

FLORIDA ENERGY CODE WORKGROUP

REPORT TO THE FLORIDA BUILDING COMMISSION



SEPTEMBER 3, 2009

TAMPA, FLORIDA

FACILITATION, MEETING AND PROCESS DESIGN BY



CONSENSUS CENTER

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FLORIDA BUILDING COMMISSION

FLORIDA ENERGY CODE WORKGROUP REPORT

OVERVIEW

Governor Crist directed the Commission to increase building energy efficiency requirements by 15% in his July 2007 Executive Order 127. In addition, the 2008 Legislature through passage of The Energy Act of 2008 created a suite of energy related assignments for the Building Commission. The Energy Code provisions were a major focus of the Commission during 2008, and the Commission increased the thermal efficiency requirements for the Florida Energy Code by 15% and integrated the enhanced requirements into the 2007 Florida Building Code. The Commission reviewed energy related code amendments adopted in the 2007 Florida Building Code Update to determine their cumulative level of increased efficiency, and adopted additional amendments required to achieve Governor Crist's directive of 15% increased efficiency. During 2008 the Energy Code was amended by administrative rule and then the revised Energy Code was adopted into the 2007 Florida Building Code during the 2008 "glitch" cycle concurrently with the March 1, 2009 effective date for the 2007 Florida Building Code. Working with stakeholders using consensus-building workgroups, the Commission was able to achieve the 15% increase in efficiency in buildings and implement code amendments that are efficient, consistent, understandable and enforceable for the full spectrum of Energy Code users. The Commission's Energy Code Workgroup will develop recommendations regarding energy conservation measures for increasing efficiency requirements in the 2010 FBC by 20% as required by law.

MEMBERS AND REPRESENTATION

Raul L. Rodriguez, AIA, Chair of the Florida Building Commission, has made the following appointments to the Florida Energy Code Workgroup. Members are charged with representing their stakeholder group's interests, and working with other interest groups to develop consensus package(s) of recommendations for submittal to the Commission.

2010 Florida Energy Code Workgroup

Steve Bassett, Rusty Carroll, Bob Cochell, Phillip Fairey, Dale Greiner, Jeff Gross, Jeff Householder, Bill Kent, Tom Larson, Larry Maxwell, Donny Pittman, Paul Savage, Drew Smith, Jeff Stone, and Rob Vickers.

Meeting Schedule

February 3, 2009: Melbourne; March 5, 2009: Cape Canaveral; March 27, 2009: Tampa; April 30, 2009: Tallahassee; May 28, 2009: Tallahassee; September 3, 2009: Gainesville; October 14, 2009 Tampa.

REPORT OF THE SEPTEMBER 3, 2009 MEETING

Opening and Meeting Attendance

The meeting started at 10:00 AM, and the following Workgroup members were present: Rusty Carroll, Bob Cochell, Phillip Fairey, Dale Greiner, Jeff Gross, Jeff Householder, Tom Larson, Dino Muggeo for Bill Kent, Larry Maxwell, Donny Pittman, Drew Smith, and Jeff Stone.

Members Absent:

Steve Bassett, Paul Savage, and Rob Vickers.

DCA Staff Present

Rick Dixon, Mo Madani, Jim Richmond, and Ann Stanton.

FSEC Staff Present

Sherri Shields, Rob Vieira, and Nick Waters.

Meeting Facilitation

The meeting was facilitated by Jeff Blair from the FCRC Consensus Center at Florida State University. Information at: <http://consensus.fsu.edu/>



Project Webpage

Information on the project, including agenda packets, meeting reports, and related documents may be found in downloadable formats at the project webpage below:

<http://consensus.fsu.edu/FBC/2010-Florida-Energy-Code.html>

Agenda Review and Approval

The Workgroup voted unanimously, 12 - 0 in favor, to approve the agenda as presented including the following objectives:

- ✓ To Approve Regular Procedural Topics (Agenda and Summary Report)
- ✓ To Identify Issues and Options Regarding Project Tasks and Sub-Tasks
- ✓ To Discuss and Evaluate Level of Acceptability of Proposed Options
- ✓ To Consider Public Comment
- ✓ To Identify Needed Next Steps and Agenda Items for Next Meeting

May 28, 2009 Facilitator's Summary Report Approval

Jeff Blair, Commission Facilitator, asked if any members had corrections or additions to the May 28, 2009 Report, and none were offered.

The Workgroup voted unanimously, 12 - 0 in favor, to approve the May 28, 2009 Facilitator's Summary Report as presented.

