

# Energy Efficiency – Where to Begin

Dena Strait



***“Preaching to the choir, but the choir may not be using the same song book.”***  
**Carolyn Ramsey**



# Dena Strait

- Private practice in Alaska for 10 years
- Alaska Housing Finance Corporation- 3 years
- RA – Registered Architect
- EMP – Energy Management Professional
- CEA-IT – Certified Energy Auditor-in-Training
- LEED Green Associate
- Energy Programs Manager for Bettisworth North



# Commercial Buildings

Everything (in general) **except:**

1. Your own single family residence
2. A residence intended to be used by not more than
  1. 4 families and is not more than two stories high
  2. 2 families and not more than three stories high in some municipalities.
3. Does not change the structural system or affect public health, safety and welfare.
  - Alaska Statute AS 08.48.331



# Conference Attendees Introduction

**Federal**

**State Agencies**

**Utilities**

**School Districts**

**Real Estate  
Managers**

**Construction  
Contractors**

**Architects &  
Engineers**

**Municipalities**

**Service  
Providers**



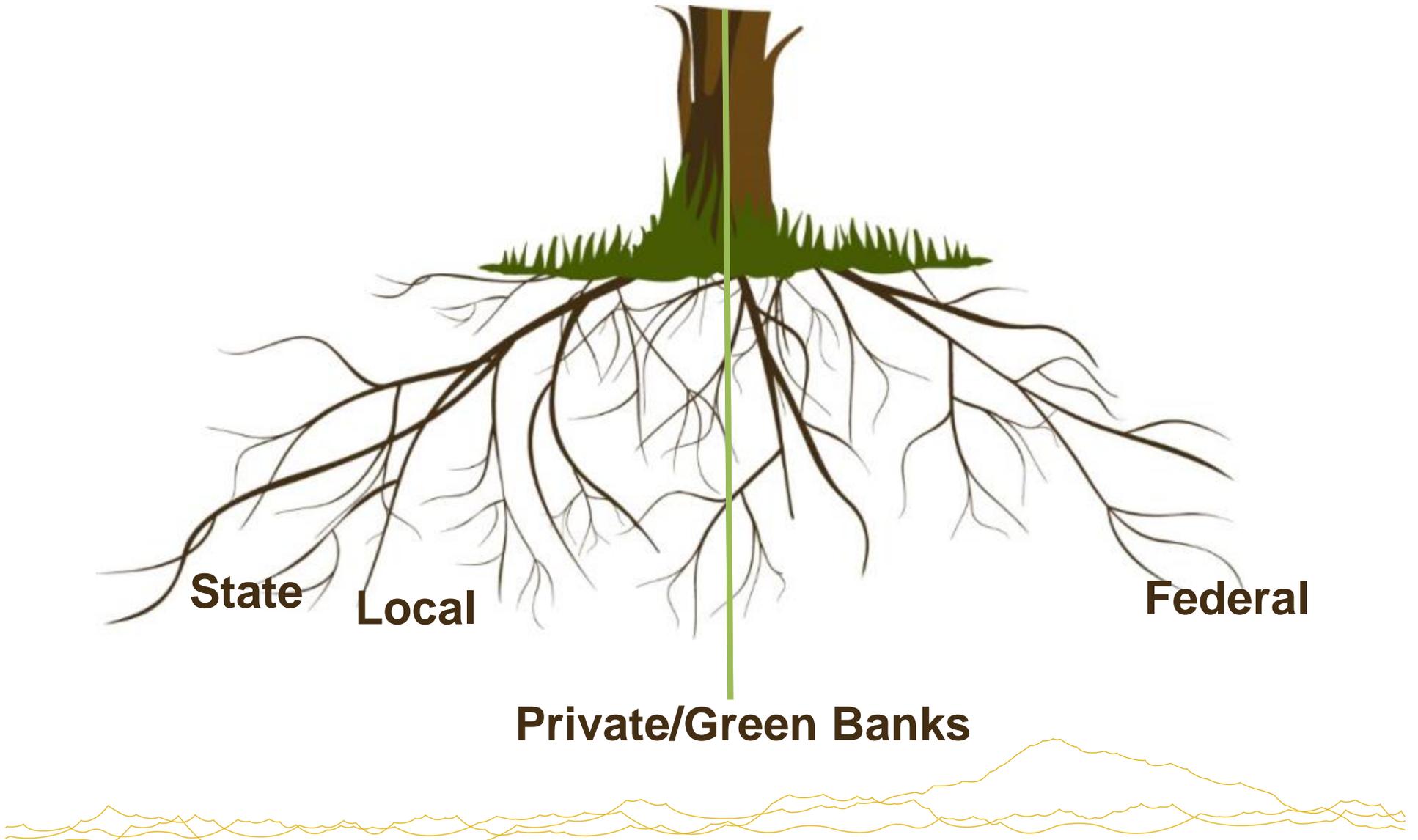
# Presentation Outline

How does EE work get done?

- People:
  - Funders
  - Agencies
  - Service Providers
  - End Users
- Programs, Codes and Standards
  - Continuum of Energy reduction

