



CHP IN NYS: PAST, PRESENT, AND FUTURE Conference

June 9 - 11, 2008 New York Marriott at the Brooklyn Bridge Hotel



Over 50 NYSERDA-funded CHP projects situated throughout NYS are currently operational. Another 50 are in various stages of design, construction, and commissioning. This conference will highlight lessons learned from this large portfolio.









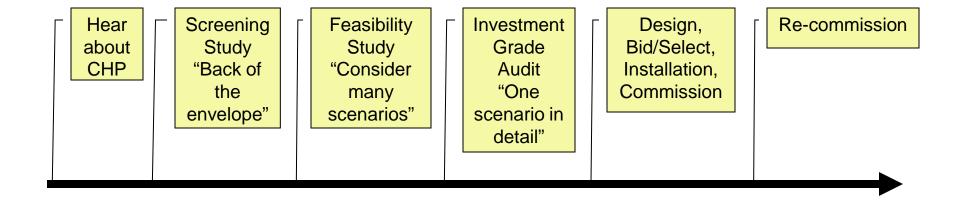




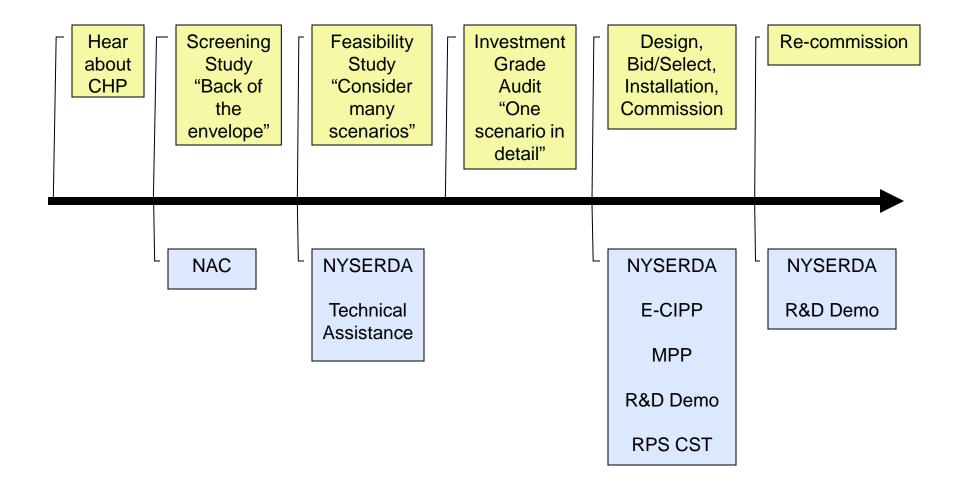


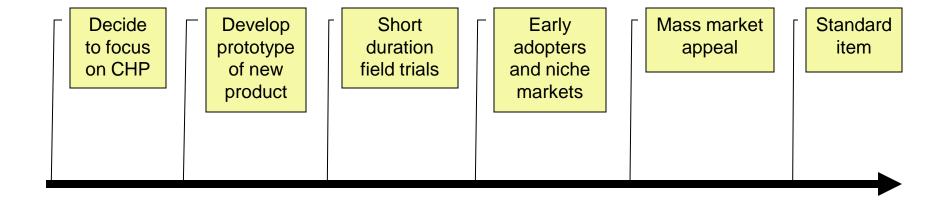
Demand (Customer Perspective)