Develop Strategic Plan for Energy Standards Revision (Task 46, Pursuant to 553.9061 F.S.)

The Workgroup was asked to develop recommendations for a strategic plan regarding how the Commission can meet the required incremental increases in energy efficiency culminating with a 50% increase in efficiency relative to the 2007 FEC by 2019.

The overall project strategy for the Workgroup is to evaluate the following Tasks:

1. Evaluate how to provide for future flexibility to implement efficiency increases for the broadest range of housing prices.
 - Identify compliance methods used in current national model and Florida energy codes.
 - Identify compliance method characteristics that provide for future flexibility of efficiency increases.
2. Compare characteristics of FEECBC to IECC for flexibility to achieve higher efficiency standards.
 - Create a matrix of IECC and FEECBC characteristics.
 - Evaluate for flexibility to implement future efficiency increases.
3. Develop strategic plan for FBC energy standards compliance methods.
 - Select compliance method characteristics that provide the maximum potential to implement the 553.9061 mandated efficiency increases to form the strategic plan.
4. Integrate FEECBC and IECC to implement the strategic plan for the 2010 FBC.
 - Develop a draft of the energy standards chapters for the 2010 FBC.

The objectives for evaluating the Strategic Plan for the September 3, 2009 meeting are as follows:

- Review the directives of the 2008 law.
- Review the plan set out for this task.
- Receive the report on the pending federal energy bill.
- Ranking exercise to develop agreement on the criteria the strategic plan must meet.
- Receive information from FSEC on its analysis of how to implement the schedule for building efficiency standard increases.
- Review the compliance methods characteristics chart developed at the last meeting.
- Go through an exercise to rank each compliance method according to the criteria established for the strategic plan and to select the methods appropriate to meeting the objective of the plans.

Review of Directives of Law

Rick Dixon, FBC Executive Director, reviewed the directives of law and answered member's questions. The directives are as follows:

1. Prescribed schedule of increases in the energy performance of buildings subject to the Florida Energy Efficiency Code for Building Construction.
2. Identification within code support and compliance documentation the specific building options and elements available to meet the energy performance goals.
3. Adopt by rule and implement a cost-effectiveness test for proposed increases in energy efficiency.
4. Select latest edition of IECC and modify to maintain the efficiencies of the Florida Energy Efficiency Code for Building Construction.

The full text of the law is available as Attachment 3 of this Report.

(Attachment 3—Directives of Law)

Review Task Plan

At the May 2009 meeting the WG reviewed and agreed on characteristics of different compliance methods. Once the Workgroup evaluates and agrees on a set of criteria that the Strategic Plan should meet, they will be asked to evaluate the compliance methods relative to the criteria to determine which methodology best achieves the required increases in energy efficiency. The matrix is provided as Attachment 7 of the May 28, 2009 Report, and Attachment 6 of this Report.

(Attachment 6—Compliance Comparison Matrix)

Federal Energy Bill Report

Rick Dixon, FBC Executive Director, reviewed the building code standards requirements of the HR 2454 and answered member's questions. The Summary Report is available as Attachment 4 of this Report.

(Attachment 4—Analysis of Code Impacts of H.R. 2454)

Strategic Plan Criteria Ranking Exercise Results

Overview

Rick explained that the Workgroup is working on Task 46 to present a Strategic Plan to the Florida Building Commission, via the Energy Technical Advisory Committee.

Considerations:

- 1) Scheduled increase in overall stringency of the energy code.
- 2) Include new and emerging technologies.
- 3) Include measure of cost-effectiveness (rulemaking concluded).

Start with the IECC, maintain FL specific. FL “2007” code almost the same as the 2006 IECC. IECC '09 does not give credit for installing more efficient HVAC and water heating equipment. Referenced historical 50% increase in code stringency: 1985-1992. US Congress HB 2454 could require an increase of 30% over 2006 IECC. There are aggressive impacts from increasing code stringencies. There are levels of diminishing returns when requiring higher levels of efficiency in a building. There is a potential for problems with humidity control in Florida homes. More than energy is involved here; issues need to be balanced to achieve design goals.

The Workgroup was asked to evaluate a starter list of possible criteria that the strategic plan should meet. Once agreement is reached on the criteria the Workgroup will evaluate the compliance methods relative to the criteria to determine which method best achieves the prescribed energy increases. Following public comment, discussion and a ranking of proposed criteria the Workgroup reached consensus on the following criteria for the Strategic Plan:

1. The Strategic Plan must implement s.553.9061(1), F.S., scheduled increases in the Code's energy performance standard.
2. The Strategic plan must consider cost effectiveness of the incremental changes in efficiency required by the Code.
3. The Strategic Plan must implement s.553.73(6)(a), F.S., selection of the IECC as a foundation code and its modification to maintain the efficiencies of the Florida Energy Efficiency Code for Building Construction, s.553.901, F.S..

