



**Episode 677 | October 7, 2022 | 12:00 PM EST**

## **Nate Adams**

### **Electrification, Heat Pumps, IAQ & The Inflation Reduction Act.**

Good Day and welcome to IAQ Radio+ This week we welcomed back one of our favorite regular guests Nate “The House Whisperer” Adams for a show called electrification, heat pumps, IAQ & The Inflation Reduction Act.

Nate “The House Whisperer” Adams is the author of The Home Comfort Book and has helped numerous clients make their homes healthier, more comfortable, and able to run on clean electricity. He and his partners have adapted that upgrade process into the HVAC 2.0 program which gives HVAC contractors a business model to deliver the same results for their clients while enjoying their work more and being more profitable.

His focus on residential electrification retrofits earned him the moniker “The Father of Electrify Everything” from Panama Bartolomy, CEO of the Building Decarbonization Coalition. He splits his time between living on the Cuyahoga River in Hiram Ohio and in a former West Virginia coal mining village with his wife and young daughter.

#### **Nuggets mined from today’s episode:**

Nate has been “electrified” for awhile; he pulled his first gas meter in 2014 and hasn’t looked back.

Improving energy efficiency has always been complicated; government programs have made and will make what is already complicated much more complicated.

Nate opines that electricity is the cheapest energy source and is becoming the cheapest energy source the world has ever known. “Clean electricity” is carbon free and sources of it include: wind, solar, nuclear, hydro & geothermal.

The Build Back Better Act was stalled; the IRA (Inflation Reduction Act) was a much smaller compromise bill that is meant to be revenue neutral. The name was to pacify Senator Manchin.

While the IRA does provide opportunities for HVAC contractors and the public to upgrade homes and buildings the bill is complicated and requires strict compliance to new energy efficiency requirements.

While the failure of wind and solar in Texas received notable news coverage, the rest of the story that wasn't told was that the freeze caused all power plant types in Texas to fail.

Storage batteries are a key component of electrification. California and the state of Texas have invested in storage batteries that both helped on hot days this summer. Texas' utility solar generation is 3X what it was 18 months ago.

**What details do we know? None.**

- The federal bill will be out before tax season.
- The states will have up to 2 years to implement.
- Few current HVAC products will qualify as the rules stand. Each state will make its own rules.

**Note: Just after we recorded Nate learned that the CEE is going to reduce from 3 tiers to 1, and that the base tier is basically 16 SEER (15.2 SEER2) which is quite easy to hit. So a lot of people will be using the program. It requires having a \$2000 tax liability, so lower income customers may not qualify.**

**Tread carefully.**

- Frothy news coverage will heighten consumer expectations.
- Clients asking about incentives may not be your clients. Beware of people looking for free stuff.

- Beware of fully integrating these programs into your marketing and sales programs as incentives may vanish. Use them as a bonus, not a primary tool.

### **IRA is really 3 programs**

- **10 Years** - Programs go through late 2031 or early 2032
- **Federal Tax Incentives** - begins 1/1/23 - unlimited budget for 10 years - \$1200/\$2000 per year
- **State Rebates** - up to 2 years to begin, state by state
  - **Hope for HOMES** \$4.3 billion budget - \$2000/\$4000 for 20-35% or 35%+ modeled/actual energy savings
  - **High Efficiency Electric Homes** \$4.5 billion budget - up to \$14,000 for various upgrades

**Income Qualified**, no double dipping rebates

### **Federal Tax Credit (25C)**

- **Now \$1200/year** max, 30% of job cost
- **Was \$1500 max lifetime**, 10-30% of job cost
- **\$2000/year** for heat pumps and heat pump water heaters
- **Requires tax liability**, can be spread over multiple years
- **Stackable?** Big deal if true, otherwise spreads job out over multiple years and likely increases total project cost

### **Federal Tax Credit (25C)**

- **Maximums, up to 30% of job cost**
- **Heat Pumps \$2000**
  - Requires CEE Tier 3 – See Note Above(“What details do we know”)
  - Currently 18 SEER
  - May require AHRI match
  - Most 3/4/5 ton 18 SEER products don’t match up to be 18 SEER
- **Heat Pump Water Heaters \$2000**
  - 3.25 COP, all current products qualify (two OEMs)
- **Windows \$600**

- **Exterior Doors** \$250 each, \$500 max
  - Energy Star doors and windows required

**Comment:** The \$ in the IRA is for weatherization and HVAC upgrades, there is little funding for IAQ.

**Comment:** The program specifications have the potential create IEQ problems and make people sick.

**Comment:** Most electrified homes will incorporate storage batteries.

**Comment:** Requirements may only get consumers back to break even and require most costly equipment.

**Comment:** Supply chain issues have slowed delivery and driven up costs. Rooftop units have 1 year waiting period. Residential units have 3-4 month waiting period and consumer and contractor will be stuck with what brand and efficiency level is available.

