



Dora NEWSLETTER

Department of Regulatory Agencies

Division of Registrations

May 2009

Bill Ritter, Jr.
Governor

D. Rico Munn
Executive
Director

Charles H. Adams
Program
Director

STATE ELECTRICAL BOARD

Greetings From The Chair

By Loren Priest -- Chairman, State Electrical Board

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**Consumer protection
is our mission**

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In taking a moment to reflect on the accomplishments of both this board and our industry as a whole, we must acknowledge the uncertainty that we face. While great strides have been made, a lot of our profession has remained unchanged for the last 100 years. The principles that guide us have been laid down from the past and will remain for future generations of electricians.

While acknowledging the past, we must also look to the future. There are great technological advances coming; everything from new types of lighting to energy saving equipment to new sources of energy. We have the opportunity to embrace these technologies and form new foundations in our industry. We have the ability to learn about these new and changing technologies and then teach our clients and colleagues how to utilize them to provide additional sources of work during this time of uncertainty.

By replacing energy consuming fixtures and HVAC equipment, jobs are created. Replacing switches with occupancy sensors and installing photoelectric sensors in buildings to reduce energy consumption during the day creates jobs. The installation of new small scale wind generators and photovoltaic systems creates jobs. Educating building owners on how they will benefit from this and other energy saving systems, creates jobs.

This economic change can spell expansion in the electrical industry as we look to solve the cash flow issues which face all businesses. As we take the time to understand and embrace these new systems and technologies, we expand our knowledge on how to better serve both individual homeowners and commercial building owners. We need to take control of our own destiny rather than waiting for others to tell us what to do and how to survive.

We at the State Electrical Board stand ready to assist you in the understanding of the installation of these new systems. We have an extremely capable staff which keeps abreast of new and frequent changes in the industry; from wiring methods to new and safer devices to the requirements for installing the photovoltaic arrays and inverters.

This board, on which I am honored to serve, is forward thinking and embraces the future advancements for the protection of consumers. We look to find consensus in other inspecting agencies both locally, statewide, and among other state regulatory agencies. We do this to ensure that we understand where the industry is going and how to better protect the public and to assist you, the installing professionals.

Inside This Issue... On Page ...

ARC-FAULT Protection Causes Controversy	2
Renewal Information	4
Notes from The Chief Inspector	4



Board Statistics

*All numbers are effective
March 12, 2009*

Total licensed/
registered: (active)
31,160
Electrical Contractors:
3,650
Master Electricians:
6,000
Journeyman Electricians:
10,113
Residential Wiremen:
1,141
Electrical Apprentices:
10,256



ARC-FAULT Protection Causes Controversy

By Richard Wyland, State Electrical Inspector -- Walsenburg



Have You Moved Lately?

It is imperative that all licenses and registrants keep their mailing address updated with the State Electrical Board.

The State Electrical Board mails renewal information to the licensee and registrant at the last address furnished to the Board.

Failure to receive such a renewal notice does not relieve the licensee or registrant of the obligation to submit a timely renewal.

Electricians and electrical contractors can update their mailing and email address at:

<https://www.doradls.state.co.us/>



The 2008 NEC, as adopted by the State Electrical Board on August 1, 2008, contains new requirements for arc-fault protection of branch circuits in dwelling units. The new rule significantly increases the number of circuits that will be required to be provided with arc-fault circuit interrupter (AFCI) protection. This new rule was met with strong opposition by some in the home-building industry, citing concerns regarding the cost it will add to the wiring of a residence.

I must admit I was surprised at how rapidly this new technology was incorporated into most of the 120 volt, 15 and 20 ampere circuits in a dwelling. Looking back at the measured pace of the expansion of GFCI protection, I expected that the new AFCI technology would follow the same model. I questioned whether or not this move could be justified on a cost/benefit ratio. I did some research into the justifications used by Code Making Panel No. 2 in their decision to incorporate the new rules into the code. The research provided some eye-opening statistics.

An arcing fault produces erratic current flow that sometimes won't generate enough energy to cause a standard circuit breaker to see the fault and open the faulted circuit. These arcing faults do generate tremendous amounts of heat though (up to 9,000° F.) and according to the National Association of State Fire Marshals (NASFM), are responsible for 82% of electrical fires in residences. An arc-fault circuit interrupter incorporates new technology into circuit breakers that recognizes the current flow characteristics of an arcing fault, causing the circuit breaker to trip and open the circuit, which stops the fault hopefully, before something combustible has ignited.

