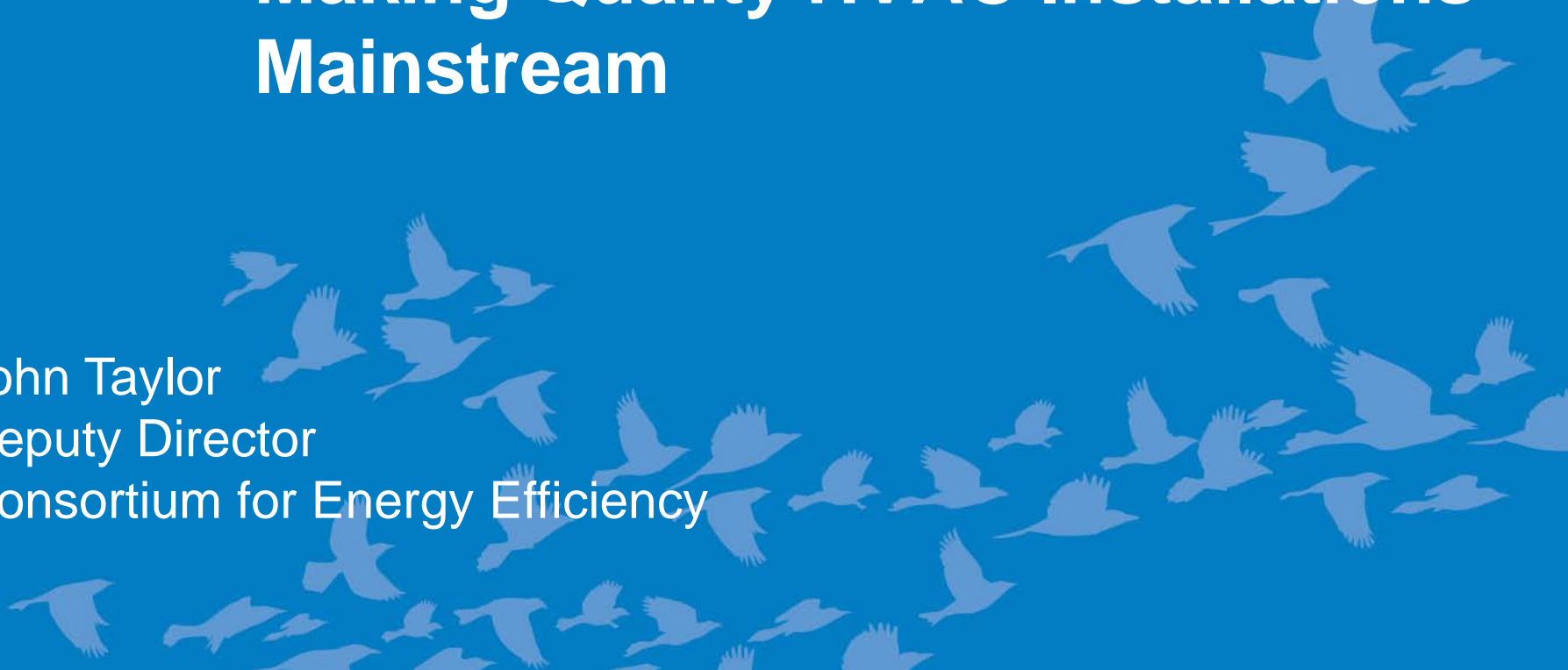


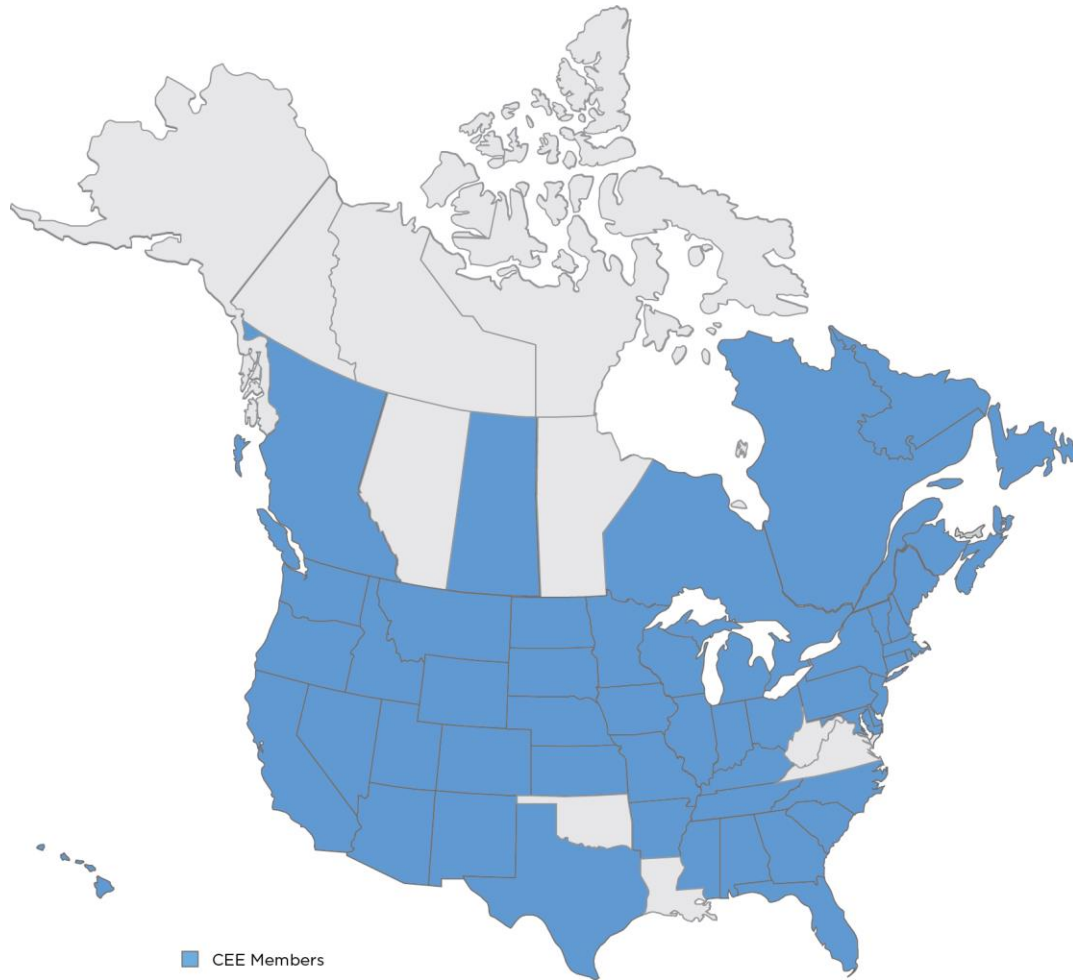



Making Quality HVAC Installations Mainstream

John Taylor
Deputy Director
Consortium for Energy Efficiency



CEE Today



- ▼ CEE brings together 100 program administrators serving all or part of 45 states and 7 provinces
- ▼ CEE program model was recognized by the EPA with the 2009 Climate Protection Award 
- ▼ CEE is a member-driven nonprofit, governed by a Board of Directors from member organizations

CEE members work together and with stakeholders to achieve higher savings

Members

- ▼ Efficiency Program Administrators—utilities and nonutilities with ratepayer funded programs
- ▼ Other Organizations
 - DOE, EPA, NRCan
 - National labs
 - Vetted and Legacy Non-Profits
 - State and provincial energy offices

