

# **Utah Energy Code Stakeholder Process**

**May 2009**

**Prepared by**

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## **Introduction**

The Utah State Energy Program performed a stakeholder process to determine desired training and resources needed to support the 2009 International Energy Conservation Code. A copy of the invitation is in Appendix A. The process consisted of gathering verbal and written feedback from three stakeholder meetings, along with electronic feedback. The stakeholder meetings were located in St. George, Sandy, and Salt Lake City on February 17<sup>th</sup>, 24<sup>th</sup>, and 25<sup>th</sup>, respectfully.

Stakeholder meetings had the following format:

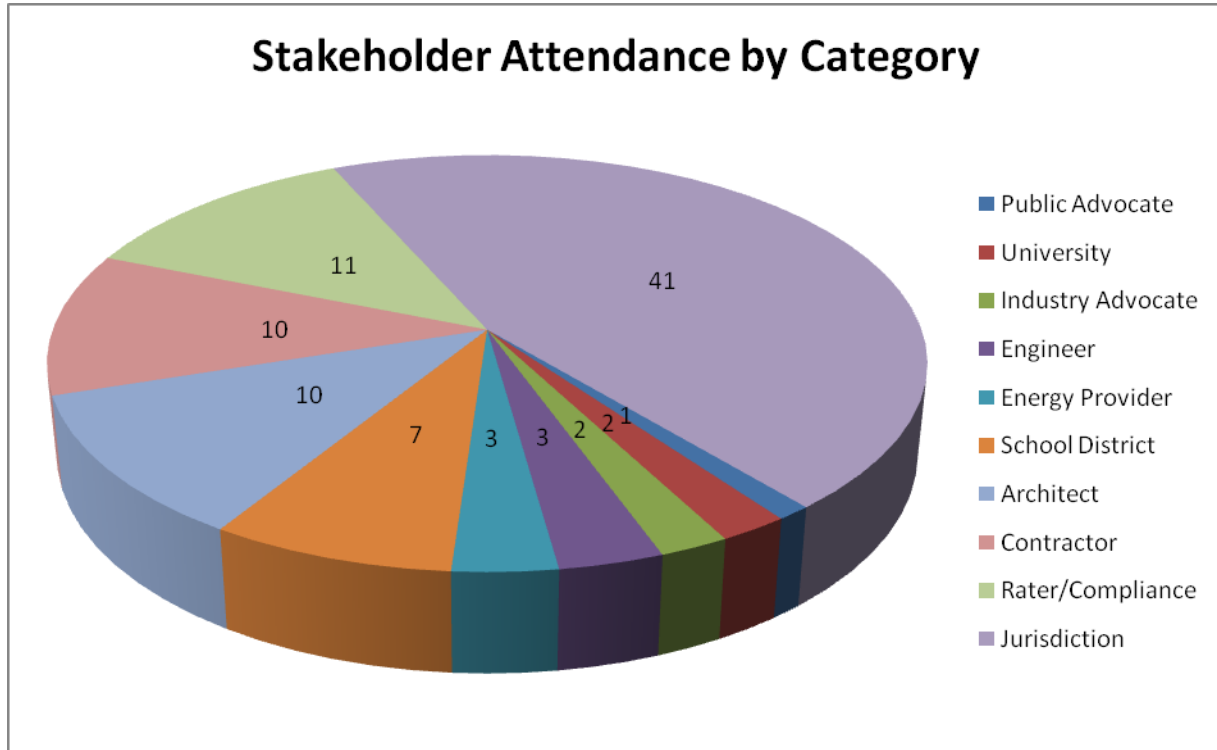
- Goals of the stakeholder meetings and process
- Brief overview of the legislation regarding the 2009 IECC
- Overview of changes in residential and commercial provisions of the 2009 IECC
- Stakeholder Discussion on Training, Tools and Resources needed to support implementation of the 2009 IECC
- Wrap-up – Where do we go from here

William Chatwin, Utah State Energy Program Energy Efficiency Coordinator, covered goals and legislation while Eric Makela of Britt/Makela Group, Inc covered residential and commercial provisions and led the stakeholder discussions.