Arcing faults can be caused by frayed extension cords, loose connections at wiring devices, faulty wiring devices, broken wires, installation errors, etc. Studies indicate that most arcing faults occur in the branch circuit wiring, hidden behind walls and ceilings, where the problem is likely to go undetected until a fire erupts.

In December 1994, the Consumer Products Safety Commission (CPSC) issued a call to manufacturers to research technical solutions to mitigate the risk of electrical fires caused by arcing faults.

A number of manufacturers answered the call and several technologies were investigated. Arc-fault circuit interrupters were found to be promising.

In December 1996, Underwriters Laboratories (UL) and National Electrical Manufacturers Association (NEMA) created a draft standard on the operational requirements for arc-fault circuit interrupters. The first arc-fault circuit interrupters became commercially available in 1997. In February 1999, UL 1699 Standard for Arc-Fault Circuit Interrupters was published. The 1999 NEC required AFCI protection for circuits supplying receptacles in bedrooms, effective January 1, 2002. The 2002 NEC required AFCI protection on all 120-volt, 15 and 20 ampere bedroom circuits. The 2005 NEC required the use of combination-type, arc-fault circuit interrupters effective January 1, 2008. The 2008 NEC expands AFCI protection to cover most of the branch circuits in a residence.



According to the CPSC, in 1998, residential electrical fire losses totaled \$1.68 billion. It is recorded that \$680 million of this damage was attributed to problems in the dwelling's electrical distribution system. These are the types of fires that arc-fault circuit interrupters are effective in preventing. In an average

year, the NASFM counts 67,800 residential fires of electrical origin. Four hundred eighty five people die in these fires and the aforementioned CPSC figure of \$1.68 billion in residential property damage is caused by these fires. AFCI protection will stop, depending on the source quoted, from 50% to 80% of these fires. So a benefit is a substantial reduction in deaths and property damage caused by electrical fires. Arc-fault circuit interrupters also provide a measure of protection against mistakes made while the house is being wired, in that loose connections, staples through cables, etc. can be detected by the device before a fire results.

Cost estimates of providing this AFCI protection for an average residence vary but most fall into the \$250 to \$400 range, per dwelling. Even if the average cost were twice that, with an average fire causing \$23,600 in damage, it seems that the benefit to cost ratio favors providing this protection.

(Continued on page 3)

ARC-FAULT Protection Causes Controversy

(Continued from page 2)

This technology has been in use for 10 years. Its reliability and effectiveness have been demonstrated in actual use in homes since January 1, 2002. According to the manufacturers of these devices, most instances of nuisance tripping can be traced to errors in the installation of the device itself, shortcomings in the circuit wiring or, problems with equipment connected to the circuit.

The addition of these requirements to the code is endorsed by, among others, NECA, CPSC, the U.S. Fire Administration, and NASFM.

Thanks to Siemens' White Paper on AFCIs and UL.com for providing the statistics used in this article.

New technologies are often met with resistance. Remember the brouhaha that the introduction of GFCI protection caused in the seventies? That technology has saved countless people from electrocution. For that matter, even the common practice of grounding electrical transformer secondaries met with similar opposition in 1890! In my humble opinion, AFCI technology has been tested and proven, the protection provided by the devices is needed, and the benefit compared to the cost is justifiable.



Helpful Social Security Number Information for Electrical Contractors

By Charles Adams, Program Director - State Electrical Board



Our Board office has recently encountered some apprentice registration and termination cards that had fraudulent social security numbers. Please be advised that social security group numbers beginning with 9 are invalid social security numbers. The highest issued group number to date by the Social Security Administration is 772, so anything above those starting three numbers are invalid.

Be advised that as of January 1, 2007, the Division of Registrations (who not only register electrical apprentices, but over 40 other professional and occupations) can no longer register or license those individual who cannot prove legal presence. This is in accordance with:

C.R.S. 12-34-107(1) "Applications for licenses – authority to suspend licenses – rules. (1) (a) Every application by an individual for a license issued pursuant to the authority set forth in titles 10, 11 and 12, C.R.S., by any division, board, or agency of the Department of Regulatory Agencies shall require the applicant's name, address, and social security number. Subject to the exemptions found in 8 U.S.C. Sec. 1621(c)(2), to the extent that any such license constitutes a professional license or commercial license regulated by 8 U.S.C. Sec. 1621, such division, board, or agency may issue or renew any such license to an individual only if the individual is lawfully present in the United States, and shall immediately deny any such license or renewal thereof upon determining that the individual is unlawfully present in the United States. The individual shall prove his or her identity with a secure and verifiable document, as that term is defined in Section 24-72.1-102(b). For purposes of this subsection (1), an individual is unlawfully present in the United States if the

individual is an alien who is not: (I) A qualified alien as defined in 8 U.S.C. Sec. 1641; (II) A nonimmigrant under the "Immigration and Nationality Act," Federal Public Law 82-414, as amended; or (III) An alien who is paroled into the United States under 8 U.S.C. Sec. 1182(d)(5) for less than one year.

