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SITING COUNCIL

May 11, 2006

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Dear Mr. Phelps:

The Connecticut Municipal Electric Energy Cooperative (CMEEC) herewith submits an original and twenty (20) copies to the Connecticut Siting Council of responses to Interrogatories 1 through 6 dated April 21, 2006 from the Connecticut Siting Council in conjunction with Docket No. F-2006 Connecticut Siting Council Review of Connecticut Electric Loads and Resources.

Should you require any additional information, please advise us.

Very truly yours,

CONNECTICUT MUNICIPAL ELECTRIC
ENERGY COOPERATIVE

Maurice R. Scully
Executive Director

CJC/

Enclosures

Witness Responsible: Charles J. Carpinella

RESPONSE TO CSC DATA REQUEST Dated April 21, 2006

Q-CSC-1-CMEEC

In Table I of CMEEC's 2006 Forecast of Electric Loads and Resources (CMEEC Forecast), explain the significant drop in hydroelectric generation output from year 2004 to 2005 (2,315 MWh to 689 Mwh respectively).

A-CSC-1-CMEEC

The 689 MWh output for 2005 refers to the Occum hydroelectric facility with is owned by the Norwich Public Utilities ("Norwich"). Norwich uses this facility in a peak shaving capacity to offset their energy requirements from CMEEC. At the request of FERC, scheduled work began on the domestic fish passage at the Occum hydro site in December 2004 and continued into the July/August 2005 time frame. During this time, the unit was shut down. Generation levels did return to more normal levels of output during October – December 2005 and continued into 2006.

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Q-CSC-2-CMEEC

In Table I of the CMEEC Forecast, is the summer coincident peak demand based on a 50/50 scenario (i.e. the forecast peak has a 50 percent chance of being exceeded)? If no, approximately what is the probability of this peak being exceeded in a given year?

A-CSC-2-CMEEC

The reference forecast as presented in Table I is the likely forecasted coincident peak based upon expected normal weather. CMEEC does not perform scenario analysis when preparing the peak demand forecast. CMEEC updates its forecasts on a continuous basis and does forecasting in the short term on a daily basis and as a result these updated forecasts reflect the most recent weather data which effectively eliminates the need for scenario analysis.

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Q-CSC-3-CMEEC

Does CMEEC prepare an extreme weather forecast? Explain why or why not.

A-CSC-3-CMEEC

No, CMEEC does not prepare an extreme weather forecast. As we explained during the 2005 forecast hearings, the total system requirements and the summer and winter coincident peak demand columns shown in Table I are developed using econometric models with weather variables explicitly incorporated into the model structure.

In the energy models, historical retail sales and economic/demographic information are used in the model formulation was well as historical and forecasted heating degree days (HDD) and cooling degree days (CDD) weather information. In the peak demand models, historical monthly peaks, in addition to historical and forecasted energy requirements are used in the model formulation was well as historical and forecasted dry bulb temperatures at the time of peak demand to predict system peak demands for each of CMEEC'S Members/Participants.

The forecasted CMEEC system energy requirements are computed by summing the individual Members/Participants residential, commercial and industrial energy forecasts. The forecasted CMEEC summer and winter coincident peak demands are then computed by summing the individual Members/Participants noncoincident peak demands and multiplied by an average monthly historical coincidence factor.

CMEEC has never produced or performed an extreme weather forecast for this docket due to limited time and resources.

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Q-CSC-4-CMEEC

On page 2 of the CMEEC Forecast, CMEEC notes that, "The municipal electric utilities have delivered cost effective CLM programs to customers for many years." Briefly describe what types of programs have been used for energy conservation in CMEEC's territory in the past.

A-CSC-4-CMEEC

Prior to January 1, 2006 the municipals were engaged in conservation and load management program activities that were focused on this particular demographic composition of each of the municipal utilities. Subsequent to January 1, 2006 the conservation load management activities are described in the CLM plan filed by CMEEC on behalf of the municipal utilities with the ECMB in February 2006. The following is a brief summary of the activities of the municipals and CMEEC prior to January 5, 2006.