In total, 90 stakeholders attended the meetings. Attendees were divided into 10 categories: Architect, Contractor, Energy Provider, Engineer, Industry Advocate, Jurisdiction, Public Advocate, Rater/Compliance, School District, and University.

Stakeholder attendance by category is displayed in figure 1. Meeting specific graphs are provided in Appendix B.

Figure 1.



### Verbal Feedback

Verbal feedback during the St George stakeholder meeting was recorded by William Chatwin. Verbal feedback during the Sandy and Salt Lake City meetings was recorded by both Clint Holm and William Chatwin. The notes were then transcribed, compiled, and codified. Results are listed as meeting specific major points, summaries, and similarities and differences.

## **St. George**

### Major Points

#### IECC 2009 Opportunities

- Financial savings due to decreased energy consumption leading to infrastructure savings

#### IECC 2009 Issues

- Lack of sealed combustion appliances prescription negates air barrier improvements

#### Barriers to Enforcement

- Variations in jurisdictional enforcement and contractor compliance

#### Paths to Enforcement

- Continuing professional education

#### Training Opportunities

- Conditioned space clarification and duct blaster testing

#### Training Issues

- Attendance is not mandatory

### Summary

Stakeholders in St. George identified infrastructure and homeowner savings due to lower energy loads as opportunities of the new Code. They had few questions addressing specifics of the code, focusing on calculation of wall R values. Code issues discussed included prohibition on prescribing 90% furnaces combined with halting of trade-offs will drive low-efficiency furnace usage, and the lack of sealed combustion requirements negates the air barrier requirements.

St. George stakeholders focused on barriers to implementation, singling out lack of jurisdictional enforcement, varied compliance among contractors, and general lack of political will to enforce the code as significant barriers in Code enforcement. Unreliable

certifications and ratings along with the inability of the General Contractor to supervise all work were discussed. The stakeholders identified education as the primary method for overcoming these obstacles, identifying a need to educate construction professionals on a continuing basis along with a desire to educate politicians. The desire for a single source for ongoing education was identified.

In regards to 2009 IECC training opportunities, stakeholders in St. George indicated additional training in conditioned space requirements and duct blaster testing is required, and would like to see illustrated handbooks produced, giving examples of correct and incorrect procedures. The difficulty in getting contractors to attend was identified, with mandatory licensing requiring training put forth as a solution.

Participants' suggestions for training include on-site training with both General Contractors, and Sub Contractors in attendance, inclusion of architects and home designers in training, and instruction in window orientation. Materials manufacturers, building supply distributors, homebuilder associations, and energy testers were identified as additional resources for training and information dissemination.

The importance of educating the homebuyer to create demand side pressure was noted.

### Similarities and Differences

The St. George stakeholder group was the smallest, 12 individuals from four categories, and lacked contractor representation. Like the Sandy and Salt Lake groups, they identified the lack of 90% furnaces and sealed combustion mechanical prescription as a significant issue. All three groups viewed lack of enforcement and variations in compliance between contractors as significant barriers, and all agreed training, particularly continuing education linked to licensure, as the best way for overcoming these barriers. All three groups identified availability of a "how-to" manual with illustrative examples of correct and incorrect procedures as necessary.

Unlike the other two groups, St. George stakeholders had few questions about IECC2009 design changes. In particular they did not address insulation and air barrier requirements, nor did they discuss the 500-sq-ft roof exemption. Also excluded from discussion were questions about pool cover and CFL requirements. Geographic considerations prevented any interest in snow melt applications. The St. George group, along with the Sandy group, had no questions about commercial IECC2009 changes.

