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November 3, 2014

#### **VIA HAND-DELIVERY**

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

RE: Docket No. 192—An Application By Towantic Energy, LLC For a Certificate of Environmental Compatibility and Public Need for the Construction, Maintenance and Operation of a Proposed Electric Generating Facility Located North of the Prokop Road and Towantic Hill Road Intersection in the Town of Oxford, Connecticut--Petition of CPV Towantic, LLC (f.k.a. Towantic Energy, LLC) to Reopen and Modify the Decision in Docket No. 192 Due to Changed Conditions

Dear Chairman Stein:

Enclosed are an original and fifteen (15) copies of the Petition of CPV Towantic, LLC (f.k.a. Towantic Energy, LLC) to Reopen and Modify the Decision and Order in Docket No. 192 Due to Changed Conditions (the "Petition"). Also enclosed is one (1) set of compact disks with the Petition and accompanying exhibits. In the Petition, CPV Towantic, LLC asks the Connecticut Siting Council ("Council") to reopen Docket No. 192 and to modify the Decision the Council issued in that docket on June 23, 1999 pursuant to Conn. Gen. Stat. §4-181a(b).

Please contact Franca L. DeRosa, Esq. or me at (860) 509-6500 with any questions.

Sincerely,

Philip M. Small

Counsel for CPV Towantic, LLC

PMS/jmb Enclosures

cc: Service List, Docket No. 192

61800968 v1-022345/0005

# STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

AN APPLICATION BY TOWANTIC ENERGY, LLC

DOCKET NO. 192

NOVEMBER 3, 2014

FOR A CERTIFICATE OF ENVIRONMENTAL

COMPATIBILITY AND PUBLIC NEED FOR THE

CONSTRUCTION, MAINTENANCE AND

OPERATION OF A PROPOSED ELECTRIC

GENERATING FACILITY LOCATED NORTH OF

THE PROKOP ROAD AND TOWANTIC HILL ROAD

INTERSECTION IN THE TOWN OF OXFORD,

**CONNECTICUT** 

PETITION OF CPV TOWANTIC, LLC (f.k.a. TOWANTIC ENERGY, LLC) TO REOPEN

### I. INTRODUCTION

AND MODIFY THE DECISION IN DOCKET NO. 192 DUE TO CHANGED CONDITIONS

Pursuant to Conn. Gen. Stat. §4-181a(b), CPV Towantic, LLC ("Towantic") hereby petitions the Connecticut Siting Council (the "Council") to reopen and modify, based on changed conditions, its June 23, 1999 Decision in Docket No. 192. The Decision consists collectively of the Findings of Fact, Opinion, Decision and Order, and Certificate of Environmental Compatibility and Public Need (the "Certificate") authorizing the construction, operation, and maintenance of a net nameplate 512 megawatts ("MW") dual-fuel combined cycle electric generating facility (the "Facility"). Based on the changed conditions discussed in this Petition, Towantic respectfully requests that the Council modify the Decision to authorize certain modifications to the Facility that are necessary and appropriate to address fundamental changes in the electric and natural gas markets, advances in combustion turbine technology, and the issuance of more stringent environmental requirements since 1999.

As described in more detail in Section IV of this Petition, Towantic proposes to upgrade the Facility's two combustion turbines from the GE 7FA.03 model to the newer, more efficient, lower heat rate, GE 7HA.01 model, add duct firing capability, and make related changes in the

Facility. These changes will increase the net nameplate electrical output of the Facility from 512 MW to 785 MW. Additionally, Towantic proposes to adjust the Facility site plan to minimize visual impacts; accommodate changes in stormwater regulations; address certain Federal Aviation Administration ("FAA") considerations; and install an updated, lower profile, air cooled condenser ("ACC").

