Exhibit No.___ T (GLW-1T)
Docket No. UG-060256
Witness: Gene L. Waas

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **CASCADE NATURAL GAS CORPORATION,** **Respondent.**	**DOCKET NO. UG-060256**

RESPONSE TESTIMONY OF

GENE L. WAAS

STAFF OF WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Natural gas rate design issues

September 12, 2006

Q. Please state your name and business address.

A. My name is Gene L. Waas. My business address is 1300 South Evergreen Park Drive Southwest, P.O. Box 47250, Olympia, Washington, 98504.

Q. By whom are you employed and in what capacity?

A. I am employed by the Washington Utilities and Transportation Commission ("WUTC" or "Commission") as the Assistant Director for Energy.

Q. What are your duties as Assistant Director for Energy?

A. I am the supervisor of the Energy section of the Regulatory Services Division of the WUTC, which consists of 13 professionals and technical Staff members. The Energy section is responsible for reviewing and providing recommendations for actions to the Commission concerning all filings by regulated utility companies that provide electric or natural gas service to retail customers in the state of Washington. As the Assistant Director of the Energy section, I have participated actively in the development and presentation of Staff recommendations to the Commission. I also assist the Commission on larger energy policy issues as necessary.

Q. Briefly describe your education and relevant employment experience.

A. I earned a Bachelor of Arts degree in Economics, cum laude, from Doane College in 1971. I completed the requirements for an M.A. in Economics at Drake University in Des Moines, Iowa in 1973. In addition, I did additional post graduate work at the University of Nebraska toward the Ph.D. in Economics. Finally, I attended Northern

Illinois University College of Law, receiving my J.D. in 1983. I have been a member of the Illinois State Bar since 1984. In addition, I am a member of the Federal Energy Bar.

I began my energy career with the Lincoln Electric System in Lincoln, Nebraska, where I was in charge of all regulatory activities for that entity from 1976 until 1978.

In mid-1978, I joined Northern Illinois Gas Company (now NICOR Gas) as a member of its department of Rates and Economics. I occupied the positions of Rate Analyst, Senior Rate Analyst, Coordinator Rate Regulation, and Coordinator Rate Research and Regulation. Finally, I was named Area Manager for the Western Division of the Company. NICOR Gas serves about 2.1 million customers in the northern one third of Illinois outside of the city of Chicago.

I became a part of the Office of the General Counsel ("OGC") at Peoples Energy Company ("Peoples") in Chicago in 1987. While in the OGC I handled contract matters, rule makings, rate issues, and Least Cost Planning ("LCP"). Later, I was placed in charge of Peoples Rate Research and Policy department, where I was the lead negotiator and chief rate case witness on revenue allocation and rate design through three rate cases. Peoples serves approximately 1 million customers in the city of Chicago. During this period I also served as Peoples' representative on the American Gas Association Rate Committee and its subcommittee on cost allocation and rate design.

In 1998 I moved to California to join the California Power Exchange ("PX") as its Manager of Regulatory Affairs. In that position I was in charge of the PX's

tariff filings. These filings covered both its core PX auction tariff and the Block Forwards Market Tariff. Both of these tariffs were regulated by the Federal Energy Regulatory Commission ("FERC").

When the PX ceased operations in January of 2001, I joined the California Independent System Operator ("CAISO") as one of its Regulatory Counsel. In this position, I was responsible for FERC filings of amendments to the CAISO's Open Access Transmission Tariff ("OATT") and for special litigation revolving around its tariff, as well as litigation involving misbehavior in the CAISO Market by various market participants.

On June 1, 2006, I assumed my present position as Assistant Director for Energy at the WUTC.

Q. Will you please explain the purpose of your testimony in this proceeding?

A. I will respond to the testimony filed by witness Jim Lazar for the Office of Public Counsel (OPC), in which he proposes to institute inverted block rates for the residential customers of the Cascade Natural Gas Company ("Cascade" or "the Company").

II. SUMMARY OF THE TESTIMONY

Q. Please summarize your testimony on the proposed institution of inverted block rates for residential customers as proposed by Mr. Lazar.

A. Mr. Lazar's proposal for the institution of inverted block rates for residential customers should <u>not</u> be approved for five basic reasons. First, inverted block rates do not track the pattern of cost incurrence on the distribution system. In fact, they

are the inverse or opposite of cost tracking rates. Second, inverted block rates will increase the weather sensitivity of Cascade's revenues and cash flows. Less stable cash flows could create an upward bias to Cascade's cost of equity capital. Third, Mr. Lazar's own testimony, along with that of certain other witnesses, points to various "weaknesses" in Cascade's embedded cost of service study such that it is not fully usable to make revenue allocation decisions. However, even in light of these alleged shortcomings in the Company's cost of service analysis, and no load studies for the customers in question, Mr. Lazar undertakes a proposed radical redesign of Cascade's residential rate. Fourth, Mr. Lazar incorrectly implies that the existence of an inverted block in the residential rate will, by its own force, lead to increased customer conservation. This presumably is based on the customer's knowledge of when, each month, the customer's usage level has exceeded the initial block. Finally, inverted block rates do not lead to economic efficiency, are inequitable and violate the goals of gradualism and rate stability.

