

**STATE OF NEW HAMPSHIRE  
PUBLIC UTILITIES COMMISSION**

**DE 13-195**

**UNITIL ENERGY SYSTEMS, INC.**

**2013 Least Cost Integrated Resource Plan**

**Order Accepting and Finding Adequate 2013 Least Cost Integrated Resource Plan**

**ORDER NO. 25,651**

**April 17, 2014**

**APPEARANCES:** Gary Epler, Esq. on behalf of Unitil Energy Systems, Inc.; the Office of Consumer Advocate by Susan W. Chamberlin, Esq. on behalf of residential ratepayers; and Suzanne G. Amidon, Esq. on behalf of Commission Staff.

In this Order, the Commission finds that the Least Cost Integrated Resource Plan (LCIRP) filed by Unitil Energy Systems, Inc. (UES) in July 2013 meets the requirements of RSA 378:38 and is adequate pursuant to RSA 378:39. The Commission accepts the plan and further approves a Settlement Agreement that directs UES to include certain information in its next LCIRP, to be filed no later than July 16, 2015.

**I. PROCEDURAL HISTORY**

On July 16, 2013, UES, filed its 2013 LCIRP pursuant to RSA 378:8. UES's LCIRP contained an overview of UES's planning procedures along with related appendices including (1) UES's distribution planning and design guidelines, (2) separate evaluations of UES's Capital distribution system planning and UES's Seacoast distribution system planning, (3) load history and ten-year design forecasts for both the Capital and Seacoast regions, (4) separate reliability studies for the Capital and Seacoast regions, and (5) UES's demand-side management report.

With its filing, UES requested a waiver pursuant to RSA 378:38-a. RSA 378:38-a authorizes the Commission to waive any of the LCIRP filing requirements of an electric utility

except for plans related to transmission and distribution. In support of this request, UES stated that it does not own any generation plant or facilities and is not a party to any long term power purchase contracts. The Commission granted the waiver by secretarial letter dated July 19, 2013.

The Office of Consumer Advocate (OCA) filed a letter on July 18, 2013, indicating its participation in this docket on behalf of residential ratepayers pursuant to RSA 363:28.

The Commission issued an Order of Notice on August 7, 2013, scheduling a pre-hearing conference on September 26, 2013. Also on September 26, Commission Staff (Staff) filed a proposed procedural schedule, which the Commission approved by secretarial letter dated September 27, 2013. Following several rounds of discovery and technical sessions, Staff and UES reached agreement regarding the disposition of the filing. Staff filed the Settlement Agreement on March 20, 2014. The hearing on the merits was held on March 27, 2014.

## **II. UES's Initial Filing**

UES, through its affiliate Unitil Service Corp. (Unitil), performs various and ongoing planning activities to assess the short-term and long-term requirements and capabilities of its electric distribution system. According to the LCIRP, the planning activities include distribution system planning to evaluate distribution circuits and substations, electric system planning to evaluate UES sub-transmission facilities and system supply points, joint system planning to evaluate the external delivery system that provides UES access to regional transmission and generation resources, and participation in statewide and regional transmission planning efforts. UES's LCIRP also included demand-side resource planning.

### **A. Distribution System Planning**

UES's franchise territory consists of two geographically separate electric distribution systems—the UES Capital system and the UES Seacoast system—and Unitil conducts separate

circuit analysis and planning for each. UES's distribution planning includes radial circuit analysis on UES's 34.5 kilovolt (kV), 13.8 kV and 4 kV distribution circuits as well as circuit load forecasting and loading reviews of its substation transformers and equipment.

Unitil conducts distribution system planning on an annual basis; the plan itself covers the following five years. Unitil undertakes the distribution planning process with the goal of providing safe, economical and reliable service for electric service customers. System capability and reliability are reviewed on an annual basis to identify planned investment required for the electric system. Unitil plans system enhancements with consideration for normal and reasonably foreseeable contingency situations, load levels and generation in order to optimize existing distribution system capacity and capital expenditure.

According to the LCIRP, the distribution system planning process includes the evaluation of distribution substations and distribution circuits based upon a five-year load forecast to identify equipment loading and voltage performance concerns. The planning process results in recommended system modifications to address specific problems. As part of this evaluation, Unitil calculates a five-year history of summer and winter peak demands for each individual circuit to forecast future peak demands for substation transformers, circuits and other major devices. Unitil then compares the forecast with the ratings for each circuit or substation. Individual assessments are made where projected loads reach 90% of the rating for any circuit position or transformer to determine if the loading configuration requires remediation or simply further monitoring.

