



February 26, 2016

Mr. Robert Stein, Chairman  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Dear Chairman Stein:

The Connecticut Municipal Electric Energy Cooperative (CMEEC) herewith submits an original and twenty (20) copies to the Connecticut Siting Council of our Forecast of Electric Loads and Resources for 2016-2025 Report as required by Section 16-50R of the Connecticut General Statutes.

Should you require any additional information, please advise us.

Very truly yours,

CONNECTICUT MUNICIPAL ELECTRIC  
ENERGY COOPERATIVE



Drew Rankin  
Chief Executive Officer

CJC/

Enclosures

cc: Service List

**FORECAST OF ELECTRIC LOADS AND RESOURCES 2016-2025**

**March 1, 2016**

**Connecticut Municipal Electric Energy Cooperative  
30 Stott Avenue  
Norwich, Connecticut 06360**

## **Introduction and Background**

The Connecticut Municipal Electric Energy Cooperative ("CMEEEC") is a not-for-profit joint-action power supply agency empowered to finance, plan, acquire, construct, operate, repair, extend, or improve electric generation and transmission facilities and sell power at wholesale to serve the needs of the Connecticut municipal electric utilities (MEUs) and other electric utility systems.

The CMEEEC Member utilities (collectively, the "Members") are (1) Norwalk's Third Taxing District Electrical Department ("East Norwalk"), (2) Groton Utilities ("Groton"), (3) Jewett City Department of Public Utilities ("Jewett City"), (4) Norwich Public Utilities ("Norwich"), and (5) South Norwalk Electric & Water ("South Norwalk"). Bozrah Power & Light Company ("Bozrah") and the Mohegan Tribal Utility Authority ("MTUA") are also full-requirements wholesale customers of CMEEEC. The loads of the CMEEEC Members, Bozrah and the MTUA are represented on an integrated, single-system basis for purposes of ISO-New England ("ISO-NE") operations.

The joint power supply established by CMEEEC is intended to meet the diversified power supply needs of all of CMEEEC's Members and customers. CMEEEC's mission is to meet these requirements reliably and at the lowest possible cost over the long-term. Today, CMEEEC's portfolio consists of CMEEEC and member-owned generation, unit entitlement contracts, long-term contracts, intermediate and short-term system contracts, financial instruments, and ISO New England (ISO-NE) market purchases.

<sup>1</sup>The enclosed forecast for 2016-2025 shows minimal load growth for CMEEEC's Members/customers. CMEEEC's projections for the 2016-2025 period reflect an average compound growth rate of 0.94% for total system energy requirements and -0.14% for annual summer coincident peak demand. Last year (2015) showed decreases in total energy purchases for all of CMEEEC's Members and customers in the Large General Service category. In the 2016-2025 load forecast the residential sector of CMEEEC's Members/customers is anticipated to grow slightly while the remaining sectors, except as noted below, reflects an overall flat forecast. Power usage from the biological science clusters has also slowed significantly. Growth attributable to the area Casinos slowed during the 2011-2015 time period. There is still some uncertainty about the pace of development at these facilities and related regional economic impacts. However, the 2016-2025 forecast projects significant increases in three areas. A new Norwalk based data center came on-line in December 2013. The new data center still has the potential for significant load growth and is fed by the newly constructed Fitch Street substation located in East Norwalk. In addition, a new hotel is being built at the Mohegan Tribal Utility Authority and a new mall is being planned for in South Norwalk which could lead to significant load increases for these two entities.

Future growth is further modulated by reductions in usage rates resulting from the conservation programs planned and implemented by the municipal electric distribution utilities (MEU). These programs remain very active and are popular with all sectors of MEU end users. The long-term

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forecasts of electric demand and the energy of the CMEEC Member and customer utilities are the primary tools used to ascertain future CMEEC power needs. When the primary individual forecasts are combined, the result is a CMEEC system-wide energy, peak demand and capacity requirements forecast, which is filed with the Council herein and also used to make power supply decisions.