Importantly, the Facility's primary features will remain unchanged. It will continue to be a combined cycle plant with a similar footprint utilizing air cooling technology and having dual fuel capability. The proposed changes will enable the Facility to be financed and constructed, which would be unlikely without the proposed changes. With the proposed changes, the Facility will operate more efficiently than the approved Facility while providing the benefit of clean, reliable, low-cost energy, and needed electric capacity to Connecticut and the New England region.

As discussed in detail below and in the exhibits to this Petition, fundamental changes in combustion turbine technology, the electric, natural gas, and financial markets, the regulation of those markets, and environmental regulation have occurred: since 1999 when the Council approved the Facility; since 2007 when the Council last considered changed conditions regarding the Facility; and even since 2010 when the Council last granted an extension to the construction deadline for the approved Facility. These changes include the following:

- The creation and evolution of the New England wholesale electric market, including recent significant changes to the design of the ISO New England ("ISO-NE") Forward Capacity Market ("FCM");
- The imminent need for new electric capacity in New England and the need to procure that capacity through market mechanisms;

- Significant advances in combustion turbine technology that substantially increase efficiency, lower emission rates, and provide additional operating flexibility;
- Changes in the regulation of wholesale and retail electric markets;
- Changes in natural gas supply, transportation infrastructure and pricing;
- Increasingly stringent environmental regulation of electric generating facilities,
   including new and emerging regulations limiting carbon dioxide ("CO<sub>2</sub>") emissions;
   and
- Changes in financial market requirements for obtaining project financing for electric generating facilities.

These fundamental changes since 1999 have had a profound effect both on the existing New England electric generating fleet and on the ability to permit, finance, and construct new electric generating facilities in New England. As demonstrated below, these changes collectively justify the modifications of the Decision requested by Towantic in this Petition.

For the reasons discussed in this Petition, Towantic hereby respectfully requests that the Council: (i) reopen Docket No. 192; (ii) find that changed conditions exist that justify modification of the Decision; (iii) modify the Decision to authorize Towantic to install more advanced combustion turbines, add duct firing, upgrade Facility equipment, and increase the electric output of the Facility; (iv) adjust the Facility layout; and (v) extend the construction deadline date from June 1, 2016 to June 1, 2019.

#### II. PRIOR COUNCIL PROCEEDINGS

On June 23, 1999, the Council issued the Decision authorizing the construction, operation and maintenance of the Facility. Notably, in its Findings of Fact, the Council found that "Connecticut is expected to need [additional capacity] to maintain reliability of the state's bulk

power system . . . . " Findings of Fact, ¶ 13. Further, the Council determined that the Facility "would help reduce dependence on large nuclear and older, more polluting fossil-fueled generators . . . and reduce certain air emissions compared to existing fossil-fueled electric generators." *Id.*, ¶ 15. An appeal from this Decision was dismissed by the Superior Court. *Citizens for the Defense of Oxford v. Connecticut Siting Council*, 2000 WL 1785118 (Conn. Superior Ct. Nov. 14, 2000).

On March 1, 2001, the Council issued a Decision ("2001 Decision") approving

Towantic's Development and Management Plan ("D&M Plan") and denying a petition for
declaratory ruling (Petition No. 492) filed by opponents of the Facility. The Council noted that

Towantic had "compacted and shifted some facility components up to 265 feet further south and
lowered the elevation of the facility's footprint . . . ." 2001 Decision, page 1. The Council

further found that the Facility "will displace older plants to improve both state and regional

ambient air quality and the health of Connecticut residents." 2001 Decision, pages 3-4. The

Council's 2001 Decision was appealed unsuccessfully to the Superior Court. *Town of Middlebury v. Connecticut Siting Council, 2002 WL 442383* (Conn. Superior Ct. Feb. 27, 2002).

Since the Council granted the Certificate and approved the D&M Plan, a number of events have transpired that have delayed the completion of the Facility beyond the original construction deadline of May 29, 2005. Opponents appealed the Department of Energy and Environmental Protection's (the "DEEP") June 26, 2003 issuance of the air permits to construct and operate the Facility. Due to the appeal, the Council extended the deadline one year until June 26, 2006, to allow resolution of the appeal. See Council Letter to Alan M. Kosloff, March 9, 2004; see also, Town of Middlebury v. Department of Environmental Protection, 283 Conn. 156 (2007) (affirming Superior Court dismissal of appeal.)