Legal presence can be proven through different mechanisms, among them: 1) a United States birth certificate or proof of birth abroad to U.S. citizen parents; 2) certificates of naturalization; 3) valid I-551 (Permanent Resident Card or "green card"); 4) valid, unexpired, I-766 (Work Authorization Card) with a valid SSN; or 5) a valid U.S. passport with a valid unexpired visa and I-94 (Arrival-Departure Record) allowing a non-resident to work in the United States.

In some cases, numbers beginning with a "9" are taxpayer identification numbers; however, Taxpayer Identification Numbers (TIN) do not replace social security numbers, and do not prove legal presence in the United States. Since we no longer register or renew those individuals who come to our attention who cannot prove legal presence, we will be unable to register or renew individuals lacking the proper documentation to prove such.

Please use the following website as a resource <http://www.ssa.gov/bsowelcome.htm> and register your company. This service is free to employers. Once you are registered, you have the ability to validate whether a SSN actually belongs to an individual. The website is fairly user friendly and can assist you in determining whether a SSN presented by an individual actually belongs to that person, or is being used fraudulently.



Important requirement affecting your license renewal regarding lawful presence in the USA.

Effective January 1, 2007, all applicants requesting original licensure, renewal of an active license, or reinstatement of a lapsed license must complete and sign the Affidavit of Eligibility Form.

No license can or will be issued without this form.

The good news is that you can complete this form online when you use Registrations Online Services!

You must possess at least one secure and verifiable document and include information about that document on the Affidavit itself (or provide the information during online renewal).

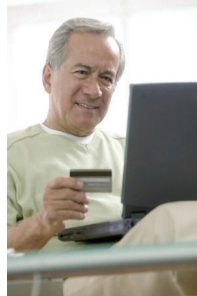
The list of secure and verifiable documents is available to you when you renew online.

We also have a web page where you can read the law, look at the Affidavit, and see the list of acceptable documents.

www.dora.state.co.us/registrations/Affidavit.htm

RENEWALS

There is a 60-day renewal grace period following the license expiration date on February 28, 2009, during which time you will have to pay an additional late fee to renew your license. If you have not renewed your license before the 60-day grace period ends on April 30, 2009, your license will be lapsed and you must apply for reinstatement to continue practicing as an electrician. If you do not, you will be practicing without a license, which is a violation of Colorado law.



You can pay your renewal fee using a credit card, debit card or a prepaid credit card.

RESIDENCE OUTSIDE OF THE UNITED STATES

If you are outside of the United States, you may not be able to access our Registrations Online Services. If you attempt to access the following link www.dora.state.co.us/registrations and you cannot get the page to display, you may have to contact your Internet Service Provider (ISP) to allow you access. If your ISP still cannot grant you access, then you will have to request a hard copy renewal form.

You will also need a United States Social Security Number (SSN) to access the Registrations Online Services. If you do not have a SSN then you will need to request a copy of the renewal coupon.

You can request the hard copy renewal form by contacting our manual request line at 303-894-2984 or email at registrations@dora.state.co.us. You will either speak to the representative or you will have to leave a voice message. In your voice message, please make sure to leave your name, license type, license number, and address where you would like the renewal form mailed.

Notes from the Chief Inspector

By Stephen Conrad, State Chief Electrical Inspector

2008 NATIONAL ELECTRICAL CODE

The State Electrical Board (Board) has adopted the 2008 edition of the National Electrical Code (NEC) without amendments effective on August 1, 2008. The Board invited public input, either by writing or by participation in a public hearing which was held on May 19, 2008. The Board received public input from a number of interested parties including home builder associations, inspectors, electrical contractors, and manufacturers of electrical equipment.

One particular note is that the Board recognized there is a cost associated with the safety enhancements included in the 2008 NEC, which weighed heavily into their decision. Board member deliberation recognized that many enhancements in electrical safety have come with an initial cost associated with the adoption of past NEC requirements and that those past editions have proven to provide a safe environment and to further the protection of homes and structures from the hazards arising from the use of electricity. At the conclusion of the public hearing and deliberation, the Board determined that the enhanced safety requirements of the 2008 NEC were necessary to protect the citizens of Colorado from electrical fires and shock hazards.

