



Design Incentives & Reach Codes

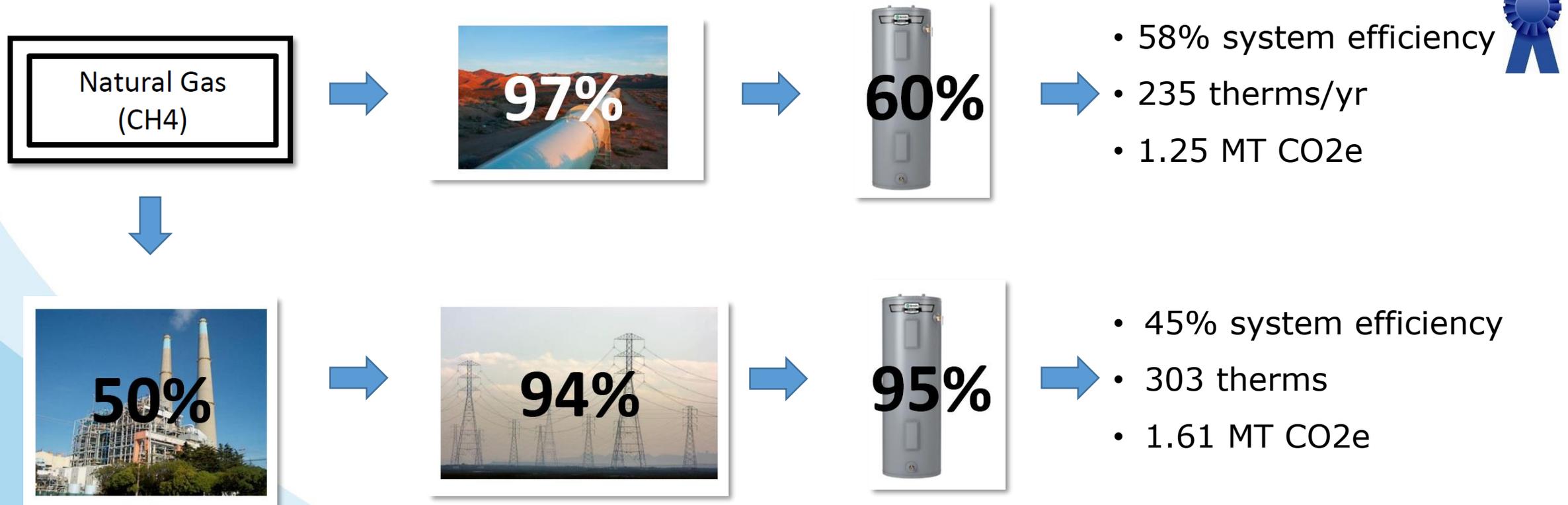
**SVCE Board of Directors Meeting
November 14, 2018**

Design Incentives & Reach Codes

- Why natural gas was prevalent in building code
- Market status of all-electric technologies
- Methods of influencing and changing market choices
- What is a Reach Code?
- Call to action and next steps

Natural Gas – the prior view . . .

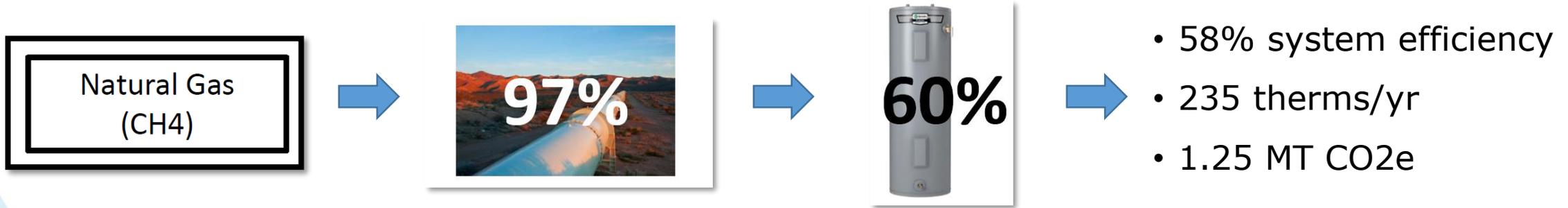
Pipe natural gas to site, for use in gas water heater



