UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF

GEORGE R. GANTZ

New Hampshire Public Utilities Commission

Docket No. DE 06-61

September 17, 2007

Q. Please state your name and business address.

A. George R. Gantz, Senior Vice President for Customer Services and Communications for Unitil Service Corp. ("USC"), 6 Liberty Lane West, Hampton, NH. USC provides centralized management and administrative services to all Unitil affiliates including Unitil Energy Systems, Inc. ("Unitil").

Q. Please review your background and qualifications.

A. I have been employed by the Unitil companies in various capacities since 1983. The positions have included management and executive responsibility for rates and regulatory services, power supply planning and procurement and customer service and communication. Prior to joining the Unitil companies I served on the staff of the New Hampshire Public Utilities Commission (1981 to 1983), with the New Hampshire Governor's Council on Energy (1979 to 1981) and as a research consultant (1976 – 1979). I have a Bachelor's Degree in Mathematics with Honors Humanities from Stanford University. I have testified before this Commission on numerous occasions.

Q. What is the purpose of your testimony.

A. The purpose of my testimony is to present Unitil's overall position and recommendations to the Commission in this Docket. Unitil believes that implementation of time-based pricing of electric service to its customers should only be accomplished based on a thorough analysis of costs and benefits and a deliberate and well planned implementation strategy. This process is likely to take a number of years. As part of this

evolutionary process, we recommend that the Commission move to modify ratemaking approaches generally in order to align policy objectives with distribution utility finances. We also recommend that the Commission refrain from forcing mandatory time-based metering and pricing on New Hampshire utilities and instead embrace an experimental and targeted approach. The Commission should invite targeted and/or pilot program proposals which can offer quantifiable benefits and valuable experimental information with the goal of achieving the maximum benefits at the minimum cost. This approach will encourage solutions including time-based pricing that are positive for customers and for utilities while achieving broad societal goals. Finally, I offer my interpretation of the EPACT time-based metering and communication standard and suggest the Commission adopt a very broad perspective on the issues of time-based pricing in order to maximize benefits to consumers.

Q. What are the considerations which should be taken into account in determining whether to implement time-based pricing?

A. One of the key ratemaking principles is to promote economic efficiency by having utility rates reflect the actual costs of service. At the conceptual level, moving to time-based pricing is an effort to better reflect the true cost of service in the rates customers pay. We know that wholesale energy clearing prices vary significantly by time and that capacity requirements are determined by customer loads in a very small number of peak hours. Translating these time-varying costs into time-varying prices to customer would seem to further the principal of economic efficiency.

However, economic efficiency is not the only ratemaking principle. Revenue sufficiency, fairness, simplicity, consistency, ease of administration, and consumer acceptance – these are all important considerations as well. Moreover, economic efficiency is not just a concept – it is a measurable outcome. The implementation of time-based pricing should be based upon sound findings that the benefits outweigh the costs – both in economic terms as well as in broader ratemaking policy.

We also recognize that time-based pricing is part of a broader re-definition of the distribution utility business that is now taking place. Public policy has been shifting in favor of energy efficiency, small scale renewable energy, and demand response programs – initiatives which are generally referred to as distributed energy resources, or DER. Over time, successful deployment of DER will reduce reliance on fossil fuels, improve the efficiency of our energy infrastructure, and may reduce energy consumption and peak demands. This deployment will be accompanied by an evolution of the distribution grid to a system that accommodates a diverse mix of centralized and distributed supply and demand resources, provides enhanced consumption and pricing information to customers, operators, and decision-makers, and which leads to more efficient consumption and delivery of electricity – the so-called "smart grid." Time-based pricing is an important tool for DER deployment – and DER technologies can provide the means for enabling net benefits from time-based pricing proposals.

Q. What steps is Unitil taking to evaluate distributed energy resources and time-based pricing options?

A. Unitil is currently completing installation of its Advanced Metering Infrastructure which replaces conventional meter-reading and enables enhanced communication with the customer's meter. As the company completes the installation and migrates all customer accounts to billing on the new system, we will also begin to look at and test system capabilities for time-based data collection and advanced communications functionality.

Unitil is also studying options for DER deployment in order to gain information and experience with developing technologies. For example, we have installed a small-scale wind turbine on a transmission pole in Hampton, and will be looking for additional sites throughout our system – the energy produced will displace system losses and company use which is presently factored into our overall Default Service requirements. We are reviewing a technology for displacing air conditioning load to off-peak by utilizing ice storage and hope to be able to test this technology on our system. We will also be working with the state Energy Policy Commission later this fall on legislation to enable distribution utilities in New Hampshire to participate in DER deployment on a broader scale. We anticipate making specific, concrete proposals to the Commission for DER – it is our expectation that targeted time-based pricing will be a part of those proposals.

These efforts will take time. Each proposal for time-based pricing or DER will require careful evaluation of costs and benefits based on specific information. We feel strongly that this work needs to be carefully planned with a focus on specific, concrete proposals that produce real net benefits. In this instance, a generic, broad-based initiative may be exceedingly difficult to assess, as both costs and, more importantly, the benefits can be very speculative. Under such circumstances, and until more certainty concerning the nature of the benefits which may be expected is available, the inordinate commitment of time and resources and may simply not be worth the effort.

Q. What steps can the Commission take to encourage utilities to take the lead in developing innovative time-based pricing and DER proposals?

A. The most important thing the Commission can do to encourage utilities to be innovative and creative in developing and implementing time-based pricing and DER proposals is to consider changes in ratemaking. We believe that time-based pricing and associated DER initiatives will be successful only if distribution utility ratemaking is fundamentally realigned. Properly designed revenue decoupling is a first and important step.