The MEUs maintain the State's municipal electric systems delivery capabilities during the forecast period 2016-2025 appear strong and poised for growth. The new Fitch Substation in East Norwalk is expected to meet the needs of that community for several decades and the similar SNEW South Norwalk 115 kV to 13.8 kV SONO substation which opened in 2014 likewise sets the stage for meeting load growth with improved reliability over the current 27.6 kV supply system. Corresponding with this major supply route change SNEW has upgraded its distribution system to 13.8 kV, reducing losses and improving distribution level reliability. With respect to grid related issues, CMEEC participates in NEPOOL studies which include delivery capability review for MEU points of receipt. A current such study is the Southeastern Connecticut Area Study which looks out to 2022.

### **Conservation and Load Management**

The MEU'S continued delivery of cost effective Conservation and Load Management ("C&LM") programs to customers in 2015. CMEEC, on behalf of the MEUs, worked with the members of the Energy Efficiency Board ("EEB") pursuant to Conn. Gen. Stat. Section 7-233y, in implementing additional programs to reduce customer electricity usage and peak demand. The C&LM Plan measures the overall impact of electricity conservation programs on customer energy usage and peak demand.

In 2015, the MEUs provided a fully implemented portfolio of energy-efficiency initiatives, including:

- Performing comprehensive energy audits and weatherization of 1,185 homes;
- Distributing over 47,500 compact fluorescent and LED lamps, bringing the total to over 1,500,000 since program inception;
- Promotion/purchase of over 56 ENERGY STAR appliances through the mail-In Appliance Rebate Program;
- Participation in the Cool Choice HVAC Rebate program by more than 119 residential and commercial customers; and
- Providing energy-efficiency assessments and incentives for nearly 143 commercial and industrial customer projects (e.g. custom equipment replacement, lighting retrofits).

CL&M efforts during 2015 resulted in a 2.3 MW in coincident summer peak demand reduction and more than 6.4 GWh in annual energy savings, at a cost of about 3 cents per lifetime kWh. MEU commercial and industrial customers received over \$1.3 million in incentives for installing energy-efficiency measures in their facilities. Residential customers received over \$345,000 in incentives. These efforts will continue through 2016 and beyond.

The following material and tables are in the specific itemized requirements of Sec.16-50r of the General Statutes and provided on behalf of CMEEC and its Members and customers. Items (1) through (8) listed below correspond to the numbers included in that section.

- (1) Provide a tabulation of estimated peak loads, resources and margins for each year (of the forecast period):

Table I shows forecasted energy and demand for the period as well as data on summer and winter peak demands. Table II reflects the forecasted annual peak demands for the 2016-2025 periods for both the 50/50 forecast as well as the 90/10 forecast.

CMEEC is a participant in ISO New England and buys its power through the ISO New England market system. CMEEC also maintains power and related resources delivered to the Markets. Market resources over the forecast period include NYPA and Hydro Quebec ICAP credits (20 - 30 MW), Conservation & Load Response ICAP Credits (5 MW), A.L. Pierce (75 – 95 MW), Norwich Jet (15 - 18 MW). CMEEC maintains distributed generator resources (40-50 MW) to help attain local reliability goals.

CMEEC has contracted for 15 MW of solar power through the development of community solar gardens located in the service territories of several CMEEC MEU's together with 1.5 MW of storage battery technology to maximize the utilization of solar energy for the MEU customers. These resources will further enhance and strengthen the resiliency of existing CMEEC grid infrastructure. The resources have received the required permitting, are under construction, and will enter into service starting in the late spring timeframe of 2016.

- (2) Provide data on energy use and peak loads for the five preceding calendar years:

Historical energy use and peak loads for the five-member CMEEC system, plus Bozrah and the Mohegan Tribal Utility Authority (MTUA), are provided in Table III.

- (3) Provide a list of existing generating facilities in service:

Generating facilities owned by CMEEC and CMEEC Members are listed in Table IV. The mix of existing generating facilities and system power agreements that serve the CMEEC system are listed in Table V. Anticipated retirement dates of CMEEC's Members' generating facilities are listed in Table VI.

