

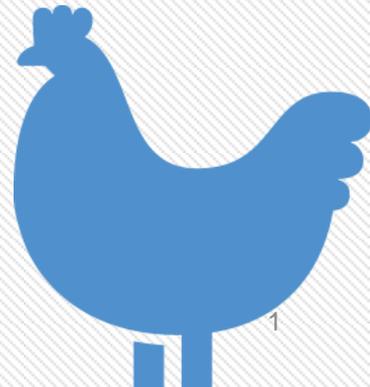
FREE RANGE MEASURES

PART 1:

How customer feedback is changing the way BPA manages risk and develops measures

PART 2:

Changes to Commercial Sector Deemed Measures



Lay of the land...

1. Research & Development

2. Emerging Technology

3. BPA Qualified Measures

4. RTF Gold Standard

- **Unit Energy Savings (for deemed measures)**
- **Protocols (for calculators and custom projects)**

What we've heard around the farm

**I need to understand the measure
before I offer an incentive**

- **It needs to be easier for me**
- **It needs to be easier for the trade allies**
- **The incentives aren't high enough to motivate action**



What we've done in response

- **Introduced AirNW to teach trade allies and utilities. (expanded programs feedback loop)**
- **Increased BPA's wholesale incentive offering**
- **Clarified measure requirements**
- **Eliminated unnecessary measure requirements**
- **Simplified documentation requirements**



Reducing Documentation Requirements

Current State: Requires Project Information Forms be submitted to EE Docs at the time of invoice

Why? Early warning system for QC –steady stream of data to track i.e. project cost – brands and models being installed... etc. Having the REQUIREMENT – guaranteed BPA got the forms.

Future State: Utilities will maintain Project Information Forms in files. BPA will track measure update via reporting system and collect forms from utilities as required.

Why? Utilities said make it easier...

Developing New Measures and Managing the Risk vs.

Rigor Continuum

Phase 1

Very little existing research

BPA solicits projects for research and help fund installations

Phase 2

Research informs starter measure

Research Plan in place

GO GET 100 INSTALLS

Phase 3

Collect PIFs feed into the Research Plan

Are we collecting the right data?

Research Plan gets updated

GO GET 500 INSTALLS

Phase 4

BPA Data is shared with the RTF and hopefully... a UES measure is approved...

Risk to Portfolio Savings

Emerging Tech

BPA Qualified

RTF

Years 1-2

Years 3-4

Years 3-4

Year 5

Updated Measures (October

1, 2016)



VRF

PIFs

DHP

Windows

Heat Pump Upgrade

Advanced Rooftop

Connected Thermostat

HP H₂O Heater



AirNW

EMERGING TECH FIELD TESTS 2016-2017

GRANT OPPORTUNITIES FOR COMMERCIAL HVAC PROJECTS

- Help BPA to develop future measures
- Give grants to support the installation and research of promising energy efficient technologies
- Pay all or most of the project cost
- Allow utility to claim savings as self-funded custom projects

Emerging Technology Field Test

HVAC PREMIUM PUMP RETROFIT

AVAILABLE FUNDING

- \$50,000 total available
- Estimated \$10,000 per project

IDEAL BUILDING USE TYPES

- High hours of operation
- Hospitals
- Grocery stores

SELECTION CRITERIA

- Meets eligibility criteria
- Provided cost information
- Project location
- Regional applicability
- Preference given to:
 - Integrated ECM
 - Longer Hours of Operation

ELIGIBILITY OVERVIEW

Pre-conditions:

- Commercial space
- HVAC system variable loads (heating water, chilled water and condensing water)
- Constant speed
- .33 – 10 Horsepower range
- Operate a minimum of 2,000 hours per year

Post-conditions:

- Integrated variable-speed pumps with controls
- Control strategy
- Installed and programmed by a licensed contractor per manufacturer's specs
- Installed by June 30, 2017

Emerging Technology Field Test

HEATING RECOVERY SYSTEM

AVAILABLE FUNDING

- \$160,000 total available
- Estimated \$40,000 per project

IDEAL BUILDING USE TYPES

- High hours of operation
- Hospitals
- Grocery stores

SELECTION CRITERIA

- Meets eligibility criteria
- Provided cost information
- Project location
- Regional applicability
- Preference given if hours of operation exceed 4,500

ELIGIBILITY OVERVIEW

Pre-conditions:

- Commercial space
- Electric resistance or existing heat pump
- RTU in 3 – 10 ton range
- RTU without DCV
- Operate a minimum of 3,000 hours per year

Post-conditions:

- Variable capacity heat pump provides heating and cooling
- HRV has sensible effectiveness ratio of 85% or greater
- Installed and programmed by a licensed contractor per manufacturer's specs
- Installed by June 30, 2017

Final Thoughts...

