

DIVISION OF BUILDING SAFETY

IDAHO ELECTRICAL BOARD
VIDEOCONFERENCE MEETING

JULY 11, 2013



IDAHO ELECTRICAL BOARD

Agenda Item No. 01

Agenda

PRESENTER: Bob Scott, Chairman

OBJECTIVE: Approve agenda for the July 11, 2013 Idaho Electrical Board Videoconference meeting.

ACTION: Consent

BACKGROUND:

PROCEDURAL HISTORY:

ATTACHMENTS: Tentative agenda



TENTATIVE AGENDA

NOTICE OF PUBLIC MEETING

IDAHO ELECTRICAL BOARD VIDEOCONFERENCE MEETING

**Division of Building Safety
1090 East Watertower Street, Suite 150, Meridian, Idaho
1250 Ironwood Drive, Suite 220, Coeur d'Alene, Idaho
2055 Garrett Way, Building 1, Suite 4, Pocatello, Idaho
dbs.idaho.gov – (208) 332-7137**

***Thursday, July 11, 2013
9:30 a.m. – 3:30 p.m. (MT)***

(Note: North Idaho - Meeting Commences @ 8:30 a.m. PT)

9:30 a.m. CALL TO ORDER – Bob Scott, Chairman

- Roll Call & Introductions
- Open Forum

CONSENT AGENDA

1. Approval of the July 11, 2013 Agenda
2. Approval of the April 25, 2013 Board Meeting Minutes

ACTION AGENDA/PUBLIC HEARING

3. Label and Listing Proposal – Steve Keys
4. Negotiated Rulemaking – Amendment and Adoption of the 2014 NEC
 - a. NEC 680.26 -- Pools – Rob Foster
 - b. NEC 210.8(A)(7) -- GFCI, Sinks – Dave Yorgason
 - c. NEC 210.8(A)(10) -- GFCI, Laundry Areas – Dave Yorgason
 - d. NEC 210.8(D) -- GFCI, Kitchen Dishwasher Branch Circuit – Dave Yorgason
 - e. NEC 210.52(E)(3) -- Outdoor Outlets – Dave Yorgason
 - f. NEC 394 -- Concealed Knob and Tube Wiring – Rod Burk

12 p.m. LUNCH BREAK *(If needed)*

INFORMATIONAL AGENDA

5. Scheduling Online Inspections – Ron Whitney

6. Program Manager Report – Rob Foster
7. Operational Report – Steve Keys
8. Administrator Report
 - a. Financial Report – C. Kelly Pearce and Kathleen Watkins
 - b. Administrator – C. Kelly Pearce

3:30 p.m. ADJOURN

All times, other than beginning, are approximate and are scheduled according to Mountain Time (MT), unless otherwise noted. Agenda items may shift depending on Board preference. 06/24/13r

IDAHO ELECTRICAL BOARD

Agenda Item No. 02

Minutes

PRESENTER: Bob Scott, Chairman

OBJECTIVE: Approve minutes from the April 25, 2013 Idaho Electrical Board Videoconference meeting.

ACTION: Consent

BACKGROUND:

PROCEDURAL HISTORY:

ATTACHMENTS: Draft minutes



**IDAHO ELECTRICAL BOARD
VIDEOCONFERENCE MEETING**

Thursday – April 25, 2013 – 9:30 a.m. (MT)

**Division of Building Safety
1090 East Watertower Street, Suite 150, Meridian, Idaho
1250 Ironwood Drive, Suite 220, Coeur d'Alene, Idaho
2055 Garrett Way, Building 1, Suite 4, Pocatello, Idaho**

***DRAFT MINUTES OF THE APRIL 25, 2013 MEETING**

**NOTE: The following report is not a verbatim transcript of the discussions at the meeting;
however, is intended to record the significant features of those discussions.**

Chairman Bob Scott called the meeting to order at 9:30 a.m. (MT).

Board Members Present:

Bob Scott, Chairman
Jeff Wheeler, Vice-Chairman
Mark LaBolle
Tim Phillips
Allan Perman
Kreg Davis
Al Frieze
Denis Duman
Dale Pippitt

DBS Staff Members Present:

C. Kelly Pearce, Administrator
Steve Keys, Deputy Administrator-Operations
Ron Whitney, Deputy Administrator-Administration
Patrick Grace, Deputy Attorney General
Kathleen Watkins, Financial Manager
Rob Foster, Electrical Program Manager
Rod Freligh, Regional Manager, Region 1
Chris Jensen, Regional Manager, Region 3
Terry Blessing, Regional Supervisor, Region 1
Adam Bowcutt, Regional Supervisor, Region 3
Bill Hatch, Public Information Officer
Renee Bryant, Administrative Assistant 2/Board Secretary

◆ **Open Forum**

Residential Energy Compliance – To receive funding through the American Recovery and Reinvestment Act, Idaho must be 90% energy compliant by 2017. As part of the agreement, Idaho adopted the 2009 International Energy Conservation Code with an implementation date of January 1, 2011.

The only electrical-related requirement is one and two family dwellings must have 50% lighting efficacy. DBS has developed a high visibility sticker to indicate where the builder is with compliance during construction. Should the sticker and review service be offered to local jurisdictions, a memorandum of understanding will be part of the agreement wherein enforcement would be the sole responsibility of the building official and corrections, with regard to lighting compliance, would be issued to the builder.

The HVAC program manager provided the *HVAC/Electrical Program Manager Report* for distribution to the Board.

ACTION: The board secretary will distribute the *HVAC/Electrical Program Manager Report to the Board*.

Apprentices/Journeyman Exam – Tom Brown, B & B Electric, inquired whether statistics are being gathered with regard to graduates and the journeyman exam, and which entity is administering the test.

An update on the progress of the agency’s testing program was provided. It is estimated the Division will begin administering the electrical journeyman exam around June or July 2013.

The Division will provide an initial summary of student performance on the journeyman exam at the October 2013 meeting.

ACTION: For the October 2013 meeting, the Division will provide a report of student performance on the journeyman exam and the graduating school of the apprentice.

◆ **Approval of the April 25, 2013 Agenda**

MOTION: Denis Duman made a motion to approve the agenda as presented. Kreg Davis seconded. All in favor, motion carried.

◆ **Approval of the January 24, 2013 Board Meeting Minutes**

It was noted on page two the Administrative Appeals Hearing, NOV ELE1207-0054, should read Alpha Electric rather than Alpine Electric.

MOTION: Mark LaBolle made a motion to approve the minutes with corrections. Tim Phillips seconded. All in favor, motion carried.

◆ **Election of Officers**

Idaho Code §54-1006(4) “Idaho Electrical Board” states in part, “The members of the board shall, at their first regular meeting following the effective date of this act and every two (2) years thereafter, elect by majority vote of the members of the board, a chairman ... and a vice-chairman ...”.

MOTION: Kreg Davis made a motion to reappoint Bob Scott as chairman. Dale Pippitt seconded. All in favor, motion carried.

MOTION: Denis Duman made a motion to reappoint Jeff Wheeler as vice-chairman. Dale Pippitt seconded. All in favor, motion carried.

