

# Enabling CHP State Energy Policy

*Integrated Energy Resource Plan  
Energy Action Plan  
California Climate Action Team Report*

*Clean Fuels For California and The West  
Workshop*

September 19, 2006

# Benefits Provided by CHP

- **Energy Efficiency**
  - Reduces Use of natural gas for power generation by up to 60%
  - Eliminates T&D lines losses
- **Environmental Stewardship**
  - Lowest fossil fuel greenhouse gas (GHG) emissions
  - Ultra-clean air emissions
  - Reduced land-use impacts and NIMBY objections
  - Reduced fresh water use
- **Economic Development**
  - Lower cost for new electricity
  - Creates local jobs for installation & maintenance
  - Supports competitive market structure
- **Energy Reliability**
  - Business Continuity during grid outage
  - Reduced grid congestion
- **Energy Security**
  - Reduced System Vulnerability
  - Disaster Mitigation Assistance

# CHP is a Key Element of California's Energy and Environmental Policy

- Deemed most cost-effective form of DG in CEC 2005 Integrated Energy Policy Report (IEPR)
  - Society Benefits from CHP
  - Recommends the CPUC to direct utilities to make T&D capacity payments for CHP
- Listed as important energy resource in CA Energy Action Plan (EAP) and given a high ranking in the loading order
  - 2<sup>nd</sup> in loading order behind efficiency and demand response
- CA Climate Action Team Report targets CHP for 2.4% of 2020 GHG reduction goals
  - 5 million metric tons CO2 Equivalent reduction by 2020
  - 50% greater than California Solar Initiative

# Broad Support For CHP Outside the State

- Natural Gas CHP is Supported by the Federal Government, other States, and Environmental Groups
- Connecticut provides incentives, favorable rate treatment, & low interest loans for all efficient DG/CHP up to 65 MW in size
- Sierra Club recommended CHP as preferred resource for a “smart energy future”

# Does CA Legislation and Regulations Enable CHP?

- Self-generation Incentive Program Sunsets in 2007
  - Continuation of Program Uncertain
- CARB Air Emission Guidelines Threaten Reciprocating Engines as a CHP Option
  - Engines are most cost-effective CHP option < 3 MW
  - No recognition of GHG benefits as is done for landfill gas DG
- Uncertain Standby Charge Exemption
- Unlike Energy Efficiency, CHP subject to Exit Fees that are approaching \$0.02/kWh
- Rate Structures Trending Toward Higher Facility and Demand Charges and Lower Energy Charges for Distribution.

# Connecticut Legislation - A Model for California?

- Connecticut Senate Bill 7501 establishes incentives and portfolio standard for energy efficiency and CHP
  - Goal is to reduce energy use, ease grid congestion, decrease air emissions and lessen greenhouse gas emissions
  - 4% by 2010 subject to non compliance penalties
  - Decouples utility revenues from earnings
- CHP incentives
  - \$200 - \$500 per kW, amount linked to congestion avoidance
  - Applicable to customer-side projects up to 65 MW
- Low interest loans
- Gas distribution charges waived
- Backup rates and demand ratchets eliminated
- Utility to receive \$200/kW incentive for implemented DG
- CHP > 50% overall efficiency also eligible for renewable credit

# Recommendations

- Recognize and treat Clean CHP as energy efficiency measure
  - CHP reduces gas consumption for power generation
  - CHP reduces source energy use by end users
- End user incentives accelerate and expand CHP market
  - Should apply to large and small users - up to 25 MW
  - To accelerate CHP market implementation
  - To bridge the gap between business financial hurdle rates and utility investment criteria
  - To ameliorate the many institutional and utility obstacles that still exist
- Utilities
  - Decouple revenue from earnings
  - Utility incentives to encourage proactive behavior toward CHP
  - Like energy efficiency, no exit fees
- Policies should be harmonized/ coordinated across various government/ regulatory entities to achieve common policy goals

# Other Pacific Region States

## Nevada

- Renewable energy systems property tax exemption (NRS 361)
- Net metering - AB 236 applies to renewables up to 150 kW
- Nevada Energy Portfolio Standard - includes waste heat-first CHP

## Hawaii

- Instituting Standby Charge

# Conclusion

Policies will only produce results if barriers are cleared, markets for clean CHP are enabled and projects are successfully deployed at the site level

# Thank You

Keith Davidson

DE Solutions, Inc.

(858) 832-1242

[kdavidson@de-solutions.com](mailto:kdavidson@de-solutions.com)