

Today's Panel

Panel - Energy Efficiency – the Low Hanging Fruit

Moderator – Dan Beckley, NREL

Panelist –

1. Dan Beckley – Weatherization Assistance Program Update
2. Sam Flannery – WX Workforce Development
3. Mercedes Vega – FCPC Wundar Hall Historic Building Retrofit
4. David Brien – FCPC Parking Structure Lighting Retrofit

What is Energy Efficiency?

Energy Efficiency

- Refers to activities that are aimed at reducing the energy used by substituting technically more advanced equipment, typically without affecting the services provided.

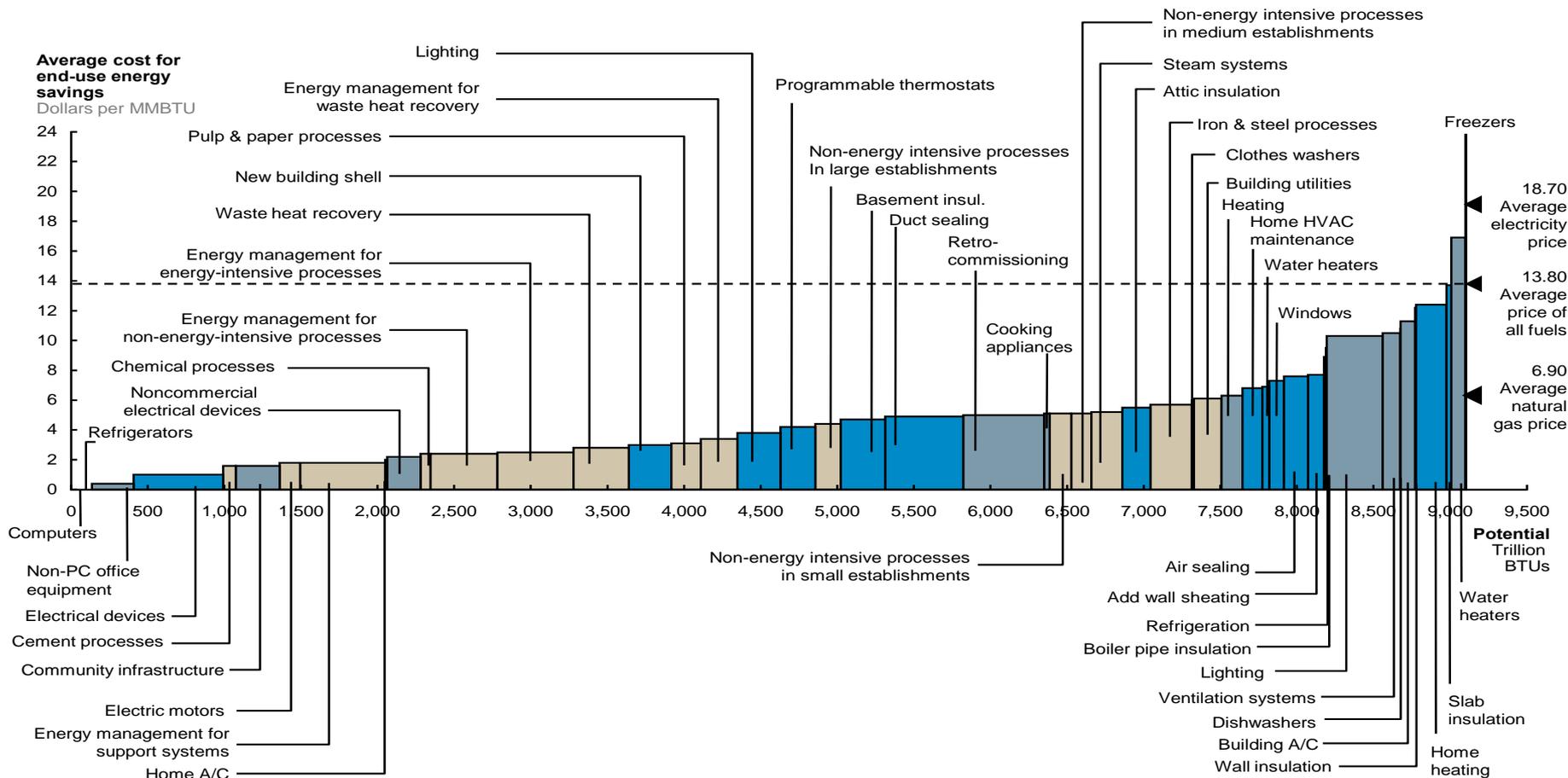
What is the 'low hanging fruit'