## **Sandy**

### Major Points

#### IECC 2009 Questions

- Insulation and air barrier requirements

#### IECC 2009 Issues

- Lack of mechanical ventilation requirements

#### Barriers to Enforcement

- Variations in jurisdictional enforcement and contractor compliance

#### Paths to Enforcement

- Third party certifications

#### Training Opportunities

- Conditioned space clarification and duct blaster testing

#### Training Issues

- Attendance is not mandatory

### Summary

The Sandy stakeholder meeting focused on questions about and issues with IECC 2009. Questions revolved around clarification of insulation and air barrier requirements and conditioned versus unconditioned space. Details of the high efficiency lighting prescription were sought, including whether the 50% requirement was by bulb or fixture. A major issue discussed was the lack of mechanical ventilation requirements, as improved air barriers are lowering exchange rates to near minimum levels for non vented homes. Other issues included the lack of sealed combustion requirements for mechanical systems and the lack of sensors on rooftop snowmelt systems.

Sandy stakeholders noted lack of jurisdictional enforcement and varied compliance among contractors as significant barriers in Code enforcement. Third party certification

was viewed as the primary method for overcoming these obstacles, particularly in regards to HVAC systems.

In regards to IECC2009 training opportunities, stakeholders in Sandy indicated additional training in conditioned space requirements and duct blaster testing is required, and would like to see illustrated handbooks produced, giving examples of correct and incorrect procedures. It was pointed out any handbooks should be available in multiple languages. The lack of mandatory licensing requiring training was noted as a training issue.

Participants' suggestions for training include on-site training with Inspectors, General Contractors, and Sub Contractors in attendance. The possibility of classes at chapter meetings was also introduced.

### Similarities and Differences

The Sandy stakeholder group was the largest and most diverse, with 41 people from 9 categories. Like the St. George and Salt Lake groups, they identified the lack of 90% furnaces and sealed combustion mechanical prescription as a significant issue. All three groups viewed lack of enforcement and variations in compliance between contractors as significant barriers, and all agreed training, particularly continuing education linked to licensure, as the best way for overcoming these barriers. All three groups identified availability of a "how-to" manual with illustrative examples of correct and incorrect procedures as necessary.

Sandy and Salt Lake City stakeholders did not elaborate on IECC 2009 opportunities, unlike St. George participants, nor did they question the commercial requirements.

## **Salt Lake City**

### Major Points

#### IECC 2009 Residential Questions

- Insulation and air barrier requirements

#### IECC 2009 Residential Issues

- Lack of mechanical ventilation requirements

#### IECC 2009 Commercial Questions

- Occupancy change requirements

#### IECC 2009 Commercial Issues

- Lack of HVAC commissioning requirements

#### Barriers to Enforcement

- Variations in jurisdictional enforcement

#### Paths to Enforcement

- Third party certifications

#### Training Opportunities

- Conditioned space clarification and duct blaster testing

#### Training Issues

- Attendance is not mandatory

### Summary

The Salt Lake City stakeholder meeting also focused on questions about and issues with IECC 2009. Questions again revolved around clarification of insulation and air barrier requirements and conditioned versus unconditioned space. Roof insulation requirements were questioned, including the 500-sq-ft exemption and application to remodeled existing structures. Lack of mechanical ventilation requirements was

discussed due to lowering exchange rates as a result of air barrier improvements. Other issues included the lack of sealed combustion requirements for mechanical systems and the placement of sensors in snowmelt systems.

Regarding commercial questions, stakeholders requested clarification on occupancy change driven compliance, daylighting requirements, and lighting calculations. Bypassing of daylighting by shade devices and lack of HVAC commissioning were identified as IECC 2009 commercial issues.

Salt Lake City stakeholders noted lack of jurisdictional enforcement as the key barrier in Code enforcement. Third party certification was viewed as the primary method for overcoming these obstacles, particularly in regards to HVAC systems.

In regards to IECC2009 training opportunities, stakeholders in Salt Lake City indicated additional training in conditioned space requirements and duct blaster testing is required, and would like to see illustrated handbooks produced, giving examples of correct and incorrect procedures. The lack of mandatory licensing requiring training, particularly in regards to HVAC, was noted as a training issue.

Participants' suggestions for training include on-site training with Inspectors, General Contractors, and Sub Contractors in attendance.

