

# Residential Energy Codes in Utah

Presentation to  
Committee of Consumer Services  
May 26, 2011

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Utah Clean Energy



# WHAT ARE ENERGY CODES?



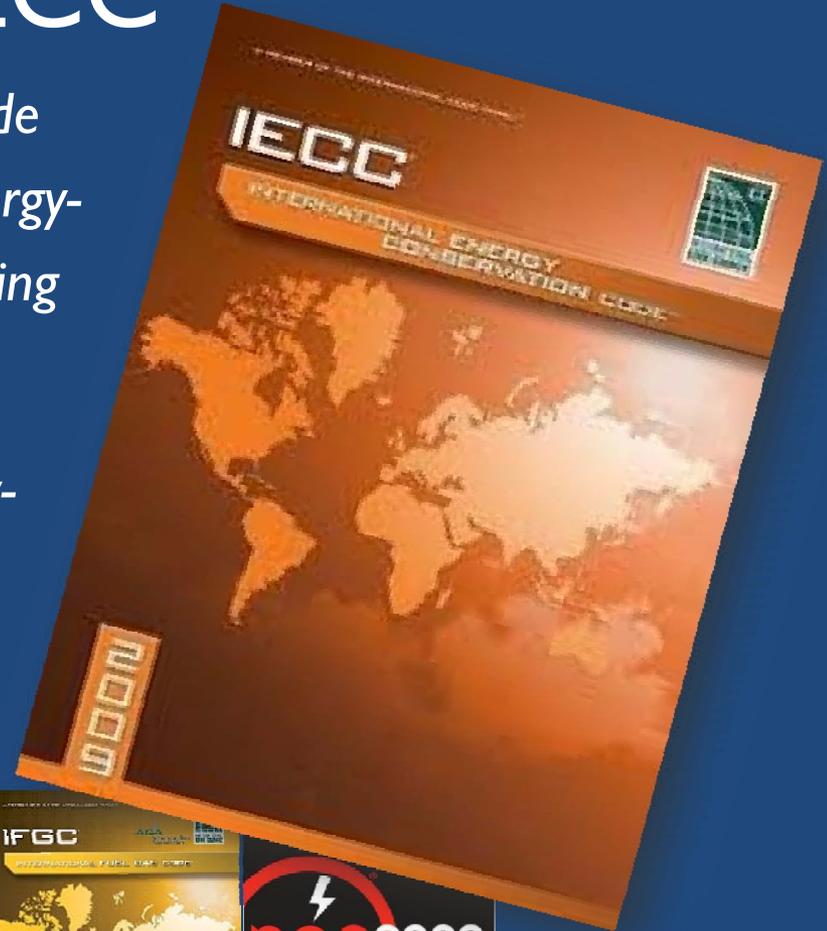
# Goal / Definition

- Minimum requirements for energy-efficient design and construction
- New and renovated buildings
- Impact energy use and emissions for the life of the building.
- Set a baseline for energy efficiency in new construction
- Generates energy savings in a consistent and long lasting manner.

# International Energy Conservation Code: IECC

*“Modern, up-to-date energy conservation code addressing the design and installation of energy-efficient building envelopes, mechanical, lighting and power systems.”*

*“Establishes minimum regulations for energy-efficient buildings using prescriptive and performance-related provisions.”*





