The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 08-50-D October 19, 2012

Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines Consistent with An Act Relative to Green Communities.

ORDER ON BILL IMPACTS

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I. INTRODUCTION

The goal of the Green Communities Act[1] is to significantly increase the development and deployment of renewable energy and energy efficiency in Massachusetts. Green Communities Act, preamble. To expand existing energy efficiency efforts, the Green Communities Act requires all electric and gas distribution companies ("distribution companies") and approved municipal aggregators (together, "Program Administrators") to develop energy efficiency plans that will "provide for the acquisition of all available energy efficiency and demand resources that are cost effective or less expensive than supply." G.L. c. 25, § 21(b)(1). In recognition of the fact that the acquisition of all cost-effective energy efficiency could require funding above that provided through existing funding sources,[2] the Green Communities Act provides that electric Program Administrators may collect additional revenues from ratepayers through a mechanism such as the energy efficiency surcharge ("EES"). G.L. c. 25, § 19(a). Before approving additional ratepayer funding, however, the Department must consider, among other things,[3] "the effect of any rate increases on residential and commercial customers."[4] G.L. c. 25, § 19(a).

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1 An Act Relative to Green Communities, Acts of 2008, chapter 169, section 11.

2 For electric efficiency programs, these sources are: (1) the mandatory system benefits charge ("SBC") of 2.5 mills per kilowatt-hour; (2) amounts generated under the forward capacity market ("FCM") program administered by the Independent System Operator-New England; and (3) amounts generated by cap and trade pollution control programs, such as the regional greenhouse gas initiative ("RGGI"). G.L. c. 25, § 19(a). Gas efficiency programs are funded entirely through revenues from ratepayers.

3 The Department must also consider: (1) the availability of other private or public funds; and (2) whether past energy efficiency programs have lowered electricity costs to residential and commercial customers. G.L. c. 25, § 19(a).

4 Although not mandated by the Green Communities Act, the Department also considers the effect of any resulting rate increase on consumers before approving gas efficiency

Although the statute refers to "the effect of any rate increases," the Department has found that analyses of bill impacts provide a more meaningful indication of the effects of energy efficiency than analyses of rate impacts because, while investments in energy efficiency result in increases to the distribution rate, they result in savings on the entire bill. Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines Consistent with An Act Relative to Green Communities, D.P.U. 08-50-A at 58 (2009). In contrast to a rate impact analysis, an analysis of bill impacts captures the effects of energy efficiency savings as well as costs. The Department, therefore, focuses its attention on bill impacts. Electric Three-Year Plans Order, D.P.U. 09-116 through D.P.U. 09-120, at 88 (2010); . Gas Three-Year Plans Order, D.P.U. 09-121 through D.P.U. 09-128, at 74 (2010). To provide a consistent method for each Program Administrator to calculate and present the bill impacts of its proposed energy efficiency plan, the Department convened a working group in April 2009 to develop appropriate models and templates ("D.P.U. 08-50 bill impact model"). See Investigation by the Department of Public Utilities on its own Motion into Updating its Energy Efficiency Guidelines Consistent with An Act Relative to Green Communities, D.P.U. 08-50-B at 13 (2009). Since that time, the bill impact working group has met on numerous occasions.

On August 16, 2012, the Department met with the bill impact working group and presented a proposal to discontinue work on the D.P.U. 08-50 bill impact model and to continue to calculate bill impacts using the information provided by the traditional approach ("traditional

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program funding. Gas Three-Year Plans Order, D.P.U. 09-121 through D.P.U. 09-128, at 71 n.63 (2010).

approach").[5, 6] On August 31, 2012, Northeast Energy Efficiency Partnerships, Environment Northeast, Mass Energy Consumers Alliance, Conservation Law Foundation, and Conservation Services Group ("Joint Commenters") filed comments regarding the Department's proposal. By Hearing Officer Memorandum dated August 31, 2012, the Department invited other interested persons to comment on the proposal. On September 14, 2012, the Department received comments from: (1) the Program Administrators; (2) the Department of Energy Resources ("DOER"); (3) National Consumer Law Center ("NCLC"); and (4) Community Labor United and Green Justice Coalition ("CLU/GJC"). The Attorney General of the Commonwealth of Massachusetts filed comments on October 1, 2012. This Order addresses the information that Program Administrators must include in their three-year energy efficiency plan filings regarding bill impacts.