### Similarities and Differences

The Salt Lake City stakeholder group was similar in size and composition to Sandy, with 37 people from 8 categories. Like the St. George and Sandy groups, they identified the lack of 90% furnaces and sealed combustion mechanical prescription as a significant issue. All three groups viewed lack of enforcement and variations in compliance between contractors as significant barriers, and all agreed training, particularly continuing education linked to licensure, as the best way for overcoming these barriers. All three groups identified availability of a "how-to" manual with illustrative examples of correct and incorrect procedures as necessary.

Salt Lake City stakeholders question the IECC 2009 commercial requirements and discussed several issues. They were also the only group to address the roof insulation and exemption prescriptions.

## **Written Feedback**

### Introduction

Each participant was provided a copy of the Energy Code Stakeholder Meeting feedback form (Appendix C), which contained a meeting agenda and questions soliciting feedback on opportunities, barriers, training opportunities, additional resources, and concerns/questions in regards to IECC 2009.

A total of 26 Stakeholder Feedback Forms were completed by meeting attendees, 3 from St. George, 11 from Sandy, and 12 from Salt Lake City. This compares favorably with the total attendance of 90, yielding feedback percentages of 25% for St. George, 27% for Sandy, and 32% for Salt Lake City. Overall feedback rate was 29%.

### Major Points

#### Opportunities

- Financial savings for both homeowners and communities from decreased energy loads

#### Barriers

- Education
- Enforcement

#### Training Opportunities

- On-site duct blaster, blower door, and conditioned space familiarization
- Insulation installer training for contractors

#### Additional Resources

- Guides with pictorial of correct and incorrect procedures
- Public Awareness / Consumer Education

#### Concerns / Questions

- Homes are close to requiring mechanical ventilation

## Summary

Written feedback was in line with verbal feedback, providing reinforcement of the main points. Financial and environmental savings were identified as IECC 2009 implementation opportunities. It was also noted the lack of envelope tradeoffs may have the effect of further standardizing construction and raising quality. Lack of jurisdictional enforcement, varied compliance among contractors, and general lack of political will to enforce the code continued as significant barriers in Code enforcement, with licensure requiring continuing training and education for stakeholders and consumers identified as pathways to enforcement. Duct blaster, blower door, conditioned space, and insulation installation training were identified as the primary training opportunities, with the desire for on-site training highlighted. Development of a guide illustrating correct and incorrect procedures was suggested, along with digital and on-line versions. Lastly, the low levels of air exchange were noted, with a suggestion for prescribing mechanical ventilation. The remaining feedback consisted of related topics or detailed suggestions for implementation, such as lack of belief in conservation goals and EEBA “Houses that Work” sessions.

## **Electronic Feedback**

### Introduction

Attendees of the three stakeholder meetings were provided an e-mail address, [UtahEnergyCode2009@gmail.com](mailto:UtahEnergyCode2009@gmail.com), to send additional comments, with a deadline of 6 March. Reminder e-mails were sent on March 2<sup>nd</sup> and March 5<sup>th</sup> soliciting feedback from the stakeholder meeting attendees and attendees of previous Utah State Energy Program meetings and training sessions. In total, over 200 individuals, companies, and organizations/associations were solicited for input. Eight responses were received, of which four contained feedback.

### Feedback

- Illustrate correct and incorrect practices in training
- Require engineering design on residential HVAC
- Provide a class on commercial/industrial lighting
- Set up a state-wide information resource network

### Summary

The electronic feedback, although sparse, continued to reinforce the main points of education and certification.

## **Conclusion**

Participants in the State Energy Program feedback process viewed financial benefits to both the homeowner and the municipalities due to reduced electrical loads as the primary opportunity for IECC 2009, with environmental savings a secondary opportunity. Lack of jurisdictional enforcement and varied compliance among contractors are viewed as significant barriers to Code enforcement, while third party certification and education are viewed as the primary methods for overcoming these obstacles.

It was agreed that duct blaster, blower door, and insulation installation training were the primary training opportunities, with a general preference for on-site training. The conditioned space requirement for HVAC ducting was questioned extensively and could use further clarification. Development of a multi-lingual guide illustrating correct and incorrect procedures was suggested, along with digital and on-line versions.

