



COMBINED HEAT AND POWER ENERGY EFFICIENCY PORTFOLIO STANDARD

BPU STAFF'S STRAW
PROPOSAL

CHP – FC WORK GROUP MEETING
APRIL 30, 2013



Goal: To develop a long term secure and stable funding/financing source to implement the 2011 Energy Master Plan CHP target of 1500 MW including both storm response CHP and dual economic and environmental benefit CHP.

Objectives: Develop CHP as part of the State's long term strategies for economic development.

Develop a near term CHP storm response program for critical public facilities.

Develop a non-lapsable funding source

No new certificate trading programs



The Board currently has the authority to establish an energy efficiency portfolio standard (EEPS) includes both an electric (EEEPS) and a gas (GEEPS).

The PS targets may be up to 20% below the electric or gas usage projected by the Board in 2020 without the PS

The PS would be set on the utilities to establish EE measures to reduce electric usage or gas usage for heating.



An EEPS means a requirement to procure a specific amount of EE or demand side management resources as a means of reducing energy usage and demand by customers.

The specific resource would be CHP to reduce a facilities heating and electric usage through useful thermal energy provided the CHP project was cost effective



The annual statewide CHP percentage would be an obligation on the individual utilities based on annual retail sales of gas or electric and other factors which may include market conditions and supply and demand.

This CHP PS could be based on MW or MWh or dtherms based on thermal energy saved



This long term CHP financing structure would be a “smart” portfolio standard.

The CHP PS requirement would be a dynamic standard that responds and changes based on market conditions.



Smart CHP PS Criteria:

- Market demand,
- Overall system costs,
- Overall environmental and energy benefits
- Overall economic condition

A cap and a floor below which the CHP PS could not rise or fall would be set to minimize disruption to the market.



CHP PS Requirements:

- Includes both electricity and heating savings through useful thermal energy
- Must be new
- Must be over and above current energy building codes for HVAC
- Must be cost effective

Does not include the additional gas to generate electricity



To be developed in the stakeholder process

- The eligible technologies and eligible fuel types;
- The percentage of the facility installation cost covered by the financing incentive;
- Initial financing or performance payments over time;
- The cap on the size of the facilities;
- The definition of public critical facilities;
- The length of time for repaying the financing
- The size of the incentive;
- The value of the incentive (\$/MWh)
- The criteria to annually revise the CHP capacity requirements including:
 - Market supply and demand;
 - Environmental and energy benefits;
 - Overall system costs; and
 - Statewide economic conditions.



A reduction in the overall Utility E3 and NJCEP SBC costs would be a part of the overall design of a CHP PS long term financing program.

As the long term financing structure were developed and implemented the direct utility E3 CHP or NJCEP CHP rebate budgets would be reduced by an equivalent increment.

In addition all administrative cost would be paid by the developer as a fee to the utilities.



Combined Heat and Power Portfolio Standards -

MWh or Dtherms or MMBtus or cu ft

CHP-PS	Estbalished CHP-PS			Increasing Market Signals			Decreasing Market Signals		
Years	%	MW	Inc	%	MW		%	MW	
2014	1.0%	107.4		1.0%	107.4		1.0%	107.4	
2015	2.0%	214.9	107.4	3.5%	376.0	268.6	2.5%	268.6	161.2
2016	4.0%	429.8	214.9	6.0%	644.6	268.6	3.0%	322.3	53.7
2017	6.0%	644.6	214.9	8.0%	859.5	214.9	3.5%	376.0	53.7
2018	8.0%	859.5	214.9	10.0%	1074.4	214.9	4.5%	483.5	107.4
2019	10.0%	1074.4	214.9	14.0%	1504.2	429.8	5.5%	590.9	107.4
2020	12.0%	1289.3	214.9				6.5%	698.4	107.4
2021	14.0%	1504.2	214.9				7.5%	805.8	107.4
2022							9.0%	967.0	161.2
2023							11.0%	1181.8	214.9
2024							13.0%	1396.7	214.9
2025							14.0%	1504.2	107.4

PLEASE NOTE: THIS IS ONLY A HYPOTHETICAL EXAMPLE



Based on the total PS requirement a percentage of the PS requirement would be bid out by the utilities.

The utilities either collectively or individually would solicit CHP projects that met the criteria.

Based on a CBA of each project proposal, the utilities would select up to the CHP PS requirements for that period.

The utility and the selected project would enter into a financing agreement.

Based on the energy saving the customer would pay back the financing and if the customer met the performance requirements a portion of the financing would be forgiven.



EXAMPLE

Utility A has 20% of the total CHP PS

Year 1 CHP PS is 107 MW and 20% is 21 MW for Year 1 for Utility A

Utility A issues a bid for 7 MW every 4 months or bids out the entire 21 MW in a declined amounts over the year.

If bids are submitted for less than 7 MW Utility A can select all projects if they are cost effective.

If bids are submitted over 7 MW Utility A selects most cost effective projects up to 7 MW

If bids under 7 MW utility A can carry over the amount for a year at which time the CHP PS can be reduced.



Three other Financing options

The SBC Credit program – The nonresidential customer can apply for up to 50% of the cost of a CHP or FC project and receive up to 50% of the funds they pay into the SBC.
(The SBC Credit program was approved by the Board and the Order is available on the NJCEP website)

Pool bond financing through the NJ Environmental Infrastructure Trust (EIT) for CHP at wastewater or water treatment facilities.

Pool bond financing using Qualified Energy Conservation Bond funds in conjunction with ESIP financing