4. The Strategic Plan must implement s.553.9061(2), F.S., requiring the Code to recognize including energy efficiency performance options and elements including but not limited to: Solar water heating; Energy efficient appliances; Energy efficient windows, doors and skylights; Low solar absorption roofs/cool roofs; Enhanced ceiling and wall insulation; Reduced leak duct systems; Programmable thermostats; and Energy efficient lighting systems.
5. The Strategic Plan should identify compliance methods with the best potential for complying with the schedule for increasing efficiency standards.
6. The Strategic Plan should be adaptable for all potential mandated efficiency performance standard increase schedule.
7. The Strategic Plan should allow flexibility for builders to choose different ways to adapt their construction.
8. The Strategic Plan should provide flexibility appropriate to product innovation.
9. The Strategic Plan should provide for easy measurement and demonstration of compliance with the energy efficiency increases required by s.553.9061, F.S..
10. The Strategic Plan should require that compliance meets an equivalent energy standard regardless of the compliance method.

The Results of the Criteria Ranking Exercise and relevant comments and discussion are included as Attachment 5 of this Report.

(Attachment 5—Criteria Evaluation Exercise Results)

FSEC Analysis For Implementing The Schedule For Building Efficiency Standard Increases

Philip Fairey, FSEC Deputy Director, provided the Workgroup with a PowerPoint presentation titled: "Getting to 50 What Will It Take", and answered member's questions. Following the presentation there was an opportunity for questions and answers and a discussion. The public was included in the discussions and provided opportunities to comment. The complete presentation may be viewed at the project webpage as follows: <http://consensus.fsu.edu/FBC/2010-Florida-Energy-Code.html>

General Public Comment

Members of the public were invited to provide the Workgroup with comments. In addition, members of the public spoke on each of the substantive discussion issues before the Workgroup throughout the meeting.

None were provided.

Member's Comments and Issues

Workgroup members were invited to provide comments, or identify any issues or agenda items for the next meeting.

None were provided.

Review of Workgroup Delivery and Meeting Schedule

The Workgroup will be meeting as follows during FY 2008/2009:

February 3, 2009: Melbourne, March 5, 2009: Cape Canaveral, March 27, 2009: Tampa, April 30, 2009: Tallahassee, May 28, 2009: Tallahassee, September 3, 2009: Gainesville; October 14, 2009: Tampa.

Following Workgroup meetings will focus on identifying and evaluating options regarding the additional project subtasks as follows: humidity and moisture control problems, specific building options to achieve energy efficiency improvements, and strategy to achieve statutory requirements for energy efficiency increases. Subsequent meetings will continue to focus on the project subtasks.

The delivery schedule is as follows:

Schedule for Sub-Task 27—Cost Effectiveness Test

Appoint Workgroup	12/9/08
Work Group/TAC meetings to develop recommendation	2/09, 3/09
Rule Development Workshop	4/09
Rule Adoption Hearing	6/09
Rule Effective	7/09

Schedule for Other Sub-Tasks (26, 29, 39, 42, 45, and 46)

Workgroup/TAC considers options and develops consensus plan	3/09, 4/09, 5/09, 6/09, 8/09
Recommendations to Commission	10/09
Proposals submitted for 2010 FBC Update	12/09

Next Steps

Members agreed that they would like to have a presentation by DOE on the IECC and proposals for enhancing the IECC. In addition, members requested some commercial building analysis, similar to the residential analysis.

Adjournment

The Workgroup voted unanimously, 12 – 0 in favor, to adjourn at ~ 4:00 PM.

ATTACHMENT 1

MEETING EVALUATION RESULTS

September 3, 2009—Tampa, Florida

Average rank using a 0 to 10 scale, where 0 means totally disagree and 10 means totally agree.

1. Please assess the overall meeting.

- 9.36 The background information was very useful.
- 8.45 The agenda packet was very useful.
- 9.00 The objectives for the meeting were stated at the outset.
- 7.91 Overall, the objectives of the meeting were fully achieved.