◆ **Labeling and Listing Proposal**

There were significant comments to the latest draft rule, IDAPA 07.01.10, with regard to the labeling and listing or requirements for field evaluation amendments.

Jeff Fitzloff, UL, suggested in section 011, *Certification and Approval of Electrical Products and Materials*, the word “fixtures” be replaced with “luminaires” since fixtures pertain to the plumbing code.

Dave Hill, Intertek Testing, clarified NFPA 790 is a standard; however, NFPA 791 is a recommended practice only. Mr. Hill recommended subsection 02.b be withdrawn as an item and incorporated into subsection 02.a.; establishing a level playing field for all field evaluation entities.

Board member Dale Pippitt suggested the verbiage in subsection 02.b be changed from “A professional engineer currently licensed to practice electrical engineering...” to “A professional engineer currently licensed to practice field evaluations...”.

The Division will modify the draft with the following: 1) Delete “fixtures” and insert “luminaries” under section 011, *Certification and Approval of Electrical Products and Materials*; 2) Take provision “b” and exchange with provision “c” in subsection 02; and, 3) Add additional language limiting the application to only industrial equipment.

MOTION: Kreg Davis made a motion to modify the proposal; bringing it back as an action agenda at the July 2013 meeting. Denis Duman seconded. All in favor, motion carried.

ACTION: The Division will amend the labeling and listing proposal; bringing it to the July 2013 meeting as an action item.

◆ **Scheduling Online Inspections**

The Division’s current TRAKiT system automatically defaults inspection requests to the next day. Some inspections are needed more than one day out due to scheduling conflicts, thus creating an issue. The Division’s IT department is working on a resolution. The topic *Scheduling Online Inspections* will be addressed at the July 2013 meeting.

ACTION: The topic *Scheduling Online Inspections* will be addressed at the July 11, 2013 meeting as an informational agenda item.

◆ **Code Collaborative Report**

The Code Collaborative has met several times and tentatively agrees on the following: 1) Keep the AFCI requirement amended as in the 2008 NEC; 2) GFCI protection of receptacles required six (6) feet from the outside edge of the tub or shower; and, 3) A 20 square foot minimum on outdoor porches for GFCI receptacles.

The collaborative will continue to discuss: 1) GFCI additions in the 2014 code; 2) Dishwashers; 3) Extra garage outlets (depending on the number of vehicles); 4) Outlets within six (6) feet of the kitchen sink (not covered by the countertop); 5) Laundry areas; 6) Light poles in subdivisions; 7) Disconnect from pivot sprinkler systems; and, 8) Amendments to the 2008 NEC currently enforced.

One amendment, insulate over knob and tube wire in existing structures, was received by the Division. The collaborative will address this issue; bringing a recommendation to the Board.

◆ **Negotiated Rulemaking – Amendment and Adoption of the 2014 NEC**

This topic coincides with the *Code Collaborative Report*.

As mentioned at the February 2013 meeting, Tim McClintock, NFPA, provided a summary of changes from the 2014 NEC and 2011 NEC to the collaborative committee.

At the July meeting, the Board will review and vote on proposed legislation for possible submission to the 2014 legislature. An online submittal form and draft proposals must be completed through the Division's website two weeks prior to the July meeting for review.

ACTION: The topic *Negotiated Rulemaking – Amendment and Adoption of the 2014 NEC* will be addressed at the July 11, 2013 meeting as an action agenda item.

◆ **Program Manager Report**

Light Pole & Water Line – The city of McCall has asked DBS to approve a manufactured product, light pole with water lines running through it to water flowers/plants, for installation. The product has not been approved by any testing agency. It was suggested since the poles are not in an industrial area they either need to be listed or approved by the authority having jurisdiction, which is DBS. A final decision will be made by the Division.

◆ **Operational Report**

Collaborative Group – The Division has been engaged in supporting the collaborative effort.

Fire in Orofino – It appears the probable cause of death of five people in Orofino was due to an extension cord run from a detached garage to a 100-year-old house (porch) into an electric barbeque. There was no GFI protection.

◆ **Administrator Report**

Financial Report – The Electrical Board Fund, FY 2013 financial statement as of March 31, 2013, was reviewed. A request was made to change the head count denominator from hours to people in the financial report.

ACTION: The Division will change the head count denominator to people rather than hours in the financial report.

City of Meridian – An update on the electrical and mechanical inspections provided by DBS for the city of Meridian was addressed.

Artwork – The Division will secure artist renderings of several of the major projects it is engaged in across the state for display at the Meridian office.

Construction in Idaho – New steel plant, Ucon; new corporate headquarters, Melaleuca Wellness Company, Idaho Falls; new Loves Travel Center, Bonneville County; and expansion at Chobani yogurt plant, Twin Falls.

JFAC – In 2007, the Division had 152 full-time employees (FTE). As of July 1, 2013, its authorized strength will be 121. For FY 2014, the Division’s appropriations have been reduced by \$500,000 and manpower decreased by ten (10) FTE.

◆ **Adjournment**

MOTION: Kreg Davis made a motion to adjourn the meeting. Al Frieze seconded. All in favor, motion carried.

The meeting adjourned at 12:05 p.m. (MT).

BOB SCOTT, CHAIRMAN
IDAHO ELECTRICAL BOARD

C. KELLY PEARCE, ADMINISTRATOR
DIVISION OF BUILDING SAFETY

DATE

DATE

*These DRAFT minutes are subject to possible correction and final approval by the Idaho Electrical Board 05/29/2013rb

IDAHO ELECTRICAL BOARD

Agenda Item No. 03

Labeling and Listing Proposal

PRESENTER: Steve Keys, Deputy Administrator-Operations

OBJECTIVE: Standard criteria for the approval of electrical equipment and apparatus installed in Idaho.

ACTION: Approve, disapprove or modify proposed legislation.

BACKGROUND: October 2012 – A great deal of machinery is being installed in the state of Idaho. Large corporations with credible safety programs would like to adopt North Carolina’s provision to exempt industrial equipment from the field evaluation approval process. Smaller companies would like professional electrical engineers, credentialed in the state of Idaho, to perform field evaluations on electrical equipment. NFPA 791 is the standard for industrial equipment.

January 2013 – A standard criteria and proposed rule change for the label and listing issue in Idaho was presented. The criteria may be modified to address the inclusion of standards adopted by NFPA relative to the assessment of industrial equipment. The Division will present a final draft proposal at the April 2013 meeting.

April 2013 - There were significant comments to the latest draft rule, IDAPA 07.01.10, regarding requirements for field evaluation amendments.

The Division will modify the draft with the following; bringing it to the July 2013 meeting as an action item: 1) Delete “fixtures” and insert “luminaries” under section 011, *Certification and Approval of Electrical Products and Materials*; 2) Take provision “b” and exchange with provision “c” in subsection 02; and, 3) Add additional language limiting the application to only industrial equipment.

