



IDABO

Idaho Association of Building Officials
National ICBO Award Winning Chapter

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November 16, 2011

Interim Energy, Environment and Technology Committee
Representative George Eskridge, Co-Chair
Senator Curt McKenzie, Co-Chair

RE: Comments on the 2012 Idaho Energy Plan (update of the 2007 Energy Plan)

Dear Sirs:

The Idaho Association of Building Officials (IDABO) is pleased to offer comments on the current draft of the 2012 Idaho Energy Plan. As an association of building safety professionals who work closely with adopted building codes, we understand the value of consistency in construction practices, and in moving toward continued energy efficiency through developments in new materials and methods of construction. First and foremost among the tools we employ is the family of construction codes published by the International Code Council. The State of Idaho adopts the following International Codes: Building Code, Residential Code, the Energy Conservation Code, Mechanical Code, Fuel Gas Code, and the National Electrical Code, among others. The requirements of the codes, developed with cross-referencing and consistency have proven to be key in providing greater efficiency in energy use, livability, and health and life-safety levels in the built environment in Idaho.

IDABO is saddened to see the deletion of Action CE-9 from the Energy Plan. IDABO plays a key role in the adoption and implementation of the construction and energy codes, with consistent enforcement of the codes throughout Idaho. Together with the Office of Energy Resources, the Northwest Energy Efficiency Alliance, the Idaho Division of Building Safety, and the Pacific Northwest National Laboratory, IDABO has spent a great deal of time in developing training and education on the requirements of the International Energy Conservation Code for inspectors, contractors, design professionals and others interested in energy conservation in the built environment. The perceived challenges, mentioned in the ISEA synopsis of the modifications to the 2012 Energy Plan regarding the deletion of Action CE-9: "Deleted due to ongoing challenges with informational and educational efforts regarding the adoption of the 2009 International building code;" *are not apparent to IDABO.*

IDABO recently conducted an evaluation of several building inspection departments across the state. A copy of the results of the survey is attached for

your reference. In view of the fact that approximately 95 percent of the population of Idaho lives in a jurisdiction that has adopted building codes, the value of those codes cannot be cast aside due to challenges.

The Idaho State Building Code Board will review the new versions of the codes and will make recommendations for amendments in the best interests of the citizens of Idaho. The review, amending and adoption of future codes, i.e., the 2012 versions of the above listed codes, which are perceived as more stringent in some areas while keeping current with new materials and methods, is the path that IDABO recommends. Notwithstanding Governor Otter's promise to have 90% compliance with the 2009 International Energy Conservation Code by 2015, adoption of 2012 editions of the codes will not interfere with nor prohibit compliance with 2009 codes. To remove future editions of construction codes from the 2012 Energy Plan runs counter to the needs of the citizens of Idaho, and is not in keeping with the overall Energy Plan Objectives: namely, "to provide the means for Idaho's energy Policies and Actions to adapt to changing circumstances." **It is in the best interests of Idaho that we recommend you address the need for review and updating the construction codes in the 2012 Idaho Energy Plan, and provide the means for Idaho to adapt to changing circumstances and be current with construction practices, methods, materials, and energy conservation identified through the codes.**

Sincerely,

A handwritten signature in black ink that reads "Charles W. Allen". The signature is written in a cursive, flowing style with a large initial "C".

Charles Allen, President
Idaho Association of Building Officials

IDABO JURISDICTIONAL SURVEY

June 2011

George Klomp

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Jurisdictions Visited

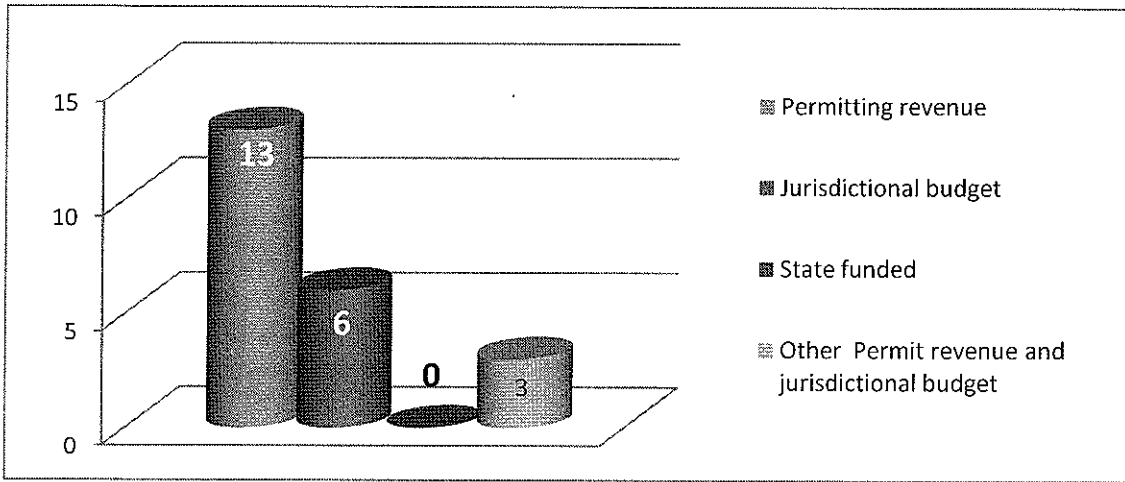
Ada County
Blaine County
Boise
Bonneville County
Caldwell
Coeur d'Alene
Franklin county
Idaho Falls
Kootenai County
Latah County
Moscow
Nampa
Pocatello
Rexburg
Sun Valley

Person Interviewed

Mark Ferm
Bill Dyer
Jennifer Gilliland
Mark Fillmore
Adele Adams
Edward Wagner
John Burg
Reginald Fuller
Robert Ankersmit
Eric Pah
Carol Alexander
Jimmie Brown
Lynn Transtrum
Jon Berg
Eric Adams

How is your agency funded? (Check all that apply)

Permitting revenue	13
Jurisdictional budget	6
State funded	0
Other <u>Permit revenue and jurisdictional budget</u>	3

