



Commercial Boiler Programs

Developing a CEE Initiative that Works
for You!

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Meeting Ground Rules

- ▶ *6 to Mute Phone (Do Not Put Call on Hold)
- ▶ 100% Participation
- ▶ Parking lot for off topic issues
- ▶ All ideas are valid and valued
- ▶ Confidentiality
- ▶ Meeting closure will outline next steps

This meeting will follow **CEE Guidelines for Program Meetings**

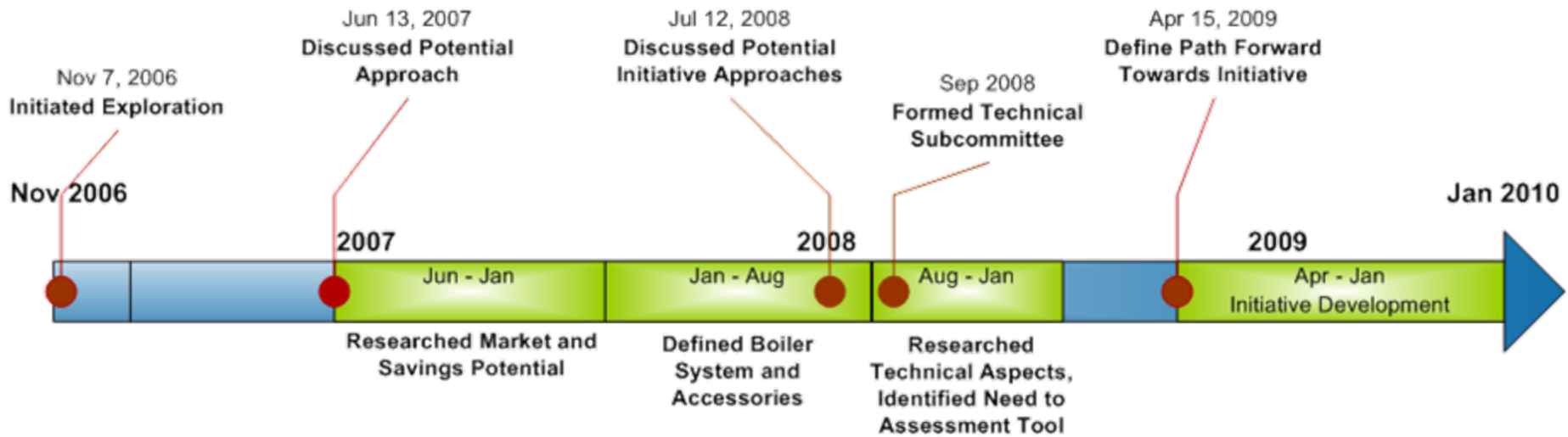
Today's Breakout

- ▶ Introductions
- ▶ Background on Commercial Boiler Exploration
- ▶ Program Presentations
 - Robert Wherritt, PG&E
 - Sharareh Moaddeli, So Cal Gas
- ▶ Discussion
- ▶ Wrap-Up and Next Steps

Commercial Boiler Systems Exploration The Framework



What We Have Done to Get Here



Background

- ▶ Commercial boilers provide a large savings opportunity
- ▶ Must consider system design in addressing boiler efficiency
- ▶ A traditional specification will not work for commercial boiler systems
- ▶ The current test metric is not adequate for indicated infield performance

Goal: Provide guidance towards appropriate high efficiency options for a given system design

Solution: A Guidance Specification

Will provide guidance on:

- ▶ Selecting an appropriate boiler efficiency for a given system design
- ▶ Upgrading the system design to achieve greater efficiencies
- ▶ When optimizing the system may make more sense than replacing the boiler

Proposed Approach

1. Is the boiler a low-pressure steam or hot water system?

STEAM

HOT WATER

2. Is the system design such that you can achieve less than 130°F return water temperatures?

NO

YES

How to move to a hot water system:

How to move to a condensing system:

3. Is the boiler used for space heating or service water heating?

SPACE HEATING

SERVICE WATER HEATING

Guidance on Maximizing Efficiency of HW Space Heating Systems

Guidance on Maximizing Efficiency of HW (Service) Systems

Guidance on Maximizing Efficiency of Condensing Systems

HE Non-Condensing Spec (Space Heating)

HE Non-Condensing Spec (Service Water)

Condensing Spec

The Current Scope

- ▶ **Smaller Commercial Boilers**
300 MBtu/h – 4,000 MBtu/h
- ▶ **Hot Water Boilers**
(potentially some advice on upgrading from steam to hot water)
- ▶ **Space Heating and Service Water Heating Applications**

Program Presentations



Discussion Questions

- ▶ What are the biggest challenges you face in your programs?
- ▶ How will the proposed initiative help support existing programs and address common program needs?

Discussion Questions

- ▶ Are there specific components that should be added to the proposed initiative that will increase the national impact? If so, how should CEE prioritize these?
 - Checklists, calculators...
- ▶ What does CEE need to know to help ensure that the proposed initiative will add value to existing programs?

Contact

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