

# Home Performance with ENERGY STAR

## Advancing Partnership Models

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## Session Agenda

1. Overview of current national landscape for Home Performance with ENERGY STAR
2. Update on HPwES Stakeholder Work Group process and results
3. Update on current HPwES pilot activities
4. Summary and Call to Action
5. Q&A

# Understanding Challenges and Barriers in the HPwES Market

Program Challenges	Market Barriers	Issues for National HPwES to Address
<p><b>Perceived program value and market awareness</b></p>	<p>Lack of industry and homeowner awareness; lack of credible information</p>	<ul style="list-style-type: none"> <li>• Residential market understanding of the value proposition for home performance is lacking</li> <li>• Artificial barriers to participation are inhibiting market penetration</li> </ul>
<p><b>Program consistency and effectiveness of delivery</b></p>	<p>Limited market readiness</p>	<ul style="list-style-type: none"> <li>• Local program administrative burden and lack of effective residential portfolio integration inhibit broader program acceptance</li> <li>• Specific business case to appeal to broader range of trades is lacking</li> </ul>
<p><b>Program cost efficiency</b></p>	<p>Industry and homeowner cost hurdles</p>	<ul style="list-style-type: none"> <li>• Costly approaches to conducting QA processes and data exchange</li> <li>• Missed opportunities to apply the HPwES approach during system specific projects</li> </ul>

## “Typical” HPwES Sponsor Profile – legacy program delivery model

A typical HPwES Sponsor is:

- A regulated entity
- Subject to evaluation, monitoring, and verification
- An electric/gas utility OR a state-sponsored non-profit, trust, or authority

A typical HPwES Sponsor’s program includes:

- Discounted or free home energy assessments
- Consumer rebates
- Low interest financing



## Limitations and Constraints of the “Typical” HPwES Sponsor Model

- Cost effectiveness tests
- Politics
- Inconsistent and uncertain budgets
- Procurement, legal
- Liability issues
- Split incentive for utilities
- Social equity – public program paradigm
- Gaps in coverage by territory

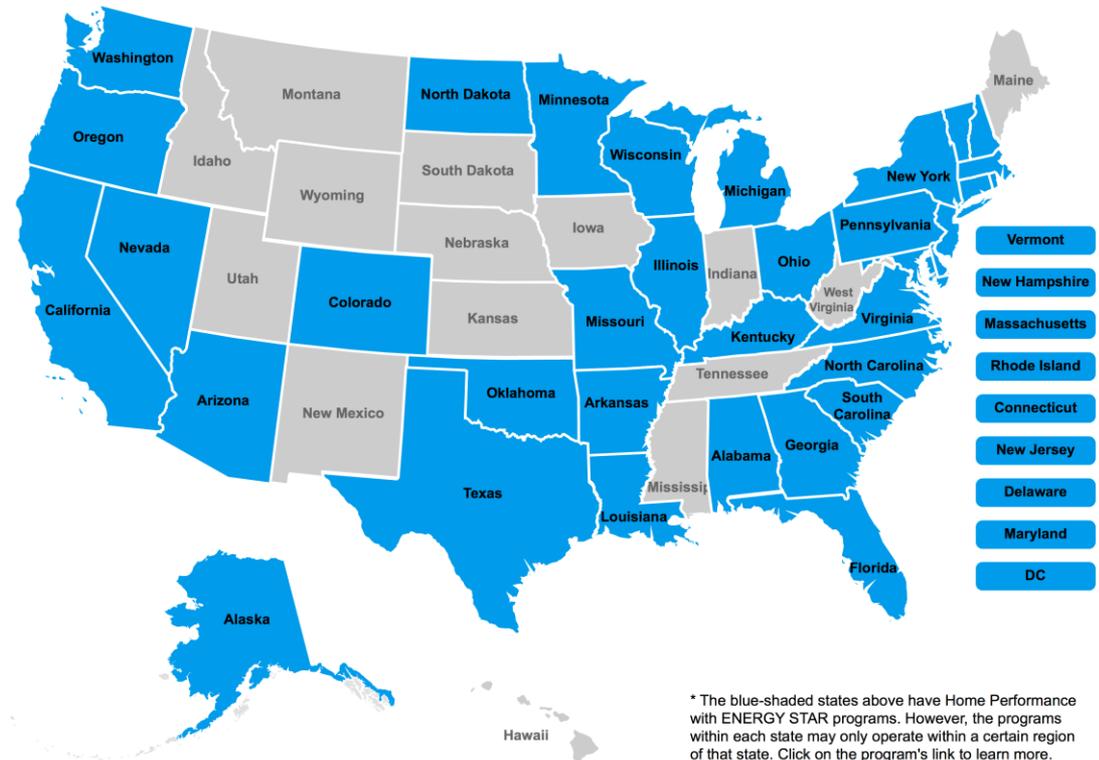
**Example 1:** In the Northwest, cost-effectiveness tests have deemed air sealing homes ineligible, but air sealing is a fundamental component of most good home performance projects.