Generate electricity from natural gas,
for use in electric resistance water heater

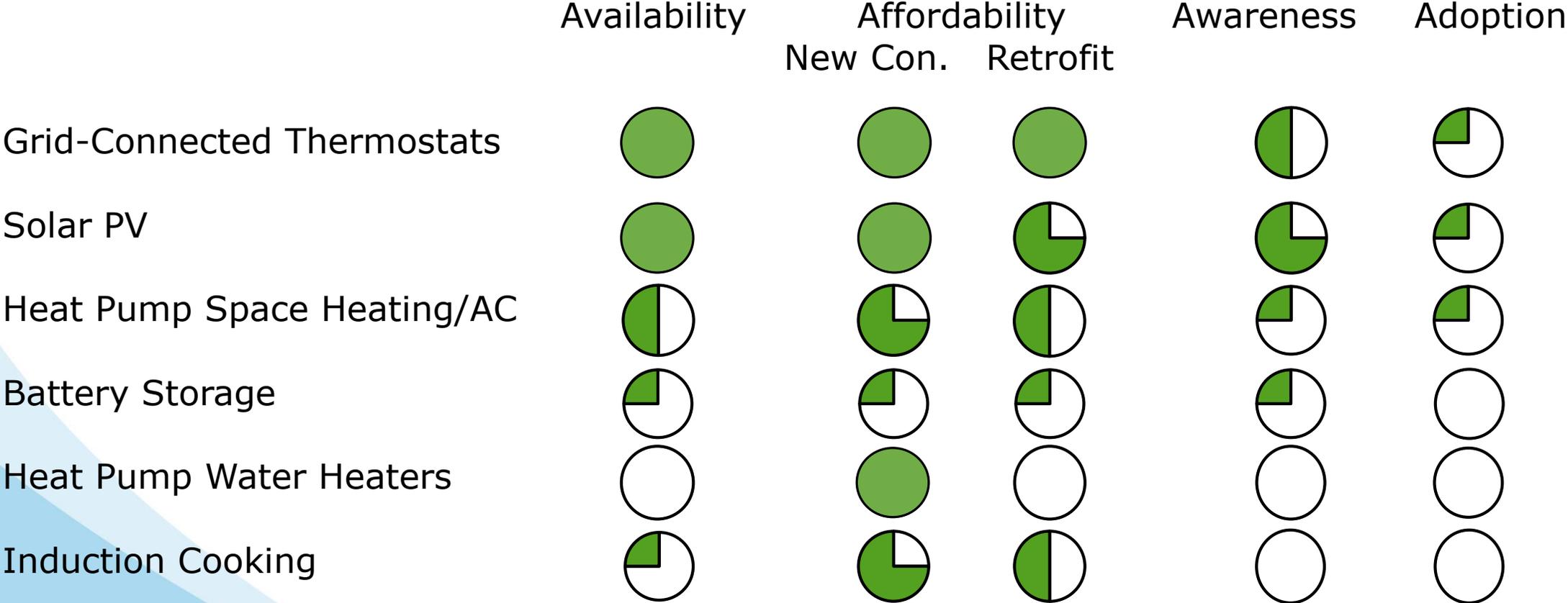
Natural Gas – the current view

Pipe natural gas to site, for use in gas water heater



Generate carbon-free electricity for use in electric heat pump water heater

Building Electrification - market status



Moving the Market – Example Programmatic & Policy Tools

Educate

- Resource Center
- Design Guide
- Workshops
- Case Studies
- White Papers
-

Motivate

- Financial Support
- Floor Area Bonuses
- Awards & Recognition
- Favorable Utility Rates
- Expedited permitting
-

Require

- Reach Codes*
- Ban the Alternative(s)

* While a Reach Code requires mandatory compliance, the 2019 Code allows two paths – all electric or mixed fuel; a Reach Code can move the market by making one path more stringent than the other.