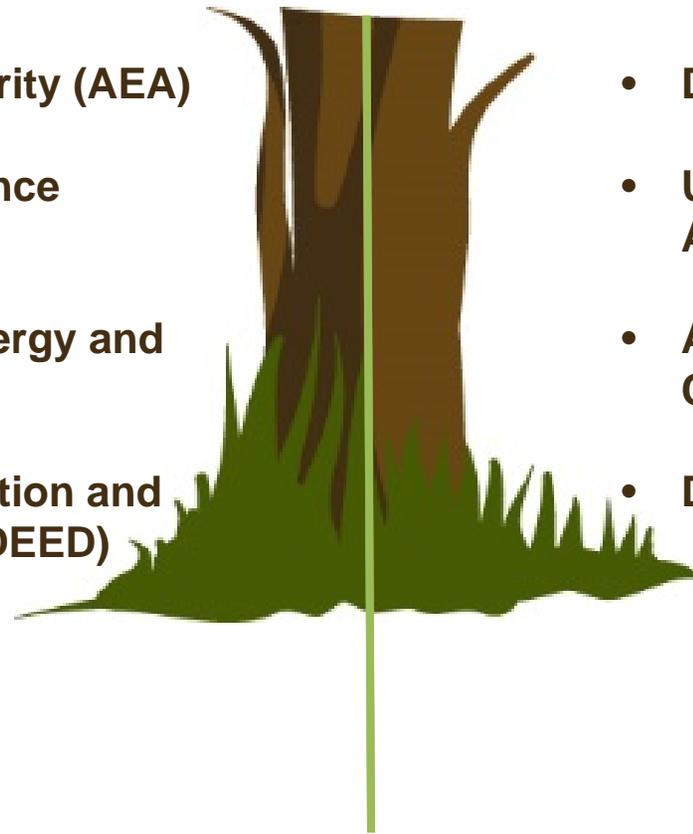


# Funders



# Agencies

- **Alaska Energy Authority (AEA)**
- **Alaska Housing Finance Corporation (AHFC)**
- **Alaska Center for Energy and Power (ACEP)**
- **Department of Education and Early Development (DEED)**

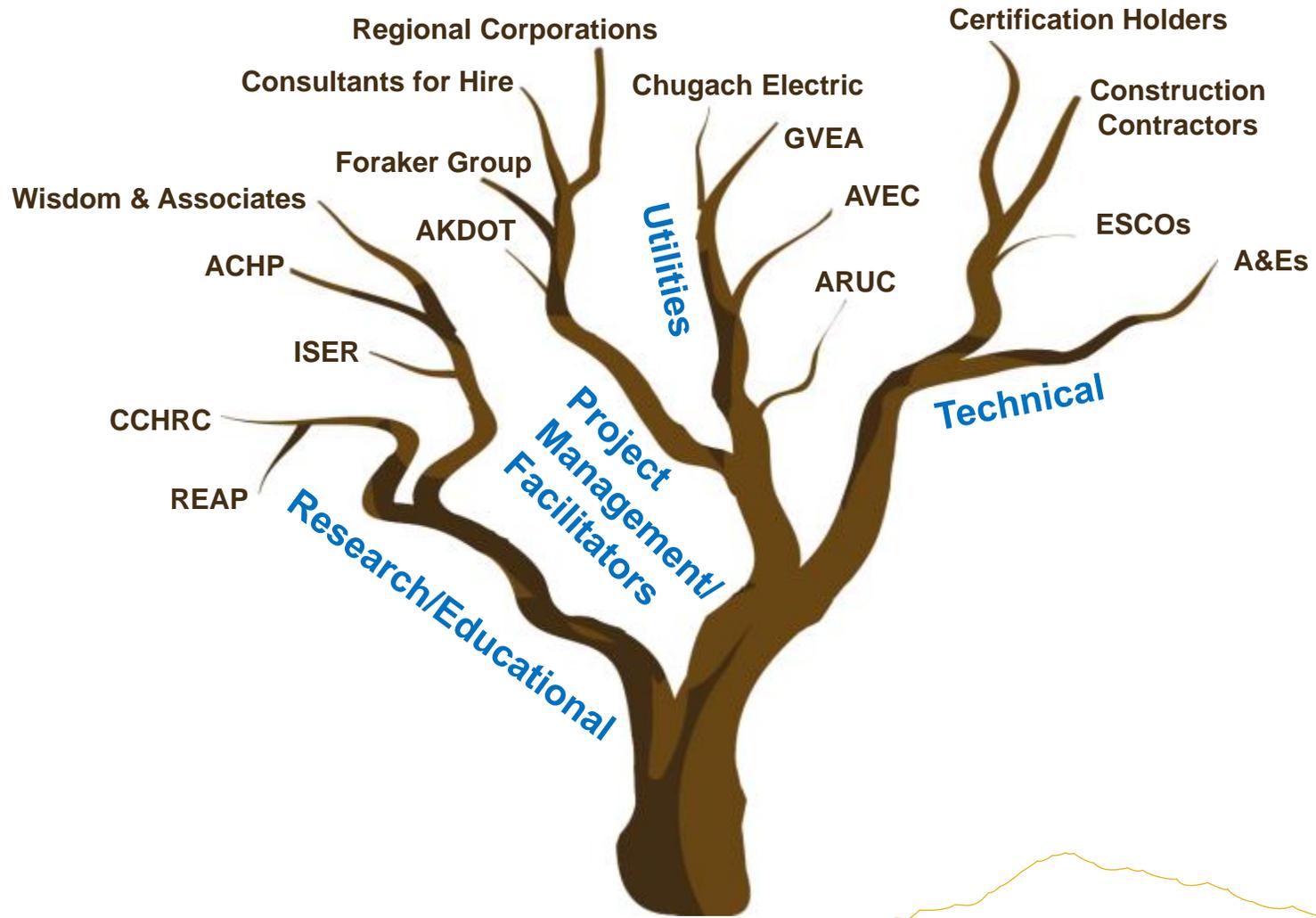


- **Denali Commission**
- **United States Department of Agriculture (USDA)**
- **Alaska Native Tribal Health Consortium (ANTHC)**
- **Department of Energy (DOE)**

**Private/Green Banks/ESCOs**



# Service Providers



# Certification Holders

[Akenenergyefficiency.org/find-an-energy-pro/](http://Akenenergyefficiency.org/find-an-energy-pro/)

