



**International Code Council**  
500 New Jersey Avenue, NW  
Sixth Floor  
Washington, DC 20001  
t: 888.ICC.SAFE (422.7233)  
t: 202.370.1800  
f: 202.783.2348  
[www.iccsafe.org](http://www.iccsafe.org)

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U.S. Department of Energy  
Office of States and Community Energy Programs  
1000 Independence Avenue, SW  
Washington, D.C. 20585

Submitted Electronically

**RE: Department of Energy (DOE) Request for Information (RFI) on Preparing Workers and Business to Deliver Energy Efficiency and Building Electrification Measures, DE-FOA-0002885**

The International Code Council (ICC) is a nonprofit organization of roughly 600 employees, driven by the engagement of its more than 63,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes (I-Codes) and standards used in design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the International Codes (I-Codes) to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention, and energy conservation in the built environment.

In March 2021, the Code Council Board of Directors released a new framework, [Leading the Way to Energy Efficiency: A Path Forward on Energy and Sustainability to Confront Climate Change](#), committing to the development and support of the tools communities and the building industry needs to achieve their energy and climate-related priorities. This includes leveraging the success of the International Energy Conservation Code (IECC) and International Green Construction Code (IgCC). Increased familiarity and comfort with code-related tools by code officials and code users will help drive more effective implementation and achievement of the energy and greenhouse gas emissions savings captured in codes.

The International Code Council's response to DOE's RFI on Preparing Workers and Business to Deliver Energy Efficiency and Building Electrification Measures is provided below.

**Category B: Workforce and Business Characteristics**

**B1. What job categories in the energy efficiency and residential buildings-focused electrification industries/technologies are the most in demand (e.g., the types of jobs hired most frequently or employers' highest-priority vacancies)? What is driving this demand?**

The Department should support development of a curriculum and deployment efforts focused on multiple career pathways (code officials, contractors, designers) leading to an advanced energy workforce. Energy codes, including the IECC, should be embedded across all pathways to build capacity and support compliance. DOE should bring together existing resources including the [Code Council's Safety 2.0 Technical Training Program](#) and resources developed under DOE grant programs including BENEFIT, EMPOWERED and others. Where gaps in existing resources exist, DOE should support initiatives to fill those gaps. While the curriculum should include initial exposure to energy topics in elementary and middle school, it should start in earnest in high school creating a continuum from high school to post-secondary schools (trade schools, community college, etc.) and then into the workforce



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with ongoing learning and continuing education including certifications. DOE should also support outreach to parents and guidance counselors on the career opportunities in building codes and energy efficiency, including potential incomes. Expanding national competitions to include high schools, with a focus on codes, could help expose more students to the exciting opportunities.

A balance of focus on new entrants and existing workers is necessary. The industry needs new entrants to replace retiring workers, and the existing workforce still needs to keep up to date on the latest technologies and practices, including the progression towards net-zero energy and high-performance green buildings. New entrants are typically more receptive to technology changes and can be primed for long-term engagement. Technology and the societal impacts of careers in these fields should be highlighted. DOE should ensure that funding is used for training and certification programs that are accessible and attainable for historically underserved communities, including communities of color and rural communities.

### **Category C: Workforce Development and Business Owner Training Strategies**

**C1. What education and training (i.e., workforce development) strategies are most effective, and why, for incumbent workers and contracting firms in the energy efficiency and residential buildings-focused electrification industries (e.g., online learning, classroom and lab instruction, on-the-job training, hybrid models)? Are there effective training models that target incumbent workers and contracting firms? Who is best positioned to administer these programs?**

**C2. What education and training (i.e., workforce development) strategies are most effective, and why, for new workers in the energy efficiency and residential buildings-focused electrification industries (e.g., online learning, classroom and lab instruction, on-the-job training, hybrid models)? Are there effective training models that target new workers?**

Personnel certification for both new entrants and existing workers provides an opportunity to assure ongoing learning and should be a focus for the Energy Auditor Training (EAT), Career Skills Training (CST), and State-Based Home Energy Efficiency Contractor Training Grants (Contractor Training Program) programs. These programs are available both via online learning in self-paced formats and in-person training formats. Availability of a variety of training options ensures that opportunities are available for people of all circumstances seeking an opportunity to develop skills in the energy efficiency building sector. Certifications require continuing education to remain active, leading to sustained results. DOE should prioritize funding for certifications and further incentivize states to adopt certification requirements through these programs.