# Primary changes in 2009 IECC

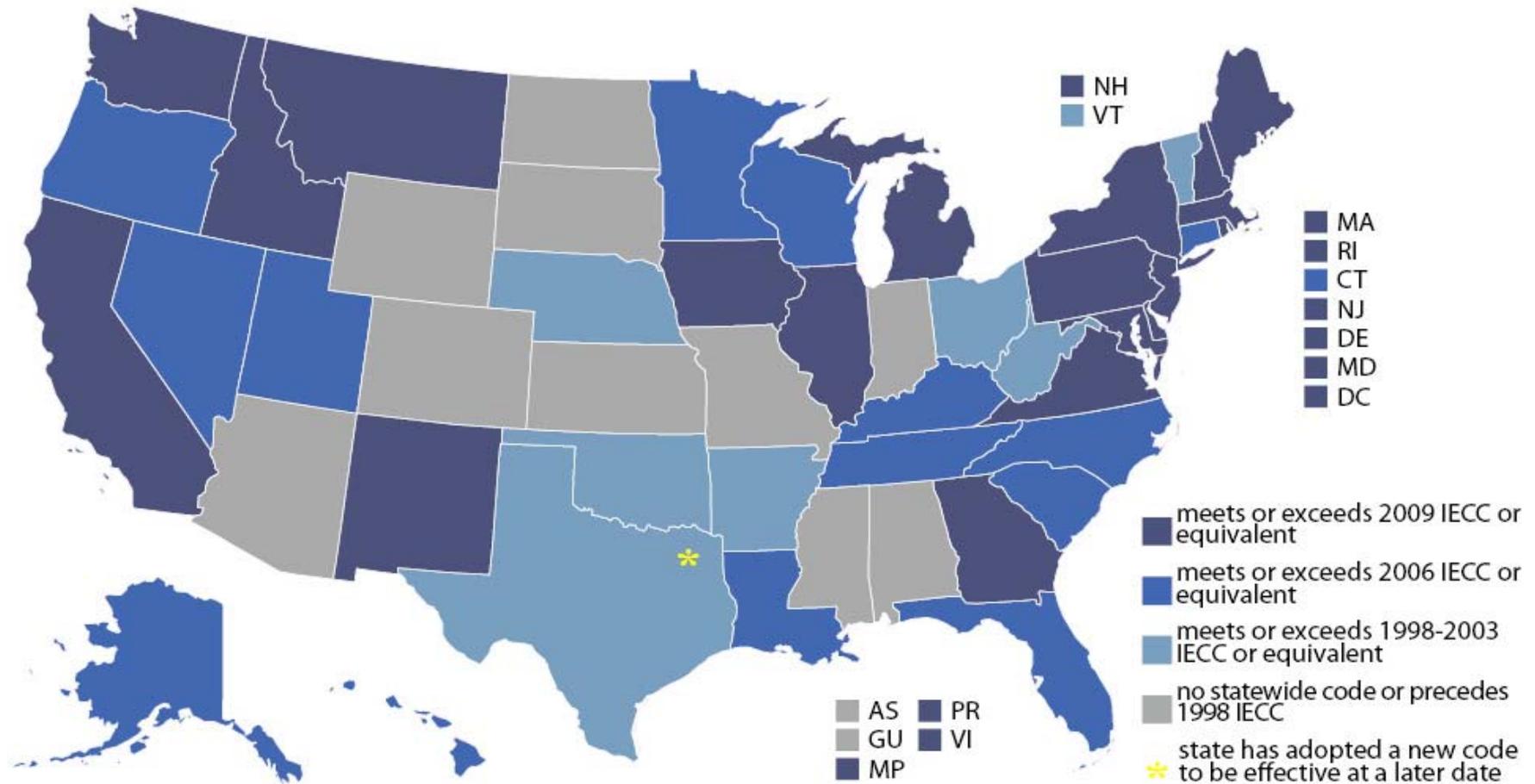
- Increased insulation levels
- Elimination of mechanical system “trade-off”
- Energy certificate
- Window efficiency improvement (So. Utah)
- 50% “high efficacy lighting”
- Ducts tightness
- Building envelope tightness
- Programmable thermostats required in homes with forced air heating



# Residential State Energy Code Status

AS OF APRIL 1, 2011

20 states + three U.S. territories



# WHY ARE ENERGY CODES IMPORTANT?



# Residential 2009 IECC is Cost-effective

Impacts to New Home Buyers				
	Ad Hoc	BCAP	Garbett Homes	ENERGY STAR
Reduction in energy consumption	10-12%	11-17%	--	--
Annual cost savings (net)	\$175	\$192	--	--
Incremental cost to builder	\$983	\$936	±\$900	\$500-\$800

Source: Utah Energy Ad Hoc Committee analysis, (2010) , Building Codes Assistance Project (2011), Personal communication with Bryson Garbett, Garbett Homes (May 2011), Sam Rashkin as cited in Big Builder Magazine (March 8, 2011)