II. BACKGROUND

A. Traditional Bill Impact Analysis

In the Department's rate setting function, the Department determines the appropriate rate structure for a utility company. In doing so, one of the Department's goals is to ensure rate continuity.[7] Fitchburg Gas and Electric Light Company, D.P.U. 11-01/11-02, at 427 (2011). Rate continuity means that changes to rate structure should be gradual to allow customers to

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5 The D.P.U. 08-50 bill impact model and traditional approach are discussed in greater detail in Section II, below.

6 The Department noted the information provided by the traditional approach could be used to calculate bill impacts on both program participants and non-participants.

7 The Department also seeks to achieve efficiency, simplicity, fairness between rate classes, and corporate earnings stability. Fitchburg Gas and Electric Light Company, D.P.U. 11-01/11-02, at 427 (2011).

adjust their consumption patterns in response to a change in rate structure. D.P.U. 11-01/11-02, at 428. To assess the extent to which the continuity goal has been satisfied, the Department conducts a bill impact analysis to measure the change to a customer's total bill resulting from an increase or decrease in one of the rate components (e.g., distribution charge, gas adjustment factor, local distribution adjustment factor, etc.). See, e.g., Boston Gas Company and Colonial Gas Company d/b/a National Grid, D.P.U. 12-GAF-O5, Company Filing, Att. B (March 15, 2012). A traditional bill impact analysis shows: (1) the existing charges; (2) the proposed charges; (3) the percentage change in the charges; (4) the total dollar change in total monthly bill at various consumption levels; and (5) the percentage change in the total bill per month at various consumption levels. See 220 C.M.R. §§ 5.03, 5.06. In the energy efficiency context, a traditional bill impact analysis will reflect these factors by looking at the effect of a proposed change in the EES on a customer's total bill at a single point in time.

B. D.P.U. 08-50 Bill Impact Model

As noted above, the Department convened the bill impact working group in April 2009. D.P.U. 08-50-B at 13.[8] The Department tasked the working group with developing models and templates that: (1) properly quantify and present the rate and average bill impacts of the energy efficiency programs by capturing the total effects on costs and sales; (2) fully investigate the

[8] Participation in the working group was open to any interested individual or organization, and was chaired by DOER. Representatives from the following entities actively participated in the meetings: Attorney General, DOER, the Energy Efficiency Advisory Council, Associated Industries of Massachusetts, Environment Northeast, Conservation Law Foundation, The Energy Consortium, the Low Income Energy Affordability Network, NSTAR Electric and NSTAR Gas, Bay State Gas Company, The Berkshire Gas Company, Western Massachusetts Electric Company, Cape Light Compact, and GasNetworks. Department staff also participated in the working group process. D.P.U. 08-50-B at 13, citing Working Group Report at 4 (September 29, 2009).

tradeoff between increased rates and reduced bills; (3) consider all the ways in which energy efficiency can affect customers' rates and average bills, whether a customer participates in energy efficiency programs or not; and (4) consider customer equity issues raised by rate and average bill impacts between program participants and non-participants. D.P.U. 08-50-B at 13, citing D.P.U. 08-50-A at 56-60.