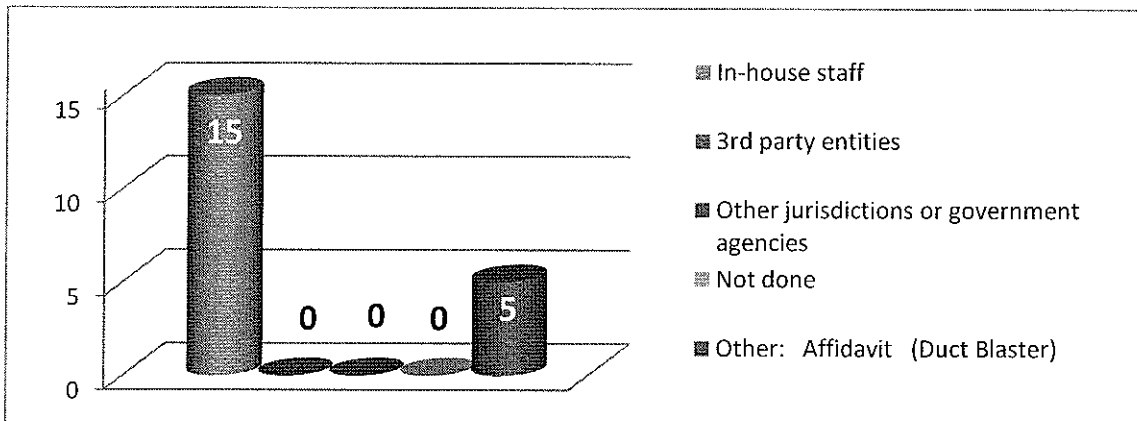


Who conducts plan reviews for energy code compliance?

In-house staff	15
3 rd party entities	0
Other jurisdictions or government agencies	0
Not done	0
Other	0

Who conducts field inspections for energy code compliance?

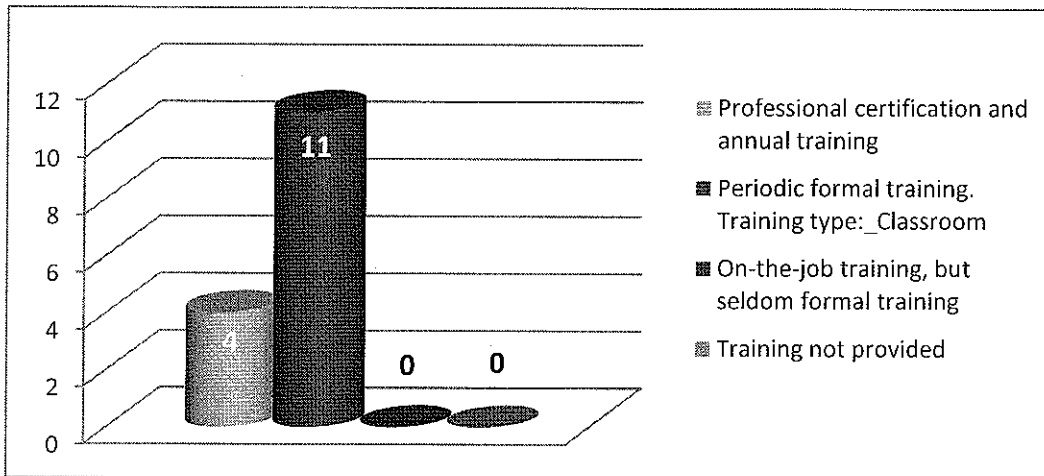
In-house staff	15
3 rd party entities	0
Other jurisdictions or government agencies	0
Not done	0
Other: Affidavit (Duct Blaster)	5



What level of education and training does your agency staff receive specifically for energy codes?

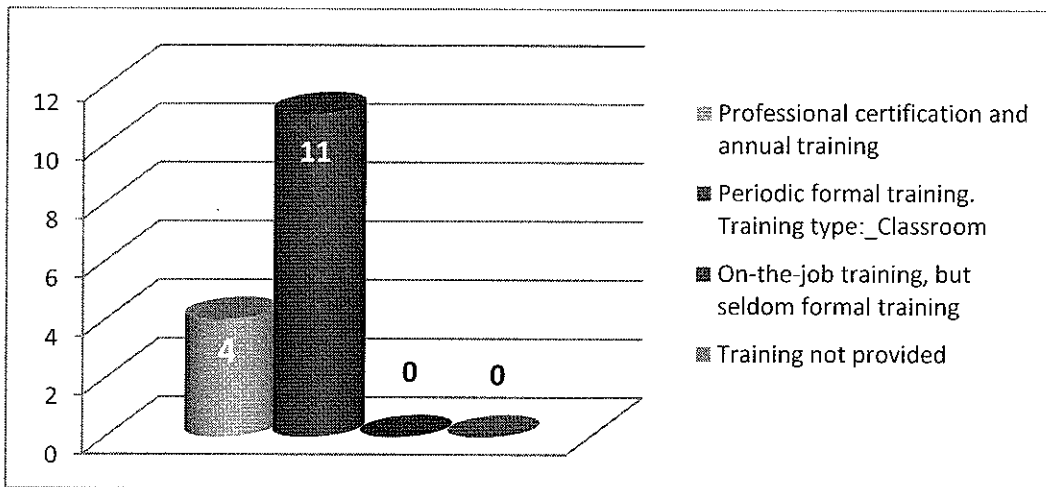
Residential energy codes training

Professional certification and annual training	4
Periodic formal training. Training type: Classroom	11
On-the-job training, but seldom formal training	0
Training not provided	0