Financial Support – Cash Incentives for All-Electric Design

SVCE, as part of our decarbonization roadmap, will propose consultative support and a cash incentive to encourage development of 'flagship' all-electric residential, commercial and institutional buildings

Cash incentives for flagship projects will assist in building awareness with the developer community, and assuring developers of all-electric design viability

Development Incentive – Floor Area Bonus for All-Electric Design

SVCE proposes other cities evaluate and implement a developmental incentive similar to what the City of Sunnyvale is currently considering

Under this proposed incentive, new construction buildings would be awarded an increase in available floor area for meeting relevant design criteria; Sunnyvale is considering adding all-electric as the (or one of the) incentivized design elements.

Building Codes and Reach Codes

Building Code

- every three years, California Energy Commission releases new state building codes known as Title 24
- all buildings must, at a minimum, comply with these codes
- when new codes are released, cities amend their local ordinances to comply with the new release
- 2019 code will be released next year, effective January 2020
- historically, code is about energy, not carbon.



Reach Code

Cities may adopt local ordinances known as reach codes; for example, cities may require buildings to be more energy-efficient than allowed by the state code:

- reach codes must be more stringent than state code
- measures must meet cost-effectiveness test
- best implemented at the same time as the regular Building Code goes into effect

Reach Code Example

Marin County – 2017/2018

In order to motivate homes built without natural gas lines, various cities in Marin County enacted reach codes:

- Mixed Fuel (gas+electric) homes must be 15% more efficient than Title 24
- All-Electric homes must meet Title 24

As written, Marin County made it simpler to comply with all-electric efficiency requirements to motivate developers to pick the cleaner all-electric path

SVCE recommends member agencies investigate and implement similar reach codes

<https://www.energy.ca.gov/title24/2016standards/ordinances/>



Reach Code – Example Options

Built Environment

'Lighter Green'

- include readiness for future all-electric retrofits
 - internal wiring for solar, battery storage, HVAC and cooking

'Darker Green'

- required installation of all-electric equipment
 - include combination of solar, battery storage, HVAC and cooking

Electric Vehicles (EV)

Lighter Green

- include readiness for EV charging
 - internal wiring and conduit for future EV charger installation

Darker Green

- comprehensive EV code – e.g. including Level 2 charger installation

Programmatic & Policy Tools - SVCE and Member Agency Roles

Toward Zero Carbon Buildings or EV Charging*



Entity	Design Incentive	Favorable Utility Rate	Floor Area Increase	Expedited Permits	Reach Code
SVCE	Lead	Lead	Support	Support	Support
Member Agency	Support	Support	Lead	Lead	Lead

* Many more options exist beyond those listed in the table

Current SVCE Reach Code Activity

SVCE currently engaging with multiple entities:

- Peninsula Clean Energy (PCE)
 - discussing regional collaboration and joint consultation for reach codes
- MAWG
 - overview of process and cost effectiveness testing via statewide Codes and Standards program
- Cities
 - met with selected city building staff on reach code potential for 2020

Timing is Critical for 2020 Reach Codes

Task	Nov-Dec 2018	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019	Oct-Dec 2019	Jan 2020
SVCE engages code Consultant						
Work with Stakeholders						
Consultant completes draft reach code						
Local Review & Public Process						
Application to CEC* & Public Review						
File with BSC (when approved)						
Reach code take effect						

 Given interest in Reach Codes in this cycle, application to CEC likely needs to be in prior to September 2019 deadline.

Summary and Next Steps

- Reach codes are a major lever for moving the market toward all-electric, zero carbon construction
- If we don't take this step, we miss the opportunity for another three years and more gas infrastructure will be built – lasting decades
- Formal proposal in December 2018 within the Programs Roadmap - for Board review and approval:
 - reach code development
 - stakeholder engagement
 - support during member agency review and adoption
- SVCE to organize webinar/information session(s) for city building and planning department staff
- **Will need local champions!**