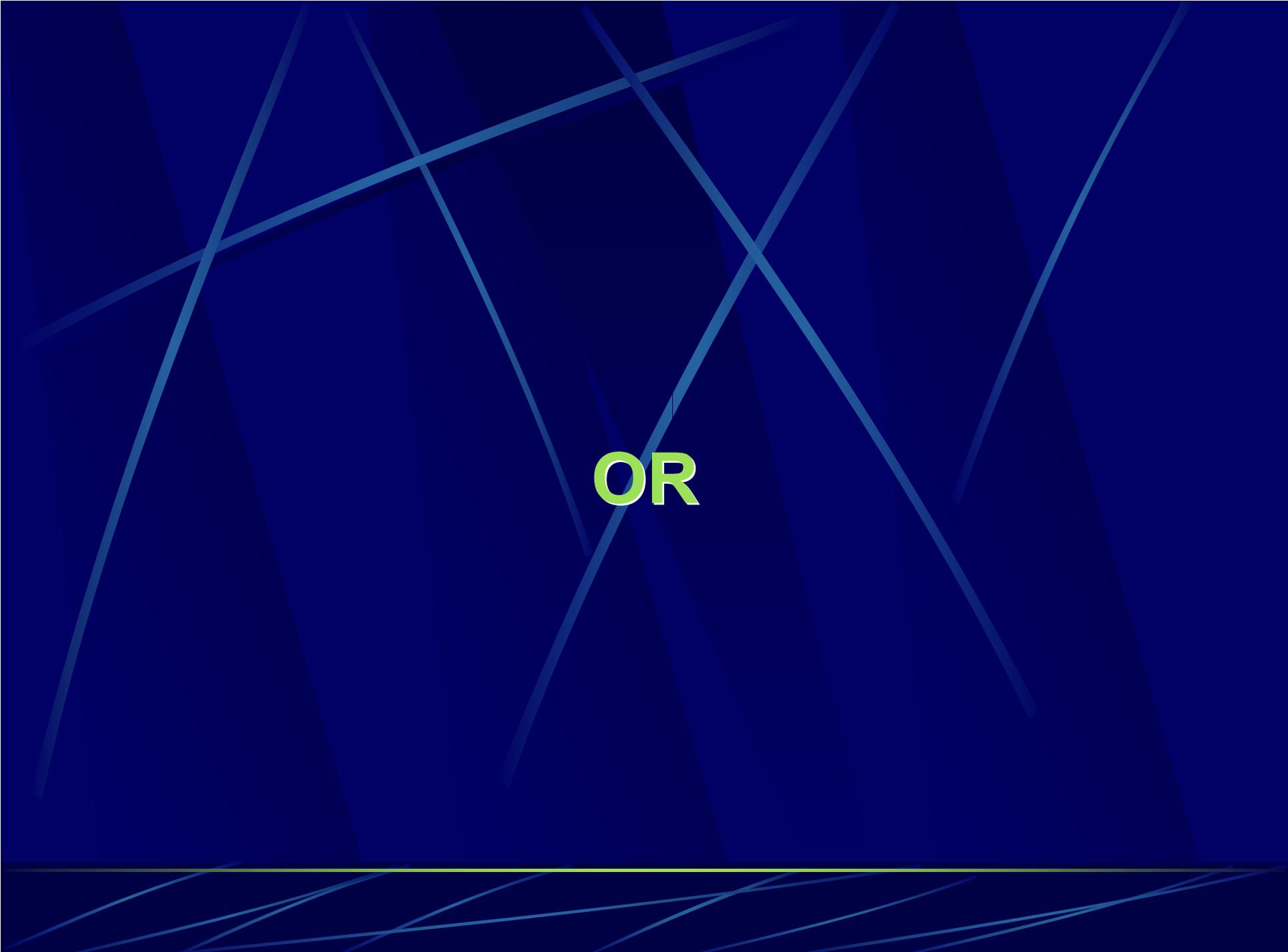


**HOW THE INSURANCE INDUSTRY
CAN PROMOTE
BUILDING ENERGY CODES**

The image features a dark blue background with several thin, white, intersecting lines that create a geometric pattern. In the center, the word "OR" is written in a bold, green, sans-serif font. A thin, horizontal green line runs across the bottom of the image, just above the bottom edge.