The Board voted unanimously in favor of the adoption of the new Board rules, of which the 2008 NEC is a major part.

ELECTRICAL CONTRACTOR RENEWAL

New this renewal cycle is the requirement for electrical contractors to attest that the list of apprentices registered to the contractor is correct at the time of renewal. Remember, per the following statute, an electrical contractor is responsible for registering and terminating registration of their apprentices.

12-23-110.5. Apprentices - supervision - registration - discipline.

(3) (a) Upon employing an electrical apprentice to work at the trade, the electrical contractor, within thirty days after such initial employment, shall register such apprentice with the board. The employer shall also notify the board within thirty days after the termination of such employment.

An electrical contractor can use the website to accomplish this important task. Simply go to <https://www.doradls.state.co.us/index.php> and select "I would like to manage my electrical apprentices."

DISCIPLINARY ACTIONS

Below is the list of businesses and individuals disciplined by the State Electrical Board from July 1, 2006 through June 30, 2008

Aable Loans HVAC	Crookston, Jesse L	Hawk, Shawn
Abeyta, Jaimie	Curry, James Earl Jr	Hebig, Brad
Aceviz, Jose	Curtis, Jeffrey	Here's Howe, Inc.
Allen, D Joseph	D&D Utility & Construction Services, Inc.	Hernandez, Salvador
Almanzar, Bryan Danny	Daly, Edward Ryan	Hetherington, Fred Howard
Anaya, Gustavo Adolfo	Davis, Joshua	Hicks, Stephen
Arco Electric Inc	DeMuro, Daniel Allen	Highland Electric, Inc.
Armer, Seth Ryan Finn	Denke, Melvin Benjamin, Jr.	Hillius, Darren Lee
Arrow Heating & A/C	Diangelo, John P	Hogue, Adam H
Baker, Cleytus Joe	Dirks, Kevin Lynn	Horrocks, John Keller
Banks, Steven Eugene Jr	Donahue, Brendan	House, Nicholas
Barela, Daniel Paul	Duclon, Gerald	Huesemann, Dale E
Barnes, Michael Joe	Duro Electric Company	Jackson, William Leonard
Bates, Christopher A	Elliot, Chad Michael	Jeffco Electric, Inc.
Benally, Gilbert	Elliott, Edwin Eugene	Jeffers, Rodney Lee II
Berry, Jason	Elliott, Ronnie Samuel	Jenkins, Randolph Scott
Bialik, Russell Shawn	Ellis, Percy	Johnson, Brad
Billingsley, J R	Essenburg, Steven	Johnson, Ray
Bird, Dennis Lyle	Favors, George Robert	Jones, Leonard J
Birdwell, Chuck	Fink, John Earl	Jones, Michael Duane
Blakey, Albert Kittridge	Frank, Brian	Jordan, Jeremy William
Blecha, Garrett	Fredericks, Jason P	Jueschke, Edward Allen
Bogart, Keith J	Freideman, David H	Junglen, James B
Boyles, Jason	Gaccetta, Thomas James	Keller, Donald Eugene
Broughton, Merlin	Garcia, Daniel Lloyd	Lachner, Mike
Brown, Darnell	Gaupel, Anthony W.	Lake, Chris Ray
Bryant, Clifford F	Gavaldon, Michael	Lee, Seung Han
Burket, Bradley Lester	Gebhards, Chester	Lewis, Thomas R
Bussard, Shane Eric	Gesell, Anthony	Lindsay, John William
Cantu, Danny	Gesell, Keith	Lowery, Tony Ferrell
Carlson, Kevin Mathew	Gillan, Daniel P	Lowman, Robert A, Jr
Carner, Eugene Francis Jr	Gilliam, Chester A	Lyden, Joseph Thomas
Cathey, Daniel	Gilligan, Robert	Maass, Philip
Chavez, Matthew Charles	Goodman, Justin J S	Maecker, Louis B
Ciletti, Jim A	Green, Clifford E	Mahaffey, Kristopher A
Clair, Dana Ray	Grout, Kevin Jay	Manzanares, John E
Clark, Charles R	Gutierrez, Habib	Manzanares, Josuef Fernando
Clark, Christopher A	H & H Electric Inc	Margheim, Terry Lee
Clement, Mathew Wade	Hall, Christopher Alan	Marque, Travis
Cobo, Philip Vincent	Hamel, Aaron J	Martinez, Matthew En
Collins, William M.	Hamilton, Mark	Marxhausen, Ryan J
Cope, Andrew George	Hardin, Daniel Nathan Jr	Mascarenas, Jason Nicholas
Copeland, William T	Hart, Michael	Mccarty, Gerald D
Cordova, Julian	Hartford, Charles M	McCoy, Leland Allen
		McGraw, Ronald D