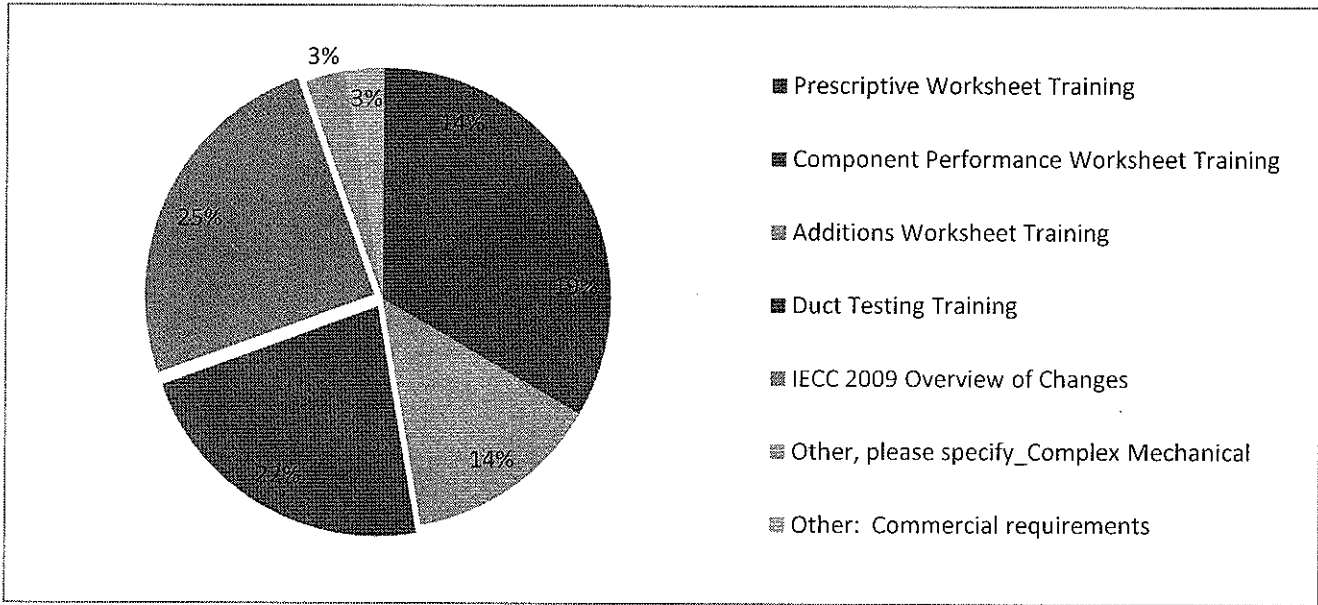
Commercial energy codes training

Professional certification and annual training	4
Periodic formal training. Training type: Classroom	11
On-the-job training, but seldom formal training	0
Training not provided	0



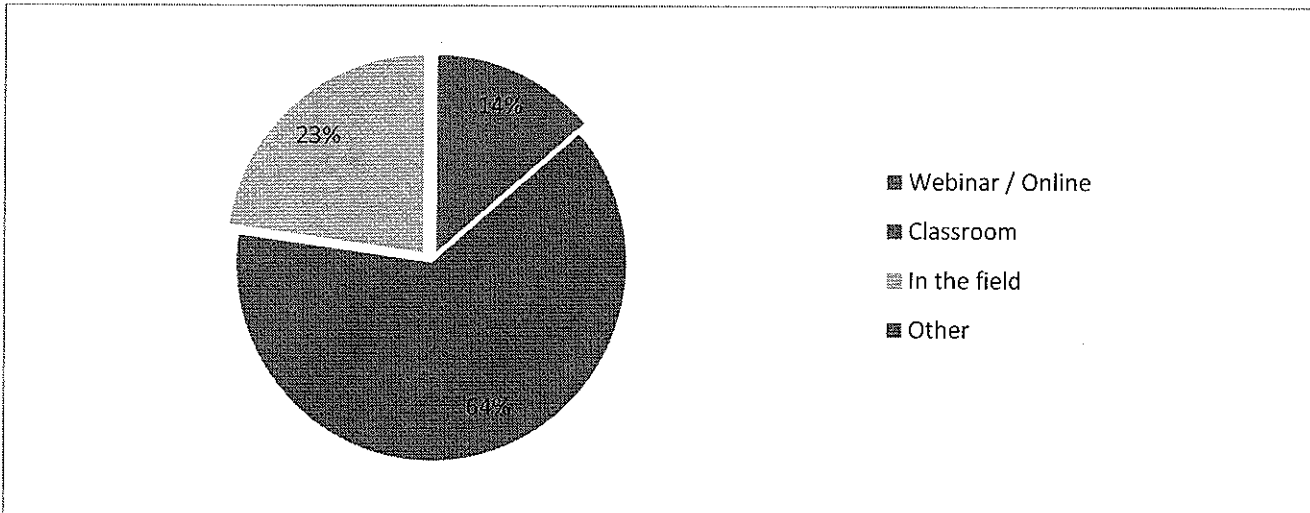
What training would be useful for your staff?

Prescriptive Worksheet Training	14%	5
Component Performance Worksheet Training	19%	7
Additions Worksheet Training	14%	5
Duct Testing Training	22%	8
IECC 2009 Overview of Changes	25%	9
Other, please specify: Complex Mechanical	3%	1
Other: Commercial requirements	3%	1



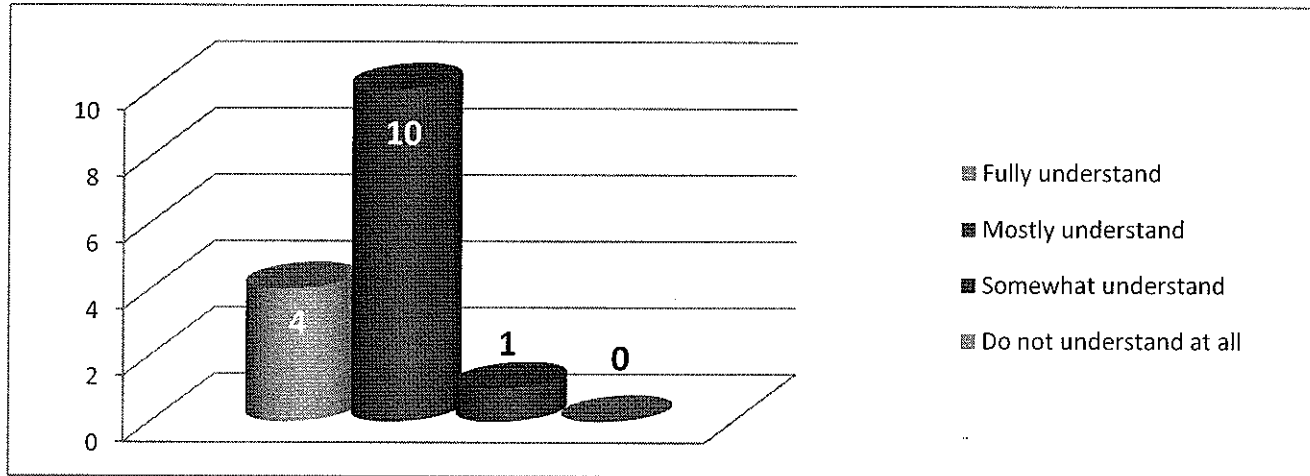
How would you prefer to receive training?

Webinar / Online	14%	3
Classroom	64%	14
In the field	23%	5
Other	0%	0



How well does the building department staff understand the changes in the 2009 Energy Code?