- (4) Provide a list of scheduled generating facilities for which property has been acquired, for which certificates have been issued, and for which certificate applications have been filed:

CMEEC executed a lease in 2014 with the NAVY for use of an approximately 1 acre federally owned site located at the Naval Submarine Base New London, in Groton. CMEEC is developing an 8 MW peaking plant on this site. Air permit filings with DEEP are pending.

- (5) Provide a list of planned generating units at plant locations for which property has been acquired or at plant locations not yet acquired that will be needed to provide estimated additional electric requirements:

There are no planned CMEEC owned generating units.

- (6) Provide a list of planned transmission lines on which proposed route reviews are being undertaken or for which certificate applications have already been filed.

There are no planned transmission lines.

- (7) Provide a description of the steps taken to upgrade existing facilities and to eliminate overhead transmission and distribution lines in accordance with the regulations and standards described in Section 16-50t.

Several projects are underway in CMEEC Member service territories and Bozrah, which are summarized below.

**South Norwalk (SNEW)** has completed (except for non-functional items such as landscaping, cleanup outside the station, paving and a final report to the Siting Council) and placed into service a new 115 kV to 13.8kV distribution substation connected to a new Eversource PTF station. The new SNEW station replaced two unreliable 27.6 kV sub-transmission feeders owned by the former Connecticut Light & Power (CL&P). The new distribution substation, feeder breakers and switch gear replaces a 70 year old 27.6 kV to 13.8 kV and a 27.6 kV to 4.16 kV substation, including all existing station switchgear. The old station is out of service and has been decommissioned. The new station necessitated the conversion of SNEW's existing 4.16 kV overhead distribution system to 13.8 kV. The purpose of the new station was to increase reliability and efficiency. SNEW has re-sized all distribution transformers. SNEW is currently replacing existing distribution system primary switches, balancing loads on the distribution system and adding additional distribution system protection equipment to further improve system reliability. The new station provides additional capacity for future system load expansion.

**East Norwalk (TTD)** put in service a new PTF level substation in December 2013 (Fitch 47R) which is the subject of CSC DN 426. The project has been completed in accordance with the CT Siting Council and the City of Norwalk Planning and Zoning Commission. This project addresses reliability and replaces aging portions of the distribution system which posed unacceptable risks to TTD. In addition, it allows for TTD to satisfy additional load growth within their system and eliminates two underground supply cables owned by Eversource which were originally installed in 1946. These cables have been repaired continuously as a result of system faults. TTD is currently developing a 5-Phase SCADA system which will monitor and control TTD's transmission and distribution substations. This system will ensure compliance with NERC/NE-ISO regulations.

**Norwich Department of Public Utilities (NPU)** continues to upgrade its 4.8kV distribution system to 13.8kV to increase efficiency by reducing system losses and to improve reliability through better voltage conditions and newer equipment. Over the last 10 years, NPU has upgraded about 50% of its 4.8kV system load and more than 15.0 miles of overhead lines to improve system voltage, capacity, and reliability in affected areas.

All NPU substations, generating stations and several distribution switches are monitored and controlled via Supervisory Control and Data Acquisition (SCADA) system in NPU's control room 24/7. All stations have been moved to NPU's fiber optic network for more reliable communication and monitoring.

NPU completed installation and commissioning of a new control system for our 18MW Gas Turbine Generator. This upgrade increases the reliability and expands the operating life of the generator.

The Greenville Dam and Occum Dam fish passages operated successfully during 2015. NPU continued to work closely with DEEP on fish passages, eel passages, pit tagging program and shad trucking to promote the migration of shad to new spawning grounds. Occum Dam continues to pass American Shad and DEEP determined that the fish passage is currently in compliance with their regulations. NPU's Greenville and Occum Dams are certified by the Low Impact Hydro Institute (LIHI) and continue to accrue renewable energy certificates (RECs).

In 2015, NPU successfully deployed approximately 1,000 electric meters onto its AMI System for a total of 17,000 operational AMI meters. NPU is planning to complete the remaining 3,000 electric meters in 2016.