In late 2005, Towantic sought to reopen Docket No. 192 to eliminate the dual-fuel capability requirement and to extend the construction deadline indefinitely to permit Towantic to secure financing. On November 17, 2005, the Council denied Towantic's request but reopened Docket No. 192 under Conn. Gen. Stat. §4-181a(b) on its own motion to consider whether changed conditions warranted a modification of the Certificate. However, in December 2005, Towantic's parent company, Calpine Corp., filed for bankruptcy protection, and the Council's proceeding was suspended by the Bankruptcy Code's automatic stay provision.

The bankruptcy court subsequently granted relief from the automatic stay, and the Council scheduled a hearing in the reopened docket for July 25, 2006. At the same time, the Council extended the deadline 90 days until September 26, 2006, to provide time for the Council to deliberate on the issue of changed conditions. *See Council Letter to Alan M. Kosloff, March 18*, 2006.

On August 22, 2006, Towantic notified the Council that General Electric Energy Financial Services ("GE EFS") was in the process of acquiring Towantic. To allow time for due diligence, Towantic requested and the Council approved a 120-day extension until January 24, 2007. *See Council Letter to Alan M. Kosloff, Sept. 7, 2006.* 

On January 4, 2007, the Council issued Findings of Fact in the reopened Docket No. 192 and rendered an Opinion concluding that "the stated changed conditions, as outlined in the Council's hearing notice, alone or cumulatively, are not sufficient to modify or otherwise reverse the Council's 1999 final decision granting the Certificate." On that date, the Council also rejected Petition No. 802 filed by opponents of the Facility. The rejected petition requested "that the Council rule that its prior extensions were void, and, since the power plant has still not yet been built, the Certificate has expired." *Petition No. 802, Decision, page 1.* An appeal from the

Council's ruling was dismissed by the Superior Court. *Town of Middlebury v. Connecticut Siting Council*, 2007 WL 4106365 (Conn. Superior Ct. Nov. 1, 2007). In light of its opinion on changed conditions and GE EFS's pending acquisition of Towantic, the Council extended the construction deadline four more years until January 24, 2011. *See Council Letter to Alan M. Kosloff, Jan. 22, 2007.* 

On October 20, 2010, Towantic sought a further extension of time to secure financing through a long-term power purchase agreement ("PPA"). In its request, Towantic stated that it had achieved a number of project milestones including completion of environmental permitting, execution of a large generator interconnection agreement, and selection of an engineering, procurement and construction contractor. Further, Towantic stated:

"...we believe it is evident that no project can go forward to construction without a long-term power purchase agreement with one or more of Connecticut utilities. Since 2001, ISO-New England's 'forward capacity market,' which was to provide the revenues on which a project could rely to cover its fixed costs, has collapsed to 10-20% of the levels initially predicted." Towantic Letter to Chairman Caruso, October 20, 2010, page 2.

Towantic further noted that, in reviewing the 2010 Integrated Resource Plan, the Department of Public Utilities Control (now Public Utilities Regulatory Authority) concluded that "no further capacity resources will be required in Connecticut over the near term." *Id.* Notably, this conclusion was made after the capacity and peaking units procurements mandated by Public Act Nos. 05-01 and 07-242, which resulted in over 1,200 MW of projects approved by the Council in Docket No. 225 (Kleen Energy) and in Petition Nos. 831 (Waterbury Generation), 836 (Waterside Power), 843 (GenConn Devon), 875 (GenConn Middletown) and 925 (PSEG New Haven). At the time, Towantic remained "optimistic that PPA opportunities will be available in the reasonably near future" and stated that extending the certificate would allow Towantic to participate in any future procurement process. *Id.*, page 3. Based on this request, the Council

extended the construction deadline under the Certificate until June 1, 2016. *See Council Letter to Vimal Chauhan, Nov. 8, 2010.* 