## Outdated energy codes lead to uncomfortable homes

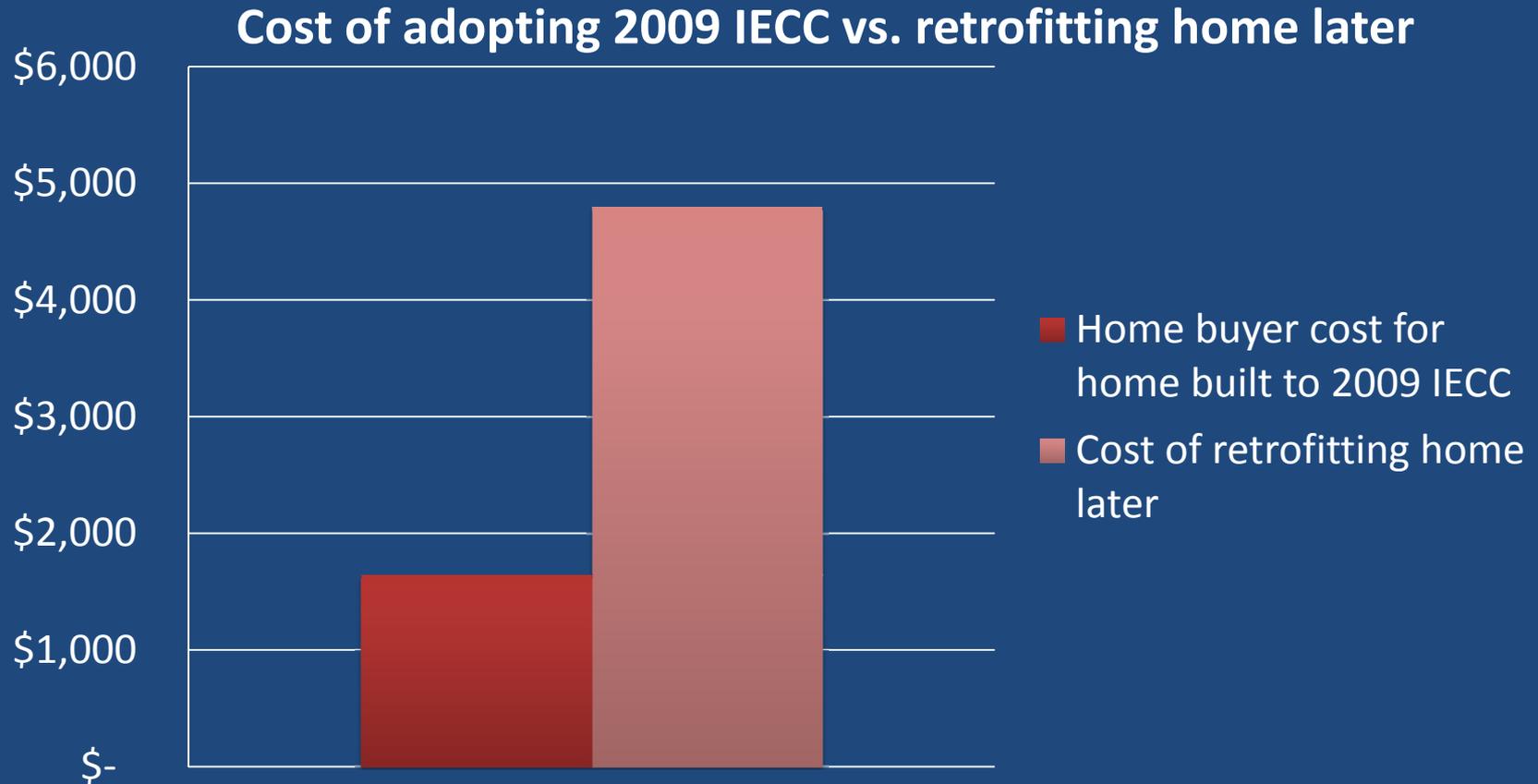
February 23rd, 2011, By Jed Boal

Courtesy of KSL News





# It Pays to Build 'Smart from the Start'

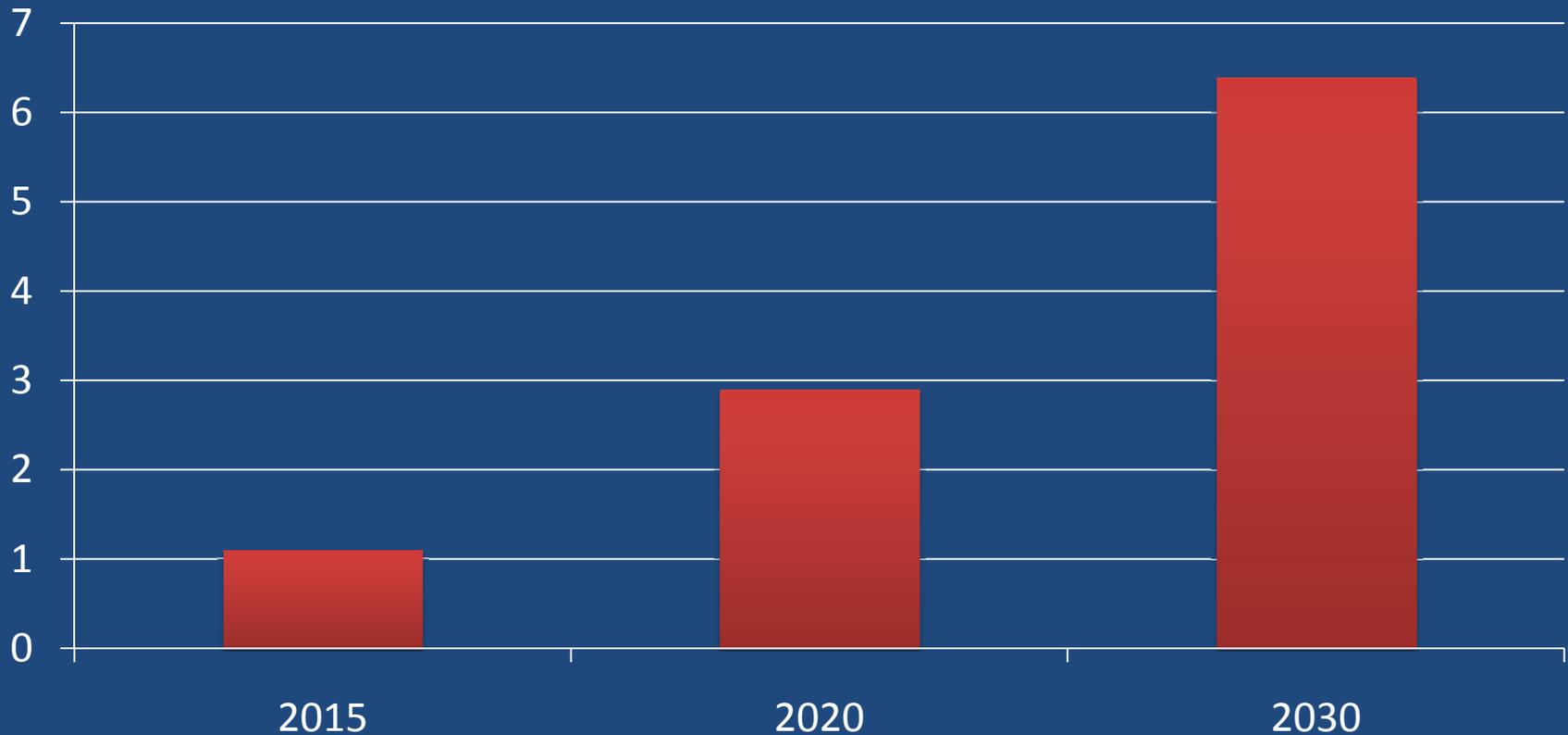


Source: Utah Energy Ad Hoc Committee analysis and Weatherization Assistance Program (2010)



# Utah Energy Savings from Energy Code Adoption

Energy Savings (trillion Btus)



Source: Building Codes Assistance Project, Energy Code Calculator: Southwest (2010)