Coordination

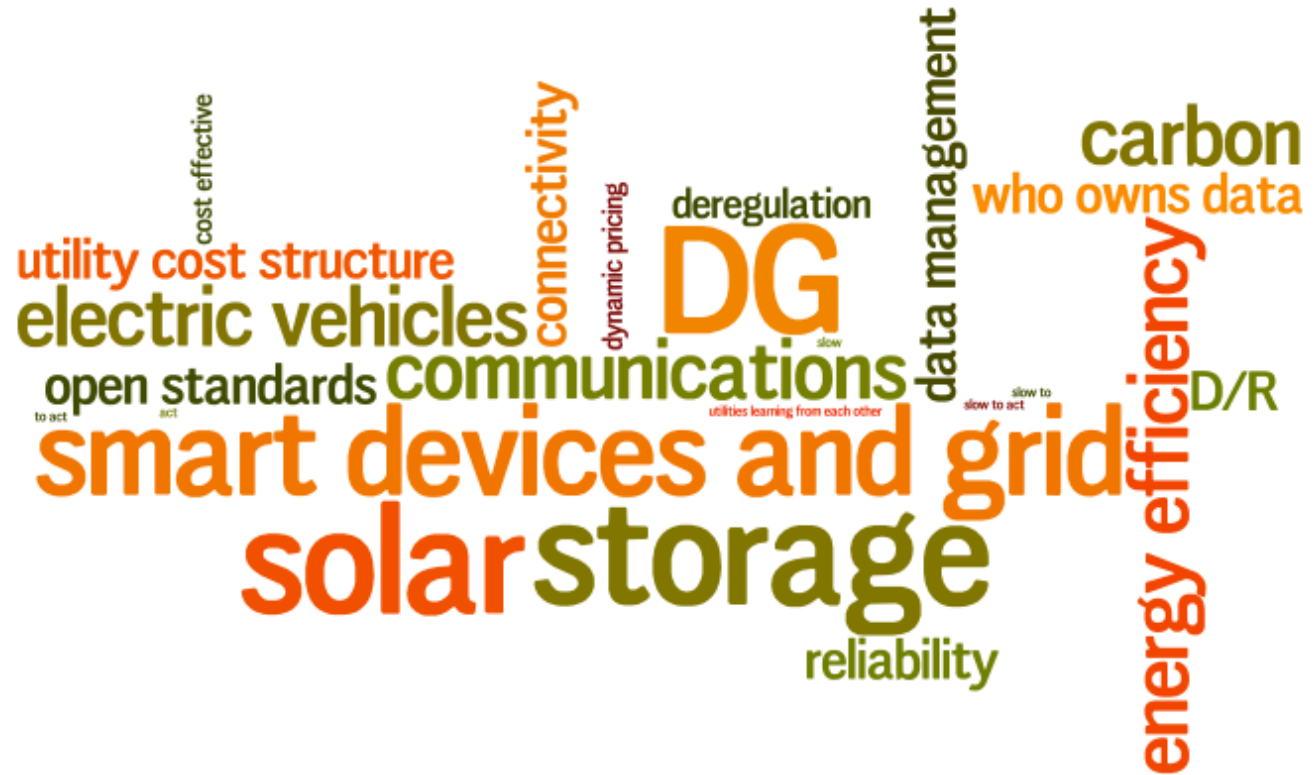
- EPRI, GTI, AGA, IEE

Trade allies

- AHRI, HARDI, ACCA

Manufacturers and others are consulted about aspects for program implication

The Electric Industry is Facing Rapid Change



Examples of Non-Energy Impacts

Residential

- Lighting Quality
- Property Value Increase
- Thermal Comfort
- Noise Reduction
- Home Durability
- Reduced Equipment Maintenance

Low-Income

- All Residential NEIs
- Reduced Arrearages
- Fewer bad debt write-offs
- Rate Discounts
- Health Benefits
- Improved Safety

C&I

- Administrative costs
- Material handling/movement
- Other labor costs
- Operations & maintenance costs
- Product spoilage
- Rent/Sales revenue
- Waste Disposal

CA Policy Drivers for Change

AB 802

- Enables PAs to pursue stranded potential, or ‘below code’ savings
- Prioritizes weather normalized, metered based savings

