CONNECTICUT
MUNICIPAL ELECTRIC
ENERGY COOPERATIVE

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May 11, 2005

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 6, 2005 from the Connecticut Siting Council in conjunction with Docket No. F-2005 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 6, 2005

Q-CSC-1-CMEEC How does the Connecticut Municipal Electric Energy Cooperative (CMEEC) compute seasonal claimed capability?

A-CSC-1-CMEEC CMEEC computes seasonal claimed capability in accordance with New England Power Pool (NEPOOL) Market Rule 1 and NEPOOL Manual 20 Installed Capacity.

Witness Responsible: Charles J. Carpinella

RESPONSE TO CSC DATA REQUEST Dated April 6, 2005

Q-CSC-2-CMEEC

In Table I of CMEEC's 2005 Forecast of Electric Loads and Resources (CMEEC Forecast), are the System Energy Requirements and Summer Coincident Peak Demand columns weather normalized? If no, provide these two columns as weather normalized.

A-CSC-2-CMEEC

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.

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Q-CSC-3-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)? Explain.

A-CSC-3-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-4-CMEEC Identify the generating facilities listed in CMEEC Forecast that have black start capability, if any.

A-CSC-4-CMEEC None of the generating facilities listed in Table V in CMEEC's 2005 Forecast of Loads and Resources (2005 CMEEC Forecast) have black start capability.

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Q-CSC-5-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-5-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.

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Q-CSC-6-CMEEC In the April ISO-New England Seasonal Claimed Capability Report, the Norwich Tenth Street plant has a winter rating of 1.23 MW. Does CMEEC agree with that number?

A-CSC-6-CMEEC Yes, CMEEC agrees that in the April ISO-New England Seasonal Claimed Capability Report, the Norwich Tenth Street plant had a winter rating of 1.23 MW. Please be aware that this value fluctuates from month to month depending on the amount of actual generation in any given month for any of the hydro generation units.