2. Do you agree that each of the following meeting objectives was achieved?

- 9.09 Discussion of Energy Efficiency Standards and Planning for Compliance with Statutory Requirements.
- 8.45 Identification of Issues and Options Regarding Project Subtasks.
- 8.36 Discussion and Evaluation of Options Regarding Project Tasks and Sub-Tasks.
- 8.18 Identification of Next Steps.

3. Please tell us how well the Facilitator helped the participants engage in the meeting.

- 9.00 The members followed the direction of the Facilitator.
- 9.09 The Facilitator made sure the concerns of all members were heard.
- 8.91 The Facilitator helped us arrange our time well.
- 8.36 Participant input was documented accurately.

4. Please tell us your level of satisfaction with the meeting?

- 8.73 Overall, I am very satisfied with the meeting.
- 8.91 I was very satisfied with the services provided by the Facilitator.
- 9.40 I am satisfied with the outcome of the meeting.

5. Please tell us how well the next steps were communicated?

- 8.27 I know what the next steps following this meeting will be.
- 8.18 I know who is responsible for the next steps.

6. What did you like best about the meeting?

- Phillip's presentation.
- Phil's presentation.
- Discussion.
- Phillip's presentation was excellent.
- Phillip's presentation.

7. How could the meeting have been improved?

- Move faster, pace is very slow.
- Better audio system.
- Some planning for lunch.
- Having Phillip's presentation before meeting.

8. Member Evaluation Comments.

- Very nice facility.

Public Written Comments

None were provided.

ATTACHMENT 2
MEETING ATTENDANCE

Public Meeting Attendance	
NAME	REPRESENTATION
Dan Haywood	Florida Power and Light
Larry Nelson	Florida Power and Light
Lorraine Ross	Intech Consulting
Jim Larsen	Cardinal
Douglas Harvey	Building Officials Assoc. of FL (BOAF)
Arlen Z. Stewart	AZS Consulting Inc.
Sunny Lazar	David Weekley Homes
Ernie MacFerran	School District of Hillsborough County
Jack Glenn	FHBA
Michael Lafevre	CWS
Dick Wilhelm	FMA
Bill Simpson	Progress Energy
Maury Pinto	PGT Industries
Doug Buck	Florida Home Builders Association (FHBA)
Justin Gote	Affiliated Engineers
Mike Rickabaugh	RCID
Ralph W. Jones III	RCID
Val Leitnec	ICBE
David Rovell-Rixx	Alachua County, FL
Kari Hebrank	FBMA, FSPA, JELD-WEN
Jameson Ward	Self

ATTACHMENT 3
RELEVANT SECTIONS FROM LAW

553.9061 Scheduled increases in thermal efficiency standards.--

(1) The purpose of this section is to establish a schedule of increases in the energy performance of buildings subject to the Florida Energy Efficiency Code for Building Construction. The Florida Building Commission shall:

(a) Include the necessary provisions by the 2010 edition of the Florida Energy Efficiency Code for Building Construction to increase the energy performance of new buildings by at least 20 percent as compared to the energy efficiency provisions of the 2007 Florida Building Code adopted October 31, 2007.

(b) Increase energy efficiency requirements by the 2013 edition of the Florida Energy Efficiency Code for Building Construction by at least 30 percent as compared to the energy efficiency provisions of the 2007 Florida Building Code adopted October 31, 2007.

(c) Increase energy efficiency requirements by the 2016 edition of the Florida Energy Efficiency Code for Building Construction by at least 40 percent as compared to the energy efficiency provisions of the 2007 Florida Building Code adopted October 31, 2007.

(d) Increase energy efficiency requirements by the 2019 edition of the Florida Energy Efficiency Code for Building Construction by at least 50 percent as compared to the energy efficiency provisions of the 2007 Florida Building Code adopted October 31, 2007.

(2) The Florida Building Commission shall identify within code support and compliance documentation the specific building options and elements available to meet the energy performance goals established in subsection (1). Energy efficiency performance options and elements include, but are not limited to:

- (a) Solar water heating.
- (b) Energy-efficient appliances.
- (c) Energy-efficient windows, doors, and skylights.
- (d) Low solar-absorption roofs, also known as "cool roofs."
- (e) Enhanced ceiling and wall insulation.
- (f) Reduced-leak duct systems.
- (g) Programmable thermostats.

(h) Energy-efficient lighting systems.

(3) The Florida Building Commission shall, prior to implementing the goals established in subsection (1), adopt by rule and implement a cost-effectiveness test for proposed increases in energy efficiency. The cost-effectiveness test shall measure cost-effectiveness and shall ensure that energy efficiency increases result in a positive net financial impact.