**Jewett City Department of Public Utilities (JCDPU)** is continuing the upgrading of its distribution network in an intended development of long-range system expansion and as part of this effort, any business or residential expansion would involve underground cable installation. All of JCDPU customers are now served through smart meters.

**Groton Utilities** installed twenty-one (21) underground services in 2015. Groton Utilities' preferred construction method is to place all power distribution facilities underground. Also, in order to improve reliability, thirteen (13) 35 kV aging oil circuit breakers are being replaced with vacuum breakers. Seventeen transmission line poles were replaced on the 115 kV transmission line. Numerous protection relays at various substation locations were replaced with relays that record events in order to analysis power disturbances.

**Bozrah Light and Power's** installed nine (9) underground services in 2015. Bozrah's preferred construction method is to place all power distribution facilities underground. In addition, a mile of bare overhead conductor was replaced with tree retardant cable on Bishop Road in the town of Bozrah.

- (8) For each private power producer having a facility generating more than one (1) megawatt, and from whom CMEEC has purchased electricity during the preceding calendar year, provide a statement including the name, location, size, and type of generating facility, the fuel consumed by the facility, and the by-product of the consumption:

Generally, the customers in CMEEC Members service areas who have generating capacity greater than 1 MW retain the power for ongoing internal utilization and/or load management. Table VII summarizes major on-site generation capability at customer locations within the municipal service territories. CMEEC does not have formal arrangements in place to purchase power from those facilities at this time. Many of these customers, however, are asked to generate power and/or shed load during high load or emergency conditions as defined in NEPOOL's Operating Procedure #4.

TABLE I

CONNECTICUT MUNICIPAL ELECTRIC ENERGY COOPERATIVE  
10-YEAR FORECAST OF RETAIL SALES BY CUSTOMER CLASS, ENERGY REQUIREMENTS AND PEAK DEMAND