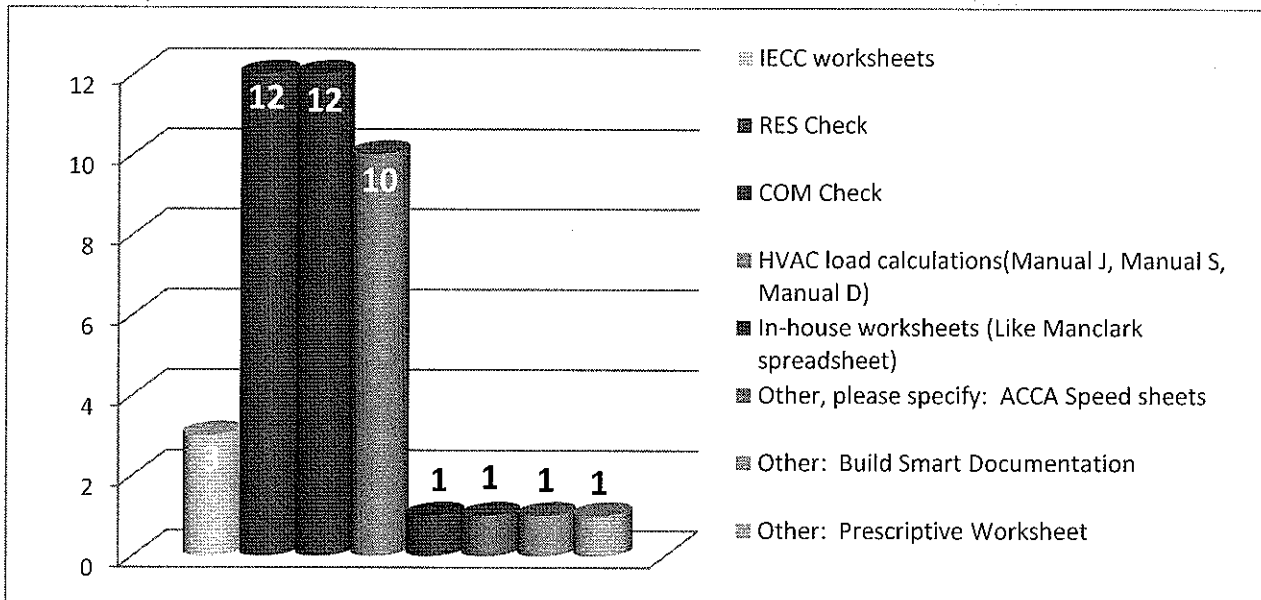
Fully understand	4
Mostly understand	10
Somewhat understand	1
Do not understand at all	0



Questions About Your Processes

What do you require in initial plan submittal to document energy code compliance?

IECC worksheets	3
RES Check	12
COM Check	12
HVAC load calculations(Manual J, Manual S, Manual D)	10
In-house worksheets (Like Manclark spreadsheet)	1
Other, please specify: ACCA Speed sheets	1
Other: Build Smart Documentation	1
Other: Prescriptive Worksheet	1

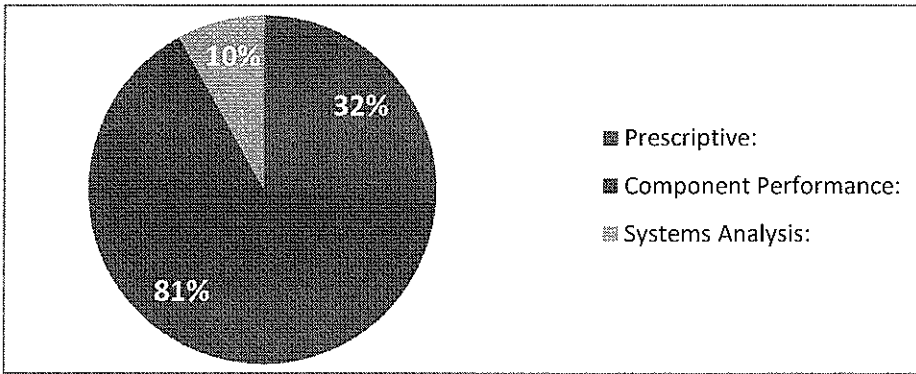


What methods are used as a basis for documenting energy code compliance and in what percentages?

(graph is averaged)

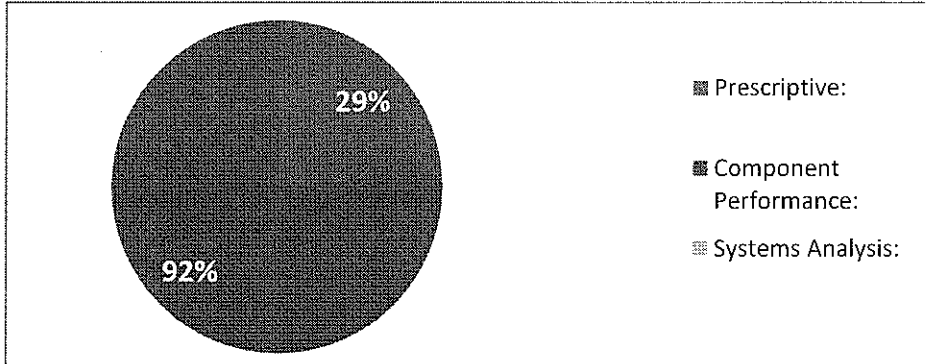
Residential Buildings

		Individual Results												
Prescriptive:	32%	50%	100%	5%	5%	10%	10%	10%	15%	90%	50%	10%		
Component Performance:	81%	50%	95%	95%	90%	90%	100%	80%	85%	100%	10%	100%	50%	100%
Systems Analysis:	10%	10%												



Commercial Buildings

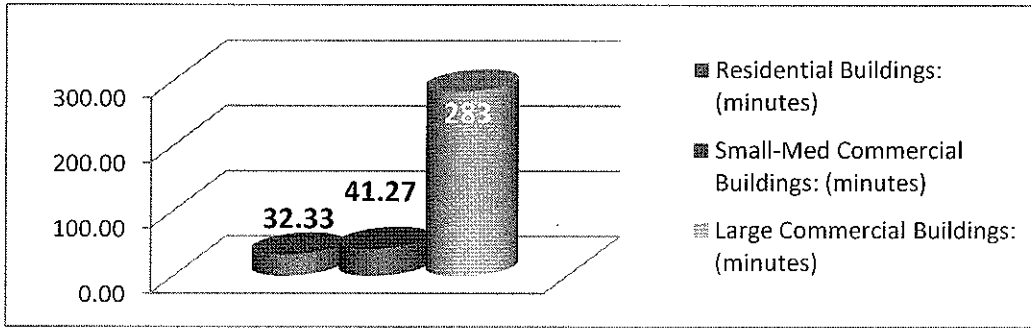
		Individual Results												
Prescriptive:	29%	50%	5%	10%	50%									
Component Performance:	92%	100%	100%	50%	95%	100%	90%	100%	100%	100%	100%	100%	100%	50%
Systems Analysis:	0%	0%												



How much time is devoted to the average plan review for energy codes? If energy plan reviews are performed in conjunction with reviews for other code provisions, please estimate the time for the energy-related reviews only.