**C9. How can DOE-funded workforce programs best help connect trainees with employment opportunities?**

**C12. What are examples of effective existing workforce development programs that meet the purposes set forth for the EAT, CST, and Contractor Training Program?**

The International Code Council offers a variety of workforce development and training options available for individuals to earn continuing education units, learning units and/or Professional Development Hours (CEUs, LUs and/or PDHs) that can be used toward Code Council certification renewal.



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[ICC Training](#) has a robust library of online courses ranging from beginner to advanced topics in all the I-Codes including topics specific to building safety, fire, design and construction, safety, plumbing, mechanical, fuel gas and leadership. ICC Training is also the home of career paths to guide building professionals in their journey to certification. DOE should leverage career databases from leading organizations in the energy efficiency sector, like the International Code Council, to ensure the workforce is connected with professional positions that meet their educational skillsets. The ICC Training online library also offers both energy code and green building concentrated catalogues to support workforce development in these innovative technical areas.

The International Code Council currently has a host of energy conservation related certifications available through the [ICC Assessment Center](#), which provides nationally recognized credentials for the building energy workforce that demonstrate a confirmed commitment to protect public health, safety, and welfare. These ICC certifications provide professionals with expertise in energy code compliance for various editions of the model code, which include the Commercial Energy Inspector/Plans Examiner w/ASHRAE 90.1 – CE, Commercial Energy Inspector – 77, Commercial Energy Plans Examiner – 78, and Residential Energy Inspector/Plans Examiner – 79. Funding to further support the development of workforce training and accreditation for building energy professionals is essential to ensure that the energy efficiency and resilience measures are realized across all building and construction projects and programs.

### **C13. How can DOE investments support sector strategies in the energy efficiency sector?**

Although about two-thirds of states require code official certifications, only 7 states require certification on energy code provisions. DOE residential field studies have demonstrated that adequate training is one of the keys to effective implementation—after training and education in 7 states, annual energy costs due to varying levels of code compliance decreased by an average of about 45 percent. Of the 7 states studied, only Pennsylvania required code official certification to the Commonwealth’s energy code. Pennsylvania’s improvement, post training, was among the smallest observed (5.9 percent), which means that, due to its training requirements, the Commonwealth was among the best at capturing the savings provided by the code. The certifications are typically portable state-to-state and cost a fraction of the time and money that must otherwise be invested in obtaining a post-secondary degree.

The Department should collaborate with leading standards development organizations, like the International Code Council, to establish partnerships with state and local governments to enhance the workforce development of code officials through these workforce grant programs. Establishing funding streams to support workforce development in the energy code arena will ensure more effective implementation and compliance, delivering more resilient and safe buildings and enhancing overall education, economic development, sustainable workforce systems and community resilience.

### **Category D: Accessing Federal Funding**

**D3. How can the EAT, CST, and Contractor Training Program dollars enhance funds from other federal, state, local, utility, and private sources? How can DOE encourage applications that draw on non-federal resources to leverage federal funds for maximum impact?**



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More than \$1.2 billion in federal funding to support the adoption and implementation of building energy codes has been allocated through the Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA).

These investments will help promote energy conservation and community resilience through the development, adoption, and effective implementation of building codes. To successfully harness this funding and realize energy and climate related goals, DOE will need to immensely enhance the current workforce in the building and energy code arena. Through the Contractor Training Program, EAT and CST programs, DOE should support development of a curriculum and deployment efforts focused on multiple career pathways, including code officials, plans examiners, contractors, designers, and auditors, to continue to build out an advanced energy workforce. At a departmental level, DOE should leverage multiple funding sources to build a comprehensive approach to energy workforce development, which should include both IIJA and IRA funding streams.

The International Code Council supports further investments in workforce development of the building energy sector to further enhance our nation's building stock. We look forward to continued work with DOE to enhance the building energy workforce and improve the performance of our nation's building stock.

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Thank you for the opportunity to provide comments. If you have any questions concerning these recommendations, please do not hesitate to contact us.

Sincerely,

Ryan M. Colker, J.D., CAE  
Vice President, Innovation  
[rcolker@iccsafe.org](mailto:rcolker@iccsafe.org)

Gabe Maser  
Senior Vice President, Government Relations  
[gmaser@iccsafe.org](mailto:gmaser@iccsafe.org)