553.73 Florida Building Code.--

(1)(a) The commission shall adopt, by rule pursuant to ss. [120.536\(1\)](#) and [120.54](#), the Florida Building Code which shall contain or incorporate by reference all laws and rules which pertain to and govern the design, construction, erection, alteration, modification, repair, and demolition of public and private buildings, structures, and facilities and enforcement of such laws and rules, except as otherwise provided in this section.

(6)(a) The commission, by rule adopted pursuant to ss. [120.536\(1\)](#) and [120.54](#), shall update the Florida Building Code every 3 years. When updating the Florida Building Code, the commission shall select the most current version of the International Building Code, the International Fuel Gas Code, the International Mechanical Code, the International Plumbing Code, and the International Residential Code, all of which are adopted by the International Code Council, and the National Electrical Code, which is adopted by the National Fire Protection Association, to form the foundation codes of the updated Florida Building Code, if the version has been adopted by the applicable model code entity and made available to the public at least 6 months prior to its selection by the commission. The commission shall select the most current version of the International Energy Conservation Code (IECC) as a foundation code; however, the IECC shall be modified by the commission to maintain the efficiencies of the Florida Energy Efficiency Code for Building Construction adopted and amended pursuant to s. [553.901](#).

ATTACHMENT 4
ANALYSIS OF CODE IMPACTS OF H.R. 2454

Summary:

As with the AARA, the ACESA requires states to adopt and enforce energy efficiency building codes. At least two sets of funds and or allotments designated for states require certification of compliance to national building selected and updated by the US DOE. Also, the targets for increased energy efficiency requirements for the national code established by the bill are more aggressive than those established by Florida law.

Titles of Interest:

- Title II, Subtitles A & B
- Sec. 201 Building Codes
- Sec. 204 Building Performance Labeling Program
- Sec. 211 Lighting Efficiency Standards
- Sec. 212 Other Appliance Efficiency Standards
- Sec. 213 Appliance Efficiency Determinations and Procedures
- Sec. 215 WaterSource
- Sec. 218 Certified Stoves Program
- Sec. 219 Energy Star Standards

Energy Code Required Improvements:

- Improvement referenced to –
 - Residential 2006 IECC
 - Commercial 2004 ASHRAE Std 90.1
- Schedule of improvement **targets** –

Effective date of the bill	30%
2017 Res/2018 Com	50%
2020 Res/2021 Com	5% additional
2023 Res/2024 Com	5% additional
2026 Res/2027 Com	5% additional
2029 Res/2030 Com	5% additional
2033 and beyond	DOE to set target
- Building code complying with target within 1 year of the target date
- DOE can modify target lower or higher based on cost effectiveness.
- Cost effectiveness to consider externalities, e.g. climate change and peak energy demand.
- If there is a national consensus code that meets the target improvement at the 1 year from target time point then it becomes the national building code.
- DOE to support development of consensus codes and standards.
- For residential code DOE to consider:
ASHRAE stds

IECC

RESNET data on measures to qualify for tax credits

DOE Build America Program

Energy Star Program data

New Building Institute data

State and local standards for cool roof

- For commercial code DOE to consider:

ASHRAE codes

IECC

Core Performance Criteria of NBI

Commercial High-Performance Green Building Office of DOE data

Energy Star

RESNET data

Cool roofs of state & local codes

- If DOE selects a consensus model code it must:
 - Notify state and local entities
 - Provide distribution on internet and to state and local entities at no cost
 - Contract with an entity to provide training
 - Can give grants to the entity
 - Provide input to the model code process for how to achieve the next target
- States shall:
 - Within 1 year – certify equivalence of state code or adoption of national code to DOE (for states that adopt the energy code).
 - DOE has 90 days to accept or reject certification.
 - Within 2 years states must certify it has achieved compliance based on 90 percent and measures adopted by DOE or equivalent.

Incentives to states:

Incentive for compliance –

- For states with certifications accepted by DOE will get state allowances “pursuant to 782(g)(2) of the “Clean Air Act””
 - 1/5 of total in equal amount allotted to all states
 - 2/5 based on state energy use
 - 2/5 based on construction starts/new building permitsAmount not used due to states not in compliance will be distributed to state in compliance
- In states where locals enforce the code a minimum of 50% of the state’s allowance must go to the local governments based on population.
- DOE is provided \$100,000,000 annually for supporting this section.

