STATE OF NEW HAMPSHIRE

BEFORE THE

PUBLIC UTILITIES COMMISSION

DE 14-216

2017 NH STATEWIDE CORE ENERGY EFFICIENCY PLAN

DIRECT TESTIMONY

OF

ELIZABETH R. NIXON

Date: November 8, 2016

Introduction

Q. Please state your full name?

A. My name is Elizabeth R. Nixon.

Q. By whom are you employed and what is your business address?

A. I am employed by the New Hampshire Public Utilities Commission as a Utility Analyst. My business address is 21 S. Fruit Street, Suite 10, Concord, NH 03301.

Q. Please summarize your education and professional work experience.

A. My educational and professional background is summarized in Appendix A.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony provides comments and recommendations regarding the 2017 New Hampshire Statewide Core Energy Efficiency Plan ("Plan") dated September 23, 2016.

Q. Please provide a summary of your testimony.

A. My testimony addresses the cost-effectiveness of the proposed Core Programs for 2017, particularly Demand Reduction Induced Price Effect ("DRIPE") which is a new element of the benefit-cost test (B/C test) introduced by the Utilities with this Plan. DRIPE is the reduction in the wholesale market prices of energy expected from the reduction in energy required in those markets as a result of the energy efficiency programs. Overall, my testimony indicates that DRIPE is a benefit of the Core Programs that should be included in the 2017 Plan. However, further examination concerning the impact of DRIPE on electricity prices, gas prices and the interplay of the two should be performed in greater detail as part of the 3-year Energy Efficiency Resource Standard ("EERS") plan to be developed in 2017.

Q. Were all of the proposed programs cost-effective?

A. Yes. All of the programs have a benefit-cost ratio of 1.0 or greater, meaning the benefits equal or exceed the costs. The cost-effectiveness of the programs ranges from 1.03 for the Home Energy Assistance Program at Northern Utilities to the most cost-effective program at 3.55 for the ENERGY STAR Homes program at Eversource. Overall, the electric programs cost-effectiveness is 1.2 for Home Energy Assistance, 2.1 for residential programs, and 1.7 for commercial and industrial programs. For the gas programs, the benefit-cost ratio is 1.1 for Home Energy Assistance, 1.3 for residential programs, and 2.1 for commercial and industrial programs. All of these results include DRIPE as an additional benefit in the B/C test. For a few of the programs offered by gas utilities, if the DRIPE benefits are not included, the benefit-cost ratio would not be greater than one.

Q. Please provide a brief explanation of DRIPE?

A. DRIPE is the reduction in wholesale market prices in electricity and gas expected from reductions in the amount of electricity and gas required resulting from the energy efficiency programs. The *Avoided Energy Supply Costs in New England: 2015 Report* (AESC 2015 study)[1] is used by the Utilities in the B/C test for the proposed 2017 Plan and has been used in analyzing past CORE programs. As indicted in the AESC 2015 study, DRIPE reflects the effects on electricity prices, gas prices, and the interplay between electric and gas prices, since many of the electric generating units are gas-fired.

[1] Tabors Caramanis Rudkevich, March 25, 2016. *Avoided Energy Supply Costs in New England: 2015 Report.* Prepared for the Avoided-Energy-Supply-Component Study Group. http://www.puc.nh.gov/Electric/Monitoring%20and%20Evaluation%20Reports/AESC_2015_%20w%20App_rev%202016_03_25.pdf

Q. Have other states in New England included DRIPE in their benefit-cost tests for energy efficiency programs?

A. Yes. In New England, DRIPE is reflected in the benefit-cost analyses for energy efficiency programs in Connecticut, Rhode Island, Massachusetts, Maine, and Vermont, although most of these states have adopted different approaches in applying DRIPE in their cost effectiveness testing.

Q. How does DRIPE affect the benefit-cost analysis for the proposed programs included in the 2017 plan?

A. The inclusion of DRIPE increased the electric benefits by 0.9% and the gas benefits by 17.4%.[2] All of the electric programs are cost-effective even if DRIPE is not included in the benefit-cost test. Without DRIPE, the Liberty Utilities Gas programs for Home Energy Assistance and the Energy Star Products and the Northern Utilities Home Energy Assistance program would not pass the B/C test.

Q. Should DRIPE be included in the cost-effectiveness test for the 2017 Plan?

A. Yes. DRIPE is an additional benefit of these programs that has not been accounted for in the past. The Utilities have proposed to include DRIPE in the Plan for 2017. Since gas prices are currently low and the energy efficiency savings goals are increasing, it is helpful that the cost-effectiveness test include DRIPE in the 2017 Plan to maintain program continuity as the 3-year EERS plan is developed.

As the 2017 Plan indicates, the Utilities plan to propose other benefits (i.e., non-energy impacts) in the 3-year EERS plan to be developed during 2017. As part of the 3-year plan development, additional review of DRIPE and the associated assumptions should be

[2] On November 1, 2016, the Utilities filed a response to a data request and indicated that they had found an error in the DRIPE calculation, which actually increases the statewide electric benefits to 1.6%. This error does not affect the conclusions drawn in this testimony.

undertaken. The white paper entitled *State Approaches to Demand Reduction Induced Price Effects: Examining How Energy Efficiency Can Lower Prices for All* discusses several issues to consider with DRIPE.[3] For example, the Utilities and Staff should consider how demand reductions affect transmission and distribution investments and line losses. In addition, the Utilities and Staff should consider whether all of the DRIPE related benefits should be counted as a gain for consumers or should some benefits be considered a transfer from producers to consumers. As part of a more comprehensive analysis of the benefits and costs of the energy efficiency programs, DRIPE can be given additional review during the development of the 3-year EERS plan, but should be included in the B/C test for the 2017 Plan to ensure that programs are maintained during the transition.

Q. Does this conclude your testimony?

A. Yes, it does.

[3] State and Local Energy Efficiency Action Network (2015). *State Approaches to Demand Reduction Induced Price Effects: Examining How Energy Efficiency Can Lower Prices for All.* Prepared by: Colin Taylor, Bruce Hedman, and Amelie Goldberg from the Institute for Industrial Productivity under contract to Oak Ridge National Laboratory.