2016-2025

YEAR	Residential Service		Small General Service		Medium General Service		Large General Service		Other Service		Total Retail Sales		Mohegan Tribal Authority		Cervalls		Hydro Gener.		Subtrans. & Distri. Losses		Systems Energy Requirements Met by CMEEC		Historical CMEEC Summer Coincident Demand		Historical CMEEC Winter Peak Demand		Load Factor %
	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	MWh	\$ales	
1992	270,933	83,233	156,951	501,767	26,497	1,039,381	0	0	0	11,292	42,485	1,070,574	267,49	266.51	267.49	266.51	45.6	45.6	45.6	45.6	1,070,574	267,49	266.51	267.49	266.51	45.6	
1993	279,044	82,034	164,872	498,732	28,118	1,052,800	0	0	0	11,372	47,869	1,089,297	286,08	263.33	286.08	263.33	43.5	43.5	43.5	43.5	1,089,297	286,08	263.33	286.08	263.33	43.5	
1994	284,347	81,308	168,083	492,743	28,891	1,055,372	0	0	0	6,524	52,708	1,101,556	296,86	281.06	296.86	281.06	42.4	42.4	42.4	42.4	1,101,556	296,86	281.06	296.86	281.06	42.4	
1995	278,782	80,182	155,144	495,714	30,414	1,098,236	0	0	0	3,845	60,545	1,094,936	311.63	296.47	311.63	296.47	40.1	40.1	40.1	40.1	1,094,936	311.63	296.47	296.47	296.47	40.1	
1996	303,563	83,822	158,786	557,436	32,460	1,136,067	15,491	0	3,774	48,836	1,196,620	290.17	48.836	290.17	48.836	42.1	42.1	42.1	42.1	1,196,620	290.17	48.836	290.17	48.836	42.1		
1997	297,759	82,504	152,531	516,056	32,433	1,081,283	45,138	0	3,216	54,551	1,177,756	319.54	264.34	319.54	264.34	42.1	42.1	42.1	42.1	1,177,756	319.54	264.34	319.54	264.34	42.1		
1998	296,010	82,528	150,523	517,951	33,002	1,080,404	48,027	0	3,524	44,208	1,169,125	309.16	263.73	309.16	263.73	43.2	43.2	43.2	43.2	1,169,125	309.16	263.73	309.16	263.73	43.2		
1999	307,293	82,983	186,571	474,411	35,359	1,086,617	48,036	0	2,111	44,343	1,186,885	322.39	286.24	322.39	286.24	42.0	42.0	42.0	42.0	1,186,885	322.39	286.24	322.39	286.24	42.0		
2000	312,981	82,434	228,141	436,367	37,447	1,097,370	61,694	0	2,825	48,100	1,204,339	200.96	283.57	200.96	283.57	48.3	48.3	48.3	48.3	1,204,339	200.96	283.57	200.96	283.57	48.3		
2001	318,599	85,694	232,129	428,910	38,749	1,104,081	101,918	0	2,118	45,295	1,249,176	251.94	178.94	251.94	178.94	56.6	56.6	56.6	56.6	1,249,176	251.94	178.94	251.94	178.94	56.6		
2002	325,566	83,709	237,734	424,952	42,857	1,114,818	147,846	0	2,173	50,885	1,311,376	265.06	213.28	265.06	213.28	61.6	61.6	61.6	61.6	1,311,376	265.06	213.28	265.06	213.28	61.6		
2003	343,612	85,729	243,644	435,590	44,795	1,153,370	150,546	0	3,163	46,546	1,347,347	249.78	221.29	249.78	221.29	61.6	61.6	61.6	61.6	1,347,347	249.78	221.29	249.78	221.29	61.6		
2004	343,537	90,090	246,356	451,268	46,338	1,177,589	151,435	0	2,315	48,025	1,374,734	245.13	239.53	245.13	239.53	63.8	63.8	63.8	63.8	1,374,734	245.13	239.53	245.13	239.53	63.8		
2005	359,170	96,321	244,023	445,991	48,748	1,194,533	149,229	0	689	47,883	1,390,976	256.79	223.78	256.79	223.78	61.8	61.8	61.8	61.8	1,390,976	256.79	223.78	256.79	223.78	61.8		
2006	338,594	88,048	252,747	441,910	44,077	1,165,376	151,334	0	3,138	44,861	1,358,433	280.02	215.17	280.02	215.17	55.4	55.4	55.4	55.4	1,358,433	280.02	215.17	280.02	215.17	55.4		
2007	345,754	90,908	258,818	437,327	45,652	1,178,439	151,654	0	2,075	47,611	1,375,629	255.36	224.46	255.36	224.46	61.5	61.5	61.5	61.5	1,375,629	255.36	224.46	255.36	224.46	61.5		