**Example 2:** IOU’s must balance the needs of shareholders to maintain or increase revenues while at the same time reducing energy consumption (i.e. sales) to meet the needs of rate-payer funded efficiency programs.

# Home Performance with ENERGY STAR Vital Statistics

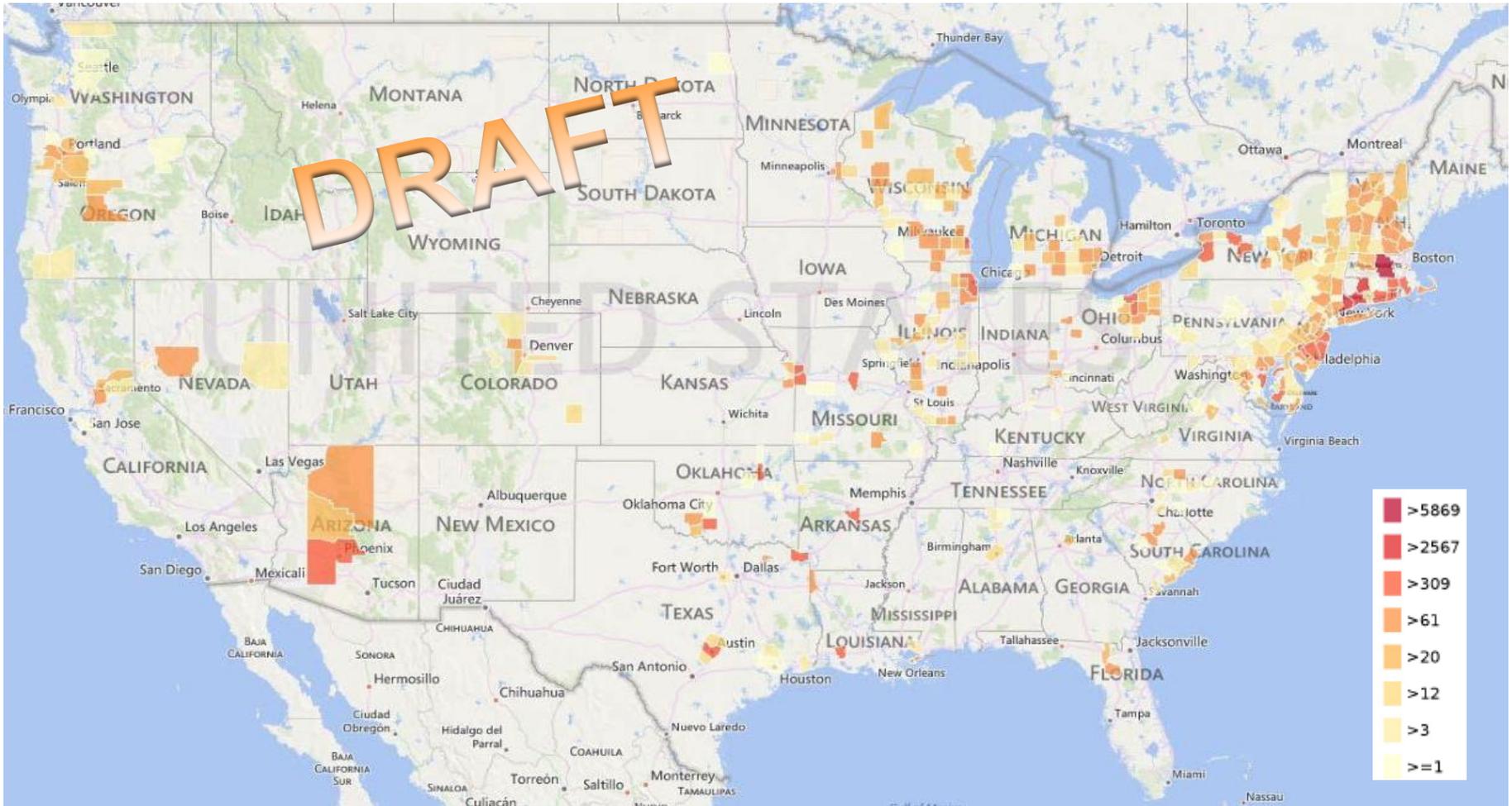
- Completed over 400,000 projects since 2002
- 27,831 projects were completed in Q4 2014 (20% growth over Q4 2013)
- 93,220 projects were completed in 2014 (15% growth over 2013)
- On average, each project realizes 22 MMBtu of energy savings (all fuels combined)
- The reported average invoice cost of a HPwES project is \$5,600 (ranging between \$600 – \$17K)

