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STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: June 29, 2016
AT (OFFICE): NHPUC

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FROM: Tom Frantz, Director – Electric Division

SUBJECT: Peak Reduction Goal

TO: Chairman Honigberg, Commissioners Scott and Bailey
Executive Director Howland

On July 8, 2015, HB 614 became effective. One key aspect of the bill was the implementation of goals from New Hampshire's 10-year State Energy Strategy (State Energy Strategy), published by the Office of Energy and Planning in September 2014. RSA 219:1 State 10-Year Energy Strategy; Implementation of Goals directed that the public utilities commission establish an "electricity peak time reduction goal" on or before July 1, 2016. It did not define "peak" nor did it define a baseline from which to measure a reduction in peak demand or a timeframe over which the peak reduction would occur. Staff met with the utilities and a number of interested parties that participate in the Core Energy Efficiency proceedings on January 27, 2016. It also met with the utilities in early June to further discuss potential peak demand reduction for New Hampshire. Staff has reviewed the State Energy Strategy, numerous ISO-NE documents concerning forecasts of energy efficiency and peak demand and believes the best approach to meet the goals of the State Energy Strategy and the intent of HB 614 is to integrate "peak time reduction" into consideration and planning within the context of an Energy Efficiency Resource Standard (EERS).

As the Commission is aware, two current proceedings - Grid Modernization and the EERS, if approved by the Commission - both provide the potential to utilize the grid in a more efficient and cost-effective manner. Each has in different ways the ability to reduce peak loads and provide benefits to New Hampshire electric customers. The enabling technologies of a smart grid and increased penetration over time of advanced meters with two-way customer communications could lead to more efficient pricing and use of electricity that could reduce system peaks and benefit both participants and non-participants. Much work currently is underway in the Grid Modernization proceeding that could directly affect ways to reduce New Hampshire's peak loads. A report is expected to be filed with the Commission in the first quarter 2017.

The other proceeding that offers the potential to reduce peak loads is through increased energy efficiency as part of a comprehensive EERS. Unlike pricing programs to reduce electricity demand during peak periods such as real-time pricing (RTP) or critical peak pricing (CPP) or other behavioral programs, the peak savings from energy efficiency are

1 HB 614 also directed the Commission to open a docket on electric grid modernization by August 1, 2015. That proceeding is docketed as IR 15-296.

passive. Energy efficiency programs are intended primarily to save kWh not kW. In short, the reductions in peak load are an indirect result of the types of energy efficiency programs that are in place during peak hours. Through New Hampshire's Core programs, the peak load has been reduced annually by 8 MW to 11 MW. Winter peak savings have been higher, generally, and the peak reductions from the C&I sector have greatly exceeded the reductions from the residential sector. Most of the peak load savings have been the result of more efficient lighting programs.

The framework and goals set out in the Settlement Agreement by the Parties and Staff in the EERS proceeding, if approved by the Commission, could significantly increase the annual peak reductions that occur through the energy efficiency programs. If the relationship between electricity savings and peak reduction remains constant going forward, and Staff understands that simplifying assumptions is highly dependent on program types and measures, increased electricity savings will lead to increased peak load reductions. Over the course of the next four years, the budget anticipated in the EERS Settlement Agreement could lead to substantial peak load reductions as the level of energy efficiency increases.

Staff recommends that the Commission direct the parties and Staff to incorporate peak reduction levels reflective of the budgets anticipated in the EERS Settlement Agreement, if approved by the Commission or the budgets proposed for the upcoming 2017 Core energy efficiency proceeding. A reasonable target for peak reductions in 2016 is 8,786 kW for summer savings and 9,033 kW for winter savings based on plan budgets for 2016. Staff also recommends that more targeted behavioral demand response programs await the report from the recommendations in the Grid Modernization proceeding.

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