Penalty for non-compliance –

- State does not get its Emission Allowances
- State does not get \$ in excess of its share of the \$125,000,000 annual allocation to DOE under sec. 323 of the bill. Penalty schedule –
Additional (beyond base allowance) reduced by:
 - 25% year 1
 - 50% year 2
 - 75% year 3
 - 100% year 4 and later

State Emission Allowances –

2012 – 2050

Deposited into the state’s SEED account

- 1/3 Equal amounts to states
- 1/3 Prorated by population
- 1/3 Prorated by state energy use

Use of Allowances –

- (2) (A) Building Code
- (B) Energy Efficiency Manufactured Home Program
- (C) Building Energy Performance Labeling Program
- (D) Smart Grid
- (E) Transportation Planning
- (F) Low income community Energy Efficiency Programs
- (G) Other cost effective Energy Efficiency programs for end use customers
- (3). REEP – Retrofit Energy and Environmental Performance
- (4) Capital grants, tax credits, production incentive loans, loan guarantees, forgivable loans, and interest buy-down

Schedule for allowances –

- 15% for (2)
- 12.5% for pass through to local governments
- 5% for (3)
- 20% for (4)
- 47.5% for (2)(A)-(F), (3) and (4)

ATTACHMENT 5
CRITERIA EVALUATION EXERCISE RESULTS

ACCEPTABILITY RANKING EXERCISE

This list of options is a preliminary list and is not meant to be an exhaustive list. All of the options regarding cost effectiveness test were extracted the FSEC Report: “Energy Efficiency Cost-Effectiveness Tests for Residential Code Update Process”, and the balance were proposed by members during meetings. During the meeting(s) members are asked to propose any additional option(s) they would like the Workgroup to evaluate, and to develop and rank options, and following discussions and refinements, may be asked to do additional rankings of the options if requested by a Workgroup member. Members should be prepared to offer specific refinements to address their reservations. The following scale will be utilized for the ranking exercises:

Acceptability Ranking Scale	<i>4 = acceptable, I agree</i>	<i>3 = acceptable, I agree with minor reservations</i>	<i>2 = not acceptable, I don't agree unless major reservations addressed</i>	<i>1 = not acceptable</i>
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WORKGROUP’S OPTIONS EVALUATION PROCESS OVERVIEW

For each key topical issue area the following format will be used:

- * Overview of the option will be provided by proponent,
- * Questions and answers on the option,
- * General discussion with Workgroup members on the topic/issue,
- * Refinements proposed to existing options (to enhance option’s acceptability),
- * Public input on option or sweet of options,
- * Acceptability ranking of options (new, or any a Workgroup member proposes to be re-evaluated),
- * Information needs identified.

For each of the key topical issue areas, member’s will be asked to identify a range of potential options for the Workgroup to consider. Issues and Options will be organized to address the tasks assigned by the Florida Building Commission and the Florida Legislature. A preliminary list of options will be drafted and the Workgroup may discuss and add any additional relevant options they deem appropriate. When available, staff will provide information from data collections, research studies, and other pertinent sources to the Workgroup. Members and staff should request any information they feel necessary for evaluating an issue, option or range of options. Once ranked by the Workgroup, options achieving a consensus level of support will be listed within relevant key topical issue areas. Options with 75% or greater number of 4’s and 3’s in proportion to 2’s and 1’s shall be considered consensus options/recommendations.

Key to Speakers in Report (those providing comments):

Workgroup Members:

Rusty Carroll: RC
Phillip Fairey: PF
Dale Greiner: DG
Jeff Gross: JG
Jeff Householder: JH
Tom Larson: TL
Bill Kent: BK
Larry Maxwell: LM
Donny Pittman: DP
Drew Smith: DS
Jeff Stone: JS
Rob Vickers: RV

Staff:

Rick Dixon: RD
Mo Madani: MM
Ann Stanton: AnSt
Jim Richmond: JR

September 3, 2009

General public comments:

D. Wilhelm: How does this process address relationship with Florida Energy and Climate Commission?

RD: This plan is to execute directives of Legislature.

J. Glenn (responding to Dixon presentation): The federal legislation relative to cap and trade may not pass. Don't worry about federal legislation.

Public: Is there any consideration for life-cycle cost analysis?

RD: Not at present.

PF: It does include Net Positive Economic Benefit. Presently no externalities.

ESTABLISHING STRATEGIC PLAN CRITERIA RANKING EXERCISE

1a. The Strategic Plan must implement s.553.9061(1), F.S., scheduled increases in the Code's energy performance standard.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

Member's Comments and Reservations (September 3 2009):

JH: Cost-effectiveness is concern.