Individual Results

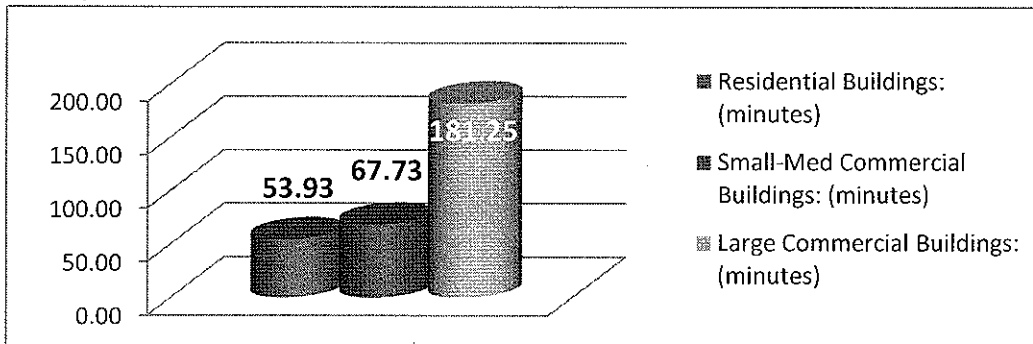
Residential Buildings: (minutes)	32.33	30	60	30	30	10	30	5	90	30	15	35	30	15
Small-Med Commercial Buildings: (minutes)	41.27	54	60	30	60	45	20	5	90	30	15	60	60	15
Large Commercial Buildings: (minutes)	283	90		120	75	120	2400		180	30		120	60	30



How much time is devoted to the average field inspection for energy codes? If energy field inspections are performed in conjunction with inspections for other code provisions, please estimate the time for the energy-related field inspections only.

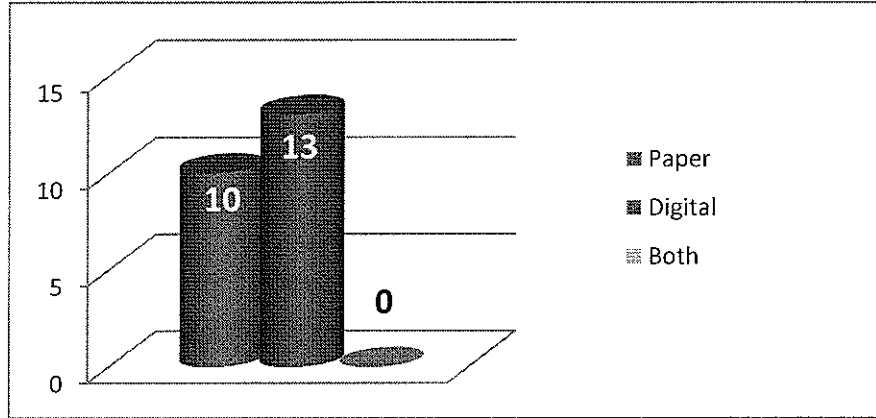
Individual Results

Residential Buildings: (minutes)	53.93	54	90	90	30	45	90	40	60	30	15	90	90	15
Small-Med Commercial Buildings: (minutes)	67.73	81	90	270	30	30	60	40	90	30	15	90	90	15
Large Commercial Buildings: (minutes)	181.25	90		480	45	300	90		450	60		210	120	30



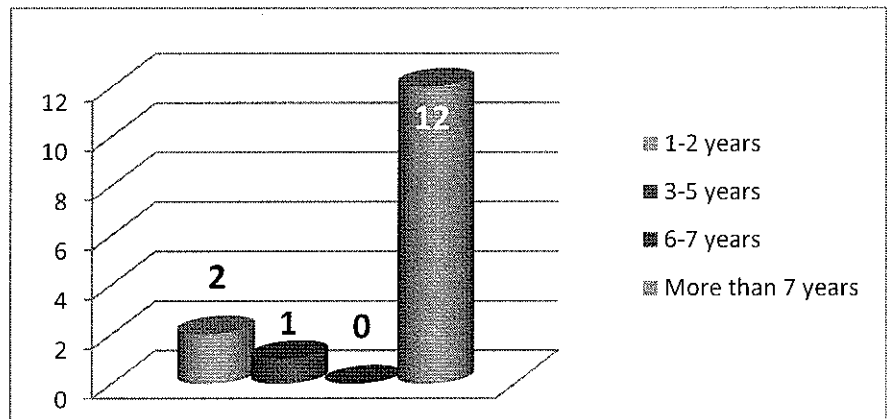
What format does your agency use to maintain permitting data?

Paper	10
Digital	13
Both	0



How many years does your agency maintain permitting data?

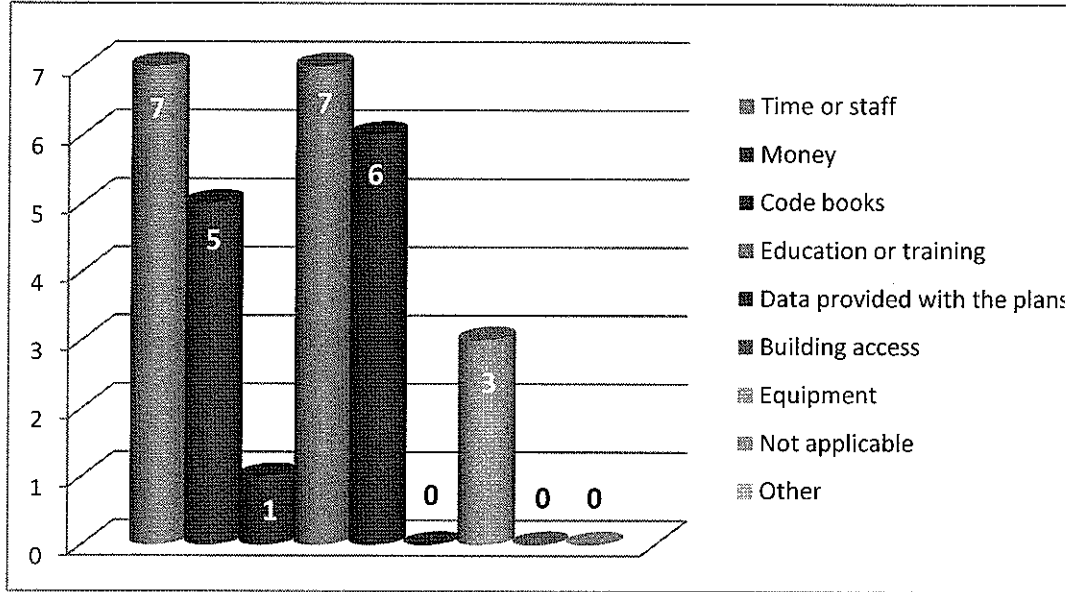
1-2 years	2
3-5 years	1
6-7 years	0
More than 7 years	12



What limitations impede your ability to enforce the energy code?