2008	343,288	90,180	259,502	414,249	46,377	1,153,596	152,534	0	8,999	45,787	1,343,518	260.31	217.21	260.31	217.21	58.8	58.8	58.8	58.8	1,343,518	260.31	217.21	260.31	217.21	58.8		
2009	333,823	85,341	246,237	329,781	47,340	1,042,522	151,387	0	8,969	40,435	1,225,385	243.97	208.29	243.97	208.29	57.3	57.3	57.3	57.3	1,225,385	243.97	208.29	243.97	208.29	57.3		
2010	343,851	85,883	256,362	315,177	49,041	1,050,314	153,546	0	5,654	36,388	1,294,574	236.15	195.94	236.15	195.94	59.7	59.7	59.7	59.7	1,294,574	236.15	195.94	236.15	195.94	59.7		
2011	337,965	85,213	255,747	310,160	48,283	1,037,368	151,640	0	7,952	34,843	1,215,919	238.00	192.74	238.00	192.74	58.3	58.3	58.3	58.3	1,215,919	238.00	192.74	238.00	192.74	58.3		
2012	325,361	82,010	252,183	297,641	45,171	1,002,366	149,769	0	5,066	40,263	1,187,332	240.82	189.86	240.82	189.86	56.1	56.1	56.1	56.1	1,187,332	240.82	189.86	240.82	189.86	56.1		
2013	340,339	85,178	257,188	303,278	42,137	1,028,044	143,729	0	6,545	31,852	1,197,080	238.28	194.78	238.28	194.78	57.3	57.3	57.3	57.3	1,197,080	238.28	194.78	238.28	194.78	57.3		
2014	338,532	85,126	253,920	298,784	40,358	1,016,720	137,693	886	4,377	24,954	1,341,126	248.15	222.91	248.15	222.91	61.7	61.7	61.7	61.7	1,341,126	248.15	222.91	248.15	222.91	61.7		
2015	338,710	84,612	250,568	282,858	39,749	996,497	134,318	1,531	2,911	33,235	1,326,806	219.86	206.992	219.86	206.992	68.9	68.9	68.9	68.9	1,326,806	219.86	206.992	219.86	206.992	68.9		
2016	343,899	79,236	257,502	286,421	36,931	1,003,988	143,030	4,188	3,000	41,063	1,355,069	228.06	201.93	228.06	201.93	67.6	67.6	67.6	67.6	1,355,069	228.06	201.93	228.06	201.93	67.6		
2017	343,767	79,961	257,529	286,701	39,997	1,007,955	169,600	4,782	3,000	43,920	1,389,056	230.78	205.99	230.78	205.99	68.7	68.7	68.7	68.7	1,389,056	230.78	205.99	230.78	205.99	68.7		
2018	345,352	79,896	258,560	297,764	40,276	1,021,848	169,600	16,782	3,000	45,692	1,414,722	232.08	210.44	232.08	210.44	69.6	69.6	69.6	69.6	1,414,722	232.08	210.44	232.08	210.44	69.6		
2019	346,014	79,764	259,381	331,050	40,491	1,056,699	169,600	28,782	3,000	43,489	1,461,371	242.63	214.54	242.63	214.54	68.8	68.8	68.8	68.8	1,461,371	242.63	214.54	242.63	214.54	68.8		
2020	344,023	79,785	260,558	331,573	40,748	1,056,687	169,927	28,782	3,000	43,629	1,461,832	243.21	214.95	243.21	214.95	68.4	68.4	68.4	68.4	1,461,832	243.21	214.95	243.21	214.95	68.4		
2021	342,578	79,509	260,790	332,011	40,885	1,055,866	169,600	28,782	3,000	43,246	1,460,294	243.38	214.65	243.38	214.65	68.5	68.5	68.5	68.5	1,460,294	243.38	214.65	243.38	214.65	68.5		
2022	343,916	79,520	261,693	332,498	41,069	1,058,695	169,600	28,782	3,000	43,026	1,462,903	243.74	214.80	243.74	214.80	68.5	68.5	68.5	68.5	1,462,903	243.74	214.80	243.74	214.80	68.5		
2023	345,612	79,620	262,694	332,994	41,279	1,062,198	169,600	28,782	3,000	42,782	1,466,162	244.26	215.08	244.26	215.08	68.5	68.5	68.5	68.5	1,466,162	244.26	215.08	244.26	215.08	68.5		
2024	348,733	79,871	264,076	333,522	41,509	1,067,711	169,927	28,782	3,000	42,733	1,471,989	244.71	215.52	244.71	215.52	68.5	68.5	68.5	68.5	1,471,989	244.71	215.52	244.71	215.52	68.5		
2025	348,606	79,769	264,472	333,984	41,630	1,068,461	169,600	28,782	3,000	42,308	1,471,951	245.24	215.54	245.24	215.54	68.3	68.3	68.3	68.3	1,471,951	245.24	215.54	245.24	215.54	68.3		
% Increase 2015-2025	0.30	-0.64	0.39	1.11	0.28	0.49	0.28	0.28	0.28	0.28	0.49	0.28	0.28	0.28	0.28	0.49	0.28	0.28	0.28	0.28	0.49	0.28	0.28	0.28	0.28	0.28	0.28

