



STATE OF NEW JERSEY
Board of Public Utilities
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www.nj.gov/bpu/

CLEAN ENERGY

IN THE MATTER OF REVISIONS TO NEW)	ORDER - UPDATED
JERSEY'S CLEAN ENERGY PROGRAM SEPTEMBER)	2012 PROTOCOLS
2010 PROTOCOLS TO MEASURE RESOURCE)	
SAVINGS)	
)	
)	DOCKET NO. EO09120975

Parties of Record:

Joe Gennello, Honeywell Utility Solutions
 Diane M. Zukas, TRC Energy Solutions
 Mike Ambrosio, Applied Energy Group
 Stefanie A. Brand, Esq., Director, Division of Rate Counsel
 Lawrence Sweeney, Jersey Central Power and Light
 Timothy White, Atlantic City Electric
 Holly Thompson, Orange and Rockland Utilities
 Bruce Grossman, South Jersey Gas Company
 Elaine Bryant, Public Service Electric and Gas
 Tracey Thayer, New Jersey Natural Gas
 Mary Patricia Keefe, Elizabethtown Gas

BY THE BOARD:

BACKGROUND AND PROCEDURAL HISTORY

On February 9, 1999, the Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et al. (EDECA) was signed into law. The Act established requirements to advance energy efficiency and renewable energy in New Jersey through the societal benefits charge (SBC), at N.J.S.A. 48:3-60(a)(3). EDECA further empowered the Board to initiate a proceeding and cause to be undertaken a comprehensive resource analysis of energy programs, currently referred to as the comprehensive energy efficiency (EE) and renewable energy (RE) resource analysis (CRA). After notice, opportunity for public comment, public hearing, and consultation with the New Jersey Department of Environmental Protection (NJDEP), within eight months of initiating the proceeding and every four years thereafter, the Board would determine the appropriate level of funding for EE and Class I RE programs (now called New Jersey's Clean Energy Program or NJCEP) that provide environmental benefits above and beyond those provided by standard offer or similar programs in effect as of February 9, 1999.

By Order dated September 30, 2008, Docket No. EO07030203, the Board concluded its third CRA proceeding and set funding levels for the years 2009 through 2012. By Order dated December 20, 2011, Docket Nos. EO07030203 and EO11100631V, the Board approved 2012 programs and budgets. By Order dated May 23, 2012 the Board approved modifications to the 2012 programs and budgets.

By Order dated September 22, 2011, Docket No. EO09120975, the Board approved a document entitled *Protocols to Measure Resource Savings (Protocols)* dated July 2011 which are the most recent *Protocols* approved by the Board and which are used by the program managers to estimate energy savings and renewable energy generation. The *Protocols* include algorithms for measuring energy and other resource savings or renewable or clean energy generation that result from implementation of New Jersey's Clean Energy Program. The *Protocols* require updating from time to time as baselines against which energy savings are measured are changed due to upgrades in energy codes or appliance efficiency standards, as programs are added or changed, as a result of program evaluations, or due to other changes in the assumptions used to measure resource savings. In this Order the Board will consider proposed modifications to the *Protocols*, described below.

PROPOSED REVISIONS TO PROTOCOLS

The Office of Clean Energy (OCE) asked the Market Managers, Honeywell and TRC, to submit proposed revisions to the *Protocols* to account for updated codes and standards and the addition of several new measures to the program. The code revisions reflect updated baselines for HVAC equipment. New algorithms were added to reflect new measures that were added to the Residential Gas and Electric HVAC, Energy Efficient Products, Commercial and Industrial (C&I) Retrofit, and Direct Install programs. Language was added to the *Protocols* for the Direct Install program to account for the use of residential efficiency standards when certain equipment is installed in C&I projects such as small furnaces.

Language was added to the *Protocols* to address implementation of lighting standards set out in the Energy Independence and Security Act of 2007 (EISA). Specifically, EISA sets efficiency standards for general service light bulbs and general service fluorescent lamps beginning in 2012 (January for general service light bulbs, July for general service fluorescent lamps) where newly manufactured bulbs, not existing stock, must adhere to the rated lumen per watt standard. While the revised *Protocols* do not include any changes to baselines or measure lifetimes at this time it includes a statement that any potential changes will be considered after the impact of the updated standard can be fully measured and quantified.