# New Career Opportunities



# **CURRENT CHALLENGES & OPPORTUNITIES FOR ENERGY CODE ADOPTION**



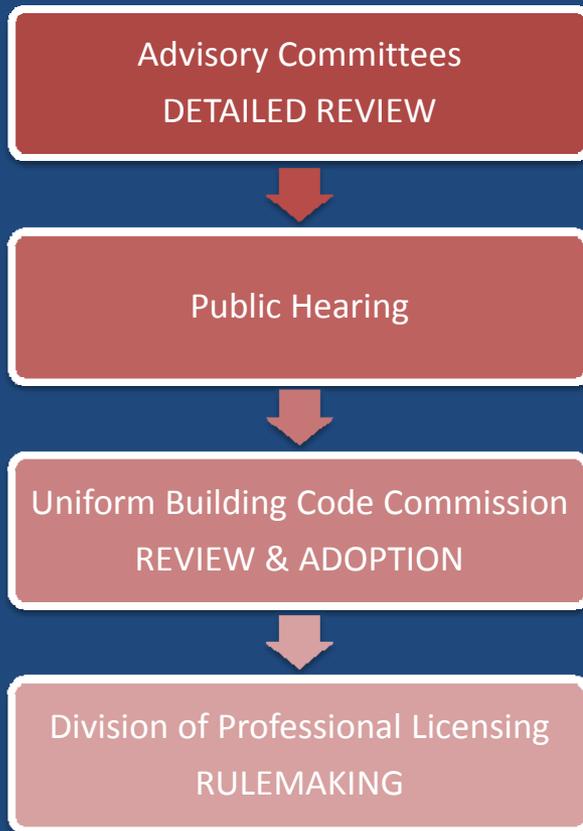


# Utah Codes Updated in 2009

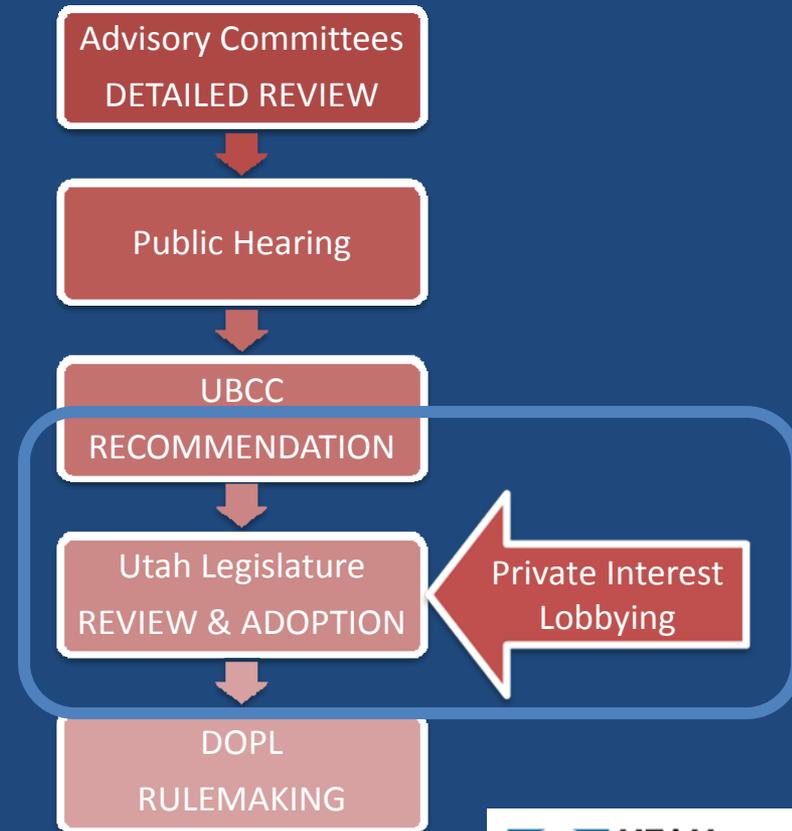
- International Building Code
- International Energy Conservation Code/ASHRAE 90.1-2007 (**excluded residential structures**)
- International Fire Code
- International Fuel Gas Code
- International Mechanical Code
- International Plumbing Code
- International Residential Code
- National Electric Code

# Utah Code Adoption Process

## Previous Process (pre-SB 211)



## Current Process





# 2011-2012 Process

- Master Study Resolution from 2011 General Session
- Business and Labor Interim Committee
- Stakeholder Working Group
- Need to educate parties
- Diverse voices must be involved in the process



# Energy Code Supporters

Rocky Mountain Power

Utah Housing Coalition

Community Development Corp. of Utah

Mountainlands Comm. Housing Trust

Salt Lake City Corporation

Salt Lake City Council

Salt Lake County Mayor

Summit County Council

Moab City Council

Grand County Council

Park City Council

Park City Mayor

Kennecott / Rio Tinto

Garbett Homes

Park City Area Home Builders Association

Park City Board of Realtors

ESCO Services

Energy Inspectors

Provident Energy

Hometeck Services

NCFI Polyuretanes (Clearfield, UT)

Fibertek Insulation (Nephi, UT)

American Chemistry Council

Polyisocyanurate Insulation Manufacturers  
Association

North American Insulation Manufacturers  
Association

American Architectural Manufacturers Association

Extruded Polystyrene Foam Association



# Discussion / Q&A

Thank you.