ATTACHMENTS: 07.01.10.011 – Rules Governing Certification and Approval of Electrical Products and Materials



**IDAPA 07
TITLE 01
CHAPTER 10**

**07.01.10 – RULES GOVERNING CERTIFICATION AND APPROVAL OF
ELECTRICAL PRODUCTS AND MATERIALS**

000. LEGAL AUTHORITY.

The Idaho Electrical Board is authorized under Sections 54-1001 and 54-06(500, Idaho Code, to adopt rules concerning certification and approval of electrical products and materials. (2-26-93)

001. TITLE AND SCOPE.

01. Title. These rules shall be cited as IDAPA07.01.10, “Rules Governing Certification and Approval of Electrical Products and Materials,” Division of Building Safety. (2-26-93)

02. Scope. These rules prescribe criteria for the certification and approval of electrical products and materials. (2-26-93)

002. WRITTEN INTERPRETATIONS.

This agency has no written interpretations of this chapter (2-26-93)

003. ADMINISTRATIVE APPEALS.

This chapter does not allow administrative relief of the provisions outlined herein. (2-26-93)

004. – 010. (RESERVED)

011. CERTIFICATION AND APPROVAL OF ELECTRICAL PRODUCTS AND MATERIALS.

In the state of Idaho, all materials, devices, fittings, equipment, apparatus, fixtures, and appliances installed or to be used in installations that are supplied with electrical energy shall be approved in one (1) of the following methods: (2-26-93)

01. Testing Laboratory. Be tested, examined, and certified (Listed) by an ~~accredited electrical product~~ Nationally Recognized Testing Laboratory (NRTL). ~~The Division of Building Safety, Electrical Bureau, shall maintain and up to date list of products and equipment approved by such testing laboratories as well as an updated list of accredited products which will be used and installed in accordance with the certification (Listing).~~ (12-17-92)

- 02. Field Evaluation.** Non-listed electrical equipment may be approved for use through a field evaluation process following the recommended practices and procedures contained in the most recent edition of NFPA 791 – Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation published by the National Fire Protection Association (NFPA). Such evaluations shall be conducted by:
- a. A field evaluation body (FEB) which meets the requirements of the current edition of NFPA 790 – Standard for Competency of Third-Party Field Evaluation Bodies published by the National Fire Protection Association (NFPA); note**
 - b. The authority having jurisdiction (AHJ); or**
 - c. In the case of industrial equipment only, a professional engineer currently licensed to practice electrical engineering by the state of Idaho who is not involved in the design of the equipment being evaluated or the facility in which the equipment is to be installed.**

~~Approval of Electrical Inspector. Be approved by the electrical inspector provided such an assembly, product, or equipment is installed under an electrical permit issued by the Division of Building Safety, Electrical Bureau, and conforms to the National Electrical Code and recognized industry standards. Where in the judgment of the Electrical Bureau a field evaluation is necessary to determine the acceptability of the assembly, product, or equipment to recognized industry standards, this field evaluation shall be completed by an accredited electrical product testing laboratory. The Division of Building Safety, Electrical Bureau, shall maintain a list of accredited electrical testing laboratories approved to complete such field evaluations. Such approval shall not be required for types of products that are regularly certified (Listed) or for certified (Listed) products as determined by the list maintained by the Division of Building Safety, Electrical Bureau. Such approval shall be obtained prior to installation. If approval is denied, the particular reasons for denial shall be stated through the issuance of a notice of defects pursuant to Section 54-1004, Idaho Code.~~ (12-17-92)

03. Availability of NFPA Standards. The most recent edition of NFPA 790 – Standard for Competency of Third-Party Field Evaluation Bodies, and NFPA 791 – Recommended Practice and Procedures for Unlabeled Electrical Equipment Evaluation published by the National Fire Protection Association are available at the Division of Building Safety offices located at 1090 E. Watertower St., Suite 150, Meridian, Idaho 83642, 1250 Ironwood Dr., Ste. 220, Coeur d’Alene, Idaho 83814, and 2055 Garrett Way, Building 1, Suite 4, Pocatello, Idaho 83201. (x-x-14)

IDAHO ELECTRICAL BOARD

Agenda Item No. 04a

Negotiated Rulemaking – NEC 680.26

PRESENTER: Rob Foster, Electrical Program Manager

OBJECTIVE: Adopt amendment to NEC 680.26 – Pools.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: Remove in its entirety as the wording in the 2008 edition is incorrect. The 2014 edition has the corrected wording.

PROCEDURAL HISTORY:

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 04b

Negotiated Rulemaking – NEC 210.8(A)(7)

PRESENTER: Dave Yorgason, Collaborative Group Representative

OBJECTIVE: Adopt amendment to NEC 210.8(A)(7) – GFCI, Sinks.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: The Code Collaborative has met several times and is in agreement to amend section 210.8(A)(7) in the 2014 NEC. The Collaborative concluded adding extra GFCI to receptacles within six (6) feet of kitchen sinks would not increase safety beyond the requirements now in place.

PROCEDURAL HISTORY:

ATTACHMENTS: NEC 210.8(A)(7)



210.8(A)

(7) Sinks - Located in areas *other than kitchens* where receptacles are located within 1.8 m (6 ft) of the outside edge of the sink.

IDAHO ELECTRICAL BOARD

Agenda Item No. 04c Negotiated Rulemaking – NEC 210.8(A)(10)

PRESENTER: Dave Yorgason, Collaborative Group Representative

OBJECTIVE: Adopt amendment to NEC 210.8(A)(10) – GFCI, Laundry Areas.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: The Code Collaborative has met several times and is in agreement to amend section 210.8(A)(10) in the 2014 NEC. The Collaborative concluded adding GFCI to laundry area would not increase safety beyond the requirement of protection within six (6) feet of sink.

PROCEDURAL HISTORY:

ATTACHMENTS: NEC 210.8(A)(10)



210.8(A)

~~(10) Laundry Areas~~

IDAHO ELECTRICAL BOARD

Agenda Item No. 04d Negotiated Rulemaking – NEC 210.8(D)

PRESENTER: Dave Yorgason, Collaborative Group Representative

OBJECTIVE: Adopt amendment to NEC 210.8(D) – GFCI, Kitchen Dishwasher Branch Circuit.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: The Code Collaborative has met several times and is in agreement to amend section 210.8(D) in the 2014 NEC. Removing the section in its entirety will avoid unnecessary cost increase to consumers. The proposal was introduced by manufacturers and no fatalities have been documented.

PROCEDURAL HISTORY:

ATTACHMENTS: NEC 210.8(D)



210.8(D)

~~Kitchen Dishwasher branch circuit. GFCI protection shall be provided for outlets that supply dishwashers installed in dwelling unit locations.~~

IDAHO ELECTRICAL BOARD

Agenda Item No. 04e Negotiated Rulemaking – NEC 210.52(E)(3)

PRESENTER: Dave Yorgason, Collaborative Group Representative

OBJECTIVE: Adopt amendment to NEC 210.52(E)(3) – Outdoor Outlets.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: The Code Collaborative has met several times and is in agreement to amend section 210.52(E)(3) in the 2014 NEC; clarifying the size of balconies, decks and porches.

PROCEDURAL HISTORY:

ATTACHMENTS: NEC 210.52(E)(3)



210.52(E)

(E) Outdoor Outlets.

