



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 14-141

December 1, 2014

Response of the Department of Public Utilities to Data Privacy and Data Security Issues Related to the Statewide Energy Efficiency Database.

ORDER IN RESPONSE TO MAY 13, 2014 RESOLUTION OF
THE ENERGY EFFICIENCY ADVISORY COUNCIL

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I. INTRODUCTION

The Department of Public Utilities (“Department”), in its January 31, 2013 Order on the 2013 through 2015 energy efficiency plans, approved a budget for the development of a statewide energy efficiency database (“database”). Three-Year Energy Efficiency Plans Order, D.P.U. 12-100 through D.P.U. 12-111, at 60 (2013). Although the Department stated that it would participate, it determined that the Department of Energy Resources (“DOER”) would assume the leadership role in the development of the database. D.P.U. 12-100 through D.P.U. 12-111, at 60.

DOER convened a database working group comprised of representatives of the Energy Efficiency Advisory Council (“Council”), the Program Administrators,¹ the Green Justice Coalition, and the Department. DOER conducted working group meetings on October 29, 2013, November 26, 2013, January 13, 2014, and April 4, 2014. The database working group was unable to resolve certain issues and on May 13, 2014, the Council passed a resolution requesting

¹ The Program Administrators are: Bay State Gas Company, d/b/a Columbia Gas of Massachusetts; The Berkshire Gas Company; Blackstone Gas Company; Boston Gas Company and Colonial Gas Company, each d/b/a National Grid; Fitchburg Gas and Electric Light Company, d/b/a Unitil (gas); NSTAR Gas Company; Liberty Utilities (New England Natural Gas Company) Corp.; The Towns of Aquinnah, Barnstable, Bourne, Brewster, Chatham, Chilmark, Dennis, Eastham, Edgartown, Falmouth, Harwich, Mashpee, Oak Bluffs, Orleans, Provincetown, Sandwich, Tisbury, Truro, Wellfleet, West Tisbury, Yarmouth, and the Counties of Barnstable and Dukes, acting together as the Cape Light Compact; Fitchburg Gas and Electric Light Company, d/b/a Unitil (electric); Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid; NSTAR Electric Company; and Western Massachusetts Electric Company.

that the Department provide guidance on identifying the data inputs that should be included in the database.²

On July 14, 2014, the Department conducted a technical session with stakeholders regarding the database. Department staff and stakeholders discussed the following topics: (1) stakeholder views on the data to be included in the database and the level of aggregation of such data; (2) areas of commonality and difference among stakeholders regarding the appropriate data to be included in the database; (3) reasons that stakeholders find the current Program Administrator data reporting requirements insufficient; and (4) issues related to data privacy applicable to the database (Statewide Energy Efficiency Database, Hearing Officer Memorandum, June 30, 2014, at 1-2).

Following the technical session, the Department sought to further identify the areas of commonality and differences among stakeholders regarding the appropriate data to be included as inputs in the database, including levels of aggregation and also customer privacy concerns. The Department requested the Program Administrators to populate a spreadsheet indicating the data categories and granularity (including data currently reported) that the Program Administrators are willing to provide and the data they are not willing to provide (Statewide Energy Efficiency Database, Hearing Officer Memorandum, July 24, 2014, at 1).

The Department requested other stakeholders to further populate the spreadsheet and add comments regarding their views on the same issues (Statewide Energy Efficiency Database, Hearing Officer Memorandum, July 24, 2014, at 1). On August 21, 2014, the following Council

² The Council resolution also seeks Department guidance to establish the reporting schedules and data privacy controls for: (1) confidential, granular usage data; and (2) publically viewable datasets.

representatives, joined by the Green Justice Coalition and the Council’s consultants, submitted comments and a spreadsheet reflecting additional data inputs recommended for inclusion in the database: DOER; Department of Environmental Protection; the City of Boston’s Office of Environment, Energy and Open Space; Environment Northeast; Associated Industries of Massachusetts; Massachusetts Energy Consumers Alliance (“Joint Commenters”).³ On September 5, 2014, the Low-Income Energy Affordability Network (“LEAN”) submitted comments.