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# Federal Policy for Energy Codes

- **1992 Energy Policy Act (§304)**
  - mandated that all states must review and consider adopting the national model energy standard ([link](#))
- **2005 Energy Policy Act (§109)**
  - specified the most current model energy codes at the time of its passage (2004 IECC supplement) ([link](#))
- **2009 American Recovery and Reinvestment Act, HR 1 (§ 410)**
  - for states to be eligible for additional State Energy Grants, governors of recipient States were required to provide written assurance to Secretary of Energy (\$35 million for Utah, including \$10 million in “Home Run” grants)([link](#))
- **Bipartisan bill: The Energy Savings and Industrial Competitiveness Act of 2011 S. 1000**
  - Strengthen energy conservation codes at the federal level ([link](#))





## STATE OF UTAH

JON M. HUNTSMAN, JR.  
GOVERNOR

OFFICE OF THE GOVERNOR  
SALT LAKE CITY, UTAH  
84114-2220

GARY R. HERBERT  
LIEUTENANT GOVERNOR

March 2, 2009

The Honorable Steven Chu  
Secretary  
U.S. Department of Energy  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

Dear Secretary Chu,

Re: American Recovery and Renewal Act of 2009 (ARRA) State Energy  
Program Notification

The State of Utah recognizes the importance of energy efficiency and renewable energy resources. The Utah State Legislature and I previously established statutes and goals for energy efficiency in state and private sector buildings, as well as state vehicle fleets. In accordance with requirements for receiving Utah's share of the \$3.1 billion funding for the State Energy Program (SEP) under Section 410 of the American Recovery and Renewal Act of 2009 (H.R. 1), I offer the following information.

Utah's regulated electricity and natural gas utilities already have Demand Side Management programs, established through the Utah Public Service Commission, which meet the requirements of Section 410(1) of ARRA. I am writing the Utah Public Service Commission to encourage their continued implementation of energy efficiency, consistent with ARRA.

Regarding building codes, Utah has a statewide adoption process where the most current IECC code for residential and commercial buildings is reviewed and formally adopted the year following the release of the new code. The IECC 2006 Code and equivalent commercial code is in place now. It is our intent that the State of Utah will adopt the IECC 2009 Code for residential and commercial buildings (including ANSI/ASHRAE/IESNA Standard 90.1-2007) according to the schedule noted above. During 2008, the State Energy Program provided training on the energy efficiency portions of the code for the building industry and local government planners and inspectors. We expect to continue those training opportunities this year.

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I am also writing the Utah State Legislative leadership and the Utah Department of Commerce to request they continue to support building codes that meet or exceed these residential and commercial building energy efficiency standards in the future. Additionally, we are in the process of developing and implementing strategies to improve enforcement of building codes in line with the requirements of HR1.

The State Energy Program will prioritize our energy investments in order to take advantage of existing programs and expand programs where appropriate. Our State is committed to a robust improvement in energy efficiency and renewable energy, as well as a balanced State energy policy.

We look forward to immediate distribution of the Federal SEP funds to help Utah make progress in energy efficiency and renewable energy.

Sincerely,

Jon M. Huntsman, Jr.  
Governor

cc: Gil Sperl, Director, Office of Weatherization and Intergovernmental Programs,  
U.S. Department of Energy  
David Terry, Executive Director, National Association of State Energy Officials  
Michael Waddoups, President of the Senate, Utah Legislature  
David Clark, Speaker of the House, Utah Legislature  
Ted Boyer, Chair, Utah Public Service Commission  
Francine Giani, Executive Director, Utah Department of Commerce  
Dianne R. Nielson, Energy Advisor, State of Utah  
Jason Berry, Director, Utah State Energy Program

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