(3) Balconies, Decks and Porches. Balconies, decks and porches *having an overall area of 20 ft² or more* that are attached to the dwelling unit and are accessible from inside the dwelling unit shall have at least one receptacle outlet installed within the perimeter of the accessible from the balcony, deck or porch. The receptacle shall be located not more than 2.0 m (6 1/2 ft) above the balcony.

IDAHO ELECTRICAL BOARD

Agenda Item No. 04f

Negotiated Rulemaking – NEC 394

PRESENTER: Rod Burk, Chairman, Idaho Technical Advisory Committee/Weatherization Assistance Program

OBJECTIVE: Adopt amendment to NEC 394 – Concealed Knob and Tube Wiring.

ACTION: Vote to accept, reject or modify proposed legislation.

BACKGROUND: The intent of the amendment is to allow insulation to be installed over and around existing Knob and Tube wiring in older dwellings; increasing energy efficiency in the home.

PROCEDURAL HISTORY:

ATTACHMENTS: Neg. Rulemaking App. for NEC 394 - Draft of Proposed NFPA 70 2014 Edition, as well as additional supporting documentation is available on the Division's website:

http://dbs.idaho.gov/boards/EBboard/NegRules/2014NEC_394_RBurk.pdf.



Submit

Reset

Print

**DIVISION OF BUILDING SAFETY
APPLICATION FOR REVIEW OF A PROPOSED STATEWIDE AMENDMENT
TO STATE ADOPTED CODES
2012 Code Adoption Cycle**

Log# _____

(Office Use Only)

PLEASE FOLLOW INSTRUCTIONS ON PAGE FIVE

1. State Building Code to be Amended:

- | | |
|---------------------------------------------------------------|-----------------------------------------------------------------|
| <input type="checkbox"/> International Building Code | <input type="checkbox"/> International Energy Conservation Code |
| <input type="checkbox"/> International Residential Code | <input type="checkbox"/> International Mechanical Code |
| <input type="checkbox"/> International Fuel Gas Code | <input checked="" type="checkbox"/> National Electrical Code |
| <input type="checkbox"/> International Existing Building Code | <input type="checkbox"/> |
| <input type="checkbox"/> Idaho State Plumbing Code | <input type="checkbox"/> |

Section 394

Page 261

2. Applicant Name (Specific local government, organization or individual):

Idaho Technical Advisory Committee/Weatherization Assistance Program

3. Signed:

Rod Burk
Proprietor

Utility/Special Projects Coordinator
Title

4-11-13
Date

4. Designated Contact Person:

Rod Burk
Name

Chairman
Title

Address: 550 Washington Street South
Twin Falls, Idaho 83301

Office Phone: 208 733 9354 Cell: 208 731 3391 Fax: 208 733 9354

E-Mail address: rod@sccap-id.org

5. Proposed Code Amendment. Use 'legislative format' including both old and new language. See instructions on page five for specific details. Please attach a separate sheet for each separate proposal.

Code NEC 2014 (Draft) Section 394.12 Page 261

Please note number of additional pages: 3

Supporting Data for Statewide Amendment Proposals. This information is required for all statewide amendment proposals. Attach supporting documentation, as necessary; incomplete proposals will not be accepted.

The governing boards require supporting data on any amendment proposal to show:

1. That it meets basic criteria – See Part I to specify how this proposal meets the criteria for code amendment.
2. The intended effect—See Part II to describe the purpose of the proposed amendment, including the benefits and the problems addressed.
3. The potential impacts or benefits to business—See Part III/Types of Construction, to explain how methods in construction businesses, industries and services would be affected.
4. The potential impact on enforcement procedures, See Part III/Types of Services Required, to provide some analysis of the impacts on code enforcement in local jurisdictions.
5. Economic costs and benefits – Use the Table in Part IV of this form to estimate the costs and benefits of the proposal on construction practices, users and/or the public, the enforcement community, and operation and maintenance.

Part I ♦ Background Information on amendment.

Code References: NEC 2014 (Draft) Title: Concealed Knob and Tube Wiring
Related codes: NEC 2011 (Does this amendment change other related codes?)
Proponent: Rob Burk Phone: 208 733 9354 Date: 04/09/2013

NOTE: Amendments to the state building code must be based on one of the following criteria; please indicate the pertinent rationale for the proposed amendment by selecting from the list below:

- (1) The amendment is needed to address a critical life/safety need.
- (2) The amendment is needed to address a specific state policy or statute.
- (3) The amendment is needed for consistency with state or federal regulations.
- (4) The amendment is needed to address a unique character of the state.
- (5) The amendment corrects errors and omissions.

Part II ♦ Amendment Benefit:

PROBLEM(S) ADDRESSED (Describe the intended effect of the proposed code amendment):

The intent of this amendment is to allow older dwelling with existing Knob and Tube wiring to have insulation installed over and around the existing knob and tube wiring. This will give home owners with knob and tube wiring who needs to install insulation, an improvement which will benefit the homeowner in terms of energy saving, a safer and more comfortable indoor environment, along with increasing the energy efficient in the home.

PRIMARY REASON FOR AMENDMENT: (Describe how the amendment meets one of the criteria listed above)

Homeowners who live in dwelling which contain live knob and tube will likely never show the benefits of energy saving, if insulation cannot be installed over and around the wiring. If this amendment is passed, Jurisdictions having Authority will have the ability to allow insulation coverage of knob and tube wiring. This will create a big benefit in energy saving and a more comfortable indoor environment for the residents.

TYPE OF BENEFITS PROJECTED:

The projected benefit is housing which contains active knob and tube wiring and needs insulation will be inspected by a journeyman electrician or a master electrician employed by a license electrician. The inspection will show if the wiring is safe or repairs are needed or if the wiring is creating a life, health and safety concern. This will create a safer environment for the family and a greater benefit from the insulation.

Part III ♦ Amendment Impacts or Benefits:

TYPES OF CONSTRUCTION: New Construction Alteration/Tenant Improvement/Repair
 Residential-Single Family Residential-Multi Family Commercial Industrial

List businesses/industries affected by amendment:

Manufacturers: _____
 Specific Construction Contractors & Trades: Electricians and Insulation Contractors
 Construction Supply Industry: Electrical materials and Insulation Suppliers
 Specialty Trades: _____
 Types of Buildings: Single Family Site Built Housing
 Fire Protection Industry: _____

Types of Services Required:

Reporting: Brief Description Knob and Tube Inspection Report to Homeowner and Contractor or WAP Agency
 Record Keeping: Brief Description Knob and Tube Inspection Report retained by Electrician and Contractor or WAP Agency
 Other: Brief Description _____
 Indirect Cost to Industry: Indicate whether there are multiple sources to obtain the equipment, material or service required by this proposal. If not, provide a justification of the benefit versus small business impact.