## HPwES Sponsored Regions



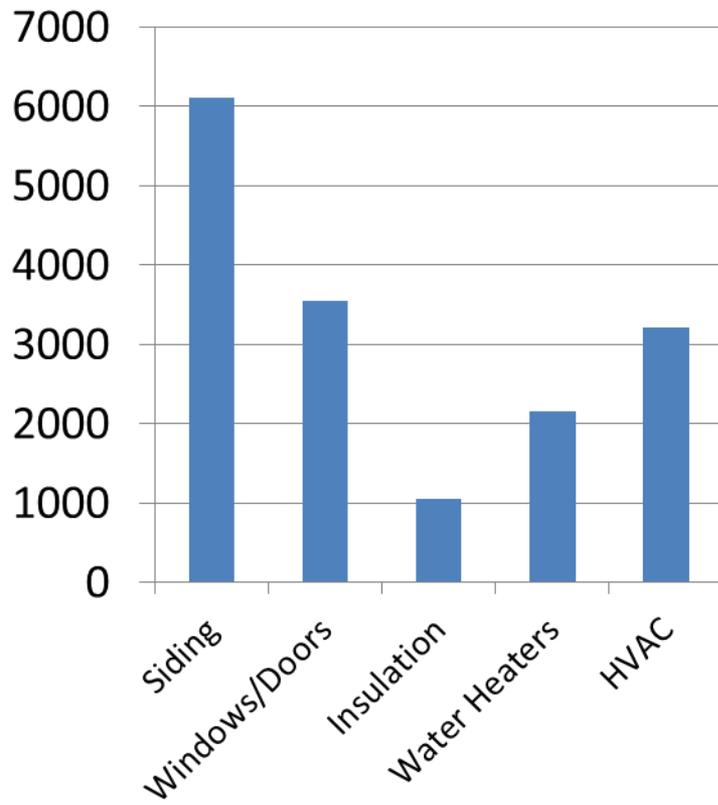
\* The blue-shaded states above have Home Performance with ENERGY STAR programs. However, the programs within each state may only operate within a certain region of that state. Click on the program's link to learn more.