The plan states that Unitil performs circuit modeling and analysis on a three-year rotating cycle for both the UES Capital and UES Seacoast distribution systems. Each circuit is modeled based on its present construction and normal configuration directly from Unitil's Geographic

Information System (GIS). The planning process focuses on identifying parts of the system that may be aged or strained due to load. Where a concern is considered likely to exist, specific options are outlined, including project description, justification, predicted benefits and associated cost estimates.

Unitil similarly assesses UES's sub-transmission system to determine the thermal ratings of sub-transmission, substation and distribution equipment. The Company develops base case models from historical peaks data, and then models the system improvements and configuration changes that are anticipated to be completed during the year the study is performed. The base case models are used to analyze normal operating conditions, extreme peak conditions and all major design contingencies for each of the ten years under study to develop system improvement options that are then analyzed to evaluate their cost effectiveness. Finally, Unitil engages in joint system planning with Public Service Company of New Hampshire to establish an annual review of wholesale delivery facilities that affect both companies' systems.

Unitil operation and engineering staff conduct reliability planning on an ongoing basis. The various reliability reviews track current year performance and compare it to the company's goals and historical performance. In addition, on a monthly basis, Unitil summarizes the largest outages that occurred in each of the operating companies over the past month. Any outage that totals more than 300,000 customer minutes triggers a root cause analysis to identify ways the outage could either have been avoided or the response time shortened. Finally, on an annual basis, Unitil conducts reliability analysis on an annual basis that is focused upon the overall reliability performance of the UES systems for an 18-month period.

UES's LCIRP also addressed demand-side resources. UES said that customers, in response to price increases in energy and market choices, have taken action to reduce their

demand and availed themselves of energy efficiency programs offered by the electric utilities, commonly referred to as the Core energy efficiency programs. UES also indicated that it had completed assessments of several distributed energy resource technology options and concluded that these distributed energy resources do not compare favorably with traditional transmission and distribution investment from a cost or a reliability perspective.

### **B. Transmission System Planning**

UES does not own any transmission system facilities and instead uses transmission system facilities owned and operated by Northeast Utilities (NU) and others; however, UES participates in the evaluation of planning of the New Hampshire transmission system as follows to ensure that it meets the short-term and long-term needs of the UES system and its customers.

First, UES maintains a working relationship with the Transmission Planning department of NU in order to ensure that the UES system needs are incorporated into NU transmission planning activities. In addition, UES participates in an annual meeting of the New Hampshire Network Operating Committee which consists of representatives from NU and its transmission service customers in New Hampshire. UES it participates in these meetings to keep up to date on transmission planning activities and to provide input concerning impacts to the UES system.

UES stated that it regularly reviews the activities of the Independent System Operator-New England (ISO-NE) planning committees and working groups, contributing to these activities when it can, and also attends meetings of the ISO-NE Reliability Committee. This committee advises ISO-NE about design and oversight of reliability standards for the New England system and about the development of the regional system plan, which UES also regularly reviews.

### **III. SETTLEMENT AGREEMENT/POSITIONS OF THE PARTIES**

#### **A. Settlement Agreement**

In the Settlement Agreement, UES and Staff agreed that UES's LCIRP filing meets the requirements of RSA 378:38 and that the Commission should find the LCIRP adequate pursuant to RSA 378:39. The OCA, which was not a signatory, took no position on whether UES's LCIRP met the terms of the least cost plan statute.

Section 2.2 of the Settlement Agreement provided that UES in its next LCIRP filing would add the following information: (1) a description of the methodology of how it conducts distribution planning, (2) a narrative description and a business process model that illustrates how UES integrates least cost objectives into its planning process, and (3) an updated assessment of demand-side energy management programs, including conservation, efficiency improvement, and load management programs. The Settlement Agreement stated that no deadline was set for UES's next LCIRP filing as the State Legislature is considering legislation to amend the least cost plan statute.