## Appendix A – Stakeholder Meeting Invitation



# Energy Code Stakeholder Meetings

**February 17, 2009 (Tues)      St. George      3-5 PM**  
Water & Energy Bldg, 811 E Red Hills Parkway

**February 24, 2009 (Tues)      Sandy      3-5 PM**  
SLCC Miller Campus, 9750 S 300W, MFEC 203

**February 25, 2009 (Wed)      Salt Lake City      8-10 AM**  
Rocky Mtn Power, 1569 W North Temple, Auditorium

The Utah State Energy Program (SEP) is requesting input from all interested and affected members of the building, design and enforcement industry on the type of support that will be required to successfully implement the 2009 IECC. This is an opportunity to hear about the changes in advance, and then suggest ideas for training, tools and resources to address the new provisions of the energy code that go into effect in Utah January 1, 2010. Don't be left out in the snow, get in the KNOW!

The agenda for the meetings will be as followed:

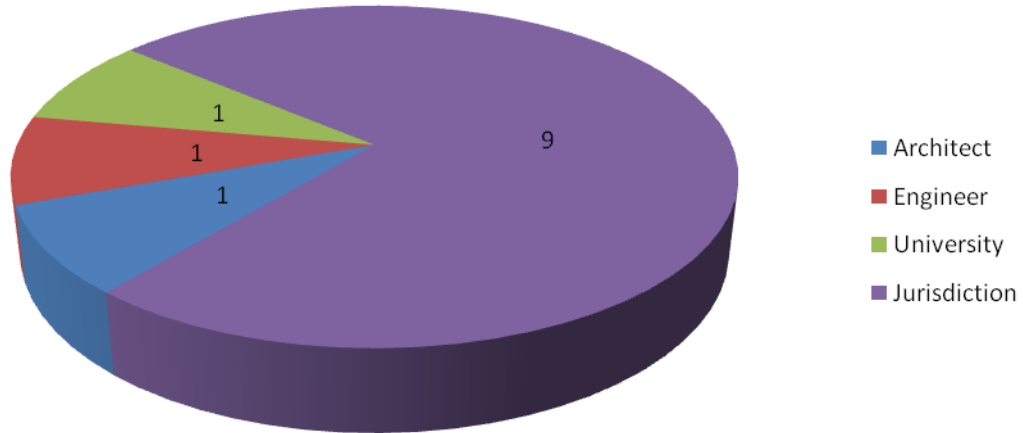
- Goals of the Stakeholder Meetings and Process
- Brief Overview of the Legislation that Requires the Adoption of the 2009 IECC
- Overview of the changes to the residential provisions of the 2009 IECC
- Stakeholder Discussion on Training, Tools and Resources that will be needed to implement the 2009 IECC
- Overview of the Changes to the Commercial Provisions of the 2009 IECC
- Stakeholder Discussion on Training, Tools and Resources that will be needed to implement the 2009 IECC
- Wrap-up – Where do we go from here

The SEP will review all of the information provided at the Stakeholder Meetings and determine the best course of action to support the implementation of the IECC. A Webinar will be scheduled following the meetings to present the findings and the programming that will be implemented as a result of the input.

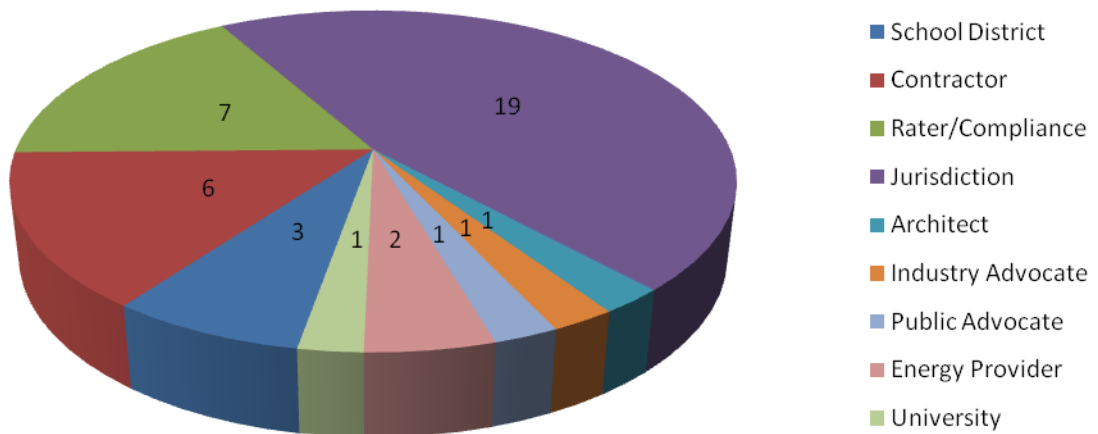
**Please, RSVP for any of the three state-wide sessions:**  
**Denise Beaudoin, Partner Coordinator, 801-538-4798, dbeaudoin@utah.gov**