The Program Administrators’ and Joint Commenters’ positions differ regarding the level of granularity of data to be input into the database. Each gas and electric Program Administrator currently reports energy efficiency data for its service territory aggregated to the measure, core initiative, program, or sector level (see D.P.U. 08-50 tables). These data are reported to the Department annually and to the Council quarterly. G.L. c. 25, § 22(d).⁴ Generally, the Program Administrators do not support disclosure of any data at a more granular level, such as tied to specific sites or projects, stating that the privacy of sensitive customer-specific account information must be protected (Program Administrator Spreadsheet at 2). The Program Administrators are, however, willing to provide: (1) the number of participants and savings data

³ The Council members designated to represent the following interests or entities did not join in the comments: residential consumers; low-income weatherization and fuel assistance network; businesses and large commercial and industrial end-users; energy efficiency experts; organized labor; the Attorney General; the Executive Office of Housing and Economic Development; the Massachusetts Association of Realtors; and small energy efficiency services contractor. On August 21, 2014, Paul Johnson, the small energy efficiency services contractor representative, submitted comments.

⁴ While G.L. c. 25, § 22(d) requires quarterly reports to the Council, the Program Administrators also provide the Council with monthly updates.

at the town level; and (2) unit-level participation (i.e., number of measures installed) information aggregated to the end-use level (Program Administrator Spreadsheet at 2).

The Joint Commenters counter that fully disaggregated data, tied to the specific site and project where each measure is installed, should be included in the database (Joint Commenter Spreadsheet at 4). The Joint Commenters note that these data are the foundation for implemented or planned measures and, as such, are required to support granular queries and confirm the accuracy of the aggregated data that is now reported to the Department and others (Joint Commenter Spreadsheet at 4). In support of their position, the Joint Commenters assert that: (1) the site where a measure is installed is an attribute of the measure; and (2) locations can be obscured or made anonymous to protect customer privacy (Joint Commenter Spreadsheet at 4).

LEAN comments that Program Administrator data reporting should lead to constructive, meaningful outcomes that do not compromise customer privacy (LEAN Comment at 1). Further, LEAN observes that moving customer level and site specific level data outside the Program Administrators' realm may compromise privacy while not producing outputs that meaningfully enhance energy efficiency program design (LEAN Comment at 1).

II. DISCUSSION

It is clear that there is an impasse regarding the data to be included in the database and the level of disaggregation with which it should be provided. The Department recognizes the competing goals and concerns regarding the implementation of the database in the near term. In general, we support the development of a robust database that can facilitate the Department and

the Council in performing their statutory roles regarding the energy efficiency programs.⁵ See G.L. c. 25, §§ 19, 21, 22. In light of the key role of energy efficiency in Massachusetts, it is vital that such parties have access to the data necessary to optimize these programs and their value to customers. We also appreciate the need to understand and address issues related to customer privacy and data security, as well as the potential costs to Program Administrators regarding changing their own data systems and processes.

Further, as evidenced by the issues presented in this proceeding and in our grid modernization and time varying rates proceedings, it is clear that in the utility industry we are facing a new paradigm regarding customer data. Modernization of the Electric Grid, D.P.U. 12-76-B at 34-36 (June 12, 2014); Investigation by the Department of Public Utilities upon its own Motion into Time Varying Rates, D.P.U. 14-04-C at 14-15 (November 5, 2014).⁶ Because the customer privacy and data access issues presented in the context of energy efficiency, grid modernization, and time varying rates are interrelated, we will undertake a comprehensive investigation to address these issues. See D.P.U. 12-76-B at 5, 50; see also Modernization of the Electric Grid, D.P.U. 12-76, Hearing Officer Memorandum (March 26, 2014) (the Department intends to open a separate proceeding on data access and privacy). However, to allow a database to be constructed for use during the term of the next

⁵ The database will serve the Department and the Council. Further, from discussions during the database working group meetings we understand that the database will be publically accessible.

⁶ In the Department's grid modernization docket, we directed the electric distribution companies to identify procedures that will allow competitive suppliers access to certain customer usage data without compromising customer confidentiality. See D.P.U. 12-76-B at 34-36. The electric distribution companies are required to submit these procedures as part of their grid modernization plans. D.P.U. 12-76-B at 36.

three-year energy efficiency plan, the Department adopts an interim step, for immediate implementation, to address database inputs at a level of granularity that should not implicate customer privacy or data security considerations. The details of the interim step and comprehensive investigation are addressed below.

A. Interim Step

Currently, the Program Administrators provide the Department and Council aggregated energy efficiency data, with the level of aggregation depending on the type of data. As an interim step, the Department requires the Program Administrators to populate a statewide energy efficiency database with all data the Program Administrators currently report (i.e., data included in the D.P.U. 08-50 tables, benefit-cost ratio screening tools, and technical reference manual). Further, the Department requires the Program Administrators to provide certain additional data at a more granular level than is currently reported. Specifically, the Program Administrators are required to provide budget, participation, savings, and benefits data for all measures (i.e., all data currently provided at the measure level in the benefit-cost ratio screening model, wherever possible) aggregated to the zip code level, subject to aggregation standards to make this information anonymous, thereby protecting customer privacy. In addition, the Program Administrators are required to provide customer usage data by customer sector, also aggregated at the zip code level. This will provide DOER and the Council with some of the additional data requested without implicating the privacy concerns raised by the Program Administrators and LEAN.