### **IV. COMMISSION ANALYSIS**

Pursuant to 378:39, we are charged with reviewing UES's LCIRP to determine whether UES has adequately addressed the planning elements outlined in RSA 378:38. We previously granted a waiver to UES pursuant to RSA 378:38-a to limit its LCIRP to issues related to transmission and distribution planning. RSA 378:38 requires, among other things, that LCIRPs consider the Clean Air Act amendments of 1990 (RSA 378:38, VII) and the National Energy Policy Act of 1992 (RSA 378:38, VIII). The Clean Air Act amendments and the National Energy Policy Act implicate generation assets, and as UES owns no generation-related physical plant, we granted a waiver limiting UES's LCIRP to transmission and distribution planning only.

In addition, UES regularly obtains default service supply for its customers through a solicitation process that we approved in 2006. Consequently, our waiver relieves UES from assessing supply options (RSA 378:38, III) and diversity of supply sources (RSA 378:38, V).

The remaining elements which must be addressed by an LCIRP pursuant to RSA 378:38 are (1) a demand forecast (RSA 378:38, I), (2) an assessment of demand-side energy management including conservation, efficiency and load management (RSA 378:38, II), integration of demand-side and supply-side options (RSA 378:38, VI), and (3) environmental impacts (RSA 378:38, IX).

UES attached Unitil's Distribution Planning Guidelines as Appendix A to UES's LCIRP (Hearing Exhibit A) which includes an assessment of peak load to develop an electricity demand forecast (RSA 378:38, I). Transmission and sub-transmission planning are detailed in Appendix D, Unitil Electric System Planning Guide, and Appendix E, Load History and Ten-Year Design Forecasts for UES Capital and Seacoast systems. Demand-side management, including the integration of demand-side and supply-side options and customer-sited distributed generation (RSA 378:38, VI and IX), is discussed in Appendix K to the LCIRP, entitled Demand-Side Management Planning Report.

Based upon our review, we find that all relevant aspects of RSA 378:38 have been addressed by UES in its 2013 LCIRP and that UES's filing is adequate for the purposes of RSA 378:39. We find that the Settlement Agreement appropriately addresses the need for additional information in future filings to ease the review of how the planning process comports with the plan.

Finally, we are aware that legislation is pending before the New Hampshire General Court that may affect the timing and content of future LCIRP filings by electric utilities.

Therefore, we will require UES to file its next LCIRP no later than July 16, 2015, unless we rule otherwise.

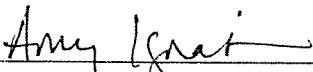
**Based upon the foregoing, it is hereby**

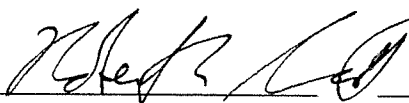
**ORDERED**, that Unitil Energy System Inc.'s 2013 Least Cost Integrated Resource Plan filed July 16, 2013 is accepted and found adequate as discussed herein; and it is

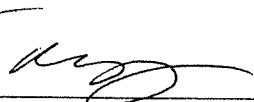
**FURTHER ORDERED**, that the Settlement Agreement between Unitil Energy System Inc. and Commission Staff is hereby APPROVED; and it is

**FURTHER ORDERED**, that Unitil Energy System Inc. shall file its next LCIRP no later than July 16, 2015, unless ordered otherwise by this Commission.

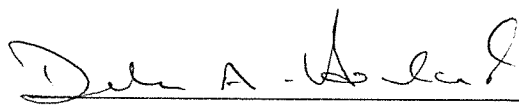
By order of the Public Utilities Commission of New Hampshire this seventeenth day of April, 2014.

  
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Amy L. Ignatius  
Chairman

  
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Robert R. Scott  
Commissioner

  
\_\_\_\_\_  
Martin P. Honigberg  
Commissioner

Attested by:

  
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Debra A. Howland  
Executive Director



**SERVICE LIST - EMAIL ADDRESSES - DOCKET RELATED**

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Pursuant to N.H. Admin Rule Puc 203.11 (a) (1): Serve an electronic copy on each person identified on the service list.

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**FILING INSTRUCTIONS:**

- a) Pursuant to N.H. Admin Rule Puc 203.02 (a), with the exception of Discovery, file 7 copies, as well as an electronic copy, of all documents including cover letter with:
- DEBRA A HOWLAND  
EXEC DIRECTOR  
NHPUC  
21 S. FRUIT ST, SUITE 10  
CONCORD NH 03301-2429
- b) Serve an electronic copy with each person identified on the Commission's service list and with the Office of Consumer Advocate.
- c) Serve a written copy on each person on the service list not able to receive electronic mail.