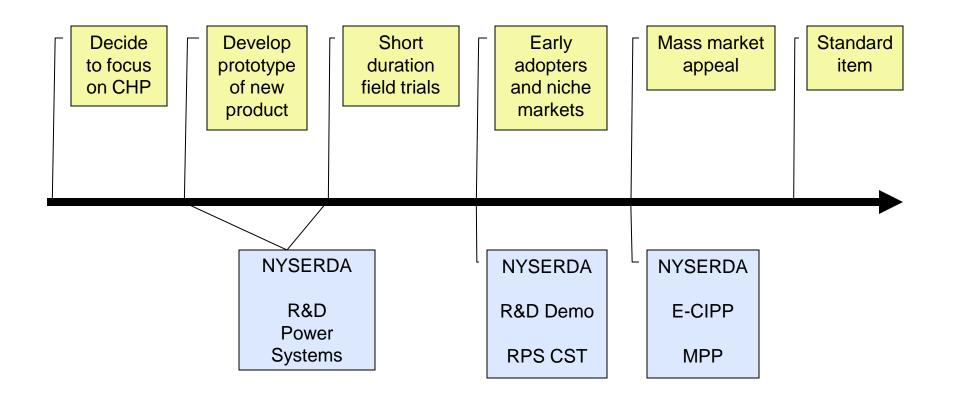
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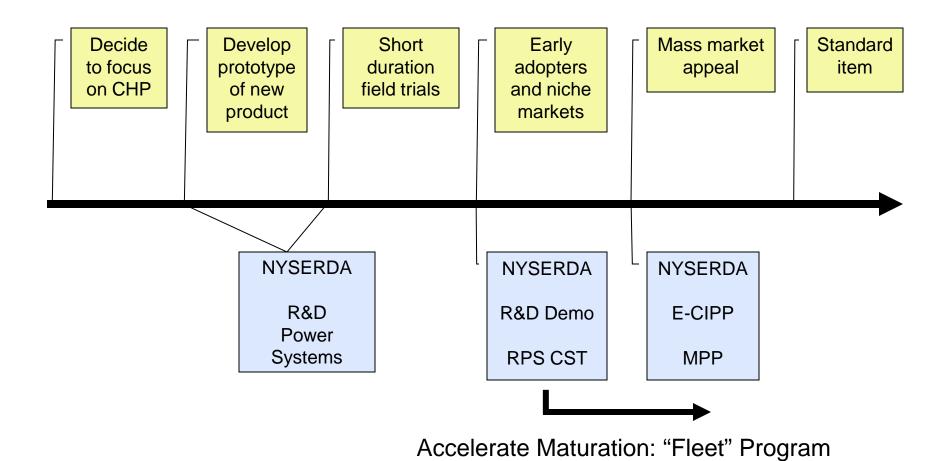


Demand (Customer Perspective)









NYSERDA Objectives for CHP

Demonstration

- Select technologies for in-field experimentation.
- Fill gaps in knowledge.
- Gain higher education.
- Risk-share with pioneer.
- Pay for best-efforts.

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Deployment

- Accelerate adoption of proven technologies.
- Achieve grid load reduction.
- Achieve energy savings.
- Achieve emission reductions.
- Pay for performance.

Background: CHP Demo Program

- NYSERDA has had a CHP Demo Program for approximately 8 years.
- About 100 projects, about half of which are operational.
- Most of these were site specific designs.

"Raising the Bar" for Demos

- Each year seek "new/innovative" projects to demonstrate features which "fill-in the gaps in our portfolio".
- Currently focusing on the interconnection challenge: CHP system (the "everyday" prime mover) must be capable of grid independent operation during grid outages.

New: CHP "Fleet" Category

- Accelerate maturation of CHP technology by encouraging the development of standardized, pre-engineered, prepackaged CHP systems.
- Encourage relationships between CHP system developers and companies that control multiple facilities with similar loads.
- Phase 1 "Prototype" → Phase 2 "Roll-out"

CHP Performance Programs

- CHP designs which have already been demonstrated and don't have new features to "fill-in the gaps" in our portfolio may still need funding support.
- CHP Performance Programs created to address this need.
- Payment structure is designed to reward measured and verified load reduction.
- Available for Multifamily and C/I Sectors.

Renewables

- Renewable Portfolio Standard Customer-Sited Tier.
- Anaerobic Digester Gas (ADG) systems.
- Commercially-mature Fuel Cells.
- Payment structure is designed to reward measured and verified electricity production.

Which Program is Right for Me?

- Which prime-mover technology?
- What fuel?
- How much "technical risk" is involved?
- Timeframe for proceeding: selection via first-come/first-serve rolling admission or periodic competitive review?
- Cash-flow (NYSERDA payments): mostly during construction/commissioning or mostly after years 1 & 2 of performance?

What About MicroCHP?

- CHP sized for a single-family residence.
- Currently assisting Product Development.
- Starting projects for limited field trials.
- Recognized need for well-orchestrated demonstration of a large number of units clustered on a given grid circuit.
 Discussing funding mechanisms.

Modernization of cooling for food preservation

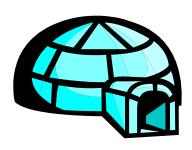
THEN:

Ice produced at remote location

transported longdistances to your home

NOW:

Cooling produced by appliance at home







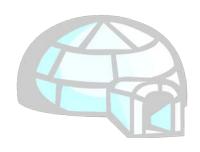
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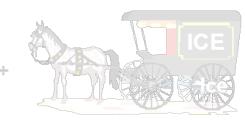
THEN:

Ice produced at remote location

transported long distances to your home

NOW: Cooling produced by appliance at home









Modernization of electricity infrastructure

NOW:

Electricity produced at remote location +

transported long distances to your home

WHEN: Electricity produced by appliance at home