#### CEE—Consortium for Energy Efficiency

**CEE** is the US and Canadian consortium of gas and electric efficiency program administrators. We work together to accelerate the development and availability of energy efficient products and services for lasting public benefit.

<https://cee1.org>

Has created specifications for: Split Central A/C, Split Air Source Heat Pump, Packaged Central Air A/C, Packaged Air Source Heat Pump

SEER- Seasonal Energy Efficiency Ratio

HSPF-Heating Seasonal Performance Factor

EER- Energy Efficiency Ratio

#### Federal Unresolved Questions

- **Stacking** - Can incentives be stacked in one year?
- **AHRI Match?** - Will heat pumps require CEE Tier 3 AHRI match? Will Tier 3 increase this year?
  - Most 20 SEER equipment is at least \$2000 more expensive, meaning the credit is not useful for most 3/4/5 ton equipment
  - Most 18 SEER Equipment Isn't 18 SEER.
- **Mix federal and state?** Can federal tax credits and state based rebates be combined? (State programs can't be)

### **The IRS is seeking comments on upcoming energy guidance.**

**Comment:** Tell the IRS not to require CEE 3. Tell the IRS we want Tier 2.

### **AHRI Directory | AHRI - Air Conditioning, Heating and Refrigeration Institute**

AHRI Directory of Certified Product Performance ( [www.ahridirectory.org](http://www.ahridirectory.org)) is the trusted source for performance certified HVACR equipment. On the public side of the Directory, engineers, contractors, regulators, and consumers can search by product lines, certified ratings, or brands to find the information they need, when they need it. <https://www.ahrinet.org/certification/ahri-directory>

### **IRA State Programs**

- **Hope for Homes** - Rebates for modeled/actual energy savings - \$2-4K
- **High Efficiency Electric Homes** - Rebates for individual measures - \$14K max

**Income Qualified** - All rebates require income verification

- LMI = Low or moderate income
- LMI Definition

“The term “low- or moderate-income household” means an individual or family the total annual income of which is less than 80 percent of the median income of the area in which the individual or family resides, as reported by the Department of Housing and Urban Development, including an individual or family that has demonstrated eligibility for another Federal program with income restrictions equal to or below 80 percent of area median income.”

### **Roundup: Nate’s Comments**

- Odds of bad experiences doing program work are higher.
- Federal program should not be so difficult.
- Government should relax standards
- Income restrictions should be removed
- Funds should be shifted to weatherization programs where they belong.
- Don’t adjust your sales process for the program.
- Don’t be a house mouse. [A **house mouse** is the one person that everyone has a problem with.]
- Don’t feed the bears. [The **bears** only come back for more and they get angry when you take away their food, they have forgotten how to hunt.)

- Divert questions about customer income to a link on a website where they can prequalify.
- Federal program will begin on January 1. State programs will begin in approximately 18 months.
- Nate is not a fan of the heat pump sections of the IRA and opines that there are more effective ways to spend the money and help more people.

#### **Nate's Links:**

[https://docs.google.com/presentation/d/1MFEJ8Vlt3ruFud1oFXMDv0d4ZDKtyLLcG5\\_kKniQv-o/edit#slide=id.g7cfbf94d51\\_1\\_0](https://docs.google.com/presentation/d/1MFEJ8Vlt3ruFud1oFXMDv0d4ZDKtyLLcG5_kKniQv-o/edit#slide=id.g7cfbf94d51_1_0) **LINK TO SLIDE DECK**

<https://docs.google.com/document/d/19ssGaCWbRERVBh4IkPPb95r2fk8P09wf1JyYymnUWIU/edit> **LINK TO NOTABLE PARTS OF THE BILL**

#### ***Z-Man signing off***

#### ***Trivia:***

Name the scientist whose contributions to the study of electromagnetism included and diamagnetism?

Answer: Michael Farrady