III. ANALYSIS OF MR. LAZAR'S RATE DESIGN PROPOSAL

Q. On page 3, lines 14 to 16 of Mr. Lazar's direct testimony, he states, " I present two alternative rate designs, again computed at both the company requested revenue level and at an estimate of the staff revenue requirement". Do you agree that this is what Mr. Lazar has done?

A. No. Mr. Lazar has offered one residential rate design at two different revenue levels. The only rate design offered is an inverted block rate design for which there is no

valid cost of service support and no recent load study to document the proper block length and associated load characteristics. Table 6 on page 34 of Mr. Lazar's testimony documents the fact that the current flat rate for Cascade's residential customers is compared with two inverted block scenarios. No alternative to inverted block rates is offered by Mr. Lazar, despite his statement on page 3 of his testimony to the contrary. Table 6 also illustrates the fact that Mr. Lazar would do nothing more than add any incremental revenue requirement granted to the proposed inverted end block of the rate. This acts to increase the "inversion" or "tilt" of the rate which exacerbates the problems caused by the rate design. These include, but are not limited to, increased weather sensitivity of Company revenues, decreased rate equity and increased uncertainty of fixed cost recovery. This would be done without consideration of bill impacts on heating customers or possible fuel stitching.

Q. On page 23, lines 7 to 8 Mr. Lazar states, "Second, increasing the Basic Charge has the effect of suppressing the rate paid per therm, and that reduces the incentive for customers to conserve gas. Given the spiraling cost of natural gas, a rate design change promoting increased gas use is not good policy". Do you agree?

A. I only partially agree. For every unit of gas consumed, the customer must pay the unit cost of that gas, which varies from month to month but could represent as much as 80 percent of the total bill. This cost represents a major incentive for the customer to conserve. The customer makes decisions to conserve based on the total amount of the bill. Many residential customers have little knowledge of the specific rate design

that generated the bill. The spiraling cost of gas has been the significant factor leading to conservation, not the distribution company's rate design, which needs to reflect a fixed-cost dominated distribution system.

Mr. Lazar's theory of rate design would lead one to believe that the distribution company's costs vary directly with volumes. However, this is not the case.

A gas distribution company, at least in the short run, may be viewed as a lump of fixed cost from the perspective of system throughput. Customer-related costs vary with the number of customers connected to the system. Demand-related costs vary with the level of system peak demand. Neither of the above cost categories varies with the system throughput of natural gas. Non-gas, volume-related costs comprise a very small proportion of the distribution company's costs. Thus, Mr. Lazar's proposed inverted block rate for distribution service completely fails to track the pattern of cost incurrence on the distribution system.

Q. On page 23, lines 12 to 16, Mr. Lazar states, " If the Company's rate design was closer to reflecting the incremental cost of providing capacity and gas supply to meet winter demands, additional load constraints could be achieved." Mr. Lazar goes on to state that his inverted block rates could "break the ongoing spiral of gas costs to the benefit of all customer classes." Do you agree?

A. No. This statement is made by Mr. Lazar after providing no embedded or incremental cost of service study and no load study based on the test year in this proceeding. To suggest that a revised residential rate design for a relatively small

gas distribution company like Cascade will be likely to "break the on going spiral of gas costs" with a minor reduction in demand is a stretch.

Q. On page 23, line 22, Mr. Lazar uses the phrase "cost-based inverted rate designs." Is such a phrase appropriate for a gas distribution system like Cascade?

A. No. As I explained above, natural gas distribution systems are fixed cost dominated. As additional throughput moves through a distribution system, the fixed cost of a system is divided by more units. This creates an average fixed cost curve that touches the vertical axis at the point of the customer charge and then falls as system throughput increases. Assuming that one of the goals of rate design is to track the cost curve with the revenue curve, it is clear that an inverted block rate will move in the opposite direction of cost causation. While costs fall on a per unit basis, revenue would rise and the larger volume customers would generate higher rates of return, decreasing intra-rate equity.

Q. Are there reasons other than economic as to why inverted block rates can be problematic from the perspective of society?

A. Yes. There are certain demographic groups that naturally have higher consumption of natural gas for various uses and little can be done with pricing to change this fact. The best example is elderly customers on a fixed income who live in their own home. These customers very often require that the home be kept warmer because of medical needs. An inverted block rate design will make them pay more for natural

gas space heating, leaving less for other essentials. There are also people with larger families whose demands for natural gas for cooking, clothes drying and water heating go beyond the 30 therms per month Mr. Lazar would allow them. This would mean that even base load usage would be billed in the inverted portion of the rate design. Thus, Mr. Lazar's proposal would create income effects for these customer groups.