In 2011, the Council modified its decision in Docket No. 192 in response to the 2010 gas explosion at the Kleen Energy Plant in Middletown. *See Docket NT-2010, Reopening of Final Decisions Pursuant to C.G.S. §4-181a(b)*. The Council, on its own motion, reopened the final decisions of all jurisdictional natural gas-fired power plants, including Docket No. 192, pursuant to Conn. Gen. Stat. §4-181a(b) to consider the recommendations contained in the reports issued by Kleen Energy Plant Investigation Review Panel and the Thomas Commission. *Id.*, Opinion, March 17, 2011, page 5. The Council concluded that "changes in industry practice standards specifically pertaining to the gas pipe cleaning process" constituted changed conditions that justified modification of these decisions, including Docket No. 192. *Id.*, Findings of Fact, ¶ 8. In the Decision and Order, the Council imposed a number of restrictions and requirements on Towantic related to cleaning operations of fuel pipelines and systems, including limitations on the use of flammable gas.

On April 12, 2012, the Council approved the transfer of the Certificate from Towantic Energy, LLC to CPV Towantic, LLC. *See Council Meeting Minutes, April 12, 2012.* 

# III. THE COUNCIL HAS THE STATUTORY AUTHORITY TO REOPEN AND MODIFY ITS DECISION IN DOCKET NO. 192

Pursuant to Conn. Gen. Stat. §4-181a(b), the Council has the authority to reopen Docket No. 192 and to modify its Decision due to changes in conditions that have occurred since the Decision was issued on June 23, 1999. Specifically, "[o]n a showing of changed conditions, the agency may reverse or modify the final decision, at any time, at the request of any person or on the agency's own motion." Conn. Gen. Stat. §4-181a(b). *See Town of Fairfield v. Connecticut Siting Council*, 37 Conn. App. 653, 668 (1995) (Conn. Gen. Stat. §4-181a(b) "gives an agency

broad discretion to reverse or modify a final decision, at any time, on a showing of changed conditions."), reversed on other grounds, 238 Conn. 361 (1996); Sielman v. Connecticut Siting Council, 2004 Conn. Super. LEXIS 119 (Conn. Super. Ct. Jan. 14, 2004).

The Council has previously exercised its authority under Conn. Gen. Stat. §4-181a(b), which "permits an agency to consider whether changed conditions exist, and then consider whether such changes, if any, justify reversing or modifying the Council's original decision . . . "

Docket No. 192, Towantic Energy, LLC, Certificate of Environmental Compatibility and Public Need, Reopening Pursuant to Conn. Gen. Stat. §4-181a(b) Proceeding, Opinion, Jan. 4, 2007, page 1. The Council will find "changed conditions" when there is "new information or facts, identification of any unknown or unforeseen events, or evidence of scientific or technological breakthroughs that were not available at the time of the final decision." Docket No. 190B, Meriden Gas Turbines, LLC, Reopening pursuant to Conn. Gen. Stat. §4-181a(b), Conclusions of Law, Sept. 19, 2013, §1.b.

Consistent with this legal standard, the Council has recently reopened a number of electric generating facilities dockets and revised final decisions under Conn. Gen. Stat. §4-181a(b) based on new facts or when circumstances not previously contemplated by the Council have arisen. See, e.g., Docket No. 190B, Meriden Gas Turbines, LLC, Reopening Pursuant to Conn. Gen. Stat. §4-181a(b), Conclusions of Law, Sept. 19, 2013, §1.b. (finding that the abandonment of the project, proposed modifications to the electric generating equipment, and the reduction in the need for generating capacity in Connecticut constituted changed conditions justifying additional Decision and Order requirements related to project abandonment); Docket No. 187, Milford Power, LLC, Reopening Pursuant to for Conn. Gen. Stat. §4-181a(b) Proceeding, Opinion, April 7, 2009, page 2 (reopening the docket to allow the continued use of potable water because "at the