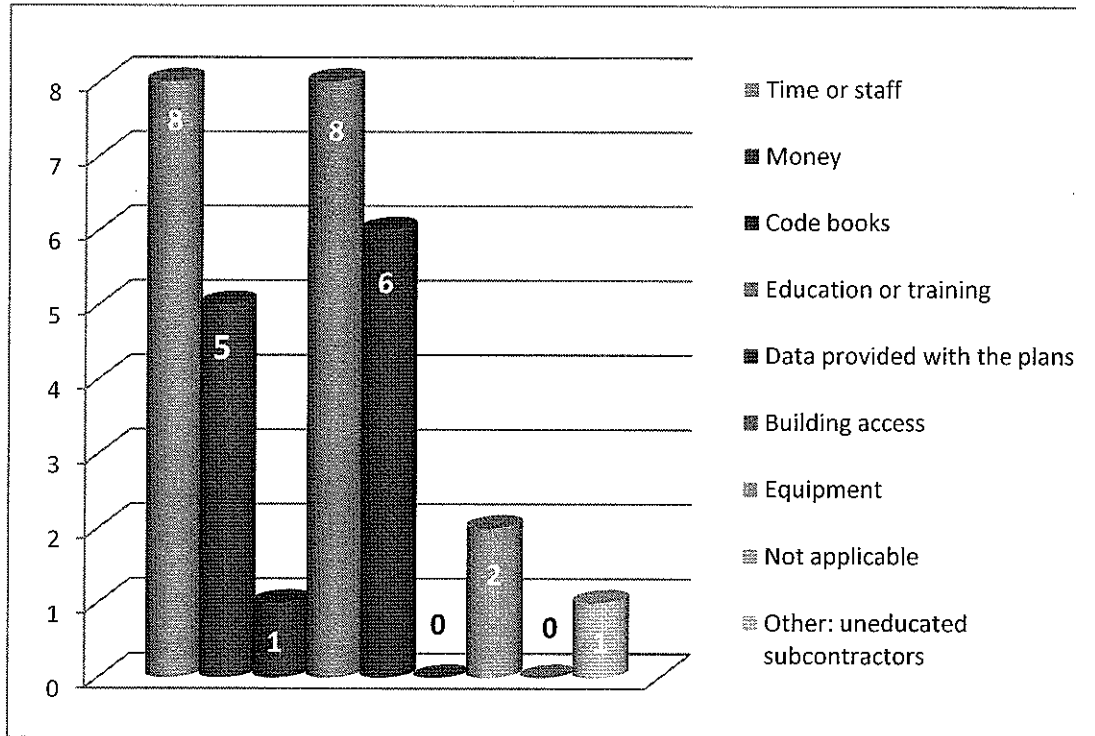
Residential Buildings

Time or staff	7
Money	5
Code books	1
Education or training	7
Data provided with the plans	6
Building access	0
Equipment	3
Not applicable	0
Other	0



Commercial Buildings

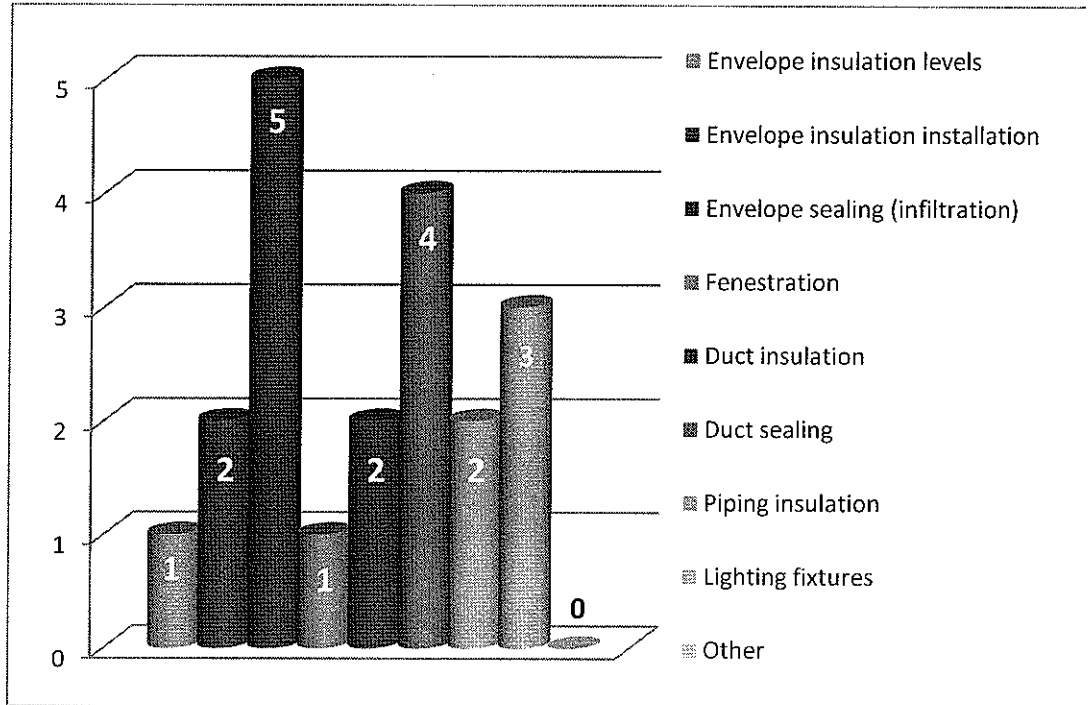
Time or staff	8
Money	5
Code books	1
Education or training	8
Data provided with the plans	6
Building access	0
Equipment	2
Not applicable	0
Other: uneducated subcontractors	1



In your jurisdiction, what plan review and/or inspection items do you generally find do not comply with the code?