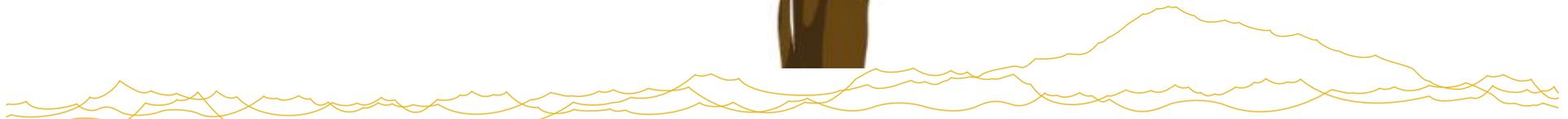
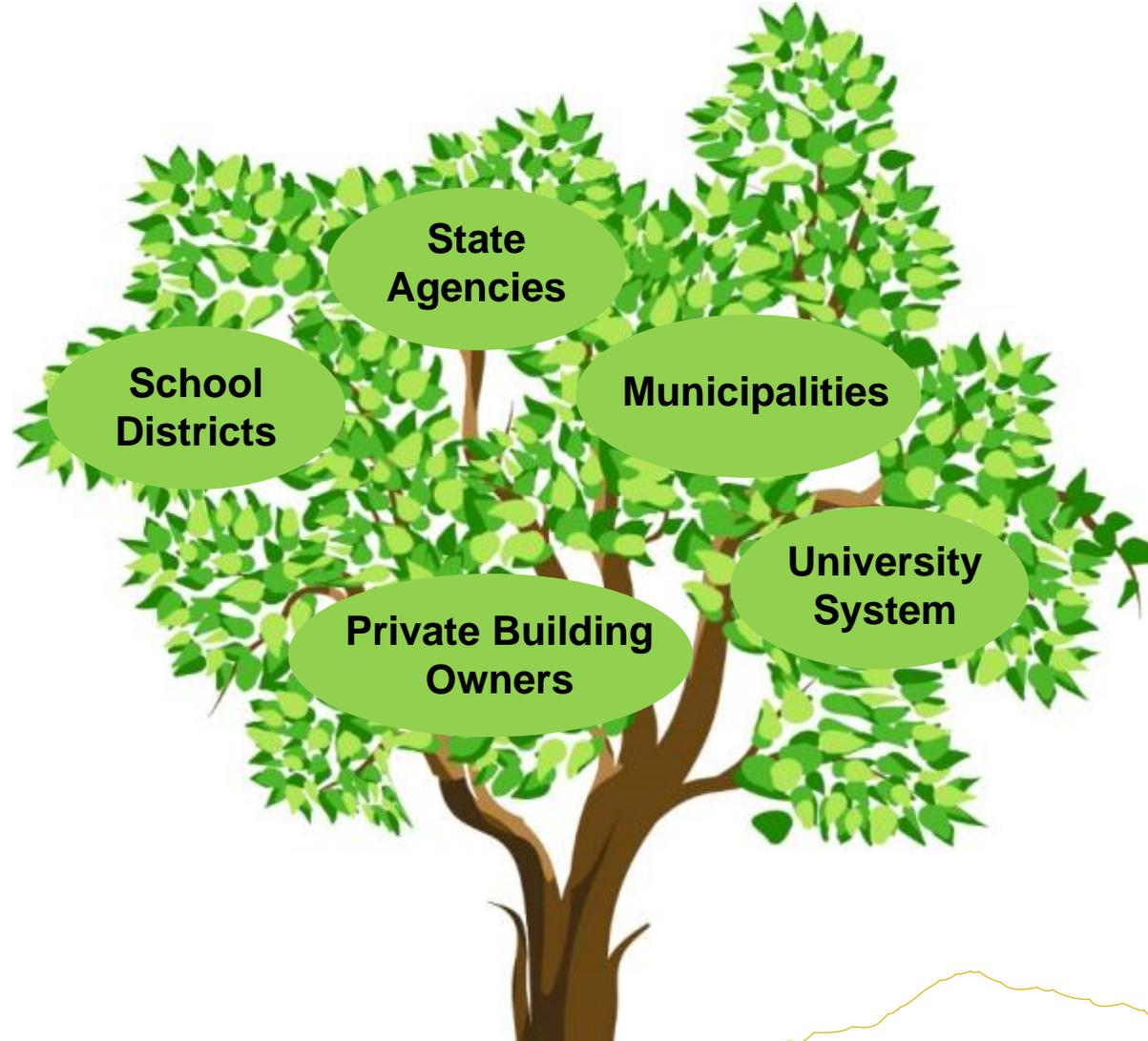
Association of Energy Engineers