# HPwES Coverage Area by County (estimated)

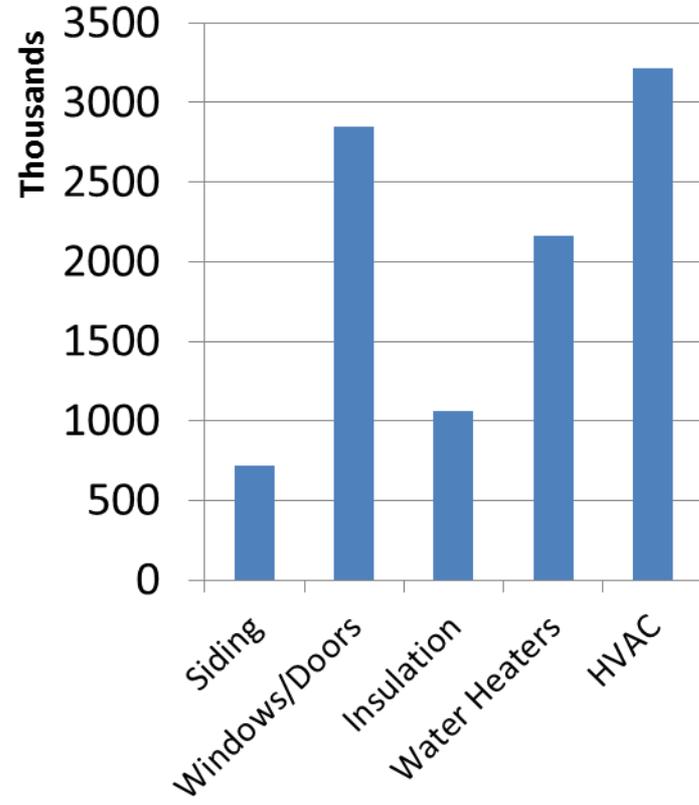


## Snapshot of U.S. Energy Related Home Improvement Market (2011 Data)

### Average Expenditure Per Project (\$)



### # of Projects Annually



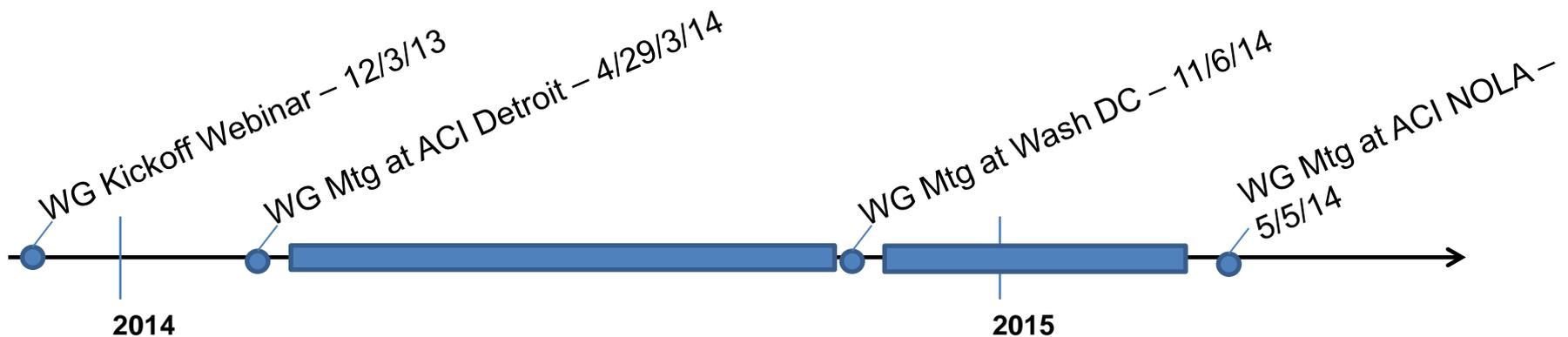
## Update: HPwES Stakeholder Work Group Process

### January 2014

A voluntary ad hoc work group was established to help inform DOE's exploration of strategies to improve upon the HPwES model and support a sustainable and scalable future for the HPwES program

### Spring to Fall 2014

Ad hoc sub-committees comprised of Work Group members and non-members assisted in deeper dive activities focused on specific topic areas identified via the Work Group process



## Work Group Activity: Aggregator Road Mapping Process

- A sub-committee of Work Group members and non-members assisted in the development of the “roadmap”
- The process explored market factors related to the potential for a new form of HPwES partner, deemed “the aggregator” assuming:
  - *The Aggregator* could represent a wide range of business interests in both the public and private sector.
  - *The Aggregator’s* primary goal in partnering with HPwES is to gain access to the aggregated benefits accrued over a large volume of HPwES projects, for possible resale or to satisfy other business interests



