



2012 National Symposium on Market Transformation

CHP Programs in New Jersey

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Agenda

- VEIC Overview
- CHP focus in NJ Energy Master Plan
- NJ Legislation
- Non-renewable Gas CHP Program and Incentives
- Renewable CHP Program and Incentives
- EDA loan program
- Future planned programs
- Other ideas



VEIC

- **Mission-driven nonprofit**
- **25 years reducing economic, environmental costs of energy**
 - 3 regional hubs
 - 35 states, 6 Canadian provinces
 - 6 Countries in Europe, Asia
- **Energy efficiency, renewable energy & transportation**



VEIC

- **National & international consulting & implementation**
 - Program design, planning, & evaluation; policy & advocacy, research & development
 - Regulators, government agencies, utilities, foundations, advocates
- **3 Energy Efficiency Utilities**
 - Efficiency Vermont: nation's 1st energy efficiency utility
 - Efficiency Smart: efficiency services to 48 Midwest municipal electric systems
 - DC SEU: sustainability services in the nation's capital





NJ Energy Master Plan

Non-Renewable CHP	Renewable CHP
Develop 1400MW of CHP within next 10 years	Maintain support for the Renewable Portfolio Standard (RPS) of 22.5% by 2021
Increase support for smaller CHP through 3 rd parties to build own and operate	Promote effective use of biomass and waste-to-energy
Lead by example by having state institutions employ 3 rd party ownership CHP solutions	Utilize agricultural and forest residues and municipal and industrial waste as fuel stream
Increase support for 2 MW – 25 MW systems through state incentives, loans and loan guarantees and streamline permitting	Pursue opportunities for public/private partnerships to build and operate biomass-to-power fuel plants



Legislation

- **On Site Generation Facilities, P.L. 2009, Chapter 240, amending and supplementing C.48:3-51 (enacted 1/16/10)**
 - Expanded the definition of “on-site generation” to include cogeneration facilities which service non-contiguous thermal load customers.
 - Clarified that a cogeneration facility is not a public utility
 - Extended the sales tax exemption for sales of energy by cogeneration facilities.
- **Farmland Assessment Act Update, P.L. 2009, Chapter 213, amending and supplementing C. 4:1C and C. 54:23 (enacted 1/16/10).**
 - Biomass generation as complying with certain conditions in the definition of “agricultural use” for farmland assessment purposes. Biomass is defined as an agricultural crop, crop residue, or agricultural byproduct that is cultivated, harvested, or produced on the farm and used to generate energy in a sustainable manner.



CHP 2012 Project Program Requirements

- For demand metered customers - System output cannot exceed 100% of host facility's annual electric consumption for demand metered customers.
- For non-demand metered customers natural gas CHP only - System output cannot exceed 125% of host facility's annual electric consumption.
- System must be net metered and interconnected with electric distribution system in New Jersey
- Host facility must pay into Societal Benefits Charge
- Projects must be completed within 18 months of date on approval letter
- Projects must receive approval prior to system installation



CHP Program Highlights

Non-Renewable CHP	Renewable CHP
2012 incentive budget allocation of \$20 Million	2012 incentive budget allocation of \$7.195M as well as RECs for energy producers
Incentives were available for systems of any size; however changes are being proposed to limit the system size to 1 MW	Incentives are available for any system size
Offer larger incentives on CHP over heat recovery	Offers larger incentive for CHP projects over power-only generation
Projects submit feasibility study results with incentive application	Systems must use sustainable biomass
Incentives are paid on a milestone schedule	Incentives are paid upon project completion Incentives are available for feasibility studies



Incentive Structure: Non-Renewable

Natural Gas CHP			
	NJCEP Incentive	NJCEP Pay for Performance Bonus	Utility Match
First 500,000 Watts	\$1.00/ Watt	\$0.25/ Watt	\$1.00 / Watt
Next 500,000 Watts	\$0.50/ Watt	\$1.00/ Watt	\$0.50/ Watt
Maximum incentive	\$1 M	\$250K or 30% of project cost	\$1 M or 30% of project costs
	or 30% of project costs or 40% when cooling equipment involved		
Heat Recovery			
Up to 1,000,000 Watts	\$0.50/ Watt	\$0.25/ Watt	\$0.50 / Watt
Maximum incentive	30% of project costs		



Incentive Structure: Renewable

Renewable Power Only Incentives	
First 500,000 Watts	\$2.00 per Watt
Next 500,000 Watts	\$1.00 per Watt
Maximum incentive	\$1.5 M or 30% project costs

Renewable Power + CHP Incentives	
First 500,000 Watts	\$3.00 per Watt
Next 500,000 Watts	\$2.00 per Watt
Maximum incentive	\$2.5 M or 40% project costs