American Society of Heating, Ventilation and  
Air Conditioning Engineers

Energy Management Association



# End users

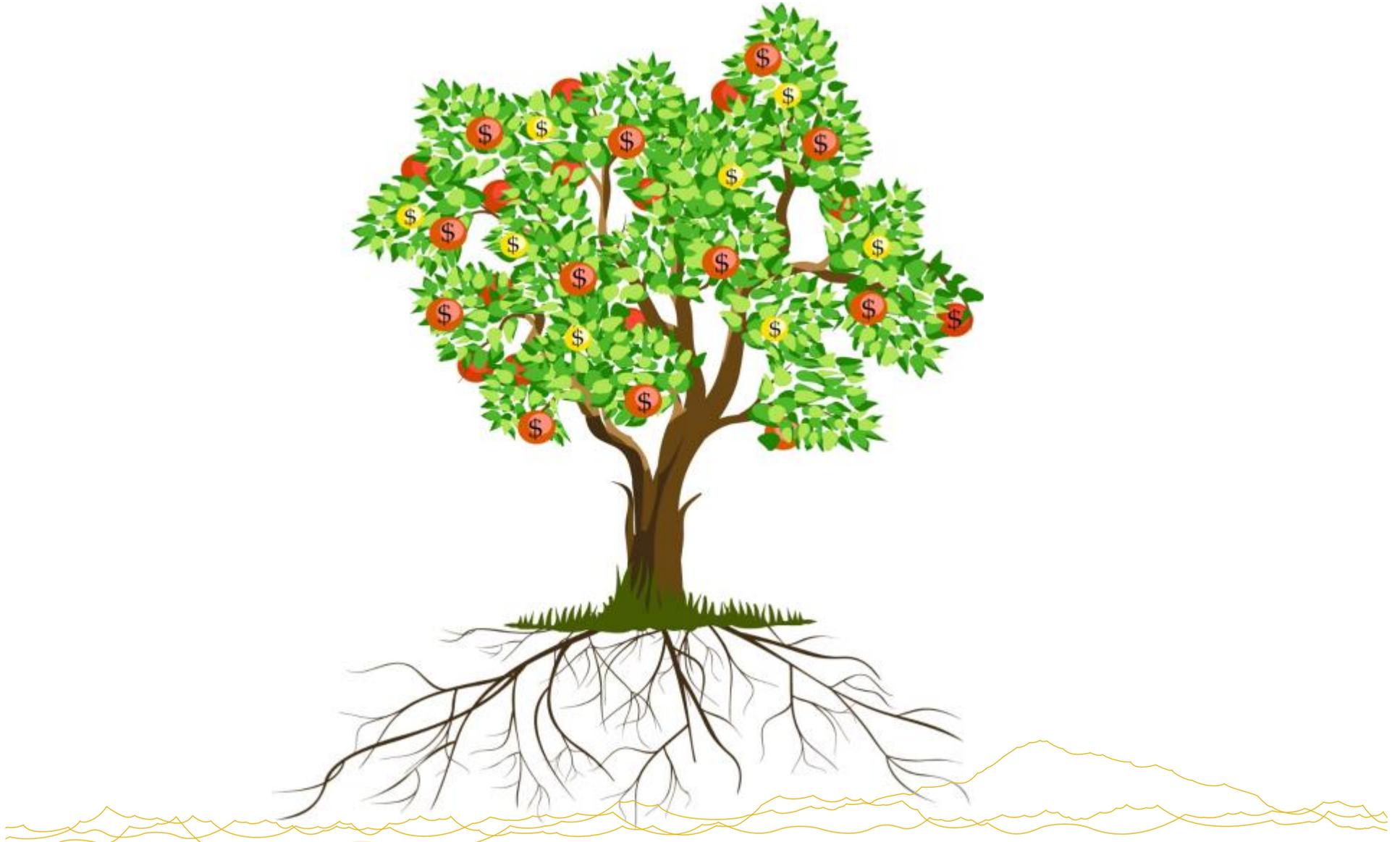


# Train your operators!

- **Most critical!**
- One on one in facility
- Training Centers
- You tube videos
- RAMP –Rural Alaska Maintenance Program



# Fruits of our labor



# Presentation Outline

How does EE work get done?

- People:
  - Funders
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  - End Users
- **Programs, Codes and Standards**
  - Continuum of Energy reduction



# Codes, Programs and Standards



One size does not fit all!



# Codes, Programs and Standards

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# Codes, Programs and Standards

**Bettisworth North: Analysis of Energy Efficiency Codes, Programs and Standards**



**Notes:** 1. MOA is on IECC 2006 which is based on ASHRAE 90.1 2004. SOA is on IBC 2009, so IECC 2009 is in effect. This is based on ASHRAE 90.1 2007. Switching from ASHRAE 90.1 2004 to 2007 saves 4%-8%. 2. Alaska Housing Finance Corporation (AHFC); Building Energy Efficiency Standard (BEES) Based on IECC 2012 which is based on ASHRAE 2010 3. American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE); Advanced Energy Design Guide (AEDG) based on ASHRAE 90.1 2004 4. Research found varying energy reduction achievement between ASHRAE 90.1 2004 and 2010 ranging from 40% to 30%. 5. ASHRAE 90.1 2013 is a 30% reduction from ASHRAE 90.1 2010 version. 6. LEED 2009 prerequisite, ASHRAE 90.1 2007, makes a 4%-8% reduction from ASHRAE 90.1 2004. Points are possible for up to a 48% reduction. 7. Green Building Initiative 8. American Institute of Architects (AIA) 9. 30% reduction from changing reference building from ASHRAE 90.1 2004 to ASHRAE 90.1 2010. Additional 50% from that reference available for credits. 10. International Living Future Institute.