OR

IN GOD WE TRUST

ALL OTHERS BRING DATA

Presented by

Center for Business and Economic Research

at

Louisiana State University in Shreveport

PROJECT REVIEWS

- Iowa Project
- Louisiana Project

IOWA PROJECT

**Phase IV of the
Iowa Building Energy Code Education (BECE) Program**

GOALS AND OBJECTIVES

- 1. Educate the insurance industry on how building energy code compliance may lead to reduced health and property risks, claims and losses**
- 2. Encourage the insurance industry to offer premium reduction incentives for clients that comply with building energy codes**

IOWA PROJECT

Scope of Work

- 1. Establish an Advisory Committee to provide guidance and direction**
- 2. Develop educational materials including a greenhouse gas (GHG) primer (which wording was changed to greenhouse gas guide at the recommendation of the Advisory Committee).**
- 3. Anticipate changes and benefits to the insurance industry and others from their implementation of the proposed programs.**

IOWA PROJECT

Scope of Work

4. Conduct a GHG focus group meeting
5. Conduct small group meetings
6. Make a presentation at a regional insurance forum/meeting

IOWA PROJECT

REVIEW OF SCOPE OF WORK

1. Advisory Committee

- Reviewed and provided editing comments during the development of the educational materials**
- Recommended additional members for the advisory group and also recommended members for the focus group meetings.**
- Made presentations at the small group and regional group meetings**
- Made recommendations for revising the project as originally designed.**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

2. Develop educational materials including a Greenhouse Gas (GHG) Primer
 - At the recommendation of the Advisory Committee, the title Greenhouse Gas PRIMER was changed to Greenhouse Gas GUIDE
 - Printed 650 Greenhouse Gas Guides for the Insurance industry
 - Created a Power Point presentation from the GHG Guide
 - Prepared handouts from the Power Point presentation
 - Wrote the Guide, the PowerPoint presentation and the handouts to CD

IOWA PROJECT

REVIEW OF SCOPE OF WORK

- 3. Anticipate changes and benefits to the insurance industry and others from their implementation of the proposed programs.**
- Building energy codes will not only conserve energy usage, they will also reduce and/or eliminate serious health and property risks, claims and losses.**
 - With the implementation of the programs presented through this project, the insurance industry should see reduced health, life, and property claims.**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

- 3. Anticipate changes and benefits to the insurance industry and others from their implementation of the proposed programs.**
 - The residents of the state of Iowa should see reduced or eliminated instances of health and life threatening illnesses.**
 - The state of Iowa should be able to hold itself as an example to the country with regard to its serious intentions to protect the health and property of its citizens, and its serious intentions to protect the environment.**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- Objectives

- Access current knowledge base of Iowa insurance industry relative to the predicted detrimental effects of global climate change in Iowa
- Assess Iowa insurance industry's level of concern over increased building loss claims associated with global climate change
- Assess willingness and ability of Iowa insurance industry to offer rate incentives to encourage building energy code adoption and enforcement

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- Objectives

- Identify other areas Iowa insurance industry may be willing to work with DNR to encourage building energy code adoption and enforcement.
- Identify potential barriers to Iowa insurance industry cooperation with DNR in promoting building energy codes

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- Objectives
 - Assist DNR in developing strategies to promote building energy codes within the Iowa insurance industry
 - Identify key individuals within the Iowa insurance industry whose participation is critical to obtaining insurance industry participation in promoting building energy codes

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- **Major findings**

- **No participant could recall the issue of global climate change ever being discussed within their respective companies**
- **Insurance rate incentives for building energy code adoption are not easy to adopt**
 - **Lack of actuarial data linking energy codes to loss reduction**
 - **Rate changes are state regulated**
 - **Iowa insurance rates are already low compared to other states**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- **Major findings**
 - **Support for building code adoption and enforcement in general was already high**
 - **Energy code adoption should be tied to building code enforcement that stresses structural and safety issues along with energy efficiency**
 - **Play down the greenhouse gas issue and play up the energy conservation issue**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

4. Conduct a GHG focus group meeting

- **Major findings**
 - **Have another focus group with more insurance management representation**
 - **Have representation from the Insurance Division of the DOC. DNR involvement with the insurance industry is unusual**
 - **Serve food and they will come**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

5. And 6. Conduct small group meetings and one regional meeting

- **Objectives**

- **Send invitations to all 243 insurance companies in Iowa**
- **Send invitations to actuaries listed in the Iowa Actuarial Society**
- **Conduct the Power Point presentation to 25 to 50 attendees per meeting**
- **Distribute the GHG Guide to attendees, with the handout and the CD**
- **Have a round table discussion during the lunch after the presentation**

IOWA PROJECT

REVIEW OF SCOPE OF WORK

5. And 6. Conduct small group meetings and one regional meeting

- Major findings

- The topic did not generate much interest in the 243 insurance companies
 - first small group meeting was held during a luncheon at a Women in Insurance monthly meeting – 26 people attended
 - Eight people attended the second small group meeting
 - Seven attended the regional group meeting
 - Four people attended the second focus group/third small group meeting
 - All meetings were held in the Des Moines area
- Participants were receptive to the message presented by DNR
- Participants recommended making the presentation on site at insurance companies