CPUC Decision 16-08-019

- 60% Third Party Programs

Implications for Portfolio

Current

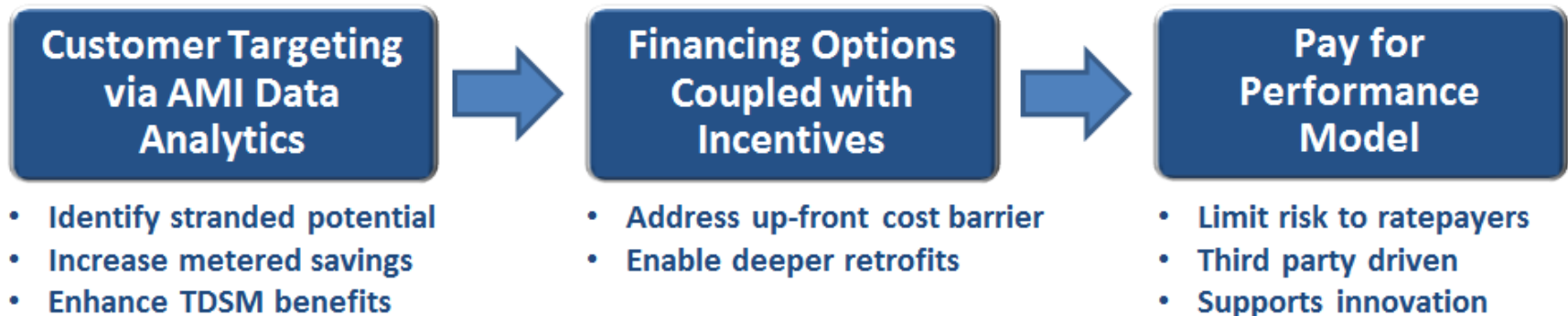
- ‘Deemed’ or ‘Custom’ savings
- Code or ISP baseline
- Incentives paid on predicted savings
- Program implementation shared between PAs and 3Ps

Future

- Metered savings
- Existing conditions baseline
- Pay-for-Performance program models
- 3rd party program implementation

One Relevant Strategy—Where California is Likely Heading

Strategy 1: Targeted Interventions



CEE's HVAC QI Initiative: Present Day

- ▶ Objective: Focused on market adoption and quality installation of high efficiency equipment
- ▶ Goals:
 - Increase contractors offering QI (ACCA 5/9)
 - Increase consumer awareness
 - Increase number of quality installs

Revising the Initiative

▼ To Achieve Scale!!!

▼ We're asking these questions:

1. Should objective be modified to emphasize QI for ALL equipment?

of verification necessary?
Can we be more targeted?

2. Should goals explicitly support strategies that invest resources in contracting businesses to embrace QI?

4. Is it appropriate to explicitly prioritize QI over promotion of high efficiency equipment?

3. What is the minimum level

Data Analysis

- ▶ Collecting data on QI programs – ENERGY STAR branded, and not.
- ▶ Data elements include:

System Eligibility	QI requirements (ACCA 5/9 or other?)	Details of verification process
Sponsor/Funder Type	ESVI?	Number of contractors
Number of projects	QA/QC process	Pass/fail rates
QM Program?	HP/other program?	Energy savings (modeled, actual)
Consumer awareness elements	Incentive structure	Other unique program design elements

Next Steps, Feedback

- ▶ Outreach to programs for data collection
- ▶ Close coordination with DOE and EPA
- ▶ Share analysis with members and key stakeholders
- ▶ Prepare revised CEE HVAC initiative guidelines

Some Themes...

- ▶ Permitting is a major issue
 - Many customers don't want to deal with the hassle
 - Many local permitting offices are significantly understaffed
 - The process is “retro”
 - Etc
- ▶ The program has to work with contractor business models. Contractors can't sell QI if they go out of business
- ▶ Engage contractors early in the program design
- ▶ Stretch goals, not aspirational ones
- ▶ Customers must be willing to pay
- ▶ Incentivize what you want to see
- ▶ Reward the good contractors

Desired Outcomes

- ▶ Identify Program Tactics that Increase Scale
 - Smarter/Targeted Verification?
 - Supporting Quality Contractors?
 - Other?

- ▶ Identify Market Research Questions to Answer
 - Pilots
 - Monitoring specific elements of 2017 programs

Roundtable Discussion Topics

- ▶ How can we support quality contractors?
- ▶ What are the hurdles in mandating QI for all HVAC rebates
- ▶ Is it possible to leverage AVS to streamline program and save money?
- ▶ Can t-stat programs shed light on usage patterns relevant to QI savings potential?

Contact

John Taylor
Deputy Director
(617) 532-0944
jtaylor@cee1.org