# ASHRAE Standard 90.1

Energy Standard for Buildings Except Low-Rise Residential Buildings



Shaping Tomorrow's  
Built Environment Today

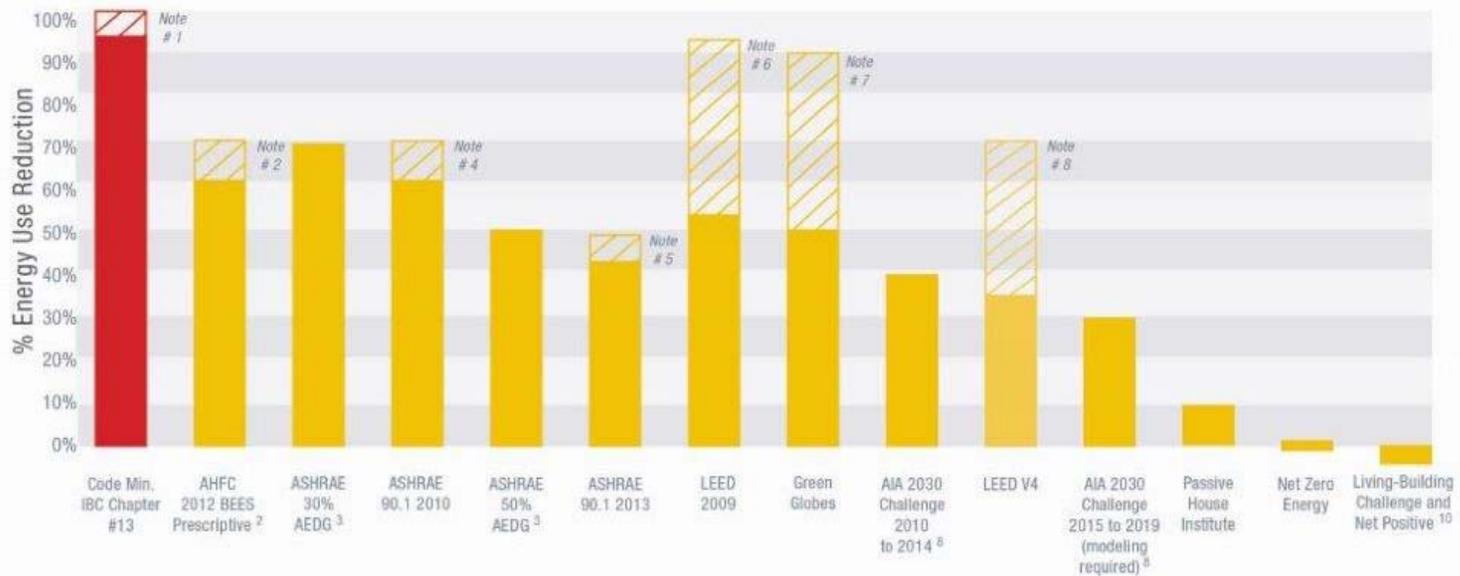


**Illuminating**  
ENGINEERING SOCIETY



# Codes, Programs and Standards

**Bettisworth North: Analysis of Energy Efficiency Codes, Programs and Standards**

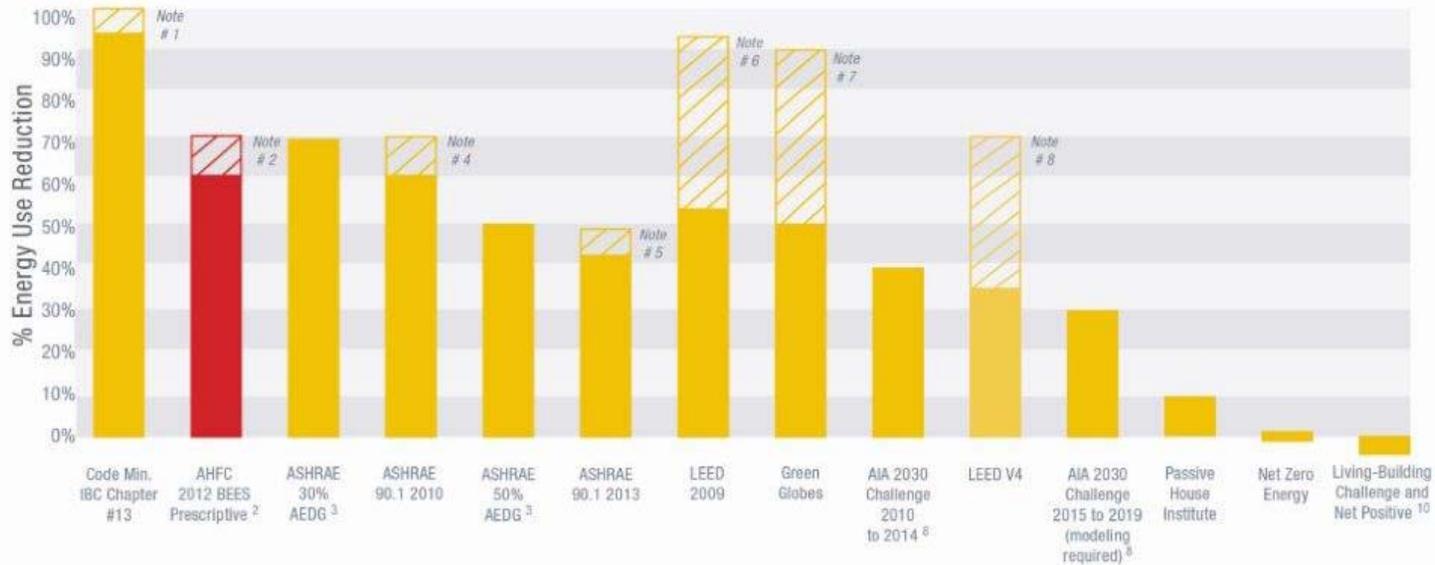


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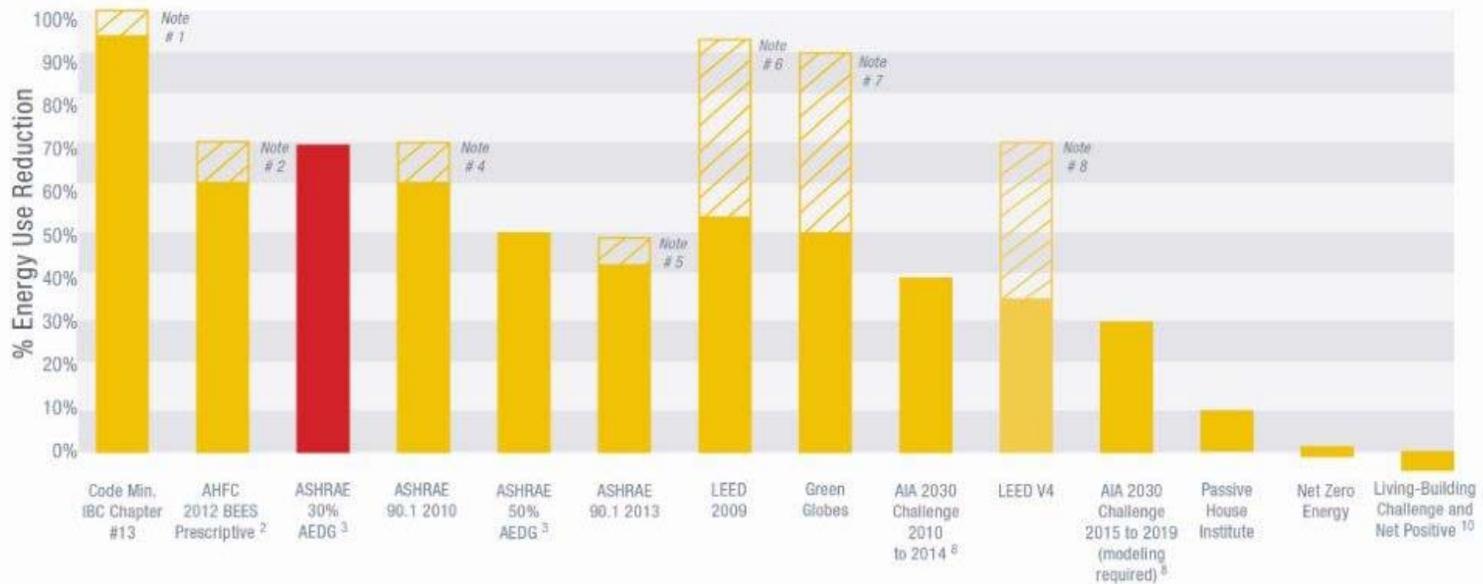