LOUISIANA PROJECT

Building Energy Codes and Property Insurance Reduction

GOALS AND OBJECTIVES

Identify and quantify the links between building energy codes and property loss due to natural disasters

LOUISIANA PROJECT

Methodology

1. Secondary research involved a literature search to identify research done throughout the country, and internationally, on insurance claims from property damage due to natural disasters relative to building energy code compliance
2. Primary research *originally* involved a mail survey of all insurance claims offices in Louisiana. The mail survey was designed to identify the dollar amount of insurance payments related to building energy code issues and natural disasters in Louisiana in the years
1992 - Hurricane Andrew,
1994 - major ice storm, and
1999 - no significant natural disaster.

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

During a meeting with the local State Farm Claims Office manager it became apparent that the intended mail survey was not a viable approach for obtaining claims information pertinent to the project. The primary research methodology was, consequently, revised.

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

- Insurance claims payments are made for specific incidences of damages, such as broken windows, roof damage, water damage to carpets, etc.**
- The cause of the wind, fire or water damage was usually well documented within the claim document, but not evident unless the claims document is examined.**
- The only way to determine if building energy codes had been relevant in a property damage claim was to physically examine individual insurance claims.**

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

The CBER asked the five major insurance writers in Louisiana for permission for CBER staff to examine claims for 1992, 1994, and 1999.

Allstate Insurance Company

State Farm

American International Group (AIG)

Farm Bureau

The Travelers

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

- State Farm had claims numbering in excess of 10,000 for the years in question, and informed the CBER that the logistics of locating the claims and subsequently transporting them to a common location was an unacceptable use of State Farm staffing time.
- Allstate also declined to participate in the project due to volume and time constraints.

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

- The detailed review of each claims record attempted to capture:

- the specific cause of the loss,**
- the relationship to building energy codes,**
- the actual dollar impact and percent dollar impact of building energy code -related loss, and**
- the recommendations for energy efficient replacement materials**

LOUISIANA PROJECT

Methodology

Revised Primary Research Methodology

- The following energy code and property loss reduction areas were researched:

- Frozen water pipes**
- Improperly installed HVAC systems**
- Flame rollout**
- Double-pane windows and insulated doors**
- High efficacy lighting**

LOUISIANA PROJECT

Secondary Research Findings

- Search resources included the Internet, academic libraries, various publications, and interviews.
- Research links between energy codes in construction and property losses were identified, however, no reports, studies, or papers were found to quantify the link between building energy codes and property loss claims.
- Very little nonproprietary research on the role of energy efficiency and renewable energy technologies is conducted within the insurance industry. Most of the research is proprietary in order to keep a competitive edge.

LOUISIANA PROJECT

Primary Research Findings

- Relationship of Loss to Building Energy Codes

Between 1% and 3% of claims examined were directly related to Building Energy Codes.

American International Insurance Group

Year	Number	Energy Related	%	Reason for Review
1992	159	5	3%	Hurricane Andrew
1994	18	1	6%	Winter Severe Freeze
1999	3	0	0%	Most Recent Year
Total	180	6	3%	

Louisiana Farm Bureau Insurance Company

Year	Number	Energy Related	%	Reason for Review
1992	0	0	0%	Hurricane Andrew
1994	0	0	0%	Winter Severe Freeze
1999	3,903	84	2%	Most Recent Year
Wind	2,311	54		
Fire	417	20		
Water	1,175	10		

Travelers Insurance Company

Year	Number	Energy Related	%	Reason for Review
1992	1,001	16	2%	Hurricane Andrew
1994	366	4	1%	Winter Severe Freeze
1999	1,504	10	1%	Most Recent Year
Total	2,871	30	1%	

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Primary Research Findings

- **Actual Dollar Impact and Percent Dollar Impact of Energy-related Loss**
 - **63% of the total claims payments for property damage with building energy code-related damages were directly related to those building energy code-related damages.**
 - **In some instances, 100% of claims paid was a direct result of building energy code-related damages.**

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Primary Research Findings

- Actual Dollar Impact and Percent Dollar Impact of Energy-related Loss

Company and Year	\$ Energy Related	% of Total Claim	\$ Total Claim Loss Paid	\$ Deductible	\$ Total Loss
AIG - 1992 CLAIMS - YEAR OF HURRICANE ANDREW	\$ 20,586	52%	\$ 39,760	\$ 10,300	\$ 50,060
AIG - 1994 CLAIMS - YEAR OF THE ICE STORM	179	100%	179	100	\$ 279
AIG - 1999 CLAIMS - NO MAJOR DISASTER	0	0%	0	0	\$ -
FARM BUREAU - 1999 CLAIMS - NO MAJOR DISASTER	787,394	55%	1,427,091	32,700	\$ 1,459,791
TRAVELERS - 1992 CLAIMS - HURRICANE ANDREW	16,035	9%	187,736	9,250	\$ 196,986
TRAVELERS - 1994 CLAIMS - ICE STORM	187,193	100%	187,193	1,750	\$ 188,943
TRAVELERS - 1999 CLAIMS - NO MAJOR DISASTER	415,760	100%	415,760	12,750	\$ 428,510
Total	\$ 1,427,146	63%	\$ 2,257,719	\$ 66,850	\$ 2,324,569