## Appendix B – Stakeholder Meeting Attendance

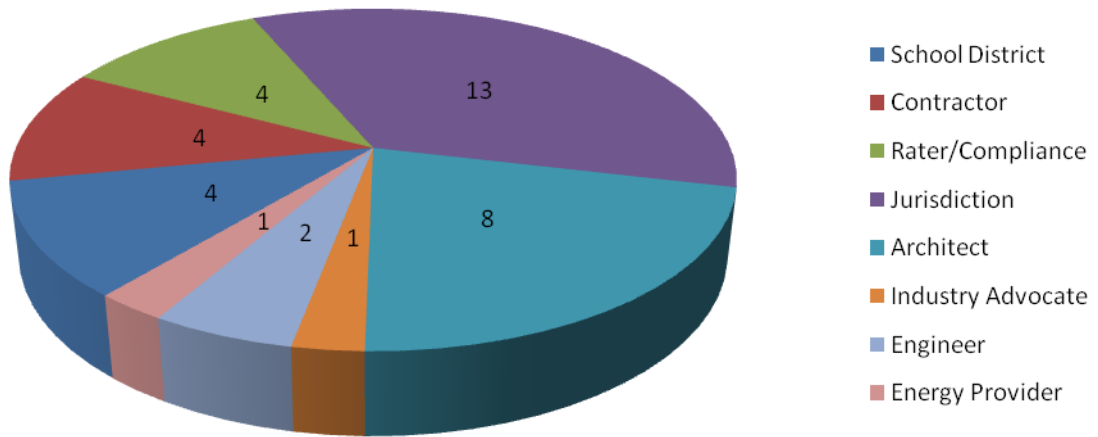
### St George Stakeholder Meeting Composition



### Sandy Stakeholder Meeting Composition



## Salt Lake City Stakeholder Meeting Composition



## Appendix C – Stakeholder Meeting Feedback Form



### Energy Code Stakeholder Meeting

#### Agenda

5 min	Welcome, Introductions
5 min	Goals of the Stakeholder Meetings and Process
10 min	Overview of Legislation regarding Adoption of Upgraded Building Codes
20 min	Overview of the Changes to the Residential Provisions of 2009 IECC
30 min	Discuss Residential Training, Tools and Resources Needed to Implement 2009 IECC
15 min	Overview of the Changes to the Commercial Provisions of 2009 IECC
25 min	Discuss Commercial Training, Tools and Resources Needed to Implement 2009 IECC
10 min	Wrap-up – Where Do We Go From Here

#### Feedback

Name? \_\_\_\_\_ Profession? \_\_\_\_\_

Are you in favor of implementing 2009 IECC? \_\_\_ Other I-Codes, which ones? \_\_\_\_\_

What are the opportunities in the new energy code? \_\_\_\_\_

\_\_\_\_\_

What are the barriers to the new energy code? \_\_\_\_\_

\_\_\_\_\_

What type of training would be most beneficial? \_\_\_\_\_

\_\_\_\_\_

What additional resources would be beneficial? \_\_\_\_\_

\_\_\_\_\_

What other concerns or questions ought to be addressed regarding the 2009 IECC? \_\_\_\_\_

\_\_\_\_\_

**If you have any additional comments you can submit them via email, deadline March 6, 2009.  
UtahEnergyCode2009@gmail.com**