- Definition- Easily obtained gains; what can be obtained by readily available means
- a recent meta-analysis of energy efficiency potential studies estimates that *between 13 percent and 30 percent of energy use could be avoided cost-effectively, with median savings of 20 percent.* (Citation: NGA Center for Best Practices)

Low Hanging Fruit

Energy efficiency offers the most affordable means of delivering energy

Residential
Commercial
Industrial



Source: EIA AEO 2008, McKinsey analysis

Benefits

Benefits to	Use and Potential
Consumers	<ul style="list-style-type: none">• Lower Energy Bills• Greater Consumer Control
Tribal Utilities	<ul style="list-style-type: none">• Lower cost than supplying new generation• Energy Efficiency Program – easy to deploy• Significant Savings
Tribal Communities	<ul style="list-style-type: none">• Investment in EE brings jobs and improves local economies• Energy Security

DOE Weatherization Program Update

Presentation Overview

1. Recovery Act Update

1. Homes Weatherized
2. Jobs Created

2. Guidelines For Home Energy Professionals

1. Standard Work Specifications
2. Certifications

3. Future - Getting involved

- Leverage

Weatherization Assistance Program



Supporting Families

- Low income families, on average, spend 15% of their income on energy costs
- Over **7.3 million** weatherized under the Program
- **35% reduction** in energy consumption for low-income families saving on average **\$400** on their heating/cooling bills in the first year alone



Supporting Workers

- 25,000 living-wage jobs are supported by Weatherization
- Workers are highly trained and make up the largest energy efficiency retrofit workforce in the nation

Homes weatherized exceeds ARRA production goals

- 731,000 homes weatherization
- 198,000 multi-family units completed (27% of total production)

2nd largest job creator in the entire Recovery Act portfolio



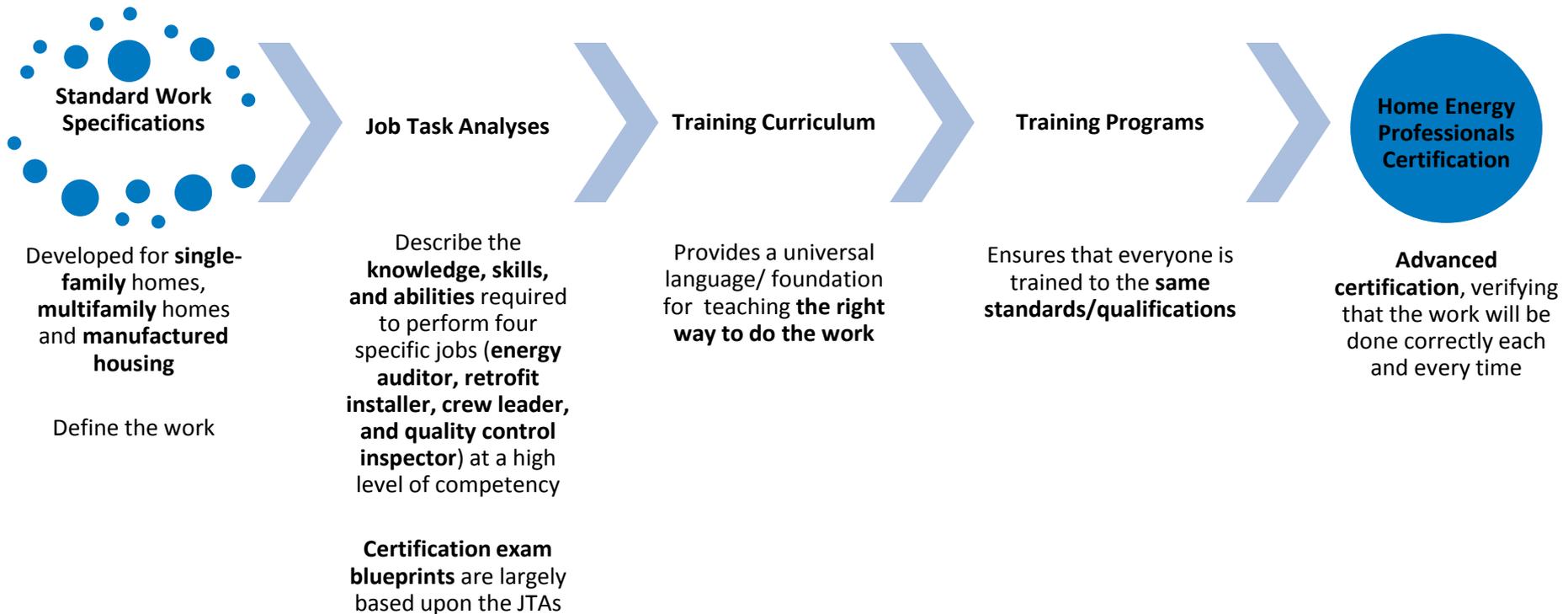
UPDATE 2 - Guidelines for Home Energy Professionals Project

The Guidelines for Home Energy Professionals project is a collaboration between the U.S. Department of Energy (DOE) and industry to support high-quality home energy upgrade work through standard work specifications, accredited training programs, and voluntary national worker certifications.