time of certification, the record did not speak to sources of cooling water for contingency events."); Docket NT-2010, Reopening of Final Decisions, Opinion, March 17, 2011 (finding that the adoption of new industry practices regarding gas pipe cleaning constituted changed conditions warranting prohibitions and limitations on fuel pipeline/system cleanings); Docket No. 187A, Milford Power, LLC, Certificate of Environmental Compatibility and Public Need, Opinion, Dec. 2, 2010 (finding that an increase in natural gas supply, improvements to the electrical transmission grid and construction of other generation facilities were changed conditions supporting removal of dual fuel requirements); Docket No. 225B, Kleen Energy Systems, LLC, Certificate of Environmental Compatibility and Public Need, Opinion, July 22, 2009 (finding that the State's imposition of an aquifer protection zone was a changed condition justifying relocation of oil pipeline route); Docket No. 189A, Lake Road Generating Co., Reopening Pursuant to Conn. Gen. Stat §4-181a(b), Findings of Facts, Jan. 19, 2012, ¶ 20-21 (finding that the increases in the natural gas supply, natural gas pipeline capacity, and the price of fuel oil created changed conditions supporting removal of dual fuel requirements); Docket No. 265A, Dominion Nuclear Connecticut, Inc., Reopening Pursuant to Conn. Gen. Stat §4-181a(b), Findings of Facts, May 2, 2013, ¶ 29-33 (finding that the changes in federal policy regarding the management of spent nuclear fuel and changes in the facility's management of spent fuel constituted changed conditions allowing the change to spent fuel storage installation).

Based on Conn. Gen. Stat. §4-181a(b) and court and Council precedent, the Council may grant this Petition if Towantic demonstrates: (i) the existence of changed conditions since the issuance of the Decision; and (ii) that these changed conditions justify Towantic's proposed changes to the Facility. In this case, the fundamental changes to the electric, natural gas, and financial markets, as well as environmental regulations, as discussed in Section V, represent new

information and unforeseen events that constitute changed conditions. Further, the significant advancement in combustion turbine technology occurred subsequent to the issuance of the Decision. As demonstrated below, these changed conditions justify modification of the Decision to permit Towantic to upgrade the approved Facility.

# IV. TOWANTIC'S PROPOSED CHANGES TO THE FACILITY AND RELATED TOPICS

Towantic requests that the Council approve the following changes to the Facility due to changed conditions described in Section V:

- 1. Upgrade the two combustion turbines from the General Electric ("GE") Frame 7FA.03 to GE Frame 7HA.01, add duct firing capability and make conforming changes in the Facility. These changes will increase the net nameplate output of the Facility from 512 MW to 785 MW.
- 2. Add six (6) acres located immediately to the south to the Facility site to allow for stormwater management consistent with current design standards.
- 3. Incorporate technological advances in air cooling technology to reduce the height, visual impacts, and footprint of the ACC.
- 4. Relocate the Facility stacks to minimize potential effects on air traffic associated with the Waterbury-Oxford Airport.
- 5. Change from one large combustion turbine and steam turbine building enclosure to three smaller and shorter building enclosures to reduce visibility.
- 6. Incorporation of other changes to the site and the Facility, as described in the Tetra Tech, Inc. "Environmental Overview in Support of Petition for Changed Conditions" Report, attached as Exhibit 1 to this Petition ("Tetra Tech Report").
  - 7. Extension of the construction deadline from June 1, 2016 until June 1, 2019.

These changes are described below.