1b. Strategic plan must consider cost effectiveness of the incremental changes in efficiency required by the code.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

LRoss: Current law talks about options, doesn't treat as mandatory requirements.

JB: We should add this to issues to discuss later when we get into the details.

2. The Strategic Plan must implement s.553.73(6)(a), F.S., selection of the IECC as a foundation code and its modification to maintain the efficiencies of the Florida Energy Efficiency Code for Building Construction, s.553.901, F.S.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	10	2	0	0

Member's Comments and Reservations (September 3 2009):

J Stone: How gain objectives? Assume not look backwards.

RD: Efficiency increases in energy code legislation. May be things that FL addresses that IECC does not.

D Greiner: Can we simplify that we use IECC as base and add FL specific.

JS: Yes.

PF: Reservation: 2009 IECC is in some ways in conflict with FL goals of increasing stringency, i.e. not allowing equipment efficiencies to increase efficiency toward FL goals. We don't control IECC.

T Larson: Looking to us to determine FL needs, should guide IECC to be more accommodating to FL needs.

D Buck: Debate is because any number of industries don't understand why FL is on own issues when IECC and backup materials exist. Propose there be a dual track so industry has a choice.

L Ross: FL impact on IECC. Always has been a FL delegation: Dale Greiner, Met Kopchinski.

Question on tradeoff issue. Good reasons why IECC committee went that way. Why not go with IECC only.

L Maxwell: Would like to change vote to 3. At one time felt strongly should support IECC, changed opinion.

K Hebrink: Legislative directive is to move to IECC.

3. The Strategic Plan must implement s.553.9061(2), F.S., requiring the Code recognize include energy efficiency performance options and elements including but not limited to:

- Solar water heating
- Energy efficient appliances
- Energy efficient windows, doors and skylights
- Low solar absorption roofs/cool roofs
- Enhanced ceiling and wall insulation
- Reduced leak duct systems
- Programmable thermostats
- Energy efficient lighting systems

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

Member’s Comments and Reservations (September 3 2009):

None were offered.

4. The Strategic Plan should identify compliance methods with the best potential for complying with the schedule for increasing efficiency standards.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

Member’s Comments and Reservations (September 3 2009):

None were offered.

5. The Strategic Plan should be adaptable for all potential mandated efficiency performance standard increase schedule.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	10	2	0	0
<i>Revised 9/3/09</i>	12	0	0	0

Member’s Comments and Reservations (September 3 2009):

L Ross: Current law talks about options, doesn’t treat as mandatory requirements.

JB: This can also be added to list for later discussion.

J Stone: Washington efforts nebulous.

B Cochell: Ditto.

J Richmond: Should be adaptable for all events.

6. The Strategic Plan should allow flexibility for builders to choose different ways to adapt their construction.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

Member's Comments and Reservations (September 3 2009):

None were offered.

7. The Strategic Plan should provide flexibility appropriate to product innovation.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12	0	0	0

Member's Comments and Reservations (September 3 2009):

None were offered.

8. The Strategic Plan should provide for easy measurement and demonstration of compliance with the energy efficiency increases required by s.553.9061, F.S.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	12			

Member's Comments and Reservations (September 3 2009):

TL: What about auditing performance, how will that be evaluated in later years? Compliance of code or building?

RD: Increases required by statute.

9. The Strategic Plan should require that the various compliance methods used in the Florida Building Code energy requirements meet the same minimum energy efficiency performance standard.

This option was not ranked. A revised statement was proposed and ranked (below).

Member's Comments and Reservations (September 3 2009):

PF: Equal to what?

RD: Same compliance level for different compliance methods. E.g. IECC % glass unlimited. FL has historically established a budget based on glass to floor area ratio.

TL: Leading to common minimum?

RD: Historically, yes.

J Glenn: Shouldn't they meet the same minimum standard? Code should establish criteria to make compliance methods the same.

DG: Minimum compliance irrespective of method.

A Stewart: Would like to remove "standard"; instead refer to "level".

9. Revised: The Strategic Plan should require that compliance meets equivalent energy standard regardless of the compliance method.

	<i>4=acceptable</i>	<i>3= minor reservations</i>	<i>2=major reservations</i>	<i>1= not acceptable</i>
<i>Initial Ranking 9/3/09</i>	11	1	0	0

Member's Comments and Reservations (September 3 2009):

Key: Trying to say that energy efficiency of piece of equipment meets standard?

J Glenn: No.

TL: Trying to say that regardless of compliance method, should achieve the same energy level, energy budget at "X".