LOUISIANA PROJECT

Primary Research Findings

- Prevalence of Type of Claim

- In the 120 claims with damages related to building energy codes, window damage was the most prevalent**
- Some claims had damages related to more than one Building Energy Code.**

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Primary Research Findings

- Prevalence of Type of Claim

BUILDING ENERGY CODES AFFECTED

Type	Total	Percent
Windows	59	44%
Doors	36	27%
HVAC	20	15%
lighting	9	7%
frozen pipes	8	6%
flame rollout	2	1%
TOTAL	134	100%

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Primary Research Findings

- **Recommendations For Energy Efficient Replacement Materials**
 - **Claims were examined to determine whether insurers were recommending replacing damaged materials with energy efficient materials, where applicable.**
 - **In only one instance did a claim indicate that the insurer recommend replacement materials with greater energy efficiency than the damaged materials.**

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Primary Research Findings

- Recommendations For Energy Efficient Replacement Materials

This recommendation occurred in the case of an historic structure in which damage to the original wood framed windows required the windows be replaced.

The insurer recommended aluminum framed insulated windows as replacements.

The recommendation was not accepted due to the diminished aesthetic quality of the aluminum framed windows in the historic structure.

LOUISIANA PROJECT

Conclusions

- **The ability to determine the impact of Building Energy Code-related insurance claims costs is limited by the following constraints.**
 - 1. The manner in which claims are coded requires the physical examination of individual claims in order to discover if a building energy code is relative to the damage reported.**
 - 2. The manner in which the major insurance writers store individual claim data for an individual state requires travel outside the state for the examiner, as well as for the actual claims, in some instances**

LOUISIANA PROJECT

Conclusions

- **The ability to determine the impact of Building Energy Code-related insurance claims costs is limited by the following constraints.**
- 3. The very large insurance writers have such a high volume of claims for individual states, that it would be incredibly time consuming to examine enough claims to get a truly representative sample of claims from which to make a statistical analysis.**

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Conclusions

- **Ability to Determine the Adequacy or Inadequacy of Existing Building Energy Codes as Well as Compliance with Existing Energy Codes**
 - **Secondary research findings identified serious problems with understanding of, and compliance with building energy codes.**
 - **Primary research findings were hampered by the inability to examine claims from all three years in question from each of the three participating companies.**

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Conclusions

- **Ability to Determine the Adequacy or Inadequacy of Existing Building Energy Codes as Well as Compliance with Existing Energy Codes**
 - **Primary research was also hampered by the inability to examine claims from State Farm and from Allstate.**
 - **These two companies combined, write over 50% of the insurance in Louisiana.**

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Conclusions

- **Ability to Determine the Adequacy or Inadequacy of Existing Building Energy Codes as Well as Compliance with Existing Energy Codes**
 - **Primary research was hampered by the way claims information was recorded.**
 - **There was no consistency in the type of descriptive data included in the claims files**

LOUISIANA PROJECT

Conclusions

- **The Ability to Evaluate the Impact of Building Energy Codes on Property Damage From Natural Disasters Is Limited by Several Factors.**
 - **The greatest number of claims examined came from the year 1999. As a result of the timing of the majority of claims examined in this project, it can seem that a year without a significant natural disaster showed more building energy code-related claims.**
 - **the manner in which claims documentation is recorded varies with individual claims adjusters, as well as with individual insurance companies.**

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Conclusions

- **The Ability to Evaluate the Impact of Building Energy Codes on Property Damage From Natural Disasters Is Limited by Several Factors.**
 - **Since claims adjusters do not specifically look at damages with building energy codes in mind, damage information pertinent to building energy codes can easily be left unrecorded.**

LOUISIANA PROJECT

Summary and Recommendation

Implementation of building energy codes is assumed to make buildings not only more energy efficient, but to also make buildings more resistant to damaging effects of certain natural disasters. The link between building energy codes and reduction of damages to buildings from natural disasters is difficult to document.

Education of the insurance industry into the benefits of promoting building energy codes and their enforcement, can result in claims recording techniques that would provide a greater ability for the insurance industry to track the impact of building energy codes and to apply rate structures accordingly.