The total electric load served by the municipal electric utilities is approximately 5.5% of the overall electric load of the state. CMEEC assists its member municipal electric utilities in the management and coordination of their conservation and load management programs

The municipal electric utilities are very responsive to the needs of their local communities and customers and they have been and are currently undertaking substantial activity to achieve CMEEC's proportionate share of load management results measured by their share of overall state electric loads within their communities. The demonstrated results and commitment to conservation and load management of the municipal electric utilities, as summarized below, follows from their local, municipal ownership and control and direct knowledge of the needs of their service areas.

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Load Management and Reliability Support

The municipal utilities currently have in excess of 55,000 kilowatts ("kW") of customer load participating in demand response programs. As a percentage of CMEEC's total peak demand, this represents approximately 15% of CMEEC's historical peak demand. CMEEC and the municipal electric utilities are making continuing, serious efforts at expanding their demand response programs and have a goal of increasing the kWs under demand response programs by an additional 20%.

Targeted Energy Efficiency Programs

The municipal electric utilities have focused on certain commercial and industrial customers that offer significant energy saving potential. The most significant and focused energy efficiency program at any site within the municipal utilities (and probably within UI and CL&P as well) is the work being undertaken with the United States Naval Submarine Base in Groton, CT (the "Base"). Working with the Base and outside energy services companies, Groton Utilities has identified over four million dollars in energy efficiency measures that would have a payback of less than seven years. Over $2.5 million of energy efficiency measures have been fully implemented to date with another million in the implementation stage and should be completed this year. At other commercial and industrial sites, municipal electric utilities have paid for or shared the cost of energy audits and for certain implementation measures.

The municipal electric utilities have additionally focused on activities with senior citizens and low income customers. They have all participated in various energy efficiency light bulb programs and have given away or nominally charged for compact fluorescent light bulbs to seniors and low income customers.

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On a more generic level, the municipals have sponsored appliance rebate programs and worked with other state agencies and energy service providers for residential audits. Since most of the municipal electric utilities also supply water utility services, efforts have been made at coordinating programs for greater efficiency and effectiveness.

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Q-CSC-5-CMEEC Identify the generating facilities listed in the CMEEC Forecast that have black start capability, if any.

A-CSC-5-CMEEC None of the generating facilities listed in Table V in CMEEC's 2006 Forecast of Loads and Resources (2006 CMEEC Forecast) have black start capability.

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Q-CSC-6-CMEEC List the technologies CMEEC Members have in place to monitor and communicate voltage fluctuations? Identify transmission system conditions and actions to maintain and protect the grid and customers.

A-CSC-6-CMEEC Please refer below to a summary of the activities undertaken by some of CMEEC's largest Members/Participants concerning this issue.

Groton Utilities/Bozrah Light & Power

Groton Utilities has installed IEDs (intelligent electronic devices) that monitor and record data of each of the three transmission lines that supply power to Buddington Substation. Similar devices have also been installed in all critical distribution substations as well. Each IED monitors various electrical measurements such as load data, voltage levels and fluctuations, current levels, power factor and many more critical electrical characteristics. The IED reports by way of a leased telephone line from the RTU (remote terminal unit) at Buddington Substation to the SCADA (supervisory, control and data acquisition) master controller located at the Electric Operations Complex. If one or more of the electrical values reported by the IED measures outside the pre-selected parameters programmed into the SCADA system, then the SCADA system will notify, by telephone (24 hours a day), the stand-by or on-call supervisor. In addition, the SCADA system will record the event's time, date and the all electrical values that were recorded outside of the SCADA's system pre-selected electrical parameters.

Groton Utilities has the following protection devices in service at this time on each of three transmission lines into Buddington Substation.

1.) phase directional overcurrents relays & backup
2.) ground overvoltage relays & backup
3.) distance relay & backup

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4.) carrier ground overvoltage & backup
5.) phase fault detector relay & backup
6.) primary trip relay & backup
7.) undervoltage relay & backup
8.) transfer trip primary & backup

All of the above protection devices are design to protect each of the three transmission lines by isolating that particular line which is experiencing a problem.