PF: Require that compliance meets a minimum energy performance budget.

JG: Use of “performance” implies driving toward performance method.

K Hebrink: Why need this? Problem with budget.

L Ross: Should meet code regardless of method.

MM: Want minimum standard regardless of method.

PF: What FL has traditionally done is create a prescriptive pathway from its performance analysis.

As a result, there was a minimum standard because performance was a father to the prescriptive requirements. IECC has historically put prescriptive and performance methods together separately.

Resulting, IECC has often been internally inconsistent among compliance methods, tried to have common minimum. FL requirements have been consistent regardless of compliance method.

Trying to distinguish how prescriptive method is developed.

LM: Work is going increasingly toward multiple energy sources, if using carbon neutral sources, do you have to meet minimum code criteria.

RD: Area hasn't been approached. Current law says meet code if using nonrenewable energy.

JS: Reservation: Still think voters confused.

ATTACHMENT 6
MATRIX OF CHARACTERISTICS—IECC/FEECBC

(a) MATRIX OF CONCEPTUAL CHARACTERISTICS OF THE IECC AND THE FLORIDA ENERGY CODE

RESIDENTIAL ≤ 3 STORIES

Characteristic	IECC 09				FEECBC '09 Supplement		
	Prescriptive	Component Performance	Performance		Prescriptive		Performance
				'09		'09*	
Building Envelope							
Credit for reduced glass area?	no	no		no		no	yes
Penalty for increasing glass area?	no	partial		yes		yes	yes
Restricts glass area?	no	partial		no		yes	no
Credit for potential wall insulation levels?	no	partial		yes		no	yes
Credit for potential ceiling insulation levels?	no	partial		yes		no	yes
Credit for potential floor insulation level?	no	partial		yes		no	yes
Credit for air infiltration testing	'06 = no '09 = yes	partial		yes		no	yes
Mechanical Systems							
Credit for air conditioner efficiency?	no	no		no		no	yes
Credit for heating system efficiency?	no	no		no		no	yes
Credit for alternative water heating?	no	no		no		no	yes

Characteristic	IECC 09				FEECBC '09 Supplement		
	Prescriptive	Component Performance	Performance		Prescriptive		Performance
				'09		'09*	
Credit for tested ducts?	'06 = no '09 = yes	no		yes		yes	yes
Penalty for untested ducts?	yes	yes		yes		no	possible
Lighting Systems							
Considers alternative lighting?	'06 = no '09 = yes	yes		no		no	no
General							
Credit for solar, passive systems?	no	no		yes		no	yes
Equivalent stringency prescriptive vs. performance?	no	no		no		yes	yes
Equivalent stringency for different fuel types?	yes	yes		no		yes	yes

*Criteria are somewhat different for renovations, equipment changeouts and small additions.

COMMERCIAL and RESIDENTIAL > 3 STORIES

CHARACTERISTIC	IECC '09			FEECBC '09 Supplement	
	Prescriptive IECC 502, 503, 504, 505/ ASHRAE 90.1 5.5	Bldg Envelope Tradeoff ASHRAE 90.1 5.6	Performance IECC 506 / ASHRAE 90.1 Chapter 11	Prescriptive**	Performance ASHRAE 90.1 Chapter 11
Building Envelope					
Credit for reduced glass area?	No	No	No	---	No
Penalty for increase glass area?	No	Yes	Yes	---	Yes
Restricts glass area?	Yes	No	No	---	No
Credit for potential wall insulation levels?	No	Yes	Yes	---	Yes
Credit for potential ceiling insulation levels?	No	Yes	Yes	---	Yes
Credit for potential floor insulation level?	No	Yes	Yes	---	Yes
Credit for air infiltration testing?	No	No	No	---	No
Mechanical Systems					
Credit for air conditioner efficiency?	No	No	Yes	---	Yes
Credit for heating system efficiency?	No	No	Yes	---	Yes
Credit for alternative water heating?	No	No	No	---	No
Credit for tested ducts?	No	No	No	---	No
Penalty for untested ducts?	No	No	No	---	No

Lighting Systems					
Credit for alternative lighting?	No	No	Yes	---	Yes
General					
Credit for solar, passive systems?	No	No	No	---	No
Equivalent stringency prescriptive vs. performance?	No	Yes	No	---	No
Equivalent stringency for different fuel types?	Yes	No	Yes	---	Yes

****There are prescriptive criteria for shell buildings at first permit, renovations, equipment and lighting change-outs, and changes of occupancy type**