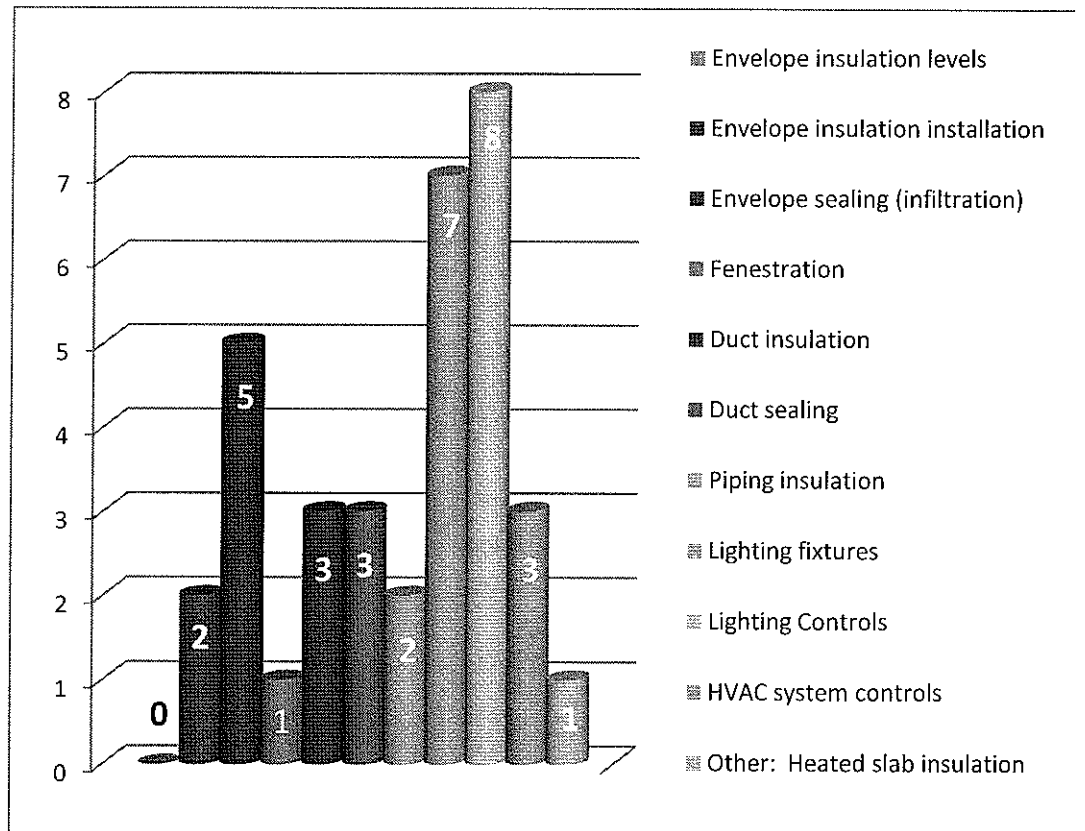
Residential Buildings

Envelope insulation levels	1
Envelope insulation installation	2
Envelope sealing (infiltration)	5
Fenestration	1
Duct insulation	2
Duct sealing	4
Piping insulation	2
Lighting fixtures	3
Other	0



Commercial Buildings

Envelope insulation levels	0
Envelope insulation installation	2
Envelope sealing (infiltration)	5
Fenestration	1
Duct insulation	3
Duct sealing	3
Piping insulation	2
Lighting fixtures	7
Lighting Controls	8
HVAC system controls	3
Other: Heated slab insulation	1

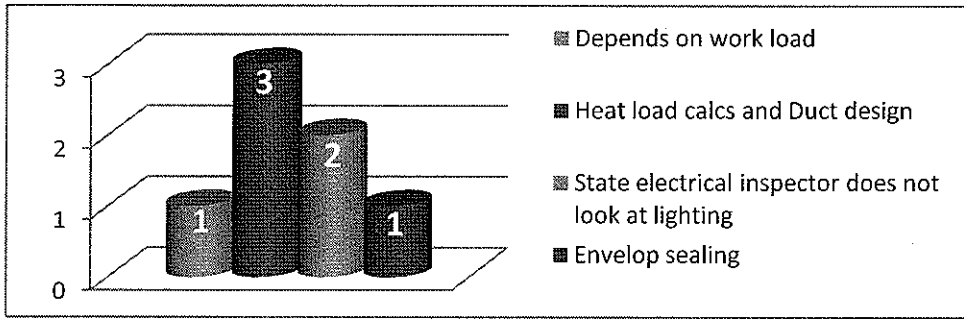


Does the energy plan review and inspection cover all aspects of the energy code?

Yes	60%	9
No	40%	6

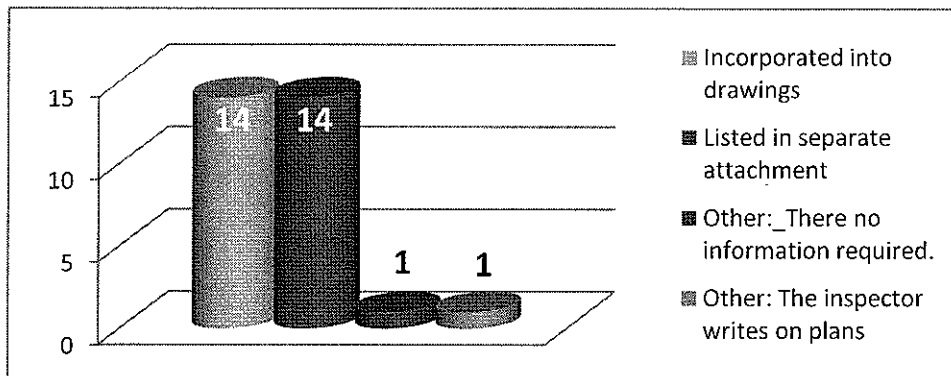
If No, what aspects are not covered?

Depends on work load	1
Heat load calcs and Duct design	3
State electrical inspector does not look at lighting	2
Envelope sealing	1



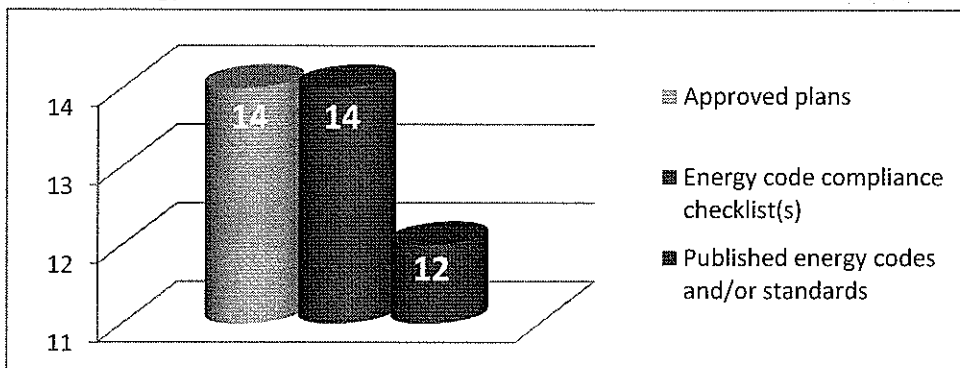
How is energy code compliance information stated in the plan set?

Incorporated into drawings	14
Listed in separate attachment	14
Other: There no information required.	1
Other: The inspector writes the prescriptive requirements on the plans	1



What information is available to your staff during field inspection?

Approved plans	14
Energy code compliance checklist(s)	14
Published energy codes and/or standards	12



Do you accept software compliance reports with permit applications in lieu of a plan review?

Yes	7%	1
No	93%	14

What information is typically missing from plans, specifications and/or actual construction that prevents you from determining compliance?