Norwich Public Utilities

Norwich operates a SCADA System which provides real-time monitoring at their substations and key points throughout the distribution system. Watch Engineer(s) in the control room monitor voltage and take actions as necessary on a 24/7/365 basis. In addition, Norwich has equipment and procedures in place to monitor, control and communicate voltage conditions either automatically or manually depending on system conditions and capabilities.

As a member of the New England grid, Norwich follows various ISO, NEPOOL and CONVEX procedures and instructions in the event actions need to be taken. Proper protection and controls are in place and maintained at all our substations connected to the grid (i.e., Bean Hill, Tenth Street and Dudley Street) in order to ensure the grid and customers are protected.

Wallingford Electric Division

The Wallingford Electric Division monitors the 115kV delivery transmission voltage for each line terminal at its three substations via SCADA. It also monitors the output and voltage of the PPL Wallingford Energy 6G generation facility at the 13M substation interconnection via SCADA. The SCADA system is supervised by

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System Operators on a 24-hour basis. Automatic high and low operational alarms are also available on the SCADA system. Wallingford's 13.8kV distribution bus voltages are all automatic, Load Tap Changer (LTC) controlled, and under SCADA supervision/control. The distribution buses themselves have Electro Industries Nexus 1250 recorders for historical and event recording purposes. Data recorded includes voltage, watts, vars, current, power factor, and frequency. Event recording is initiated only by voltage events.

In addition to various protective relaying equipment, the distribution substations are equipped for automatic under-frequency load shedding via a selective tripping matrix. This is in accordance with the NPCC *Underfrequency Load Shedding Program* as specified in Sec. 4.6 of the *Emergency Operation Criteria* (Document A-3). All distribution circuit breakers are also SCADA monitored/controlled.

In the unlikely event of sustained loss of total 115kV transmission supply, Wallingford has a CONVEX Operating Instruction (OI) in place to disconnect from the 115 kV grid and operate in an island mode. In such an island mode, Wallingford has a contractual Agreement in place with PPL Wallingford Energy to black-start and operate the PPL 6G generation plant serving the local load. Within established parameters, Wallingford's total distribution load can be served from the 6G/13M substation facility.

South Norwalk Electric Works

SNEW has the equipment to monitor and control/respond to voltage fluctuations. SNEW is connected to CL&P's subtransmission 27.6kV system, which is supplied from Norwalk Substation (9S - aka New Canaan Avenue), which is more tightly monitored and controlled by CL&P. Currently, SNEW's 27.6kV system is stepped-down by four (4) Bank Transformers, two for 13.8 and two for 4.16kV distribution-only busses. SNEW has ten

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(10) voltmeters and two voltmeter charts to monitor our two incoming lines and four busses. Each Bank Transformer has an integral Load Tap Changer (LTC) voltage regulator. These are normally automatic in operation and, after a short time delay, respond to voltage changes due to either load- or line-side system changes. Each transformer also has 5 no-load tap setting with set up the baseline value around which the LTC will either rise or lower. This information is not communicated to a SCADA or other information or control system.

Mohegan Tribal Utility Authority

The Mohegan Tribal Utility Authority (MTUA) has installed an ACS SCADA system on its transmission, subtransmission and distribution infrastructure. There is percentage differential setpoints programmed to monitor various voltage fluctuation throughout the facilities. The levels are adjustable, accuracy up to 1000th of a second and produce an operational / emergency high & low alarm.

Jewett City Department of Public Utilities

Jewett City Department of Public Utilities ("Jewett City") has the equipment to monitor and control voltage fluctuations. Jewett City operates and maintains a single 7.5Mva substation which is fed from a 23kV CL&P line. Incoming power is monitored by a voltage chart recorder, voltmeter and ammeter. Jewett City maintains (3) 4.16kV distribution circuits which are monitored by voltmeters and ammeters. Each circuit also has a dedicated load tap changer voltage regulator. Voltage adjustments are automatic and are set up around a baseline value. There is no SCADA system in place at this time.

Jewett City has the following protection devices in service:

Incoming side:
Over voltage relay

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Directional over current relay
Over current relays
Ground over current relay
Ground differential relay

Distribution side:
Feeder over current relays
Recloser relays