Overview of Proposed CHP Incentive Program

Presented to

MADRI Business Case Sub-Working Group

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Challenge

- CHP can satisfy 2 major needs in this region:
  - Reducing demand during critical-peak periods – which is the primary focus of MADRI
  - Helping to mitigate the impact of rate increases – improving efficiency is the best way to cut energy costs
- CHP provides numerous public benefits, but it is at best marginally attractive under current rate structures
  - Only 4 of the 20 benefits provided by CHP accrue directly to the user who pays for the system
- Developing a mechanism to provide a share of the public benefits to the user should increase adoption rates and hence net ratepayer benefit

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Benefits Provided by CHP

- ***Energy Reliability***
  - ***Business continuity during grid outages***
  - ***Improved power quality***
  - Reduced grid congestion
  - Can increase end-of-the-wire supply
  - Enables short lead-time, off-the-shelf, modular capacity additions
- ***Energy Security***
  - Reduced system vulnerability
  - Disaster mitigation assistance
  - Disaster recovery assistance
- ***Energy Efficiency***
  - ***Improved fuel efficiency (fuel economy)***
  - Optimized use of scarce natural gas resources
  - Eliminates line losses
- ***Economic Development***
  - Lower cost for new electricity than new central generation and T&D
  - ***Improved energy cost predictability***
  - No ratepayer investment required (generation or T&D)
  - Creates local jobs for installation, operation and maintenance
  - Creates new high-tech manufacturing sector, domestic and export
  - Supports competitive electricity market structure
- ***Environmental Stewardship***
  - Reduced emissions per unit of useful output
  - Reduces land-use impacts and NIMBY objections
  - Reduces fresh water use

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Pilot Program Objectives

- Demonstrate the value of CHP as a distributed resource
- Obtain the data needed to quantify the public benefits of CHP
- Develop a process for improved targeting of CHP and other “lumpy” DR technologies
- Determine what share of the public benefits provided by CHP must/should be paid to users to maximize ratepayer benefits
  - Benefits payments needed to stimulate CHP additions
  - Program structure that will maximize net public benefit

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Pilot Program Structure

- State utility commissions mandate participation
- Steering committees established to define details for each state and oversee programs. The 3 major issues to address are:
  - Program Goals/Targets
    - Capacity to be achieved – propose 3% target for all DR programs with 15-25% of this allocated to CHP program
    - Establish additional screening criteria – e.g.:
      - Fuel
      - Type of system or application
      - Generator size limit
      - Location

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Pilot Program Structure …

- Issues (continued)
  - Incentives to be provided – we recommend:
    - Capacity payment – based on CT carrying cost
    - Energy payment – paid for generation when Economic Load Response Program is activated
    - Waive standby charges
    - Waive interconnection application fees and expedite processing
  - Implementation approach
    - Include in RPS
    - Competitively select provider – UDC, EDC, other 3rd party
    - Direct UDC to implement

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Proposed Approach

1. Establish a steering committee to develop all of the program details, oversee implementation, and evaluate results.
2. Direct participating utility distribution companies to identify locations where installing CHP would alleviate the need for T&D system expansion or upgrades.
3. Obtain commitment to implement the program from UDC or select a 3rd party provider to implement program.

Proposed Approach …

4. Determine number/kW of systems to be installed and identify target applications.
   - Recommend a capacity target of 0.5 – 0.8% of peak demand
   - Establish additional screening criteria – we recommend:
     - Type of system/fuel – priority for RPS Tier I or II fuels
     - Application – priority to applications that can be replicated easily such as: small industrial site, hospital, campus or city CHP system, hotel, chain restaurant, laundries
     - Size – limit to under 10MW; have at least 1 under 500kW in each area
     - Location – focus on constrained or rapidly growing zones

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Proposed Approach …

5. Develop structure & levels for payments to users. Options include:
   - Capacity payments – $75/kW-yr for 10 years
   - Energy payments – equal to Economic LRP payments
   - Waive stand-by changes
   - Waive interconnection application fees and expedite processing
6. Recruit participants and install systems
7. Monitor participating systems & issue period reports

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TECHNICAL POTENTIAL FOR CHP IN THE MID-ATLANTIC REGION *

	< 1 MW		1 to 5 MW		5 to 20 MW		> 20 MW		Total		Gen Capability (Summer MW)
	Sites	MW	Sites	MW	Sites	MW	Sites	MW	Sites	MW	
Pennsylvania	7,121	774	930	1,034	70	393	5	88	11,059	2,606	42,368
New Jersey	6,604	678	620	639	66	305	5	75	7,690	1,844	18,647
Maryland	4,956	504	472	500	52	338	3	44	5,483	1,384	12,472
District of Columbia	642	70	134	138	34	215	2	50	1,147	511	806
Delaware	703	82	61	67	6	35	0	0	834	190	3,393
Total for Region	20,026	2,108	2,217	2,377	228	1,285	15	256	26,213	6,535	77,686

* - Totals include potential in hotels/motels, hospitals, nursing homes, colleges & universities, schools, prisons, apartments, office buildings, and selected other commercial applications.

Next Steps

- Form committee to develop more plan and structure for pilot.
  - Approach
  - Mechanism for identifying target areas/needs
  - Selecting provider to implement program
- Determine ranges for potential value of public benefits provided by CHP – needed to refine program.
- Recruit UDCs and 3rd party providers to participate
- Present recommendations to MADRI steering committee

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