



ENERGY STAR[®]

Water Heaters

**Draft 1 Version 2.0
Stakeholder Webinar
August 23, 2011**

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Webinar Goals



- Highlight key changes in Version 2.0.
- Solicit stakeholder feedback on proposal and outstanding issues.
- Address stakeholder questions about process and/or changes.
- Identify next steps and timeline.

Key Areas for Discussion



- Technology Neutrality
 - Product Categories
- Add-On Heat Pump Warranty Requirements
- Labeling Solar Water Heaters

Revision Drivers



- Technology Neutrality
- Specific small issues with specification
- Expansion to cover more products

- New federal standards in 2015 will be addressed by Version 3.0

Technology Neutrality



- Product Categories
 - Distinguished by Fuel Source
 - Electric
 - Gas
 - Solar
 - Further Distinguished by Use
 - Whole-home
 - Point-of-Use (POU)
- Distinctions also affected by test methods

Proposal Summary



Fuel	Product type	Requirements
Electric	Whole home storage	EF \geq 2.0, FHR \geq 50
	Point of use	EF \geq .97, min flow \leq .3 GPM
Gas	Whole home storage	EF \geq .67, FHR \geq 67
	Whole home tankless	EF \geq .82, GPM \geq 2.5
Solar	Electric or gas backup	SF \geq .5

- All categories have additional warranty and safety requirements
- Solar unchanged pending resolution of larger questions

Whole-home Electric



- Includes both integrated and add-on Heat Pumps: Removed language requiring “integrated/drop-in” units
- $EF \geq 2.0$
- Warranty Requirement Issues (for add-on)
 - Differences in how a tank manufacturer handles the warranty
 - Consumer placed in awkward situation between manufacturers

Whole-home Electric Contd.



- Options for warranty
 - Add-on heat pump manufacturer assumes the remaining warranty of the tank up to a maximum of 6 years (current proposal)
 - Limit warranty responsibility by defining what constitutes a void in warranty, or by defining “alterations to the tank”.
 - Other options?
 - Fair for manufacturers (all designs not equal)
 - Ensure the consumer is protected

Poll



- What is the best option for warranty requirements for add-on heat pumps?
 - All add-ons required to assume warranty, as in Draft 1
 - Limit warranty responsibility of add-on manufacturer in some way
 - I have an idea you didn't mention

POU Electric



- Defined by input and physical dimensions
 - 36x25x24 (LxWxH)
 - Limit to less than or equal to 12kW
 - Larger units not covered by NAECA, so manufacturers reluctant to make EF claims
 - Larger units (and hybrid units) may be considered for a commercial specification, or the next revision (before 2015) by which time the test method landscape may be different

POU Electric Contd.



- Qualification requirements proposed
 - $EF \geq 0.97$
 - Low-Flow Rate Requirement
 - Allow user to adjust temperature
 - Capable for use as booster or alone
 - Flicker requirement
 - Warranty
 - Safety

POU Electric Contd.



- 12 kW units have limited applicability (single sink fixture)
- Cost effective to serve single fixture addition
- Can be used to improve HW system without increasing energy use
- Energy savings dependent on situation

Whole-home Gas



- Includes high efficiency gas storage and gas condensing water heaters
- $EF \geq 0.67$
- Warranty ≥ 8 years
 - Needed to reconcile varying warranties in previous categories
 - Longer warranty necessary to support longer payback periods
- Gas Storage vs. Gas Tankless

Labeling Solar Water Heaters



- Goal: To effectively promote the adoption of energy efficient technologies.
- Question: What role does ENERGY STAR play in a consumer's decision to purchase a solar water heater?