Applied Energy Group (AEG), the NJCEP Program Coordinator, compiled the proposed modifications to the *Protocols* proposed by the Market Managers and prepared a redlined draft that identified all of the proposed modifications to the *Protocols*. On April 17, 2012 AEG circulated the redlined draft of the *Protocols* to the Energy Efficiency and Renewable Energy committee distribution lists, including the Market Managers, Division of Rate Counsel (Rate Counsel), the State's electric and natural gas utilities, the New Jersey Utilities Association (NJUA), environmental groups, and local governments and requested comments on the draft *Protocols* by May 1, 2012. Several groups submitted comments, which are summarized below.

SUMMARY OF COMMENTS

Comments were submitted by Rate Counsel, New Jersey Natural Gas, Opower, and Ryan Building Performance. The following summarizes the substantive written comments received.

Comment: Rate Counsel objects to the inclusion of the calculation of lost revenue as a use of the *Protocols*.

Response: This issue has been raised by Rate Counsel on multiple occasions in comments regarding previously approved *Protocols* and addressed by the Board in the previous three Orders approving the *Protocols*. As the Board has previously stated, if it were to approve lost margin recovery, it would not be bound by these *Protocols* in calculating such recovery. In addition, the Board found that using a consistent methodology to estimate energy savings for all purposes is an important factor for keeping the language in the *Protocols*. August 7, 2009 Order in Docket No. EO07120961 at p. 6; December 17, 2009 Order in Docket No. EO09120975; August 21, 2011 Order in Docket No. EO09120975.

Comment: Rate Counsel questioned whether and how the *Protocols* were revised to meet PJM's requirements for energy efficiency resources to bid into the PJM capacity market and urged the New Jersey Clean Energy Program to actively pursue available PJM capacity market revenues.

Response: In order to participate in the PJM capacity market an entity must submit a Measurement and Verification (M&V) Plan to PJM. The first section of the Plan must include the nominated energy efficiency value that an entity plans to bid into the PJM capacity market, where the methods and procedures for determining the nominated value must be discussed. The current *Protocols* may be sufficient to meet PJM's requirements to calculate the nominated energy efficiency values to be included in an M&V plan. The remaining sections of PJM's M&V plans are dedicated to post-installation savings measurements and verification, which is outside the current scope of the *Protocols* as a deemed savings calculations document.

The OCE concurs with Rate Counsel that the NJCEP should pursue the sale of capacity savings that result from the NJCEP to PJM. OCE has met with representatives of PJM to explore opportunities and requirements for the New Jersey Clean Energy Program aggregating participants into a portfolio and bidding into the PJM capacity market. However, bidding capacity into PJM raises a number of public policy issues that must be resolved by the Board that are outside of the scope of the instant proceeding which is limited to updating the *Protocols*.

Comment: New Jersey Natural Gas and Opower suggest considering revisions to savings assumptions for the Home Energy Reporting Program, adjusting language in the section to allow for generic timing and quantity of reports, and including a process for statistical billing analysis for ex-post savings analysis.

Response: The proposed savings references were found to be inapplicable to New Jersey. Therefore, it was determined that the existing *Protocol* savings estimate would remain pending New Jersey specific evaluation of the program. Also, language was changed in the *Protocols* to allow for more generic timing and quantity of reports. With regards to ex-post savings analysis, the purpose of the *Protocols* is to act as an ex-ante document; a billing analysis would be appropriate for ex-post evaluation M&V and should not be addressed in the *Protocols*.

Comment: New Jersey Natural Gas commented that HomeCheck is referenced multiple times as the software tool for the Home Performance with ENERGY STAR Program.

Response: The HomeCheck software example was deleted from the *Protocols*. The OCE does not endorse a specific software product and lists several software options in the *Protocols*.

Comment: New Jersey Natural Gas commented that the Stand Alone Home Seal-Up option in the Home Performance with Energy Star Program is no longer a part of the NJCEP and should be removed from the *Protocols*.

Response: The Stand Alone Home Seal-Up option will be removed from the *Protocols*, but the assumptions and algorithms will be preserved in case this program component is included in future program design.

Comment: Rate Counsel requested a full explanation for the capacity factor of solar domestic hot water heaters and an investigation of the demand reduction factor for drain water heat recovery in the Residential Electric HVAC Program.

