

Lessons from Connecticut Light & Power Company's “HotShot” Residential Heat Pump Water Heater Program

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CL&P Program history

- **EPRI** and **Crispaire (E-Tech)** developed a small residential add-on HPWH
- CL&P participated in a national field test
- Test results looked promising
- CL&P ordered 4500 units in 1997!



CL&P Program history

- Recruited Bob Stone from Training Dept. to manage program, train installers
- Recruited ~40 plumbing contractors
 - ~4 contractors stayed with program
- Solicited customers thru bill inserts
- **Gave away** HPWHs; customer paid \$150 to installer
- Installed ~3000 E-Tech units

A happy customer!



What happened next?

- E-Tech design & quality were immature
- CL&P requested numerous improvements
- Manufacturer became reluctant to make more changes; cost increased

New Manufacturer

- Recruited a new manufacturer:
Nyletherm
 - Duplicated E-Tech design
 - Ordered ~3000 units; installed ~2000
 - Not quite as many quality issues



Customer satisfaction

- Satisfaction was high!
- HPWH Customers were almost universally pleased
- Dehumidification was as important as water heating savings
- Many customers couldn't guess at savings
 - Guessed that dehumidification savings was significant

Installer satisfaction

- Of 40 installers, 4 remained with program
 - Needed to think “production”, not “get rich”
- Eventually raised payment by \$25 - \$50
- One installer still remains enthusiastic – wants to import HPWHs if necessary, to continue selling them
 - He could install a HPWH in one hour!
 - Up to 4 sites / day

The program's demise

- CL&P's entire Conservation Program was collapsing due to state appropriating funds
- Some units failed
 - CL&P didn't want responsibility / liability for maintaining/repairing bad units
- CL&P shut down program in 2003

How it should have been done

- Contract for **Just In Time** delivery with manufacturers
 - Assume product will be functional, but immature!
- Recognize that ongoing product improvements will be necessary
 - You are going to help mature the product!

Designing a Utility Program, 1

- Start modestly; grow the program
- Work in tight geographical areas
 - Don't advertise to the world!
- Suggest buying from 2+ manufacturers
 - Get complete installation kit
- Just in time delivery – agree to ongoing improvements

Designing a Utility Program, 2

- Gain in-house technical experience
- Develop program delivery
 - Tight control over installers
- Gain comfort with HPWH product
- Learn customers' "Satisfaction Hot Buttons"
- Strong contract with customers (ownership)

Available HPWHs

- Add-on models...
 - E-Tech, by AERS
 - 3 models
 - Hallowell (soon)
 - AirTap – AirGenerate
 - Nyletherm refurb (WYSIWYG)
 - Import???
- Integral models...
 - GE – in a year+