Residential Buildings

Duct sizing	1
Window information	1
R and U values	1
Inaccurate and incomplete submittals	6

Commercial Buildings

R values	1
Inaccurate and incomplete submittals	3

What software and/or other information technologies do you use to facilitate the plan reviews, inspection processes, record keeping, and communications with permittees?

Custom in-house program	1
CRW Tracking	1
Electronic Plan Review	1
Adobe Pro	1
PT WIN	1
Blue Prints	2
Permits Plus and HTE	1
REScheck	2
COMcheck	2
LDO	1
Writsoft	1
Tidemark	1
Computer Arts	1
Plan analyst	2
Accella	1
Customized Excel	1
DAPS	1

The Jurisdictions Have Identified the Following Items as Working or Not Working

Working

- Education and Training - A high majority of jurisdictions report that they mostly understand the 2009 IECC. Classroom training is the preferred method of receiving training and is considered the most effective.
- REScheck and COMcheck- These are the most used tools for demonstrating elements of compliance. The design, construction and enforcement communities are familiar with and have a high degree of confidence in them.
- Writsoft-- Writsoft is increasingly being used throughout the state for heat load calculation and duct design.
- Handouts- Many jurisdictions have developed excellent handouts that make it easier to submit energy code documentation or to understand the application of the code in the field.

Not Working

Manclark

- Before doing this survey, I had no idea what Manclark was. Since it is addressed in one of the questions, I asked one of the participants what it was and discovered that I had hit a hot button. I hesitate to include this topic in my findings but it became obvious that this is a topic of much debate. While there is general agreement that the intent was good there is a strong feeling that the development has not met expectations. A number of jurisdictions believe that the window of opportunity for it to be an effective tool in their community has passed. One jurisdiction believes that it would be useful for them. I am told that the latest version is acceptable for heat load calculations but not duct design.
- In house training- There is virtually no in house training taking place.
- Cooperation between the Division of Building Safety and local building departments. Counties are having a difficult time with commercial lighting in particular. The state electrical inspector will not inspect for any items that are not specifically addressed in the National Electric Code. The county building inspector does not feel qualified or responsible for inspecting the work of the electrician.
- Contractor knowledge and understanding of the energy code. There is inadequate communication between subcontractors.

Recommendations For How The Current Situation Can be Improved

The fifteen jurisdictions that were visited are representative of Idaho. Large, medium and small departments were visited. Most jurisdictions are fully enforcing the energy code and a few are not. The major issues that are identified in the survey are, full energy code enforcement, education and training, and time or staff. The following recommendations will address these issues.

Full Energy Code Enforcement

There is not full enforcement of the energy code among the jurisdictions that have adopted the code. There are some jurisdictions that have been doing a good job of energy code enforcement for some time, some jurisdictions that are in the process of fully implementing energy codes and some jurisdictions that are fully implementing energy codes. The jurisdictions that are not fully enforcing the energy code fall into two groups. One group does not enforce commercial lighting because they do not have an electrical inspector and the state electrical inspector will not do it. The other group has simply decided that they will not enforce the requirements for heat load calculations or duct design. Some building officials do not believe that there is sufficient support from their elected official, contractors and community to be able to enforce the energy code. Other building officials do not personally believe in the need for an energy code and choose not to enforce portions of it.

It is important that building officials, elected officials, contractors and the public understand the value of energy codes to their community and the nation. While it is true that major efforts have been made to emphasize the importance of energy codes in Idaho, the fact is that there is still a significant amount of resistance.

Develop and implement a strategy to identify and influence the jurisdictions that are not fully enforcing the energy code. After visiting with some of these jurisdictions, I believe that with the proper approach and patience they may change their position.

Intergovernmental Cooperation

The counties do not believe that the inspectors from the state Division of Building Safety give them the support they need to effectively enforce the energy code. In my opinion there is an additional problem. It is my understanding that the state apprenticeship programs for electrical, plumbing and mechanical contractors do not include energy code training specific to that trade. Even though many of the energy code provisions are found outside of the National Electrical Code, the Uniform Plumbing Code and the Uniform Mechanical Code, the fact of the matter is that electrical, plumbing and mechanical journeymen are the people responsible installing equipment and materials in compliance with the energy code. It does not make sense to not include that information in the training programs.

The governors' office should take a lead role in making sure that state agencies are committed to full enforcement of the energy code in Idaho. A facilitated working group consisting of state agency representatives and local government representatives should be established. The purpose of the group would be to identify the institutional barriers that are detrimental to full energy code enforcement and to define and promote policy changes to reduce or eliminate those barriers.

Education and Training

While almost all jurisdictions considered themselves mostly or fully trained, they believe they need more education and training for themselves and the contractors. Mechanical code education and training is the most important at this point. While jurisdictions prefer class room training it is important to note that no on the job training is taking place. It is not clear if on the job training is considered an outside person coming into the department or the department doing in house training.

Education and training programs should be reviewed to determine if they need to be adjusted to meet current needs. At this time mechanical code training is a high priority for building departments and contractors. Education and training designed for the contractors should utilize supportive people from the industry whenever possible. Sometimes it is not just the message but who delivers it that is important. In house training should be encouraged and supported. All education and training programs, other than in house, should receive as much publicity as possible. A component of the education strategy should be the consumer. The public has no idea what is going on with energy codes. They should be educated on why energy codes are good for them, their community and the nation. Consumers can be a significant factor in building support for energy codes in a communities that are not fully enforcing the energy code.

Building Department Administration

A lot of time and effort and money are spent on code training. Very little is spent on building department administration. Good administration is the key to effective code enforcement. It is evident that a department that effectively enforces building code will also effectively enforce energy codes or any other task that they are given because they have good administrative policies and procedures in place. Quality of submittals, incomplete plan review, miscommunication, staffing levels and a lack of support are all examples of issues that can benefit from good administrative practices.

The survey includes a variety of departments, from one person departments to medium and large departments. In one large department I discovered that there were a number of discrepancies between the REScheck and the Writsoft for a specific submittal. When I asked about the differences I learned that one person reviewed the REScheck and another reviewed the Writsoft. No one compared the two to see if they matched. In another jurisdiction, I was told in the interview that the staff was mostly trained. When I asked who looked at the lighting in a new residence the building official was not sure if the building inspector or the electrical inspector did. As we questioned the staff, we learned that the electrical inspector had not received any training on the 2009 IECC and he did not believe that the electrical contractors in the area had either. Those are examples of a number of building department administration issues that I noticed during the survey. Many of the

building department administration should become an important element of the education and training program. It should part of the IDABO annual educational program and regional training. In addition, it would be very beneficial to create a program where a jurisdiction could have a qualified individual assist them in assessing their administrative policies and procedures.