[1] Totals are the sum of kilowatt-hours rounded to the nearest megawatt-hour (MWh).

[2] The forecasted CMEEC coincident peak demands were computed by summing the Groton, Norwich (inclusive of the contribution of Norwich's Second Street and Tenth Street hydro units), Jewett City, East Norwich, South Norwich and Bozrah noncoincident peak demands and multiplying by an average historical coincidence factor.

[3] The historical 1994 CMEEC winter and summer peak demand numbers reflect Bozrah as if they were part of CMEEC at that time. The historical 1995 CMEEC winter and summer peak demand numbers reflect Bozrah as if they were part of CMEEC at that time.

[4] The historical CMEEC coincident peak demands are net of the large interruptible customer AIRGAS (Bozrah). The forecasted CMEEC coincident peak demands were computed by summing all of the noncoincident peaks for each of CMEEC's Members/Participants including the interruptible customer and multiplying by an average historical coincidence factor.

TABLE II

March 2016

**CONNECTICUT MUNICIPAL ELECTRIC ENERGY COOPERATIVE (CMEEC)**

**SUMMARY OF CMEEC PEAK FORECASTS (1)**

<u>Year</u>	<u>50/50 Peak Forecast</u>	<u>90/10 Peak Forecast</u>
2016	228.06	244.43
2017	230.78	247.35
2018	232.08	248.75
2019	242.63	260.05
2020	243.21	260.68
2021	243.38	260.87
2022	243.74	261.25
2023	244.26	261.81
2024	244.71	262.30
2025	245.24	262.88

(1) CMEEC developed its extreme weather forecast peak values by using the CMEEC summer peak forecast and applying an extreme weather scenario to arrive at the 90/10 forecast.

TABLE IV

**CONNECTICUT MUNICIPAL ELECTRIC ENERGY COOPERATIVE (CMEEC)**

**EXISTING GENERATION FACILITIES OWNED BY  
CMEEC AND ITS MEMBERS**

As of March 1, 2016

<u>Generating Facility</u>	<u>Winter Rating (MW)</u>	<u>Summer Rating (MW)</u>
Norwich Combustion Turbine (Oil-Fired) [1]	18.800	15.255
Pierce Generating Unit (Oil/Gas-Fired) [2]	97.000	77.500
Norwich Waste Water Treatment (Oil-Fired)	2.00	2.00
Norden 1 (Oil-Fired)	2.00	2.00
Norden 2 (Oil-Fired)	2.00	2.00
Norden 3 (Oil-Fired)	2.00	2.00
Norwich Second Street (Hydro)	[3]	[3]
Norwich Tenth Street (Hydro)	[3]	[3]
Norwich Occum (Hydro)	[3]	[3]

[1] Represents CMEEC current joint-ownership share. The full capability of the Norwich combustion turbine unit is under contract to CMEEC.

[2] Represents CMEEC current sole ownership share. The full capability of the Pierce generating unit is under contract to CMEEC.

[3] Winter and summer ratings are based on average river flow conditions. The nameplate rating for the Second Street hydro station is 0.95 MW. The nameplate rating for the Tenth Street hydro station is 1.00 MW. The nameplate rating for the Occum hydro station is 0.80 MW. These hydro units remain a resource of the Norwich Department of Public Utilities. The generations of these hydro units are used by Norwich to directly offset Norwich load.