The group met weekly through July 23, 2009, and submitted a report and proposed bill impact model to the Department on September 29, 2009. D.P.U. 08-50-B at 13-14. The Department approved the bill impact model included in the report and directed the Program Administrators to file bill impact analyses in accordance with the model, subject to certain directives. D.P.U. 08-50-B at 18-19. However, when the D.P.U. 08-50 bill impact model results were reviewed in the three-year plan filings for 2010 through 2012, the Department cited two shortcomings: (1) it did not account for long-term savings;[9] and (2) it did not provide a clear indication of the impact on program participants. Electric Three-Year Plans Order, at 87-88, Gas Three-Year Plans Order, at 72-73. The Department directed the working group to reconvene to continue work on the D.P.U. 08-50 bill impact model such that it would account for bill impacts over the long-term and provide a clear indication of impact on participants. Electric Three-Year Plans Order, at 87; Gas Three-Year Plans Order, at 73. The working group reconvened in April 2010 and met through June 2012.

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[9] The D.P.U. 08-50 bill impact model accounts for costs and savings that occur during the three-year term. Savings from an energy efficiency measure installed during the three years, however, continue to accrue over the life of the measure, which is typically longer than three years. D.P.U. 08-50-B at 17.

As of the 2012 iteration, the D.P.U. 08-50 bill impact model provides bill impact information for program participants, program non-participants, and all customers on average. For electric customers, the model compares bills under a scenario where energy efficiency programs are funded by revenues from the SBC, FCM, RGGI, and EES, with bills under: (1) a no EES scenario;[10] and (2) a no energy efficiency scenario. For gas customers, the model compares bills with energy efficiency and without energy efficiency.

The D.P.U. 08-50 bill impact model includes energy efficiency costs experienced by ratepayers over the three-year term of the energy efficiency plan. For electric energy efficiency programs, the model includes benefits (i.e., avoided transmission and distribution costs, and price suppression effects) that occur over the average life of the measures installed during the three-year term. For gas energy efficiency programs, these benefits are not included in the model. The model assumes that there are no energy efficiency measures installed after the end of the three-year energy efficiency plan term.

III. SUMMARY OF COMMENTS

A. Joint Commenters

The Joint Commenters argue that the Department should evaluate bill impacts with a model that measures both the costs and the benefits of energy efficiency funding (Joint Commenters Comments at 1). The Joint Commenters assert that a bill impact model for energy efficiency programs should: (1) account for both costs and savings from program implementation; (2) consider the benefits and costs for all customers and compare the potential

[10] Under this scenario, energy efficiency programs would be entirely funded by revenues from the the SBC, FCM, and RGGI.

impacts on program participants and non-participants; (3) recognize that spending on efficiency is different from other rate adjustments evaluated using the traditional approach (e.g., lost base revenues, gas adjustment factors, etc.); and (4) be calculated as a tangible number (i.e., the dollar amount of a change in a monthly bill due) (Joint Commenters Comments at 5).

The Joint Commenters argue that, by comparison, the traditional approach: (1) calculates only the costs of energy efficiency spending; (2) ignores energy and demand savings seen by energy efficiency program participants; and (3) ignores price impacts, transmission and distribution upgrade deferrals, and other avoided costs that accrue to all ratepayers as a result of energy efficiency (Joint Commenters at 2). Accordingly, the Joint Commenters urge the Department to continue working on a bill impact analysis that accounts for the full impact of energy efficiency programs and not to continue to evaluate bill impacts under the traditional approach (Joint Commenters at 6).

B. DOER

DOER requests that the Department reconvene the working group to develop a bill impact model that considers the full effect of energy efficiency programs on ratepayers (DOER Comments at 5). DOER asserts that the traditional approach ignores many of the benefits of energy efficiency programs and, therefore, is not appropriate to assess bill impacts (DOER Comments at 3). DOER recognizes that the benefits of energy efficiency programs are considered in the benefit-cost ratio model (DOER Comments at 3). DOER argues, however, that such benefits should also be considered in a bill impact analysis because, without such consideration, rate increases in the short-term could create the perception of rate shock and hinder the acquisition of all cost-effective energy efficiency (DOER Comments at 3-4). DOER

urges the Department not to rely solely on the traditional approach because it deprives the Department and stakeholders the opportunity to assess how efficiency programs produce overall lower bills for participants in the short-term, and for all ratepayers in the long-term (DOER Comments at 4-5).