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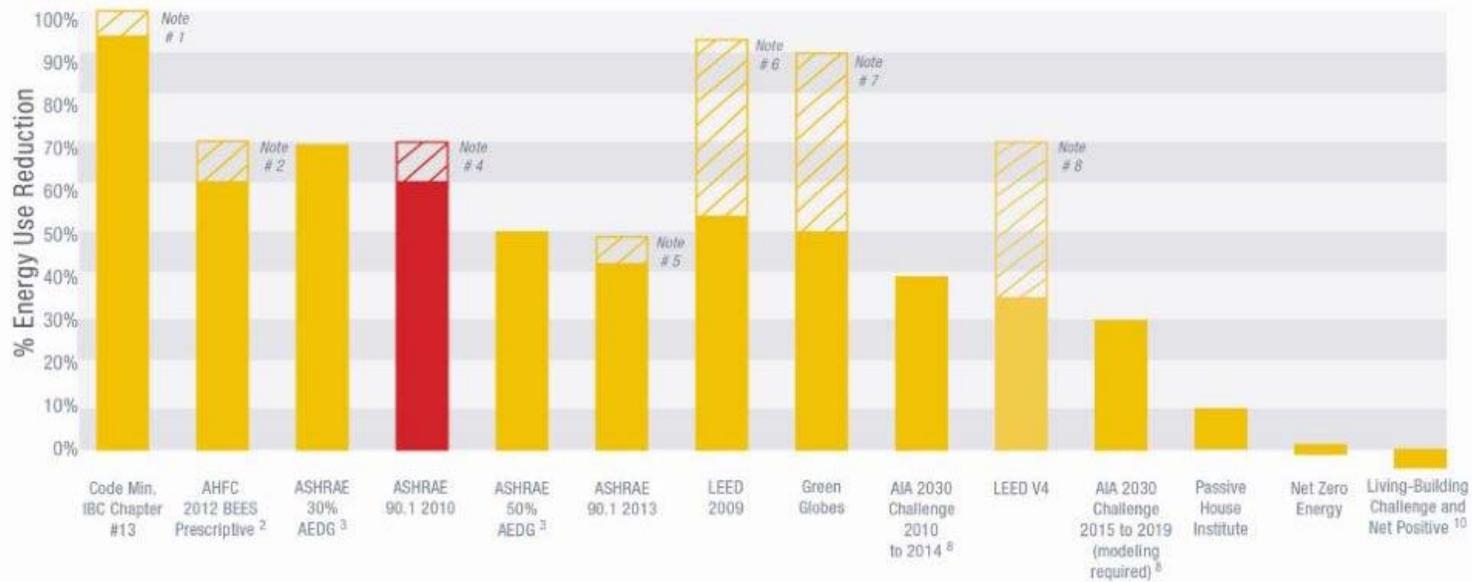


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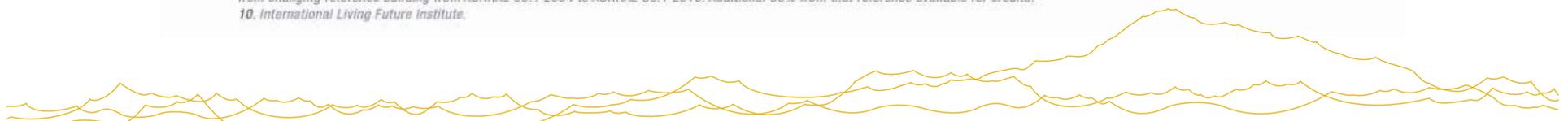


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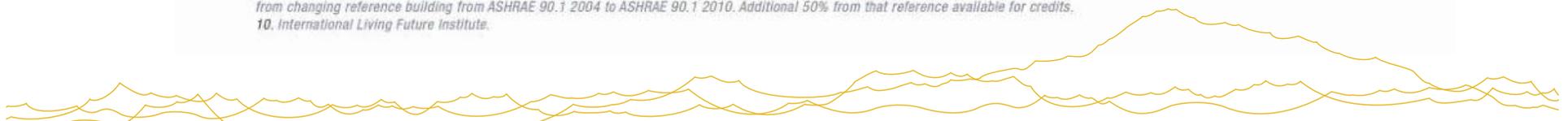


