



Industrial CHP on the Move in the Pacific Northwest

5th Annual CHP Roadmap Workshop

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Presentation Overview

- Historical background.
 - Three positive strategies are unfolding
 - Barriers are under review for thermally-balanced, all sizes.
 - Realization that Business Case needs changing to overcome low spark spreads.
 - Utility and industry attitudes are beginning to change through shared dialogue.
 - The CHP market in the Northwest is BIG.
 - NW CHP Advocates formed with objective to achieve changes that positively affect key stakeholders.
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Background

- CHP priority resource under the NW Power Planning Act (conservation, renewables, **high efficiency**)
- 3,850 MW of CHP in the region
 - PURPA (Public Utility Regulatory Policy Act) and lack of capital have been important drivers and a bone of contention.
- Renewed industry interest and growing need for rational solutions, especially with increased electric/gas prices, uncertainties and risks.
- Current surplus power market and low spark spreads cloud the future; remember these are 30 year, highly capital intensive decisions.
- Market price and supply vulnerabilities for both electric and natural gas force reasonable people to consider CHP a long-term power solution.

The Market Potential is Big in the Northwest*

- Currently 146 active installations with 3,850 MW capacity.
- OR- 2,250 MW's, WA- 1,045 MW's, ID- 175 MW's.
- The “Technical Market Potential” over the next 20 years is 15.5 GW's- existing (10.3 GW's) plus new(5.2 GW's).
- This 15.5 GW potential includes 2.1 GW's “Business As Usual Case “, 6.2 GW's in the “Accelerated Case”.

* Energy & Environmental Analysis Report- July 2004

Recent Successes in 2004

- CHP was the most important issue that emerged from the successful “Competitiveness Through Innovation” event at the Weyerhaeuser Technology Center in 2002.
- Pro-active CHP actions began in June 2003 at our regional CHP Roundtable hosted by the NW Power & Conservation Council.
- NW CHP Advocates was formalized with identity, focus and key champions.

Recent Successes in 2004 (Cont'd)

- Helped BP/TransCanada with permitting 720 MW new plant- Governor Locke expected to sign before he leaves office.
- Key support for legislative solutions expected to come from two of the most powerful Industry Trade Groups- ICNU and NWIGU.
 - Relationships with Energy & Technology Committee chairman in Washington.
 - Key environmental advocate groups lending support..
- Working closely with state Utility Commissions to remove regulatory barriers:
 - Toured Oregon's PUC chairman staff through Weyerhaeuser's CHP plant.
 - Supplied solutions to commission staff to overcome barrier regulations.
 - Idaho PUC just approved a 40 MW CHP in Idaho Power's Integrated Resource Plan.
 - Washington PUC effort to continue in earnest when new Governor takes office.

Recent Successes in 2004 (Cont'd)

- To overcome utility objections, we will meet with Sr.VP's of several key utilities in Oregon and Washington.
 - Purpose is to candidly uncover key objections.
- Need to overcome last 15 years of legal barriers to confidently suggest a win-win approach with PUC's and legislatures.
- Possible joint action steps include:
 - New long-term Business Case partnership includes reasonable contract terms, contract length, buy/sell options, reserve requirements, dispatchability , interconnection costs, et al.

Recent Successes in 2004 (Cont'd)

- Continue to input to two OPUC investigations
 - PURPA contracting issues- low avoided costs, et al.
 - Portland General Electric standby rates.- case settled in July.
- Pro-active input into NW regulatory policies
 - 5th NW Power Plan- NW Power & Conservation Council completing- substantial CHP Action Plan in their draft.
 - Washington's Puget Sound Clean Air Agency– Green House Gas policy- CHP now one of their top recommendations.
 - Oregon's Renewable Energy policy- CHP included as a recommended action step for the Governor's Action Plan.

Benefits Need Quantification and Valuation

- ROI and contract issues need fair and reasonable solutions.
- Environmental benefits
 - Offset air emissions for all greenhouse gases saved.
 - Reduced water consumption and other conservation benefits.
- Generation at load saves transmission capital costs and transmission line losses.
- Interconnection standards for plants > 30 MW's need to be established
 - Currently too many upgrade costs are being assessed by utilities.

Second CHP Roundtable in September 2004

- Led by the Western Regional Office of US DOE at the NW Power & Conservation Council on September 15.
- Objectives –
 - Identify achievements since June 2003 Roundtable.
 - Identify three most important barriers to CHP in NW.
 - Identify potential solutions and path-forward team actions.
- Participants
 - Industries – pulp and paper mills.
 - Utilities – Electrics (IOUs and publics) and Gas Supply Cos.(NW Natural).
 - Regulators, state agencies, state legislative staff, and consultants.



Can there be a marriage?

- Industries are major utility revenue sources and significant to local economies.
- Industries need to reduce energy costs to remain competitive.
- Utilities have need for resources.
- Both want to demonstrate environmental stewardship.
- Both need viable business propositions.

Summary

- Pro-active, focused alliances are key.
- Need to form coordinated partnerships for the smaller (< 1 MW) and larger CHP priority initiatives- key issues are the same.
- Remember that CHP is an extremely sensible solution to our power needs for the public's benefit:
 - it's 1/3 more fuel efficient
 - it can save 20-30 % green house gases
 - it saves 100% of transmission line costs
 - it saves 10+% transmission losses
 - it can save jobs and provide economic development for rural communities.
 - it's distributive and thus more secure.
 - it's recycled energy, meets regulatory definitions for energy efficiency, renewable resource and conservation.

Industrial CHP Efforts Funded By the USDOE

- Funding for efforts principally from the **USDOE's Industrial Technology and Distributed Energy Programs**
- The NW Regional Application Center is a multi-state effort – AK, ID, MT, OR & WA
 - WSU Energy Program serves as lead
 - Technical Assistance and information
 - Problem solving
 - SWAT team
 - Support the Regional CHP Initiative

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