# Home Performance with ENERGY STAR Aggregator Snapshot

Key Partners	Key Activities	Value Propositions	Customer Relationships	Customer Segments
<p><u>Federal</u> EPA, HUD, Labs, Building America, Home Energy Score, Better Buildings Residential Network</p> <p><u>Up-stream</u> Energy wholesalers, capital markets</p> <p><u>Mid-Stream</u> Current Sponsors, Electric and gas utilities, state agencies, quasi-governmental agencies, energy efficiency utilities, energy marketers</p> <p><u>Down-Stream</u> Financial institutions, consumer service providers, insurance providers</p>	<p><b>Develop</b> market-based QA oversight model similar to ES New Homes and Products</p> <p><b>Develop</b> eligibility/qualifying criteria including demonstration of business viability</p> <p><b>Deploy</b> guidance &amp; tools to support uptake</p> <p><b>Validate</b> value proposition with most relevant customer segments first</p> <p><b>Promote</b> &amp; demonstrate methods for valuing benefits to sell</p> <p><b>Promote</b> secondary market buy-in</p> <p><b>Key Resources</b> HPwES Team, HPwES Stakeholder Work Group, EPA Residential Team, PowerSaver Team, Building America research, BBNP data and results, HPwES data, SUI market research and proof of concept, market-driven innovation and proof of concept</p>	<p><b>Leveraging</b> the ENERGY STAR brand</p> <p><b>Third-party</b> endorsement</p> <p><b>Standards</b> and quality assurance</p> <p><b>Access</b> to contractors</p> <p><b>Access</b> to downstream customer leads</p> <p><b>Market</b> differentiation</p> <p><b>Increased</b> sales of products or services</p> <p><b>Reselling</b> of monetized benefits</p> <p><b>Reduced</b> warranty claims and callbacks</p> <p><b>Improved</b> customer satisfaction</p> <p><b>Recognition</b> opportunities for Aggregators, contractors, and homes, <i>other TBD by customer segment...</i></p>	<p>HPwES Sponsor, ENERGY STAR Partner, Sponsor service provider, Contractor service provider, something new?</p> <p><b>Customer Access Channels</b> Public energy efficiency programs, ENERGY STAR, BBRN, Building America teams, trade publications and events, conferences, Sponsor network, contractor network, stakeholder network</p>	<p><u>Up-Stream</u> Building product manufacturers, building equipment manufacturers, appliance and lighting manufacturers, distributors</p> <p><u>Mid-Stream</u> Training providers, credentialing organizations, QA providers, trade associations, supply houses, equipment suppliers, energy marketers, energy data services, program implementers, contractor service providers</p> <p><u>Down-Stream</u> Financial institutions, consumer service providers, retailers, community based organizations, contractors, healthcare providers</p>
<p><b>HPwES/DOE Investment</b> HPwES Team support, HPwES Stakeholder Work Group Support</p> <p><u>Leveraging other resources:</u> SUI Project EERE and Lab data projects (BPD, SEED, etc.) Building America new research Collaboration with EPA and HUD</p>		<p><b>HPwES/DOE Benefits</b> Reach a broader market, achieve greater energy savings (breadth and depth), work toward scale, establish HPwES as the preferred and most recognized channel for delivering energy improvement services to the residential market</p>		

## Key Activities: Qualifying Criteria and Supporting Tools and Resources

- Develop qualifying criteria for a non-traditional “sponsor” partner
- Deploy tools to support uptake (financing, data, etc.)
  - Examples: HPXML guide, data initiatives (SEED, BPD, etc.), solution centers

What other tools are needed to engage private sector?

## Key Activities: Develop the QA Oversight Process

- Develop QA oversight model
  - Coordinating with EPA to align QA oversight structure with existing QA model(s) used for other ENERGY STAR programs
- Outstanding Questions:
  - Can the ISO/ANSI model work in Home Performance?
  - Can a regulated transaction satisfy the need for third-party oversight?
  - Can a performance based model help solve the QA dilemma?

## Key Activities:

### Deploy pilots and support primary and secondary market value proposition

#### Short Term

- Validate the value proposition with each customer segment representing a viable partner

#### Mid Term

- Pilot different models and strategies with new and existing partners

#### Longer Term

- Promote methods for valuing benefits to sell
- Promote secondary market buy-in

## Key Partners

Federal

## Key Activities

Develop market-based oversight model similar

Each customer type has a **unique value proposition** specific to them

The customer's **needs and wants** inform their value proposition

Value is created by helping them: **achieve their goals**, and **solve their problems**

## Value Propositions

**Leveraging** the ENERGY STAR brand,  
**Third-party endorsement, Standards** and quality assurance,  
**Access** to contractors  
**Access** to downstream customer leads,  
**Market** differentiation,  
**Increased** sales of products or services,  
**Reselling** of monetized benefits,  
**Reduced** warranty claims and callbacks,  
**Improved** customer satisfaction,  
**Recognition** opportunities for Aggregators, contractors, and homes,  
*Other TBD by customer segment...*



## Customer Segments

### Up-Stream

Building product manufacturers, building equipment manufacturers, appliance and lighting manufacturers, distributors