C. NCLC and GJC/CLU

NCLC and GJC/CLU argue that the Department should continue working on the D.P.U. 08-50 bill impact model (GJC/CLU Comments at 1; NCLC Comments at 1). NCLC argues that if a bill impact assessment does not consider long-term benefits, it will be more difficult to maintain public support for increased energy efficiency funding (NCLC Comments at 2).

D. Program Administrators

The Program Administrators support the Department's proposal to rely on the traditional approach when evaluating bill impacts and determining their effect on customers (Program Administrators Comments at 2). The Program Administrators assert that the traditional approach is a recognized industry standard, constitutes an accepted way to assess costs, and is familiar to, and easily understood by, customers and stakeholders (Program Administrators Comments at 2). The Program Administrators support efforts to assess energy efficiency savings and costs over time and emphasize that they regularly provide long-term benefits information on both an individual and statewide basis to the Department and all interested stakeholders (Program Administrators Comments at 3). According to the Program Administrators, the traditional approach will isolate the effect of a proposed increase at a single point in time and provide an accurate assessment of the effect on customers at that time. The Program Administrators assert

that this approach is reasonable for the limited purpose of assessing whether the short-term bill impact from increased energy efficiency funding is acceptable (Program Administrators Comments at 4).

E. Attorney General

The Attorney General supports the Department's proposal to rely on its traditional approach when reviewing bill impacts associated with the three-year energy efficiency plans (Attorney General Comments at 2). According to the Attorney General, the traditional approach is an effective, straightforward and easily understood way for consumers to understand the effects of rate adjustments related to energy efficiency (Attorney General Comments at 1). In addition, the Attorney General asserts that the traditional approach accomplishes a key objective set out in D.P.U. 08-50-A at 57, namely presenting a bill impact in a way that is meaningful and easily understood (Attorney General Comments at 1-2).

IV. ANALYSIS AND FINDINGS

The Green Communities Act requires the acquisition of all available cost-effective energy efficiency resources. G.L. c. 25, § 21(b)(1). This requirement is not discretionary. Electric Three-Year Plans Order, at 85; Gas Three-Year Plans Order, at 71. The pace at which the Program Administrators acquire these resources, however, is moderated in part by the requirement that the Department consider the effect of any rate increases on residential and commercial customers bills before the approval of ratepayer funding for energy efficiency programs. G.L. c. 25, § 19(a).[11]

[11] In approving the electric three-year efficiency plans for 2010 through 2012, the Department noted:

As is clear from our Orders in D.P.U. 08-50-A, D.P.U. 08-50-B, and the electric and gas three-year plans, the Department initially saw potential in trying to develop a bill impact model that captures all of the ways in which energy efficiency can affect customers' bills, especially over the longer term. The Department recognizes and appreciates the substantial effort of a large group of stakeholders that went into developing the D.P.U. 08-50 bill impact model to date. However, we now conclude that the model suffers from at least two deficiencies that preclude us from using it in analyzing energy efficiency bill impacts.

As discussed in Section II.B, above, the electric efficiency model requires the Program Administrators to make assumptions regarding the level of savings that occur under the no EES scenario and the timing of benefits associated with avoided distribution and transmission costs, and price suppression effects.[12] The uncertainty underlying these assumptions, as well as the

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> The Green Communities Act does provide some discretion regarding the rate at which Program Administrators will acquire these resources, stating that such acquisition should be achieved through a sustained effort. Determining a reasonable pace for a sustained acquisition requires the Program Administrators and the [Energy Efficiency Advisory] Council (in developing the three-year plans) and the Department (in reviewing the three-year plans) to strike an appropriate balance between several factors, including: (1) identifying the potential level of cost-effective resources currently available; (2) exploring ways in which this level can be increased; (3) assessing the capability of the energy efficiency vendor and contractor industry to support increased program activity; and (4) assessing the capacity of the Program Administrators to administer increases in program activity efficiently and effectively. The Department must take into consideration an additional factor: the rate and bill impacts that result from increased program activity.