Part IV ♦ Amendment Costs and Benefits

Building Type	Construction ¹			Enforcement ²			Operations & Maintenance ³		
	Co sts	% impact ⁴	Benefits ⁵	Costs	% impact	Benefits	Costs	% impact	Benefits
Residential			e	200		a b	100		a
Single family									
Multi-family									
Commercial/ Retail									
Industrial									
Institutional									

1 \$ / square foot of floor area or other cost. Attach data. Construction costs are costs prior to occupancy, and include both design and direct construction costs that impact the total cost of the construction to the owner/consumer.
 2 Cost per project plan. Attach data. Enforcement costs include governmental review of plans, field inspection, and mediated litigation required for enforcement.
 3 Cost to building owner/tenants over the life of the project.
 4 Cost differential over a specific else project or range of projects as determined by the proponent. Provide sufficient cost and benefit detail to clarify the impact to the Council. All data should be created and referenced to third party reputable sources for verification.
 5 Note sectors with measurable benefit from Part II, including benefits to a) the user, b) the public, c) the industry, and/or d) the economy; use e) for all of the above.

(B) **Interconnection of Power Sources.** Listed Class 2 sources shall not have the output connections paralleled or otherwise interconnected, unless listed for such interconnection.

(C) **Reverse Polarity (Back Feed) Protection of DC Systems.** A suspended ceiling low voltage power distribution system shall be permitted to have reverse polarity (back feed) protection of DC circuits by one of the following means:

- (1) If the power supply is provided as part of the system, the power supply is provided with reverse polarity (back feed) protection; or
- (2) If the power supply is not provided as part of the system, reverse polarity or back feed protection can be provided as part of the grid rail busbar or as a part of the power feed connector.

393.56 Splices. A busbar splice shall be provided with insulation and mechanical protection equivalent to that of the grid rail busbars involved.

393.57 Connections. Connections in busbar grid rails, cables, and conductors shall be made with listed insulating devices and be accessible after installation. Where made in a wall, connections shall be installed in an enclosure in accordance with Parts I, II, and III of Article 314, as applicable.

393.60 Grounding.

(A) **Grounding of Supply Side of Class 2 Power Source.** The supply side of the Class 2 power source shall be connected to an equipment grounding conductor in accordance with the applicable requirements in Part IV of Article 250.

(B) **Grounding of Load Side of Class 2 Power Source.** Class 2 load side circuits for suspended ceiling low voltage power grid distribution systems shall not be grounded.

III. Construction Specifications

393.104 Sizes and Types of Conductors.

(A) **Load Side Utilization Conductor Size.** Current-carrying conductors for load side utilization equipment shall be copper and shall be 18 AWG minimum.

Exception: Conductors of a size smaller than 18 AWG but not smaller than 24 AWG shall be permitted to be used for Class 2 circuits. Where used, these conductors shall be installed in a Chapter 3 wiring method, totally enclosed, shall not be subject to movement or strain, and shall comply with the ampacity requirements in Table 522.22.

(B) **Power Feed Bus Rail Conductor Size.** The power feed bus rail shall be 16 AWG minimum or equivalent. For

a busbar with a circular cross section, the diameter shall be 0.051 in. (1.29 mm) minimum, and, for other than circular busbars, the area shall be 0.002 in.² (1.32 mm²) minimum.

ARTICLE 394 Concealed Knob-and-Tube Wiring

I. General

394.1 Scope. This article covers the use, installation, and construction specifications of concealed knob-and-tube wiring.

394.2. Definition.

Concealed Knob-and-Tube Wiring. A wiring method using knobs, tubes, and flexible nonmetallic tubing for the protection and support of single insulated conductors.

II. Installation

394.10 Uses Permitted. Concealed knob-and-tube wiring shall be permitted to be installed in the hollow spaces of walls and ceilings, or in unfinished attics and roof spaces as provided by 394.23, only as follows:

- (1) For extensions of existing installations
- (2) Elsewhere by special permission

394.12 Uses Not Permitted. Concealed knob-and-tube wiring shall not be used in the following:

- (1) Commercial garages
- (2) Theaters and similar locations
- (3) Motion picture studios
- (4) Hazardous (classified) locations
- (5) ~~Hollow spaces of walls, ceilings, and attics where such spaces are insulated by loose, rolled, or foamed-in-place insulating material that envelops the conductors~~

394.17 Through or Parallel to Framing Members. Conductors shall comply with 398.17 where passing through holes in structural members. Where passing through wood cross members in plastered partitions, conductors shall be protected by noncombustible, nonabsorbent, insulating tubes extending not less than 75 mm (3 in.) beyond the wood member.

394.19 Clearances.

(A) **General.** A clearance of not less than 75 mm (3 in.) shall be maintained between conductors and a clearance of not less than 25 mm (1 in.) between the conductor and the surface over which it passes.

(B) Limited Conductor Space. Where space is too limited to provide these minimum clearances, such as at meters, panelboards, outlets, and switch points, the individual conductors shall be enclosed in flexible nonmetallic tubing, which shall be continuous in length between the last support and the enclosure or terminal point.

(C) Clearance from Piping, Exposed Conductors, and So Forth. Conductors shall comply with 398.19 for clearances from other exposed conductors, piping, and so forth.

394.23 In Accessible Attics. Conductors in unfinished attics and roof spaces shall comply with 394.23(A) or (B).

Informational Note: See 310.15(A)(3) for temperature limitation of conductors.

(A) Accessible by Stairway or Permanent Ladder. Conductors shall be installed along the side of or through bored holes in floor joists, studs, or rafters. Where run through bored holes, conductors in the joists and in studs or rafters to a height of not less than 2.1 m (7 ft) above the floor or floor joists shall be protected by substantial running boards extending not less than 25 mm (1 in.) on each side of the conductors. Running boards shall be securely fastened in place. Running boards and guard strips shall not be required where conductors are installed along the sides of joists, studs, or rafters.

(B) Not Accessible by Stairway or Permanent Ladder. Conductors shall be installed along the sides of or through bored holes in floor joists, studs, or rafters.

Exception: In buildings completed before the wiring is installed, attic and roof spaces that are not accessible by stairway or permanent ladder and have headroom at all points less than 900 mm (3 ft), the wiring shall be permitted to be installed on the edges of rafters or joists facing the attic or roof space.

394.30 Securing and Supporting.

(A) Supporting. Conductors shall be rigidly supported on noncombustible, nonabsorbent insulating materials and shall not contact any other objects. Supports shall be installed as follows:

- (1) Within 150 mm (6 in.) of each side of each tap or splice, and
- (2) At intervals not exceeding 1.4 m (4½ ft).

Where it is impracticable to provide supports, conductors shall be permitted to be fished through hollow spaces in dry locations, provided each conductor is individually enclosed in flexible nonmetallic tubing that is in continuous lengths between supports, between boxes, or between a support and a box.

(B) Securing. Where solid knobs are used, conductors shall be securely tied thereto by tie wires having insulation equivalent to that of the conductor.

394.42 Devices. Switches shall comply with 404.4 and 404.10(B).

394.56 Splices and Taps. Splices shall be soldered unless approved splicing devices are used. In-line or strain splices shall not be used.