Poll



- What are the primary market barriers to broader adoption of solar water heating?
 - Education/consumer knowledge
 - Education/contractor knowledge
 - Initial cost
 - Lifetime cost/benefit
 - Social issues (e.g. my neighbors will think I'm a hippie, my HOA won't allow it)
 - Other

Key SWH Questions

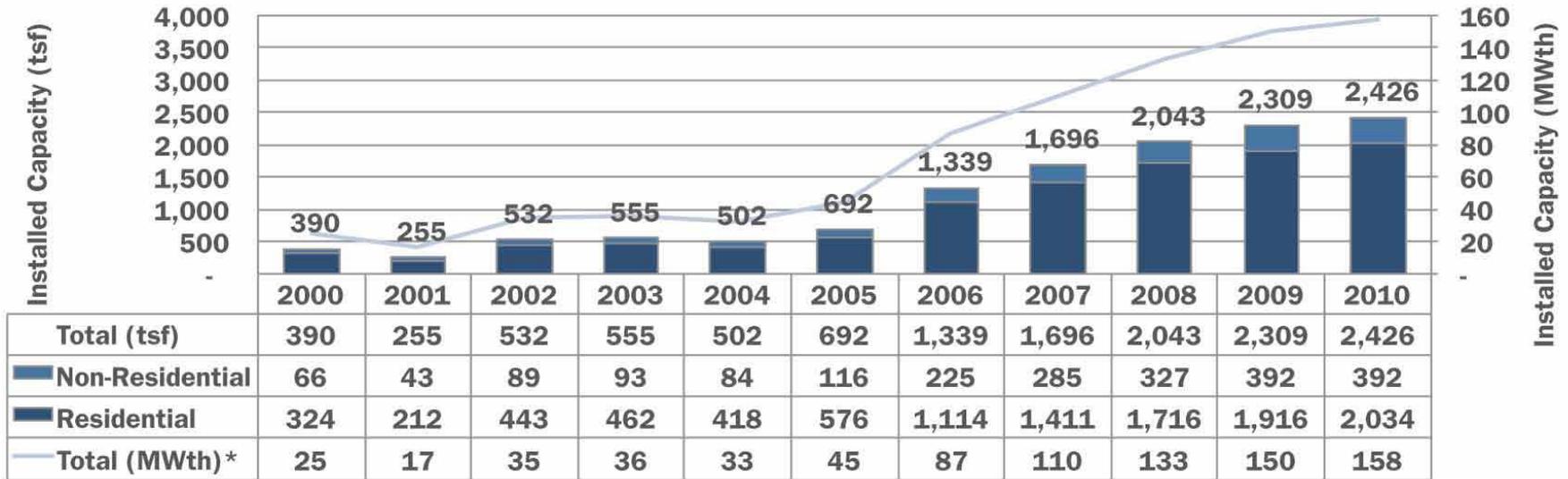


- Do utilities rely on ENERGY STAR for their solar water heating programs?
- Market changed since the ENERGY STAR program took effect?
 - More sales? More confidence in SWH?
- Does ENERGY STAR change consumers' performance or payback expectations?
 - Are expectations met? If not, market impact?