Electric Three-Year Plans Order, at 85-86 (citations and footnotes omitted).

[12] The Department notes that, because the gas efficiency model does not include these benefits (which accrue to program non-participants as well as to participants), the model

assumption that energy efficiency activities cease after the three-year term, significantly compromise the reliability and accuracy of the model's results. In addition, notwithstanding the great effort devoted to this task, stakeholders were unable to devise a way to meaningfully analyze bill impacts for program participants using this model.

Second, and more importantly, the Department now recognizes that, because of its long-term focus, the D.P.U. 08-50 bill impact model is not an appropriate means to satisfy our statutory mandate to consider the effect of any rate increases on residential and commercial customers. Instead, this mandate is best satisfied through a traditional bill impact analysis which, with its short-term perspective that isolates the effect of a proposed change in the EES, will provide an accurate and understandable assessment of the increase that will actually appear on customers' bills. As described below, such analyses will now include energy efficiency participants as well as non-participants.

We agree with the stakeholders who argue that, when considering the reasonableness of a short-term bill impact from energy efficiency activities, it is important to look at it the long-term benefits that energy efficiency will achieve. The long-term benefits of energy efficiency are fully documented by the Program Administrators and reviewed by the Department and stakeholders in the context of evaluating program cost-effectiveness. Electric Three-Year Plans Order, at 39-55; Gas Three-Year Plans Order, at 35-52. For example, for the first three-year plans, the Department approved energy efficiency investments of approximately $2.2 billion that were projected to result in long-term benefits of approximately $6.0 billion. Electric Three-Year

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provides no bill impact information for non-participants in addition to that provided by a traditional bill impact analysis.

Plans Order, at Appendix, Table 7b; Gas Three-Year Plans Order, at Appendix, Tables 9a through 9g. When weighing the short-term bill impacts of energy efficiency, we will continue to look at them through the lens of the long-term benefits that energy efficiency can achieve.[13]

Based on the above, the Department directs Program Administrators to include in their three-year energy efficiency plan filings a traditional bill impact analysis, by rate class, that provides the total monthly bills for both program non-participants and participants under the following scenarios, comparing:

- the current (e.g., 2012) EES to the proposed EES for the first year of the three-year plan (e.g., 2013);
- the EES from the first year of the three-year plan (e.g., 2013) to the proposed EES for the second year of the three-year plan (e.g., 2014);
- the EES from the second year of the three-year plan (e.g., 2014) to the proposed EES for the third year of the three-year plan (e.g., 2015);
- the current EES (e.g., 2012) to the proposed EES for the third year of the three-year plan (e.g., 2015).

As is customary, consumption for non-participants should remain unchanged when calculating the effect of the proposed change in the EES. For participants, Program Administrators should present bill impacts where consumption is reduced for three levels of savings -- low, medium, and high -- and should provide a description of how these savings levels were determined.

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[13] See Electric Three-Year Plans Order, at 89; Gas Three-Year Plans Order, at 75 ("in consideration of the significant benefits provided by energy efficiency resources, the Department concludes that the bill impacts associated with the three-year plans are well with the range of what we consider reasonable" (citations omitted)).

V. ORDER

Accordingly, after an opportunity for comment and consideration, it is

ORDERED: That, in their three-year energy efficiency plan filings, the Program Administrators shall file bill impacts for participants and non-participants consistent with the directives contained herein; and it is

FURTHER ORDERED: That the Program Administrators shall comply with all other directives contained in this Order.

By Order of the Department,

/s/
Ann G. Berwick, Chair

/s/
Jolette A. Westbrook, Commissioner

/s/
David W. Cash, Commissioner