III. Construction Specifications

394.104 Conductors. Conductors shall be of a type specified by Article 310.

ARTICLE 396 Messenger-Supported Wiring

I. General

396.1 Scope. This article covers the use, installation, and construction specifications for messenger-supported wiring.

396.2 Definition.

Messenger-Supported Wiring. An exposed wiring support system using a messenger wire to support insulated conductors by any one of the following:

- (1) A messenger with rings and saddles for conductor support
- (2) A messenger with a field-installed lashing material for conductor support
- (3) Factory-assembled aerial cable
- (4) Multiplex cables utilizing a bare conductor, factory assembled and twisted with one or more insulated conductors, such as duplex, triplex, or quadruplex type of construction

II. Installation

396.10 Uses Permitted.

(A) Cable Types. The cable types in Table 396.10(A) shall be permitted to be installed in messenger-supported wiring under the conditions described in the article or section referenced for each.

(B) In Industrial Establishments. In industrial establishments only, where conditions of maintenance and supervision ensure that only qualified persons service the installed

NEC 2014 Draft Section 324.12 Page 261 Amend to read:

Exception: The provisions of Section 394.12 shall not be construed to prohibit the installation of loose or rolled thermal insulating maters in spaces containing existing knob-and-tube wiring, providing all the following conditions are met:

- (1) The visible wiring shall be inspected by a journeyman electrician or master electrician employed by or is the owner of a licenses electrical contractor.**
- (2) All defects found during the inspection shall be repaired prior to the installation of insulation.**
- (3) Repairs, alterations or extensions of or to the electrical systems shall be inspected by a certified in the local Jurisdiction Having Authority.**
- (4) The insulation shall have a flame spread rating not to exceed 25 and a smoke density not to exceed 450 when tested in accordance with ASTM E84-91A.**
- (5) Exposed splices or connections shall be protected from insulation by installing flame resistant, non-conducting, open top enclosures which shall be installed according to the Authority Having Jurisdiction or be installed in a way to allow three to four inches of side clearance and at least four inches above the final level of insulation. As an alternative a junction box can be installed to ensure the splices or connections are not exposed.**
- (6) All knob-and-tube circuits shall have overcurrent protection in compliance with the 60 degree C column of Table 310.104(A) NFPA 70 2011. Overcurrent protections shall be either circuit breakers or types S fuses. The type S fuse adapters shall not accept a fuse of an ampacity greater than permitted NEC 2011 Sec204.54.**

Reason for change with supporting documentation:

The 2010 Census stated there are 435,316 single -family site built dwellings in Idaho. The Census also stated of those site built houses, 11% were built before 1940. This percentage represents 47,885 house s in Idaho that potentially could have knob and tube wiring. The Weatherization Assistance Program of Idaho serves households with an income at or below 200% of the Office of Management and Budget poverty guidelines. According to 2010 Census data, this income limit qualifies 37.5% of Idaho s population. This change has the potential to address safety, energy efficiency, and comfort issues in some of the worst housing stock in

Idaho. The removal of existing knob and tube wiring is the preferred method of addressing the aforementioned issues in this housing, but there are typically no funds for limited income residents to pay for this type of work. Due to the cost, WAP funding guidance does allow agencies to replace the wiring.

The Weatherization Assistance Program (WAP) and High Performance with Energy Star in retrofit, installs extremely cost effective energy conservation measures. These measures include air sealing, duct sealing, insulating walls, attics, ducts and crawl spaces. The Weatherization Assistance Program is also required to comply with the ventilation requirements of ASHRAE 62.2 2010, to ensure good ventilation and indoor air quality after air sealing and insulating the house. To ensure energy performance in a dwelling, insulation must be installed in 100% of the cavities in the building envelope of a home. Without complete insulation coverage, the house cannot perform at its most efficient energy potential, potentially costing residents valuable resources in wasted energy costs. Allowing WAP agencies and High Performance Energy Contractors the ability to install insulation over and around knob and tube will greatly improve the energy performance of the dwelling.

The following is except from the document submitted October 18, 2011 for review. The document Retrofitting Insulation in Cavities with Knob- and-Tube Wiring by University of Illinois, Building Research Council at Champaign by Jeffrey R Gordon

Knob-and-tube wiring was predominant wiring system through the 1920's and 1930's; some installations of knob-and-tube wiring continued in houses up until 1950.

While the differences are considerable between knob-and-tube wiring and Romex, there is nothing inherent in knob-and-tube wiring that makes it dangerous. Knob-and-tube wire, properly installed, is not inherently a problem. While opinions

regarding the safety of knob-and-tube wiring vary widely, the concerns are with the original wiring, but rather with what has happened after the fact.

Older homes with knob-and-tube wiring were often supplied with 60 amp service at the main electrical panel. They were also subject to limited distribution in two forms: (1) limited number of circuits, and (2) limited number of electrical outlets per room. Both of these factors opened knob-and-tube wiring to potential abuses of the electrical system after the initial installation.

Knob-and-Tube wiring could suffer from physical abuse over time. Rather than hugging structural components, knob-and-tube wiring was suspended away from surrounding areas. Bumping the wiring could place stresses and cause resultant damage on a portion of the wire. This could be particularly true in accessible attics.

The abuses (improperly added connections, overfusing and wire embrittlement, physical damage) can result in point sources of high resistance. It is at these points that fire potential is greatest. Ultimately, it is wiring that has been abused that is potentially dangerous.

Universal Energy
Energy Conservation Consultant/Contractor

Home Performance with Energy Star

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Boise, Idaho 83711

208-391-8702

universalenergy@msn.com

ID Contractor# RCT-29452

April 9, 2013

Ms. Renee Bryant, Administrative Assistance, Board Support
Division of Building Safety
1010 East Watertower Street, Suite 150
Meridian ID, 83642

RE: Insulation Contractors – Idaho’s Electrical Code, Amendment to Install Insulation over and around Knob and Tube Wiring

Dear Ms. Bryant;

Universal Energy along with other Energy Conservation Contractors and the non-profit organizations that manage the Low-Income Weatherization Assistance Programs (WAP), appreciates the opportunity to provide information to the Electrical Board, regarding an amendment to Idaho’s Electric Code concerning Knob and Tube Wiring.

In 1987, an amendment to the National Electric Code (NEC) prohibited the placement of insulation in contact with Knob and Tube wiring. This amendment had significant ramifications for low-income weatherization programs and other private companies installing insulation in older housing stock. Older dwellings, which have live Knob and Tube wiring, were missing the most cost effective energy retrofits (energy savings per dollars spent), such as wall insulation and attic insulation were not achievable due to the wiring. Soon thereafter, the NEC passed an amendment, allowing States to adopt numerous approaches and protocols to address this concern.

Replacing the existing Knob and Tube wiring with an updated electrical system is the best fix, but it can very expensive. Most homeowners and especially low income homeowners in general do not have the extra resources to complete this retrofit. We are here today to present

information from other States and local Jurisdictions with Authority that have adopted an amendment to the NEC that allows insulation to cover Knob and Tube wiring. This is a notable option for homeowners with Knob and Tube wiring that wants to receive cost effective Home Performance Energy Conservation measures, while maintain a safe and comfortable indoor environment.

Thank you for the opportunity to provide comments. Please do not hesitate to contact me if you should have questions or additional concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Brodbeck', written in a cursive style.