#### A. Change in Turbine Technology

Sections 2.1 of the Tetra Tech Report describes in detail Towantic's proposed change from the Frame 7FA.03 to the state-of-the-art GE Frame 7HA.01 and the benefits of that change. GE's Frame 7HA.01 combustion turbine technology significantly improves on the Frame 7FA.03 technology by utilizing air cooling and advanced materials. An extremely important benefit of the new combustion turbine technology is an approximately 5.5 percent improvement in the heat rate and efficiency and a corresponding approximately 5.5 percent reduction in CO<sub>2</sub> emissions per megawatt /hour ("MWH"). See Tetra Tech Report, Table 2.1.

This efficiency improvement results in significantly less fuel consumption per MWH generated and lowers the Facility's per MWH emissions. *See Tetra Tech Report, Tables 2.4 and 4.3.* It also lowers the Facility's cost of generating electricity, which results in lower overall energy costs for Connecticut ratepayers. *See* Section 6 of the Concentric Energy Advisors "New England Wholesale Power Market Changes 1999-Present" Report ("CEA Report"), attached as Exhibit 2 to this Petition. Also, the updated combustion turbines will increase the Facility's net revenue and ability to secure bank financing. *See CEA Report pages 44-46*.

Use of the GE 7HA.01 technology also results in a combined cycle generating facility with improved flexibility in the form of faster ramp rates that allow for efficient load following; faster start-up to provide capacity sooner to meet electrical demands; a larger overall emissions-compliant range; and more rapid fuel switching between gas and ultra-low sulfur distillate ("ULSD"). See Tetra Tech Report, Sections 2.3 and 2.4 and Sections 2.1.4 and 2.1.5. The GE 7HA.01 technology also provides the benefit of greater power density in the form of a higher

electric output within the same footprint to better meet electricity market demands and to provide economies of scale. *Id. at Section 2.1.3.* 

The operating profile of combined cycle units has changed, and the need for more flexible generating units in New England has grown since 1999. *See CEA Report, pages 8, 31 and 33.*The improved features of GE's Frame 7HA.01 provide the flexibility that would allow the Facility to comply with emissions limits over a wider output range as shown in Table 2.3 of the Tetra Tech Report while meeting various ISO-NE reliability needs. Further, the flexibility of the updated Facility would better support New England states' mandates for increased renewable resources such as solar and wind, much of which will be intermittent sources. As a result of the large expected increase in intermittent renewable resources, new flexible natural gas-fired generation will be needed to meet these new reliability demands. *Id.* 

The approximately 53 MW of summer duct firing and 32 MW of winter duct firing described in Section 2.2 of the Tetra Tech Report will allow the Facility to operate in a highly efficient and economic manner in peak energy market conditions. As compared to other available peaking capacity in New England, the Facility's duct firing capacity will have a favorable heat rate advantage and lower emissions. *See Tetra Tech Report, Section 2.2.* 

#### B. Addition of Parcel 9A

As described in Sections 2.4 of the Tetra Tech Report, Towantic has entered into an option agreement to purchase an additional six (6) acre parcel known as Lot 9A in the Woodruff Hill Industrial Park. This additional parcel will accommodate DEEP's current stormwater management requirements, thereby preventing off-site flooding or erosion. *See Tetra Tech Report, Sections 3.2 and 4.1.2.3*.

### C. Changes to ACC

As described in Section 2.5 of the Tetra Tech Report, technological advances in air cooling technology have allowed Towantic to reduce the height, visual impacts and footprint of the ACC. This change results in a height reduction of 31 feet from 116 feet to 85 feet. *See Tetra Tech Report, Section 4.1.5.* 

#### D. Relocation of Stacks

As described in Section 2.3 of the Tetra Tech Report, Towantic proposes to shift the stacks eastward, away from the Waterbury Oxford Airport, to minimize potential effects to air navigation. This relocation would be accomplished by switching the locations of the combustion turbines and the steam turbine. Towantic has submitted the revised locations of the stacks to the FAA for review. *See Tetra Tech Report, Sections 2.3 and 4.1.6.* 