Under traditional ratemaking, time-based rates, energy efficiency and distributed resources are a direct threat to distribution utilities – they are complicated, they increase costs while decreasing revenues, and they may serve to erode the distribution investment base. As a second step, distribution rate design needs to be re-aligned in accordance with

marginal cost-based principles to provide for recovery of fixed costs through non-volumetric charges. Additionally, positive encouragement for utilities to achieve societal goals through energy-efficiency, time-based pricing and other DER needs to be put in place. Distribution utilities should be enablers in achieving these societal goals – but they need the opportunity to achieve financial results at least as strong or stronger than the financial results for building to meet increasing peak demand.

Q. How does Unitil believe the Commission should proceed towards implementation of time-based metering and communication in this docket?

A. We recommend that the Commission refrain from forcing mandatory time-based metering and pricing on New Hampshire utilities, for four reasons. First, the utilities, including Unitil, are not prepared to implement across-the-board mandatory time-based metering and pricing at this time. While Unitil is implementing AMI on the basis of its cost-effectiveness in enabling standard meter-reading and billing functions, we have not yet begun to explore and analyze the advanced features and limitations of the system in enabling time-based pricing or demand response programs. Secondly, implementation of mandatory time-based pricing will be costly, and those costs are not well known. Although we have provided preliminary estimates of some of the costs involved in implementing time-based pricing in the data responses which are attached to my testimony, we are well aware of the complexities and pit-falls that one can encounter in the process of implementing major system changes.

The third reason for not implementing mandatory time-based pricing is that the benefits of doing so are uncertain, or even speculative. For example, in the case of large energy users, since most of that load has already migrated to the competitive market, it is unclear what benefits would be gained by imposing mandatory time-based pricing on the remaining customers. Those customers whose bills were lowered would have less incentive to seek competitive offers, while those whose bills increased would be more likely to move to the competitive market. This could actually have a perverse result in pushing customers towards non-time-differentiated options. The implication could be that achieving the benefits associated with "mandatory" time-based pricing for this class may require imposing conditions even on competitive suppliers, in a manner similar to Renewable Portfolio Standards.

For smaller customers as well, the benefits of mandatory time-based pricing are uncertain. A residential customer with time-varying Default Service might see savings of a few dollars a month from fairly significant load shifting. While the cost of implementing time-based rates from smaller customer are significant, it is unknown whether and to what extent consumers will make changes in response to time-based pricing, and yet consumer response is the driver in achieving real societal benefits.

The final reason to refrain from mandatory time-based pricing is the concern with customer acceptance. Bills will go up for some customers, and down for others. Explaining the changes will be difficult. Those bills go up may feel they are being

treated unfairly, while those whose bills go down may simply see the change as a windfall. The only behavior that may be motivated in this case may be growing customer confusion and frustration and increasing dissatisfaction with their utility service.

One additional question should be noted with respect to implementation of real-time pricing. We know that the incremental costs of moving from time-based pricing with three or four time segments, to real-time pricing, are substantial, and the complications and potential confusion is significantly higher. In contrast, we do not know if there are any incremental benefits, in terms of motivating customer behavior, from moving to real-time pricing. How much will it matter to customers to have 720 time periods per month as opposed to three or four time periods per month?

Q. What steps should the Commission take instead?

A. Implementation of time-based metering pricing solutions should be based on sound findings that the costs outweigh the benefits, both in economic terms as well as in broader ratemaking policy. We do not believe it is useful to attempt to do this, at this time, with respect to generic time-based pricing proposals. Rather, we recommend that the Commission embrace an experimental and targeted approach to time-based metering and communication implementation, by inviting utilities or other parties to propose targeted programs with quantifiable features aimed at achieving specific customer

benefits at the minimum cost. We believe this approach will focus attention on concrete options that will yield the greatest good at the lowest cost.

Q. How do you interpret the time-based metering and communication standard of EPACT, and the Commission's obligation to evaluate that standard?

A. In my opinion, the federal standard only requires consideration of voluntary time-based metering and pricing at the customer's option. Specifically, the standard in Section A says that "each electric utility shall offer each of its customer classes, and provide individual customers upon customer request, a time-based rate schedule." Section C then adds that "Each electric utility subject to subparagraph (A) shall provide each customer requesting a time-based rate with a time-based meter." Taken together, these state that the utility must offer a time-based rate to each customer class, but must provide a time-based rate schedule and a time-based meter only to customers that request them. I read this as meaning the federal standard only requires time-based rates that are at the customer's option, e.g. voluntary.

I would also note, however, that in instructing the Commission to undertake an investigation of the time-based metering and communication standard, EPACT in section (i) says the Commission must determine "whether or not it is appropriate for electric utilities "to provide and install time-based meters and communications devices for each of their customers which enable such customers to participate in time-based pricing rate schedules and other demand response programs". This language is considerably broader

than the standard itself as it asks for a determination on providing time-based meters to each customer and also adds a reference to customer participation in other demand response programs.

Q. Given this interpretation, what do you recommend to the Commission?

A. I recommend that the Commission take the broadest possible view of time-based rates and pricing in this proceeding, under its own authority under the NH Statutes, with the goal of maximizing benefits to NH consumers. In this proceeding, the Commission should also make a finding that it had considered the federal standard – in doing so it should interpret the standard in a narrow way as ONLY requiring consideration of voluntary programs.

Q. Do you have any additional information to offer the Commission?

A. Yes. I am including as exhibits to my testimony the following information previously provided by Unitil in this proceeding: Exhibit GRG-2, consisting of Unitil's Initial Comments filed on September 29, 2006; Exhibit GRG-3, consisting of Unitil's Reply Comments, filed on November 3, 2006; and Exhibit GRG-4, consisting of Unitil's responses to the Staff's data requests in this proceeding..

Q. Does that conclude your testimony?

A. Yes, it does.