Thomas Brodbeck
Universal Energy

IDAHO ELECTRICAL BOARD

Agenda Item No. 05

Scheduling Online Inspections

PRESENTER: Ron Whitney, Deputy Administrator-Administration

OBJECTIVE: Provide the progress on refining the online permit/inspection program.

ACTION: Informational

BACKGROUND: The Division's current TRAKiT system automatically defaults inspection requests to the next day. Some inspections are needed more than one day out due to scheduling conflicts, thus creating an issue. The Division's IT department is working on a resolution. The topic *Scheduling Online Inspections* will be addressed at the July 2013 meeting.

PROCEDURAL HISTORY:

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 06

Program Manager Report

PRESENTER: Rob Foster, Electrical Program Manager

OBJECTIVE: Update Board on the Electrical program's current activities.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

PROCEDURAL HISTORY:

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 07

Operational Report

PRESENTER: Steve Keys, Deputy Administrator-Operations

OBJECTIVE: Update the Board on the operations of the Electrical program and division.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

**PROCEDURAL
HISTORY:**

ATTACHMENTS: No documentation



IDAHO ELECTRICAL BOARD

Agenda Item No. 08a

Financial Report

PRESENTER: C. Kelly Pearce, Administrator and Kathleen Watkins, Financial Manager

OBJECTIVE: Review the Idaho Electrical Board's financial report

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

PROCEDURAL HISTORY:

ATTACHMENTS: Financial Report





Division of Building Safety
 ELECTRICAL BOARD FUND 0229-01
 Fiscal Year 2013 Financial Statements
 As of 5/31/2013

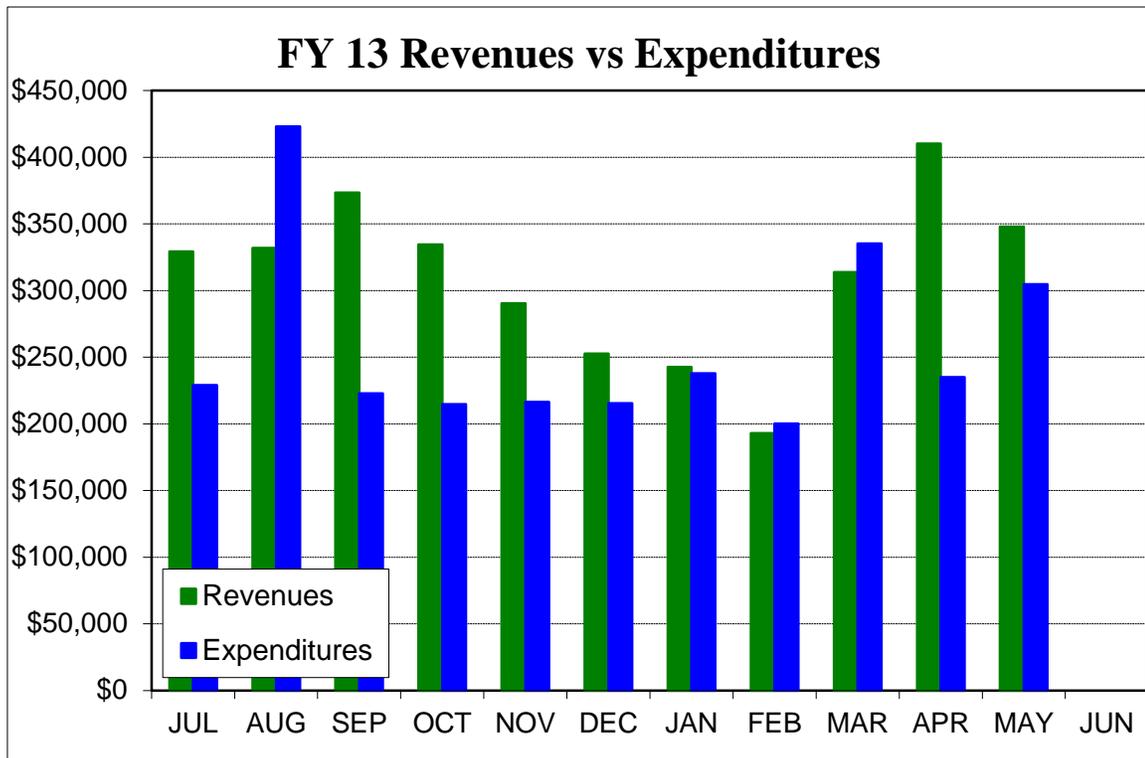
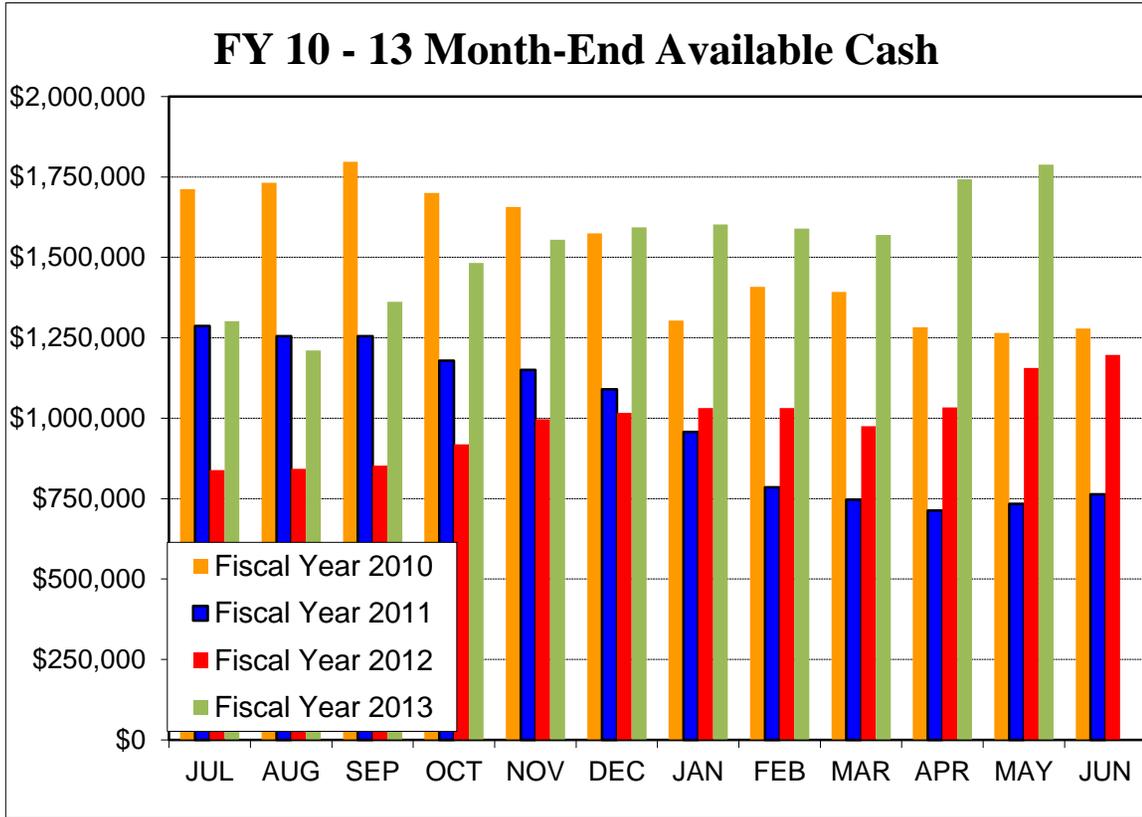
Statement of Revenues and Expenditures