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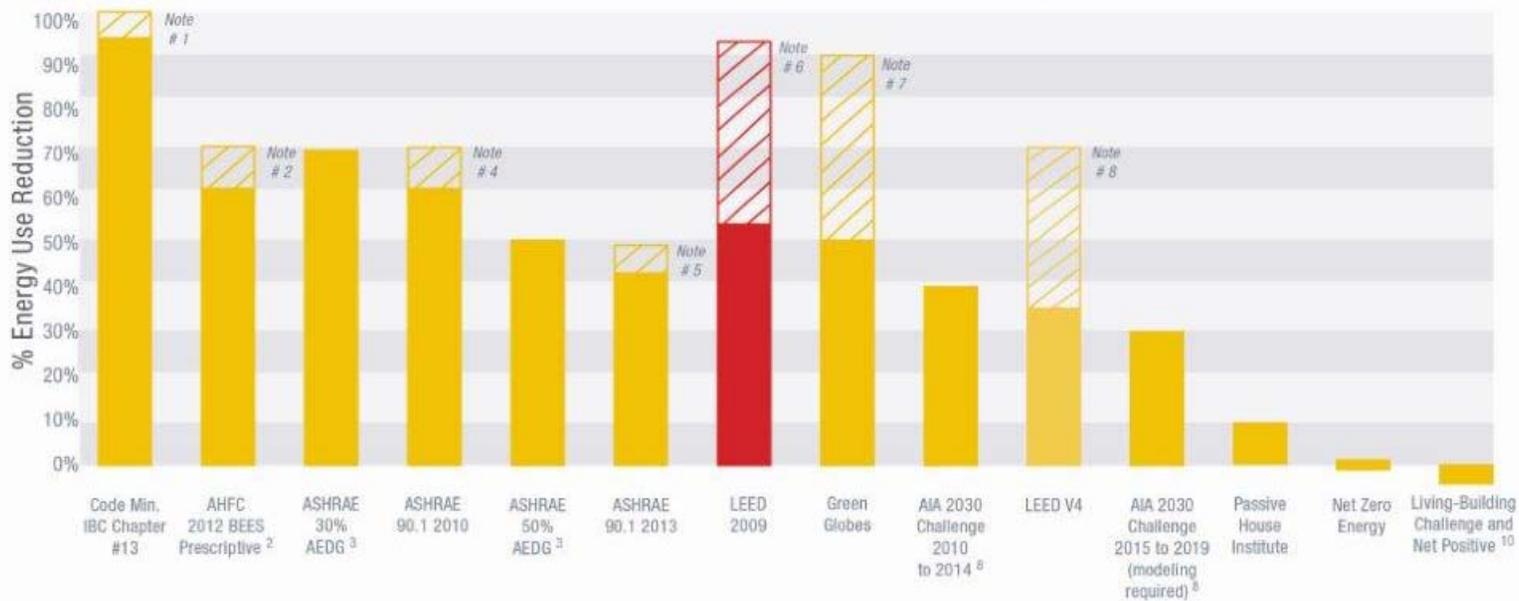


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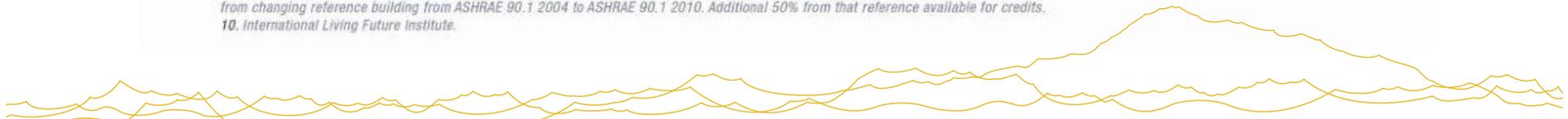


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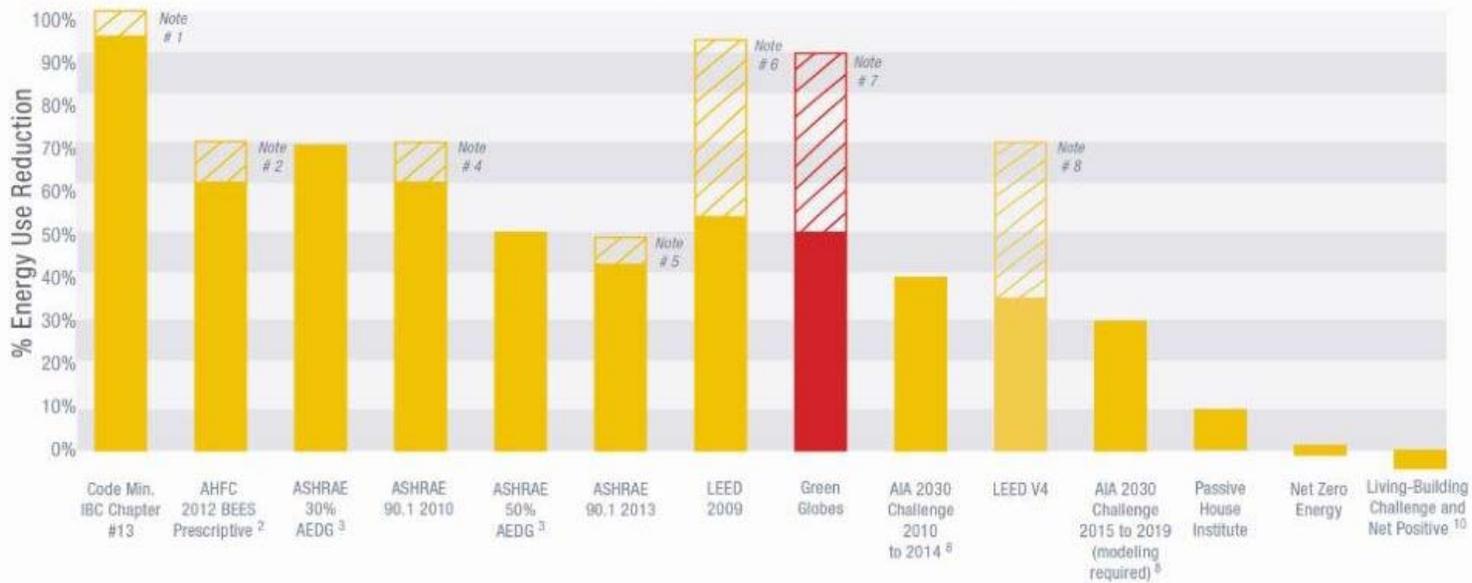


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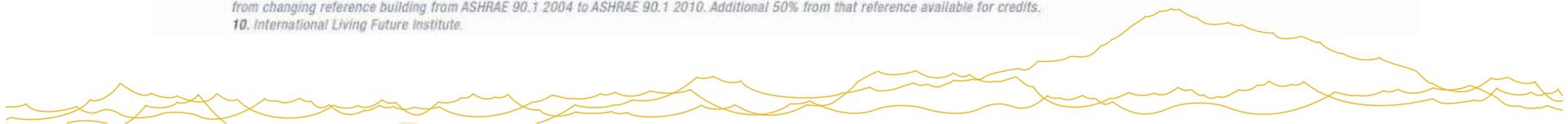