The current forward price curves for natural gas indicate that prices may exceed $10.15 per Thousand Cubic Feet ("Mcf") by February 2007. Mr. Lazar's rate design could add over $1.66 to that price, assuming that Cascade's requested amount of increase is granted.

Q. On page 28, lines 10 to 16, Mr. Lazar states that there are competitive industries (unregulated as to price) that have high fixed costs but recover those costs with variable charges. Does this surprise you?

A. No, this does not surprise me at all. Only the market regulates the firms cited by Mr. Lazar. If, using volumetric pricing, those firms can substantially over-recover their fixed costs; they are allowed to keep the profits and distribute them to their shareholders or retain them. If a regulated utility over recovers its fixed costs the applicable regulatory agency may force it to "show cause" as to why its rates should not be reduced. This distinction appears to be lost in Mr. Lazar's analysis.

Q. On page 34, line 12, in referring to his pricing proposal Mr. Lazar states "Second, it is more efficient." Do you agree that his inverted block rate design sets the marginal price equal to the marginal cost?

A. No. Mr. Lazar seems to believe that any rate design that raises the price of gas beyond the price for the "bare essentials" amount, to use his term, when gas prices are rising, moves the price to its marginal cost. This is not the case. Neither Mr. Lazar nor any other witness in this proceeding has sponsored a true marginal or incremental cost study. Thus, in this case we simply do not know what the value of marginal cost is on Cascade's distribution system for residential customers. However, under standard ratemaking principles, the customer cost is normally recovered in a customer charge and a front block. The marginal cost that sends the price signal representing the cost to move incremental load on the distribution system is in the final block. Incremental cost on most distribution systems is normally quite low when the expansion cost is levelized. Even under Mr. Lazar's "load factor" theory of pricing, if the demand related cost of the water heater were recovered second rather than first as he proposed, he would have a declining block rate rather than the inverted block rate.

Q. On page 33, lines 4 to 12, Mr. Lazar utilizes a 17-year-old study developed by Mr. Dick Byers, a WUTC employee, to establish the load factors that become the primary rationale for Mr. Lazar's inverted block rate. Do you believe that this load information is adequate to establish such a radical change in rate design?

A. No. Mr. Lazar has done no load studies to update the now 17-year-old data developed by Mr. Byers. In addition, it is likely that the water heating load factor is somewhat lower and the space heating load factor is somewhat higher than stated in that study, reducing the cost differentials to which Mr. Lazar refers on lines 11 and 12 of his testimony.

Q. What are the implications of Mr. Lazar's rate design for Cascade and the customer's pattern of usage?

A. The implications for Cascade's financial planning and short term financings are very substantial. If Mr. Lazar's proposal is approved, the entire pattern of the supply and use of funds for the Company will change. The proposed rate design will produce much greater cash flows coming out of the winter period, while much less cash will be received in the warmer, non-heating periods of the year. The Company's financial modeling and cash planning would have to be adjusted to accommodate such changes.

The other implication of Mr. Lazar's rate design proposal is that the "bare essentials" or base use portion of the customer's use goes through the meter first

each month. Again, this is asserted even in the face of no load studies and no supporting cost analysis either embedded or incremental.

Q. What is the proper method for determining a residential rate design for Cascade Natural Gas Company?

A. First, both embedded and incremental cost of service studies that need to be completed reflect the costs in the test year specified or proposed by the Company. The incremental cost analysis reflects the current cost of adding a customer to the distribution system and the embedded cost analysis reflects the historical cost of the revenues, expenses and investments assigned and allocated to the various rates. Typically, the customer cost is partially recovered through a customer charge. The "remaining customer cost" is then recovered in an initial block through which all therms pass each month. The incremental cost study is used to determine the incremental or marginal demand related cost. The marginal price is the end block price. Resource allocation is most efficient when marginal price equals marginal cost. After the end block is set equal to marginal or incremental cost, the analyst must determine if the revenue requirement has been reached. If volume times the charges specified above is less than marginal cost, a middle block must be added to reach the revenue requirement.

Q. What do you recommend the Commission do with respect to the design of Cascade's residential rate in this proceeding?

A. I recommend that in the instant proceeding the Commission leave the flat rate design for residential customers in place pending the completion of the cost analyses that I have described above. In addition, I recommend that the Commission order Cascade to complete both incremental and embedded cost of service studies as a part of their next rate filing. This will provide the documentation for the incremental or marginal cost of all of Cascade's rates, not just the residential rate.

Q. Does this conclude your testimony?

A. Yes, it does.