Class	Budget	Fiscal Year To Date	YTD as a % of Budget	Remaining Budget	Projected for Remainder of Year	Projected Year End Totals	Projected Total as a % of Budget
Revenues:	3,097,000	3,420,254	110.4%	(323,254)	171,820	3,592,074	116.0%
Expenditures							
Personnel:	2,041,000	2,035,327	99.7%	5,673	182,497	2,217,824	108.7%
Operating:	598,000	570,216	95.4%	27,784	54,301	624,516	104.4%
Capital:	163,000	229,109	140.6%	(66,109)	95,395	324,504	199.1%
Total Expenditures	2,802,000	2,834,652	101.2%	(32,652)	332,193	3,166,844	113.0%
Net for FY 2013	295,000	585,603			(160,373)	425,230	

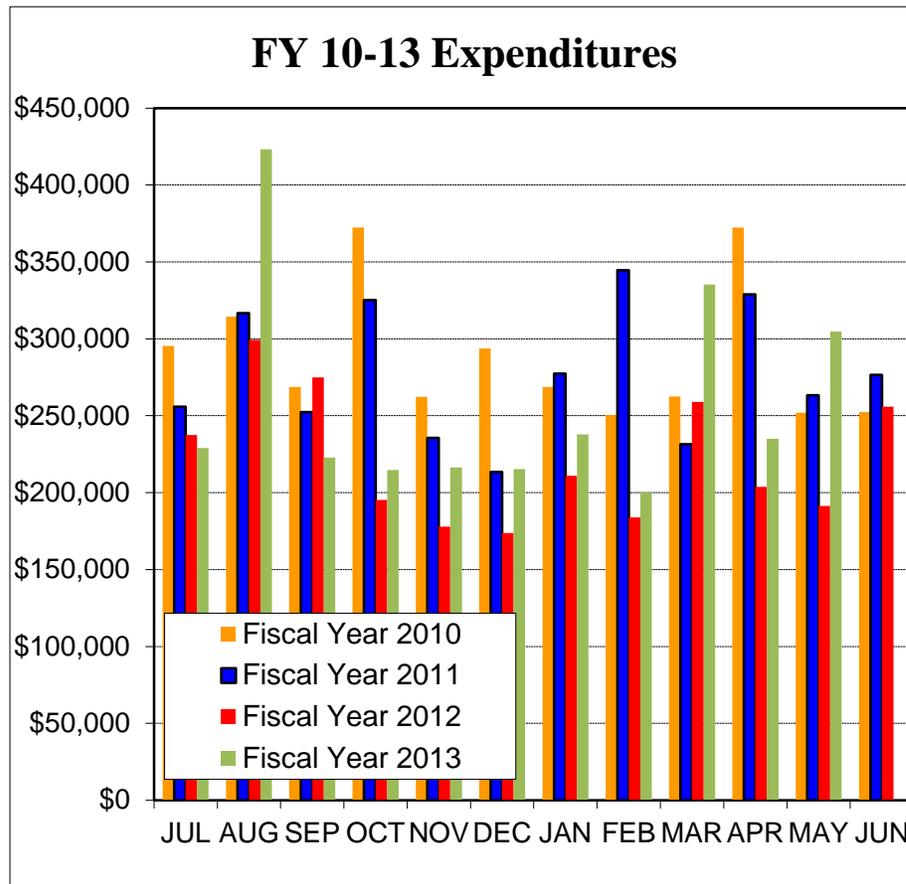
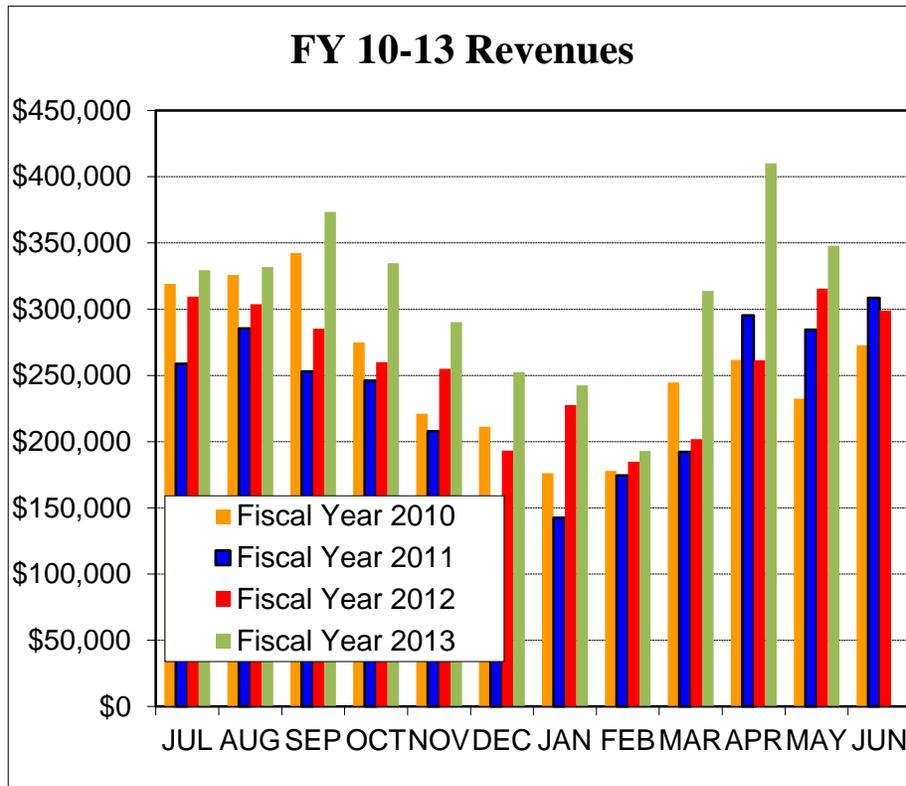
Statement of Cash Balance

	Fiscal Year to Date Revenues	Fiscal Year to Date Expenditures and Encumbrances	Other Changes in Cash	Available Cash as of May 31, 2013	Projected Change in Cash for Remainder of Year	Projected Year End Available Cash
July 1, 2012 Beginning Cash Available	1,196,822	3,420,254	5,440	1,787,864	(160,373)	1,627,492
		(2,834,652)				

ELECTRICAL BOARD FUND 0229-01



ELECTRICAL BOARD FUND 0229-01



IDAHO ELECTRICAL BOARD

Agenda Item No. 08b

Administrator

PRESENTER: C. Kelly Pearce, Administrator

OBJECTIVE: Provide an overview of the division's current activities.

ACTION: Informational

BACKGROUND: This topic is addressed at all regularly scheduled Idaho Electrical Board meetings.

**PROCEDURAL
HISTORY:**

ATTACHMENTS: No documentation