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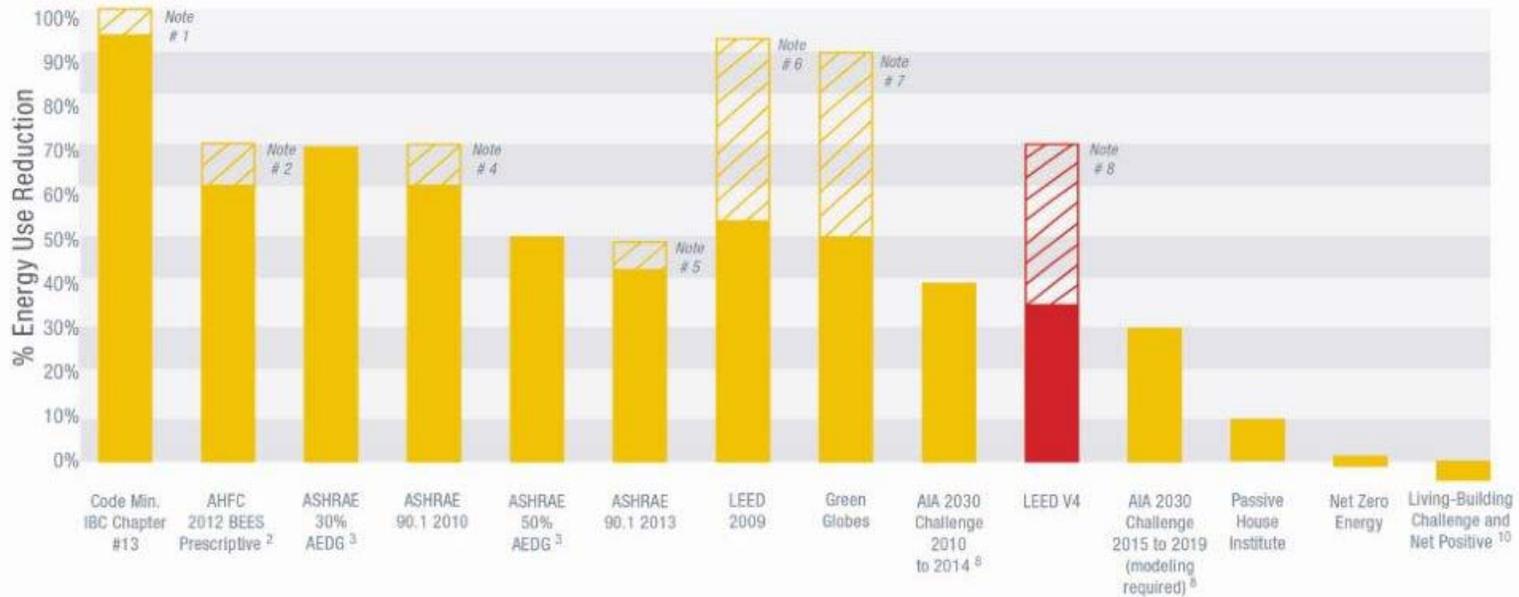


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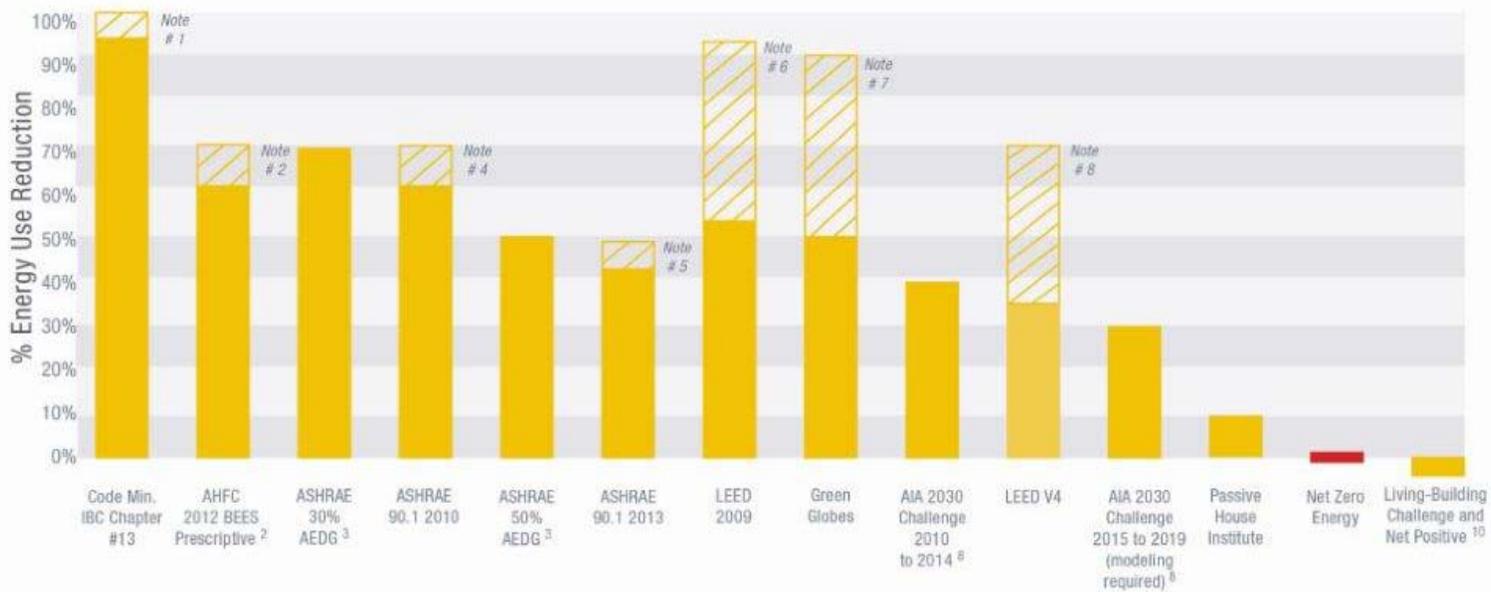


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# How does EE work get done?



# Thank you!

Dena Strait

Energy Programs Manager

Bettisworth North Architects and Planners

561-5780

[dstrait@bettisworthnorth.com](mailto:dstrait@bettisworthnorth.com)