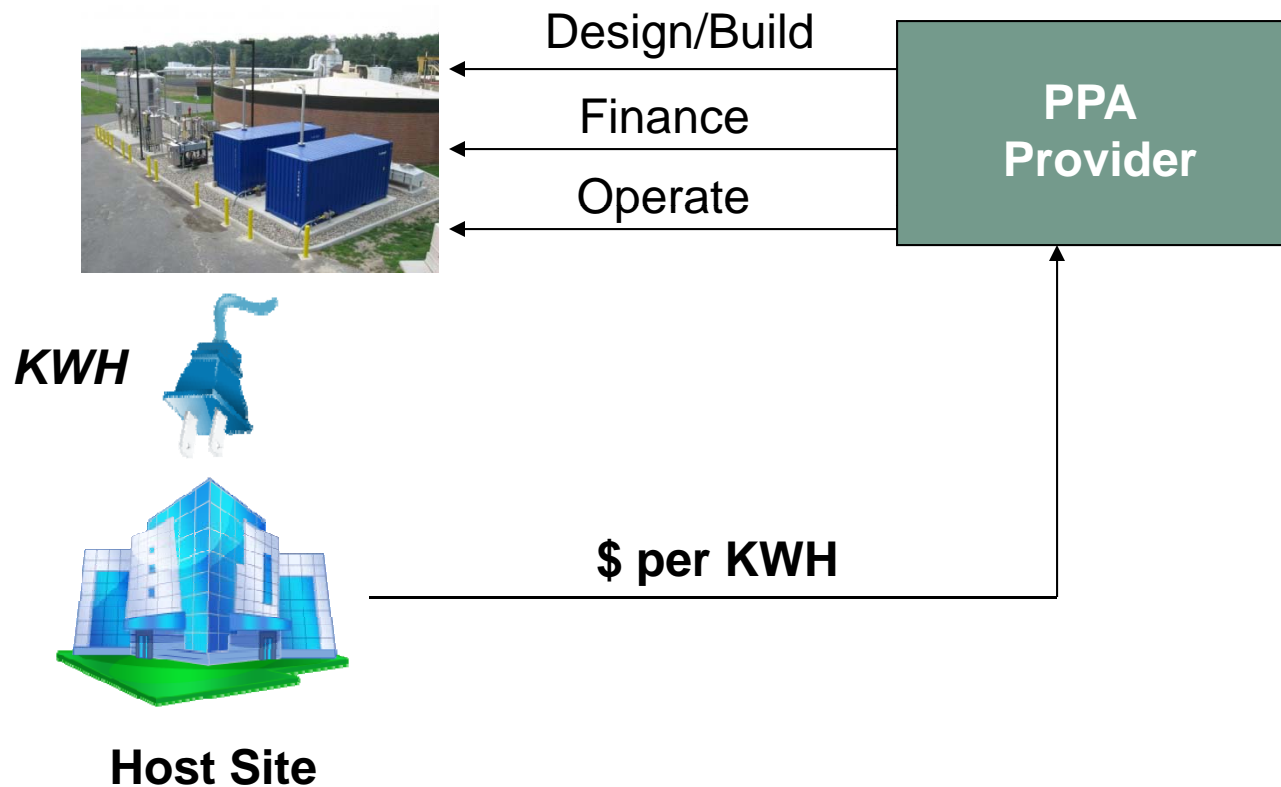


Financing Programs - EERLF

- Administered by the NJ Economic Development Authority (EDA)
- Only non-renewable CHP projects that participate in the Pay for Performance whole building energy efficiency program can participate.
- Loans can be used to support up to 80% of total eligible project costs, not to exceed \$2.5 million or 100% of total eligible project costs from all public State funding sources.
- Interest rates are 2-4% based on the term of the loan.
- Loan recipient must have a minimum contribution of \$300,000 to the NJCEP fund paid in the 2011 calendar year. The total contribution is calculated as \$0.0169/therm times total therms plus \$0.002346/kWh times total kWh.
- The average billed peak demand of host facilities submitted in the Draft Energy Efficiency Plan (DEEP)/Final Energy Efficiency Plan (FEED) must meet or exceed 400kW and/or 4,000 DTh.



Power Purchase Agreements





Future Planned Programs

- Large CHP project Solicitation - This would be for both renewable and non-renewable CHP systems over 1MW.
 - Administered by the NJ EDA, still developing the program
 - Working groups were held in January comments include:
 - Incentives are necessary; loans could supplement
 - Developing incentives on overall efficiency, capacity factors, and environmental benefits not just size
 - Review cost/analysis verse benefits before funding a proposal
 - No grid supply just customer sited



Other Thoughts to Expand CHP Projects

- Allow more flexibility in offsite sales for both electric and thermal energy
- Enable project owners to export excess power to the grid at competitive rates
- Develop renewable CHP and non-renewable CHP combined incentives
- Work to increase PPA/ESCO Involvement
- Create tax and depreciation incentives
- Standardize and streamline the permit process



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