TABLE V

As of March 1, 2016

**MIX OF EXISTING GENERATION - CMEEC RESOURCES**

<u>Unit Designation</u>	<u>In-Service Date</u>	<u>Net Winter Capacity (In MW) [1]</u>	<u>CMEEC Share (MW)</u>	<u>Net Summer Capacity (In MW) [2]</u>	<u>CMEEC Share (MW)</u>	<u>CMEEC Percent of Unit (%)</u>
<b><u>Long-Term System &amp; Asset Contracts [3]</u></b>						
Base System Purchase		71.00	71.00	74.00	74.00	
On-Peak System Purchase		15.00	15.00	12.00	12.00	
<b>Total System Contracts</b>		<b>86.00</b>	<b>86.00</b>	<b>86.00</b>	<b>86.00</b>	
<b><u>Municipal Generation</u></b>						
Norwich Combustion Turbine	1972	18.80	18.80	15.25	15.25	100.00
Norwich Waste Water Treatment	2008	2.00	2.00	2.00	2.00	100.00
Pierce Generation Unit	2007	97.00	97.00	77.50	77.50	100.00
Norden 1	2009	2.00	2.00	2.00	2.00	100.00
Norden 2	2009	2.00	2.00	2.00	2.00	100.00
Norden 3	2009	2.00	2.00	2.00	2.00	100.00
<b>Total Municipal Generation</b>		<b>123.80</b>	<b>123.80</b>	<b>100.75</b>	<b>100.75</b>	
<b>TOTAL CMEEC CAPACITY RESOURCES</b>			<b>209.80</b>		<b>186.75</b>	
<b><u>Other Resources</u></b>						
Community Solar Gardens			10.00		10.00	NA
NYPA Hydro (Firm & Peaking) [4]			13.20		13.20	NA
Short-Term Purchases [5]			Varies		Varies	NA
CMEEC's Microgen Units [6]			50.00		50.00	

[1] Represents NEPOOL Winter Maximum Claimed Capability.

[2] Represents NEPOOL Summer Maximum Claimed Capability.

[3] System Purchases, Contract Purchases & Unit Entitlement Purchases from several counterparties.

[4] Represents maximum hourly contract deliveries to CMEEC. New York Power Authority (NYPA) hydro purchases began July 1, 1985. Energy contributions from NYPA are considered to be firm contracts and used to reduce electric requirements thereby reducing CMEEC Capability Responsibility in NEPOOL.

[5] The MW amounts shown for Short-Term Purchases vary from month to month from 0 MW to 25 MW through December 2065.

[6] Represents the CMEEC MicroGen Units which are currently commercially operating. Seven (7) 2.50 MW units are located in Groton, two (2) 2.50 MW units are located in Norwich, one (1) 2.50 MW unit is located in Jewett City, two (2) 2.50 MW units are located in Lebanon, CT, four (4) 2.50 MW units are located at the Mohegan Tribal Utility

Authority and (4) 2.5 MW units located at Backus Hospital in Norwich. These resources will be used for demand reduction purposes and are not anticipated to be enrolled in the ISO New England markets.

TABLE VI

CONNECTICUT MUNICIPAL ELECTRIC ENERGY COOPERATIVE

March 2016

**Anticipated Unit Retirement Dates**

	<u>Retirement Date</u>
<b><u>Conventional Hydro</u></b>	
Norwich Tenth Street Hydro	Not Scheduled
Norwich Second Street Hydro	Not Scheduled
Norwich Occum Hydro	Not Scheduled
<b><u>Peaking</u></b>	
Norwich Combustion Turbine	Not Scheduled
Pierce Generating Unit	Not Scheduled
Norwich Waste Water Treatment	Not Scheduled
Norden 1	Not Scheduled
Norden 2	Not Scheduled
Norden 3	Not Scheduled

Table VII

**Connecticut Municipal Electric Energy Cooperative (CMEEC)**

**COGENERATION & SMALL POWER PRODUCTION FACILITIES  
GREATER THAN 1 MW IN TOTAL SIZE [1]**

March 2016

<u>Facility Name</u>	<u>Facility Type</u>	<u>Facility Location</u>	<u>No. Of Units</u>	<u>Prime Mover</u>	<u>Type Fuel</u>	<u>Summer &amp; Winter Capacity</u>	<u>Years Installed</u>
Pfizer, Inc.	Cogeneration	Groton CT	4	Steam Turbine	Turbine Fuel	35,500 kW	1950, 1993 2001 & 2009
U.S. Naval Sub Base	Cogeneration	Groton CT	1	Steam Turbine	Duel Fuel	5,000 kW	1996
			2	Diesel Engine	#2 oil	750 kW [2]	2015

[1] The customer retains power from each of these facilities.

[2] This diesel generator is used to provide black start capability.