February 11, 2015

Ms. Tracy Babbidge
Department of Energy & Environmental Protection
10 Franklin Square
New Britain, Connecticut 06051

Ms. Babbidge:

We are grateful for the opportunity to comment on Connecticut's 2014 Integrated Resource Plan (IRP). Our comments focus on Resource Strategy 5, relating to combined heat and power (CHP). I am writing on behalf of the Alliance for Industrial Efficiency (hereinafter "Alliance"), a diverse coalition that includes representatives from the business, environmental, labor and contractor communities. The Alliance is committed to enhancing manufacturing competitiveness, improving electric reliability, and reducing carbon emissions through the greater use of CHP and waste heat to power. Our national membership includes electrical and sheet metal contractors, including nearly 100 contractors and businesses based in Connecticut.

We are grateful that Connecticut is adopting an incentive program to encourage additional CHP deployment. As an initial matter, we commend the Department of Energy & Environmental Protection (DEEP) for recognizing CHP's economic and environmental benefits. Indeed, as DEEP recognizes in the draft IRP, CHP systems "save money and reduce emissions" and "can provide special value in locations where it can power microgrids and/or avoid costly upgrades to the utilities' electric distribution systems."[1]

Unfortunately, as DEEP acknowledges in its IRP, significant economic hurdles often discourage deployment.[2] For that reason, we are very grateful to DEEP for providing support for increased CHP deployment (Resource Strategy #5). We believe, however, that the proposed incentive may be too small and encourage DEEP to consider offering a more robust grant to qualifying projects. In addition, we recommend a phased approach that provides incentives throughout the process to allow CHP hosts and developers to recover some of their initial investment before projects become operational.

[1] CT Dep't of Energy and Env'tl Protection, Dec. 11, 2014, "2014 Integrated Resource Plan for Connecticut: Draft for Public Comment," at vi.
[2] *Id.*, at 107 (noting that CHP deployment can "be prohibitively expensive for many users").

As DEEP recognizes in the IRP, CHP systems face significant financial barriers that often restrict widespread adoption. Many potential projects are stymied by these high upfront capital costs. A 2012 analysis by ICF Consulting found installed costs of a CHP system range from $1,170 to $2,450 per kilowatt, depending on system size.[3] A 2011 report by the American Council for an Energy-Efficient Economy (ACEEE) dubbed such upfront costs "staggering," and identified them as a primary obstacle to greater deployment.[4]

The draft IRP proposes a $450 per kilowatt lump-sum payment for qualifying CHP systems. We are concerned that this proposal may not be sufficiently robust to support project development. Notably, similar programs in both Illinois and Maryland offer more generous incentives. In a pilot program recently approved by the Illinois Commerce Commission, the state's Department of Commerce and Economic Opportunity (DCEO) is offering a phased incentive during CHP construction and operation: a $75 per kilowatt incentive at the completion of the design phase; a $175 per kilowatt incentive at the commissioning of the system; and an $0.08 per kilowatt-hour incentive for electricity produced by the CHP unit, to be paid at the end of the first year of operation.[5] Stakeholders familiar with the program indicate that the combined incentive package is intended to provide $750 per kilowatt for eligible projects. Maryland's three IOUs offer a similar incentive for CHP systems that achieve greater than 65 percent efficiency. Under Baltimore Gas and Electric's program, eligible CHP systems receive an initial $75/ kW design incentive (upon receipt of a signed commitment letter and acceptance of a minimum requirements document), followed by a $175/ kW installation incentive, and a production incentive of $0.07/kWh paid out in three installments over the first 18 months of the system's operation.[6] As in Illinois, this incentive package is valued at $750/kW.

Notably, both of these programs have been fully subscribed, suggesting that the incentive levels are appropriately sized to attract investment. In fact, the three participating Maryland utilities (Baltimore Gas & Electric, PEPCO and Delmarva Power) approved 33 applications in the first year, representing more than 350,000 MWh in annual energy savings – more than PEPCO and Delmarva's Commercial portfolio program-to-date.[7] Continued interest has been reported in 2014.[8]

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[3] ICF International, February 2012, "Combined Heat and Power: Policy Analysis and 2011-2030 Market Assessment," Table 40 (http://www.energy.ca.gov/2012publications/CEC-200-2012-002/CEC-200-2012-002.pdf).

[4] American Council for an Energy-Efficient Economy, September 2011, "Challenges Facing Combined Heat and Power Today: A State-by-State Assessment," at iv and 6 (http://aceee.org/node/3078?id=3933).

[5] Illinois Department of Commerce and Economic Opportunity, 2014, "Combined Heat and Power Program Template."

[6] *See* Baltimore Gas & Electric Smart Energy Savers Program (http://www.bgesmartenergy.com/business/chp).

[7] Public Service Commission of Maryland, April 2013, "The EmPOWER Energy Efficiency Act Standard Report" (data for compliance year 2012) (http://webapp.psc.state.md.us/intranet/Reports/2013%20EmPOWER%20Maryland%20Energy%20Efficiency%20Act%20Standard%20Report.pdf).

[8] [8] Public Service Commission of Maryland, March 2014, "The EmPOWER Energy Efficiency Act Standard Report," at 7 (data for compliance year 2013)

In contrast, as DEEP acknowledges in the draft IRP, progress under the existing Connecticut programs "has been limited." Despite this, the proposed incentive ($450/kW) is comparable to what was previously offered in the state. What's more, DEEP anticipates that the incentive will decline over time. We believe that interest in the program would be encouraged if it were more generous.

In sum, we commend the efforts of the Connecticut DEEP in recognizing the benefits of CHP and for taking steps to overcome the financial hurdles that many of these projects face. We urge the Department to consider modifying the proposed incentive to more closely align with what is being offered in Illinois and Maryland (i.e., $750/kW). We also recommend the Department consider a phased incentive program to allow project developers and hosts to recoup costs at the various stages of design, development, construction, and deployment.

Sincerely,

David Gardiner
Executive Director
Alliance for Industrial Efficiency

(http://webapp.psc.state.md.us/intranet/Reports/2014%20EmPOWER%20Maryland%20Energy%20Efficiency%20Act%20Standard%20Report.PDF)