1. Viable Measures

- **Utility understands the measure**
- **Trade Ally understands the measure**
- **Incentive is effectively set**

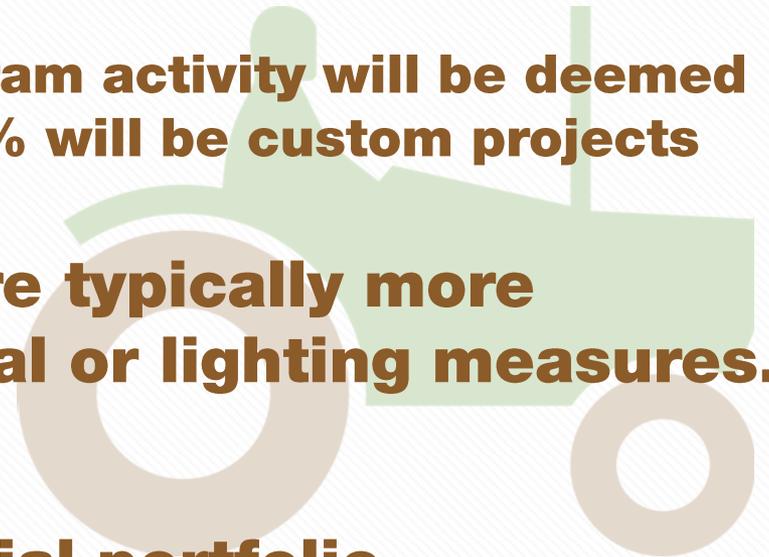
2. Viable Deemed Measures are an integral component to the success of the new commercial program.

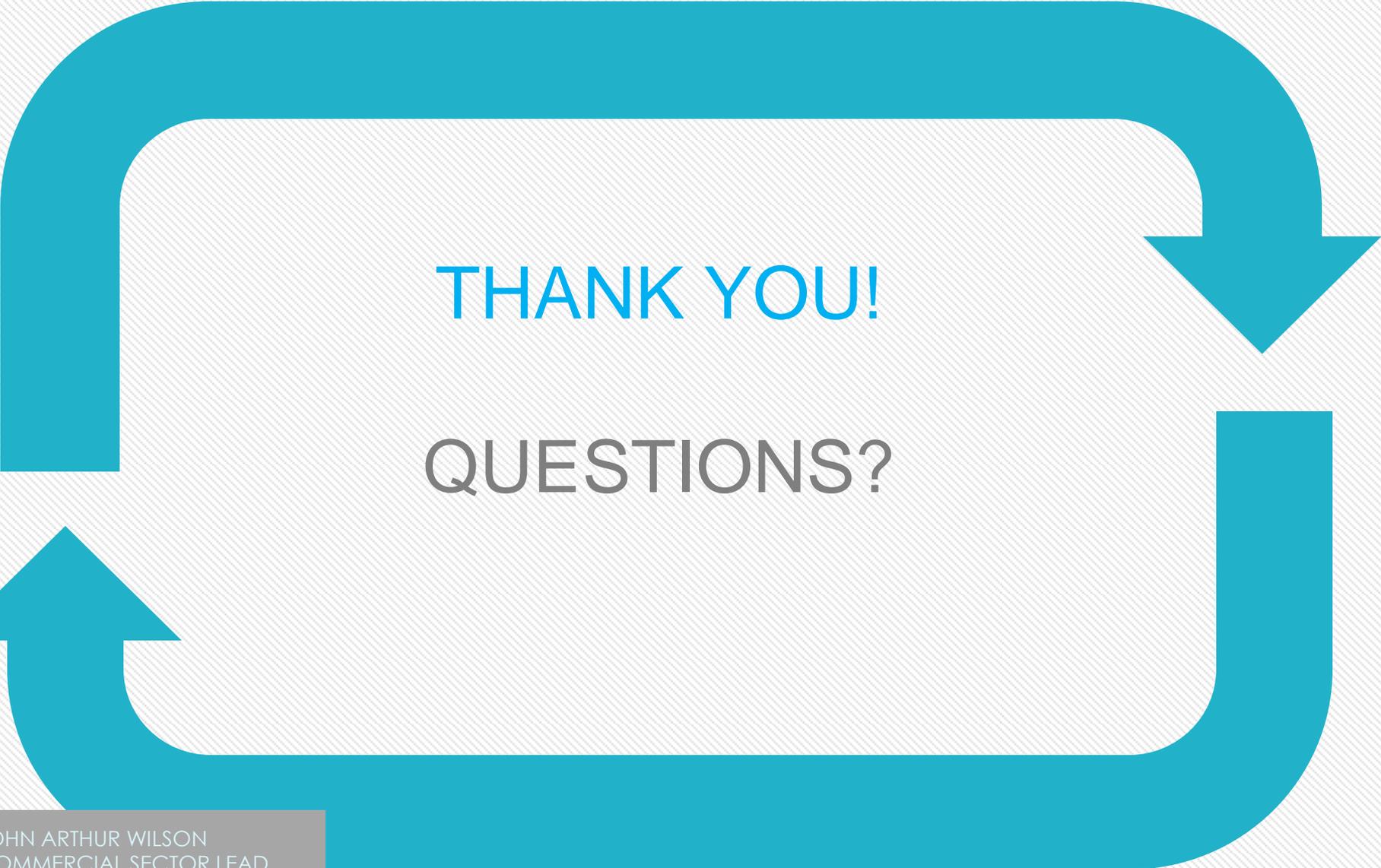
- **75 – 25 rule: 75% of program activity will be deemed measures or lighting – 25% will be custom projects**

3. Commercial Measures are typically more expensive than residential or lighting measures.

- **Averages \$0.25/kWh**

4. The rest of the commercial portfolio...





THANK YOU!

QUESTIONS?

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