Solar Thermal Growth



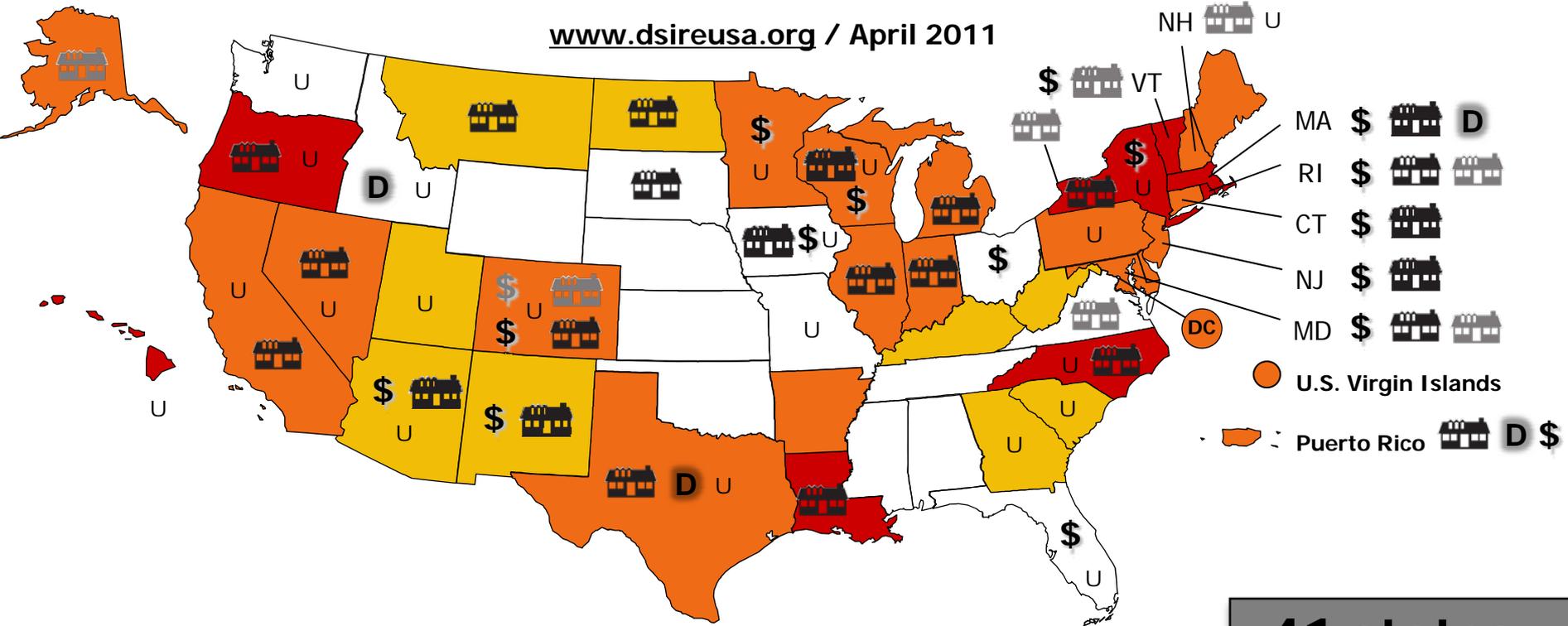
SWH: Annual Installed Capacity by Market Segment, 2000-2010



U.S. Solar Market Insight™
 2010 Year in Review Executive Summary
 GTM Research for SEIA

Financial Incentives for Solar Water Heating

www.dsireusa.org / April 2011



- Direct Cash Incentive
- Tax Credit
- Direct Cash Incentive and Tax Credit
- Tax Deduction
- Sales Tax Incentive
- Property Tax Incentive
- Utility Direct Cash Incentive(s)
- Local option to provide sales tax incentive
- Local option to provide property tax incentive

41 states + DC, PR & USVI offer financial incentives for solar water heating

Key SWH Questions



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Other SWH Programs



- Solar Rating and Certification Corporation (SRCC)
 - Does the ENERGY STAR label add significant value to this?
- EPA
 - [EPA Emerging Tech Awards](#)
 - Building scale energy efficiency programs

Other SWH Programs, cont.



- DOE:
 - Utility Solar Water Heating Initiative
 - Partnership program that helps facilitate utility implementation of solar water heating initiatives
- State Programs:
 - CA Solar Initiative, Florida Solar ratings program, Wisconsin solar rating program
 - Rating systems based on specific regions or climates.
 - Additional focus on installation and system design

Other SWH Programs, cont.



- **Federal Incentives/Policies for Renewables & Efficiency**
 - Residential Energy Conservation Subsidy Exclusion
 - Subsidies provided to customers by public utilities are non-taxable.
 - Residential Renewable Energy Tax Credit
 - Up to 30% tax credit on solar water heaters. Expires 12/31/2016.
 - Energy-Efficient Mortgages (EEM)
 - FHA backed homeowner EEM.
 - Energy Standards for Public Buildings
 - Requires adopting renewable technologies such as solar water heaters for public buildings.

Revision Timeline



- Aug. 23th Draft 1 Stakeholder Webinar
- Sept. 9th Draft 1 comment period closes
- Oct. 2011 Draft 2, webinar and comment period
- Nov. 10th Stakeholder meeting at ENERGY STAR Partner Meeting
- Nov. 2011 Draft final, comment period
- Dec. 2011 Final specification published
- Sep. 2012 Effective date

Contact information



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