The Guidelines project incorporates input from 2,000 home performance industry members and more than 30+ years of DOE weatherization experience.



Guidelines for Home Energy Professionals Project



With higher-quality energy upgrade work happening, there are fewer callbacks, fewer unhappy customers, and less litigation due to inferior work.

We hope this structure serves as another step forward in stimulating and supporting a private market/industry.

UPDATE 2 - Standard Work Specifications

Establishing clear expectations for the outcome of any undertaking is the first key to success.

The installation of upgrades in existing homes is no different. The Standard Work Specifications (SWS) are a set of statements that describe the intended outcome of the installation of upgrades ranging from attic insulation to tuning up a furnace.

For the most part, the guidelines avoid specifying how exactly installations should take place, leaving a great deal of room for industry-based solutions and innovations, including new materials, techniques, and tools.

Topic: Attics
Subtopic: Attic Openings

4.1006.1 Detail Name: Pull-Down Stairs

Desired Outcome
Pull-down attic stair properly sealed and insulated

Row	Title	Specification(s)	Objective(s)
4.1006.1a	Installation	Hatches will be insulated with non-compressible insulation and the measure will include a protective barrier or baffle Pull down stair assembly will be insulated to the same R-value as the adjoining insulated assembly Pull down stair rough opening will be surrounded with a durable dam that is higher than the level of the attic floor insulation.	Achieve uniform R-value Prevent loose insulation from entering the living area IECC R 402.2.4

The *Objective* defines the required outcomes of the work.

The *Specification* defines the minimum level of action required to meet the *Objective*.

Update 2 - Impact of Home Energy Professional Certifications

The certification component of this project was designed to create lasting and meaningful green jobs — with potential for upward mobility and professional growth. They are based on the following assumptions:

- Energy efficiency workers in the home become the face of the company to the consumer
- Unskilled workers jeopardize:
 - Quality of the work
 - Safety of the worker and client
 - Corporate reputation and integrity
 - Future client relationship
 - Ability to deliver on time, within budget
- Skilled workers lead to:
 - Reduced liability, delivery models that scale, satisfied customers, cost-efficiency, and customer loyalty



Update 2 - Home Energy Professional Certifications

Designed for experienced home performance professionals, the four new certifications focus on the most common jobs in the home energy upgrade industry: **energy auditor, retrofit installer, crew leader and quality control inspector.**

The new certifications are funded by the U.S. Department of Energy (DOE), developed by the National Renewable Energy Laboratory (NREL) and offered by BPI.

The Home Energy Professional certifications are currently in the **pilot phase**. The purpose of the pilot test period is to achieve American National Standards Institute (ANSI) accreditation of the Home Energy Professional certifications. ANSI accreditation indicates high quality and diligence.

The results of the pilot test cycle will be used to set passing scores for the national exams, scheduled to roll out this fall. Candidates who take these exams and meet the passing requirements will be amongst the first group of professionals to earn these advanced certifications.

Registration information, exam prerequisites and FAQs for the pilot certification exams are available at: www.bpi.org/pilot.

Update 3 - Leverage & Getting involved

Getting Started

- **Options**

1. Starting your own WX Agency or
2. Partnering with your State

- **Nearly 60% of grantees leverage utility funds each year (ratepayer funded EE)**

- \$150 million - \$210 million leveraged annually since 2005 from private sources (ratepayer)
- \$350 million - \$600 million leveraged annually from federal and non-federal sources since 2005 (e.g. LIHEAP funds from HHS)

Resources

WAP Training Centers

<http://waptac.org/WAP-Training-Centers/WAP-Network-Verified.aspx>

Standardized Curriculum

<http://waptac.org/Training-Tools/WAP-Standardized-Curricula.aspx>

EERE WAP Program

<http://www1.eere.energy.gov/wip/wap.html>

Home Energy Upgrades

http://www1.eere.energy.gov/wip/retrofit_guidelines.html