(Continued on page 6)

DISCIPLINARY ACTIONS

Below is the list of businesses and individuals disciplined by the State Electrical Board from July 1, 2006 through June 30, 2008

Continued from page 5)

Medina, Gregory	Quilter, James Emanuel Jr.	Taylor, Troy Richard
Meehan, Doug	Ramirez, Roberto	Tec Electric, Inc.
Menan, Lance Eugene	Reed, Robert W	Thompson, Stuart
Miller, Benjamin Michael	Reyes, Mauricio	Trainor, Leo Dean
Miller, Colby Morgan	Reynolds, Michael Jon	Trejo, Donald
Modglin, Mark W	Richardson, Kenneth E	Trujillo, Michael B
Mora, Dennis	Rivera, Victor Mario	Tru-Lite Skylights, Inc./Natale, Jr., Donald W.
Morales, Armando G	Rocky Mountain Empire Electric	Turner, Gregory Dale
Moreno, Jorge	Rubeck, Jeffrey A	Varenhorst, Christopher Shaun
Morgan, Clarence L	Rutherford, David Scott	Vasquez, Richard
Neuberger, Terry	Rutter, Kevin	Ventura, Joseph D.
Newell, William Ervin Jr	Satterfield, Shaun Richard	Vigil, Megirio
Novak, John	Schneider, Kevin	Vigil, Valentine Joseph
O'Boyle, John Joseph	Schoen, Josh	Wagner, Robert J
Ordonez, Carlos Omar Sr	Seguin, Edward	Warner, David E
Ott, Cory Edward	Semanik, Norman Joseph	Wirt, Ben J
Oxford, John Nathaniel	Shomaker, Craig	Young, Roland L
Pacheco, Robert M.	Simmons, Rance Gilbert	Zdrojewski, Jay
Packer, Terry M	Slate, Steven J	Zimmerman, Lloyd
Parris, Kenneth N.	Small, Kirk Wallace	Zimmerman, Scott T
Parsons, Stephen	Stellick, James Arthur	Zulauf, Daniel Jacob
Payne, Daniel Steven	Stone, Kelly E	
Perez, Frank	Stough, Douglas R	
Pompa, David C	Stubbs, Randy G	
Proctor, Brian Undonae	Sun Industries, Inc.	

Registration Online Documents

The Department of Regulatory Agencies' **Registration Online Documents (ROD)**, found at:

www.dora.state.co.us/registrations/ROD.htm

ROD is a website that allows the consumer to view images of scanned disciplinary documents through the Internet. In reviewing a licensee's information, it is important to know what is and is not available from the agency about Colorado licensees.

The following information WOULD appear on a record under Board or Program Actions if applicable to the licensee:

1. If a licensee had been disciplined or formally accused of wrongdoing by the Board or Program.
2. If the Board or Program has taken some other non-disciplinary action against the licensee that restricts or limits the individual's license.

Board/Program Action Documents available via Registrations Online Documents (ROD)

- All **Stipulations**, **Final Agency Orders**, and **Suspensions** that were in effect in February 2000 plus any that became effective since that date. Child support suspensions are not available online but may be obtained by contacting the appropriate Board.
- Any document **Revoking** or agreeing to a **Voluntary Relinquishment/Surrender** of license or registration, **Cease and Desist Orders** and **Letters of Admonition** from January 1, 1999 to the present.
- All **Injunctions**.
- All **Notice of Charges** or **Formal Complaints**, if the information is a public record, for cases that were pending hearing as of February 2000.
- **Jury verdicts** against a physician or physician assistant in a civil medical liability trial that occurred after August 3, 2004.

Click here for step-by-step instructions <http://www.dora.state.co.us/doraimages/regdd.htm> You may view documents by last name, licensing board or other search options such as date range.

If you are interested in viewing the disciplinary action documents, please visit Registrations Online Documents (ROD), found at www.dora.state.co.us/registrations/ROD.htm.

Click here for step-by-step instructions <http://www.dora.state.co.us/doraimages/regdd.htm> You may view documents by last name, licensing board or other search options such as date range.