Response: The *Protocols* were updated to include the information requested by Rate Counsel.

Comment: Rate Counsel requested the inclusion of full references for data points in the Residential New Construction Program and Home Performance with ENERGY STAR Program.

Response: The *Protocols* were updated to include the full references requested by Rate Counsel.

Comment: Rate Counsel requested the inclusion of definitions for unknown variables, the delineation between different capacity factor types, and full references for the lighting portion of the ENERGY STAR Products Program.

Response: The *Protocols* were updated to include clearly defined and delineated factors and variables as requested by Rate Counsel. Full references were also updated for all Residential ENERGY STAR Lighting measures.

Comment: Rate Counsel requested full references for multiple measures and variable in the C&I Efficient Construction Program.

Response: The *Protocols* were updated to include references and sources for each factor and variable in the C&I Efficiency Construction Program as requested by Rate Counsel.

Comment: Rate Counsel requested a full reference and an inclusion of justification for applying residential efficiency standards to C&I systems for the Direct Install Program.

Response: The *Protocols* were updated to include the full references, as requested by Rate Counsel, which include detailed tables that provide standard values to use for specific equipment. Language was also added for specific measures where residential standards are applied to C&I systems. The language, written around specific measure tables, reads: "The age-based efficiencies in the above table have been interpolated from RESNET standards and current baseline figures utilized in NJ C&I Energy Efficiency Rebate programs. With no equivalent resource available specific to small commercial equipment, these combined resources reflect the closest approximation to typical efficiencies of mechanical equipment present in Direct Install project facilities. The Direct Install program is targeted towards small commercial customers. As such, eligible equipment must not exceed a maximum capacity determined to be commonplace in the small C&I sector. In most cases, these capacity ranges correlate well with equipment certified by Air-conditioning, Heating and Refrigeration Institute under the designation "Residential".

Comment: Ryan Building Performance requested the exclusion of the 0.912 derate factor applied to tankless hot water heaters in the Residential Gas HVAC Program.

Response: Honeywell and their consultant, VEIC, provided extensive justification for the inclusion of the 0.912 derate factor applied to tankless hot water heaters including the support of the factor by RESNET, California's Building Energy Efficiency Standards, and a sound technical basis because of standby losses. The OCE agrees with Honeywell and VEIC on the factor and will include it in the *Protocols*.


DISCUSSION AND FINDING

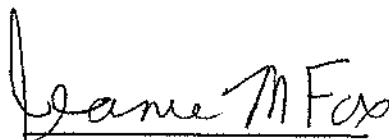
The Board **FINDS** that Staff circulated a draft of the *Protocols* for comment and addressed the comments received on the proposed Protocols. The Board carefully considered the public comments on the draft Protocols. Based on the comments and recommendations of Staff, the Board **FINDS** that a revision of the Protocols is necessary. The Board **FURTHER FINDS** that the current draft of the Protocols reflects the input of the participants in the process as appropriate.


The Board **FINDS** that the *Protocols* should be updated from time to time so that they are current with federal and State codes and standards and are reflective of current technologies and building practices and other changes in the marketplace, including the addition of new NJCEP programs and program components. For the reasons set forth above, the Board **FINDS** that the proposed *Protocols* include reasonable methodologies and are appropriate for estimating energy savings and renewable and distributed generation. The Board supports ongoing program evaluation to inform additional updates to the *Protocols* and **DIRECTS** the OCE to continue coordinating the development of an evaluation plan. Based on the above, the Board **HEREBY APPROVES** the *Protocols to Measure Resource Savings* dated June 2012 for use in estimating savings from 2012 program measures.

DATED: 9/13/12

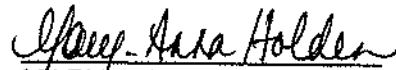
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PRESIDENT

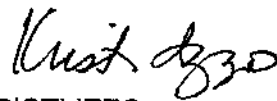

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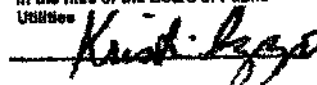

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ATTEST:


KRISTI IZZO
SECRETARY

I HEREBY CERTIFY that the within document is a true copy of the original in the files of the Board of Public Utilities



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SEPTEMBER 2010 PROTOCOLS TO MEASURE RESOURCE SAVINGS

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