealers. Possibly just make it on same terms as federal statute. **Sarah** to call Matt Cota.