#### E. Gas and Steam Turbine Buildings

As described in Section 2.5 of the Tetra Tech Report, Towantic proposes changing the single 110 foot tall gas and steam turbine building to three separate, shorter buildings of 64, 37 and 37 feet respectively. This change would reduce visibility of the Facility. *See Tetra Tech Report, Sections 2.5 and 4.1.5.* 

### F. Other Facility and Layout Changes

As described in Section 2.5 of the Tetra Tech Report, other layout and structure changes are proposed, including the following:

- The heat recovery steam generator ("HRSG") height, previously 90 feet, would be 97 feet, with steel drums extending to 110 feet and a silencer to 120 feet.
- The combustion turbine inlet structure, previously 70 feet tall, would be 72 feet tall.
- The auxiliary boiler stack, previously 100 feet tall, would be 62 feet tall.

- The ULSD storage, previously in two 40 feet tall, 886,000 gallon tanks, would be changed to one 48 foot tall, 1.5 million gallon tank. Also, the alternate fuel would be changed from low sulfur distillate with a sulfur content of 0.05% to ULSD with a sulfur content of 0.015%.
- The single two million gallon water storage tank would be replaced by two 42 feet tall,
   875,000 gallon water storage tanks.
- Water usage and discharge would change as described in Section 4.1.2 of the Tetra
   Tech Report.

#### G. Extension of Construction Deadline

The current construction deadline is June 1, 2016. Towantic is requesting that this deadline be changed to June 1, 2019. This extension would provide a reasonable amount of time for Towantic to permit, engineer, finance and construct the updated Facility.

### H. No Increase to the Facility's Environmental Impacts

Sections 4.1 and 4.2 of the Tetra Tech Report provide a comprehensive assessment of the air emissions, water use, water discharge, wetlands, noise, visibility and other environmental impacts of Towantic's proposed changes to the approved Facility. In addition, Figure 26 on page 46 of the CEA Report quantifies the updated Facility's beneficial effect on regional emissions of CO<sub>2</sub> and other air pollutants. Collectively, these expert reports demonstrate that the proposed changes to the Facility will have minimal environmental impacts and, in some cases, the updated Facility will actually result in less environmental impact than the approved Facility.

#### I. Community Outreach

Towantic has actively engaged the local community and public officials regarding the proposed changes to the Facility. Examples of Towantic's local outreach activities include well-

attended open houses and appearances before local commissions. Attached as Exhibit 3 is a letter from Town of Oxford confirming that the Planning & Zoning Commission "fully supports the Project, including the proposed changes, and asks that the Connecticut Siting Council approve the changes to the Project proposed by Towantic so that this worthy project can move forward." Towantic views its outreach activity as critically important to the process and will continue outreach activities as the Facility proceeds to development.

## V. CHANGES TO ENERGY MARKET CONDITIONS, ENVIRONMENTAL REGULATIONS, AND TECHNOLOGY JUSTIFY TOWANTIC'S PROPOSED CHANGES TO THE FACILITY

Electric and gas market conditions have changed radically since the Council's Decision in 1999, and even since 2010 when the Council issued its last construction extension for the Facility. The CEA Report provides a detailed discussion of the fundamental changes to electricity markets, regulation of those markets, natural gas supply and infrastructure, and environmental regulation over the fifteen year period since the Decision was issued. In particular, environmental regulations affecting electric generating facilities have become increasingly stringent since 1999. See Tetra Tech Report, Section 3.0. Also, Section IV of this Petition and the Tetra Tech Report describe the major advances in combustion turbine technology since 1999 and the energy and environmental benefits of incorporating those advances into the Facility. Based on the CEA Report and Tetra Tech Report, the Facility, as approved in 1999, using the outdated GE 7FA.03 combustion turbines, would be very difficult to finance and construct in today's energy and capacity markets. Whereas, the Facility as modified by the changes outlined in this Petition, including the use of the GE 7HA.01 turbines, would be viable in today's markets. Further, the CEA Report demonstrates that the modified Facility would provide very significant economic, reliability and environmental benefits for Connecticut

and New England. See CEA Report, pages 26-27, 31, 33, 44-46; see also Tetra Tech Report, Sections 2.1, 2.7, 3.1, 4.1.