### Mid-Stream

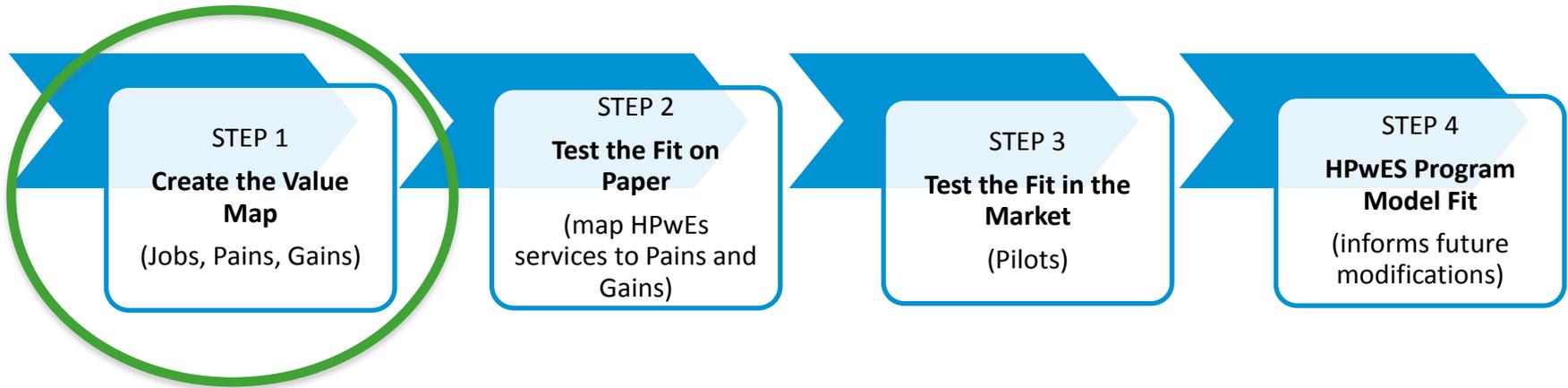
Training providers, credentialing organizations, QA providers, trade associations, supply houses, equipment suppliers, energy marketers, energy data services, program implementers, contractor service providers

### Down-Stream

Financial institutions, consumer service providers, retailers, community based organizations, contractors, healthcare providers

EERE and Lab data projects (BPD, SEED, etc.)  
 Building America new research  
 Collaboration with EPA and HUD

## Value Proposition Design Process for HPwES



Process Step	Action Items
<u>Step 1</u> Create the Value Map	Document the customer's perspective: <ul style="list-style-type: none"><li>•What does your business do? (JOBS)</li><li>•What gains are you seeking? (GAINS)</li><li>•What pain are you looking to resolve? (PAINS)</li></ul>

Trade Associations			
	Jobs	Gains	Pains
	Creating member value	Alignment of program standards	Not enough members
	Help members understand standards and regs	Positive recognition and publicity for industry actions	Back office compliance requirements
Financial Institutions			
	Jobs	Gains	Pains
Influence	Earn savings for the utility	Reaching those in need (low income)	Insane marketplace – conflicting programs
Certificati products	Customer service	Access to the Home Performance with ENERGY STAR brand	Quantifying NEBS
Represent	Innovation in delivery models	More business	Bad reviews
Offer train			
Implementation Vendor			
	Jobs	Gains	Pains
Payin	Help fund projects	(virtually) guaranteed returns	Legal restrictions
EM&V	Create profit	Aggregation	Financial market fluctuations
Being exper	Provide differentiated products	Access to customer feedback via contractors	Finding qualified customers
	Approve loans	Opportunity for deeper energy savings	Overcoming negative perceptions
	Assess risk	Reduced default rate	Regulations
	Validate/ inspect projects	Positive PR/environmental image	Program cycle vs. loan time

## Current Work Group Priorities

- Address action items
  - Define the qualifying criteria and process for becoming an aggregator partner
- Address unresolved questions
  - What QA oversight model should be pursued and tested?
  - What can DOE do to stimulate the market (short/med/long terms)
- Identify other issues to test in pilots...

## HPwES Pilot Activities

- Quality Management Systems
  - Working with existing Sponsors to integrate QMS principles into their operations incrementally
  - Piloting a small number of Sponsors to develop and implement comprehensive QMS plans based on QA Option 2 in the HPwES Sponsor Guide v1.5
  - Developing a workbook to assist Sponsors in establishing QMS based QA

### Want to learn more?

“Reduce Program Costs by Rethinking Quality Management”  
Today at 1:30 pm, Strand 10B

## HPwES Pilot Activities

- Piloting “non-traditional” sponsor/partner relationships (in development)
- **Staged Upgrades Initiative**
  - DOE pilot initiative, independent of but related to HPwES
  - Testing strategies and tactics to promote incremental approaches to home energy efficiency improvements on a path toward more comprehensive retrofits
  - Designed to help support broader participation and private sector investment

## Summary and Call to Action

Interested in assisting us with the HPwES Work Group activities?  
Want to become a pilot participant?

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Or

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# QUESTIONS?

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