Aggregation standards govern how data will be combined to ensure that customer data cannot be identified. Other jurisdictions have adopted aggregation standards that we propose to

use to protect customer data pending our comprehensive investigation into privacy issues.⁷

Accordingly, to maintain the privacy of customer data in the residential sector, we propose that Program Administrators aggregate and report data at the zip code level, provided that the aggregated data represents at least 100 customers. In the commercial and industrial sector, the aggregated data must represent at least 15 customers, with no single customer accounting for more than 15 percent of electric or gas usage. For zip codes that do not meet these standards, data must be combined with a bordering zip code until the aggregation standard for that customer sector is met. We invite stakeholder input on alternative aggregation standards to be used during the interim period (Section III, below).

This interim step will permit a database to be built for use during the next three-year energy efficiency plan term. To ensure the long-term usefulness of the database, the Program Administrators are required to design the database such that it is capable of accommodating additional types and granularity of data (as determined at the conclusion of the investigation described in Section II.B, below). Further, Department staff will work with the energy efficiency stakeholders, through the existing energy efficiency term report working group (see Energy Efficiency Guidelines Update, D.P.U. 11-120-A, Phase II at 13 (2013)), to determine whether the reporting of additional aggregated data can help address some of the outstanding questions regarding Program Administrator performance raised by the Council in the context of the database working group.

⁷ See, e.g., Decision Adopting Rules to Provide Access to Energy Usage and Usage-Related Data While Protecting Privacy of Personal Data, California Public Utilities Commission, Decision 14-05-016, at 26 (May 1, 2014).

B. Comprehensive Investigation

In the Grid Modernization proceeding, the Department announced its intention to open an investigation to develop standards for the ownership of, access to, and security of energy data. D.P.U. 12-76-B at 34-36. Energy data ownership, access, and security issues are inherent in questions regarding the uses of anonymous and aggregated data. Accordingly, we will address the remaining energy efficiency database input issues in the context of this comprehensive investigation of data ownership, access, and security issues. This investigation will include all interested stakeholders (e.g., distribution companies, competitive suppliers, low-income advocates, manufacturing industries, the Attorney General, DOER, marketers) and not just the traditional energy efficiency stakeholders. In a subsequent Order, the Department will announce the process, scope, and timing of this proceeding.

III. CONCLUSION

With this Order the Department requires the Program Administrators to populate an energy efficiency database consistent with the directives in this Order, including measure level and usage data, aggregated by zip code. We realize that this Order does not answer some questions regarding the database, including the timing and frequency of database updates and database ownership and access. We expect that, with the direction provided in this Order, the Program Administrators, DOER, and other Council members will be able to come to consensus on these implementation issues. Accordingly, we direct the Program Administrators to work with other interested stakeholders to develop answers to these and other database implementation questions. In so doing, the Program Administrators should consider, as appropriate, alternatives to the aggregation standards to ensure customer data remain anonymous, as discussed above.

The Program Administrators must deliver a report to the Department by February 23, 2015. If consensus cannot be reached within this period, then we direct the Program Administrators to submit their proposal to the Department and request that other stakeholders submit alternative proposals for Department consideration.

IV. ORDER

Accordingly, after due consideration, it is:

ORDERED: That Bay State Gas Company, d/b/a Columbia Gas of Massachusetts; The Berkshire Gas Company; Blackstone Gas Company; Boston Gas Company and Colonial Gas Company, each d/b/a National Grid; Fitchburg Gas and Electric Light Company, d/b/a Unitil (gas); NSTAR Gas Company; Liberty Utilities (New England Natural Gas Company) Corp.; The Towns of Aquinnah, Barnstable, Bourne, Brewster, Chatham, Chilmark, Dennis, Eastham, Edgartown, Falmouth, Harwich, Mashpee, Oak Bluffs, Orleans, Provincetown, Sandwich, Tisbury, Truro, Wellfleet, West Tisbury, Yarmouth, and the Counties of Barnstable and Dukes, acting together as the Cape Light Compact; Fitchburg Gas and Electric Light Company, d/b/a Unitil (electric); Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid; NSTAR Electric Company; and Western Massachusetts Electric Company shall comply with all the directives contained in this Order.

By Order of the Department,

/s/
Ann G. Berwick, Chair

/s/
Jollette A. Westbrook, Commissioner

/s/
Kate McKeever, Commissioner