The CEA Report describes how the energy markets have evolved from 1999 into today's current structure and market conditions. Among the most important developments detailed in the CEA Report are the announced and expected retirements of thousands of megawatts of fossil-fueled and nuclear units due to energy and capacity market economics and more stringent environmental regulation, resulting in the need for new capacity in New England. For example, over 3,200 MW of generating units have announced retirements since 2013. *See CEA Report, page 7.* Further, ISO-NE has identified nearly 5,100 MW of additional capacity at risk of retirement by 2020. *See id., pages 33-34 and Figure 18.* Due primarily to expected and announced retirements, New England will need new capacity beginning in the 2018-2019 timeframe. *See id., pages 2-3, 7.* 

Both ISO-NE and the Federal Energy Regulatory Commission (the "FERC") have recognized that new capacity will be needed relatively soon. *ISO-New England, Inc.*, 148 FERC §61,201 at page 5 (Sept. 16, 2014). As FERC Chair LaFleur recognized, "[i]n light of the current capacity situation in New England, where for the first time the Region is facing an overall capacity shortage...the FCM must procure new resources in order to satisfy New England's reliability needs." 148 FERC §61,201 at page 1 and footnote 2 (Chair LaFleur concurring).

Recently, ISO-NE proposed and the FERC approved a major revamping of New England's FCM, which is described in detail on pages 18-25 of the CEA Report. ISO New England, Inc., 147 ¶61, 109 (May 12, 2014); ISO New England, Inc., 147 FERC ¶61, 173 (May 30, 2014). Key changes to the FCM include the following: the substitution of an efficient,

modern combined-cycle combustion turbine technology for the previous simple-cycle combustion turbine as the proxy unit for ISO-NE's cost of new entry ("CONE") calculation; a pay-for-performance ("PFP") program to incentivize capacity sellers (both positively and negatively) for their performance during periods of electric system stress and to make investments in their generating units to improve performance; a change from a vertical demand curve to a sloped demand curve; revisions to the offer trigger review price to prevent price suppression; and a seven year lock-in period for new capacity. *CEA Report, pages 20-25*.

Based on ISO-NE's recent FERC-approved FCM reforms, the Facility as permitted in 1999 would be less competitive in an ISO-NE forward capacity auction ("FCA") because of its higher heat rate compared to the proxy unit and other competitive projects. In contrast, the updated facility would be a viable competitor in the FCA. *Id.* 

The CEA Report also discussed the expected influx into New England of intermittent renewable energy projects, such as solar and wind projects, and legal and other uncertainties involving demand response. For system reliability purposes, there will need to be flexible generation that will back-up the gaps in renewable production and demand response. *See Id.*, pages 31, 33-34.

The Facility, as approved in 1999, would not have nearly as much flexibility to fill in the gaps resulting from the intermittent renewable resources. In contrast, the updated Facility would have the necessary flexibility based on its superior start-up and ramp rates, its ability to operate over a wider range of output while maintaining environmental compliance, and its rapid fuel switching capability. *See Tetra Tech Report, Sections 2.1.2-2.1.5*. Additionally, reliable, flexible base-load generation will be necessary to deal with legal uncertainties and performance issues with demand response. *See CEA Report, pages 32-34*.

Also, as discussed on pages 13-17 of the CEA Report, the increased dependence of New England on natural gas-fired facilities and the constraints on natural gas delivery to New England in extreme winter conditions have greatly increased the need for dual fuel facilities that can reliably provide electric capacity during cold periods when gas transportation to New England is constrained. Although Towantic is receptive to and has pursued firm gas transportation options, those options are not economically viable at this time and, accordingly, Towantic has focused on maintaining the dual fuel option for the updated Facility. The updated Facility will be able to provide approximately 713 MW of capacity using ULSD in extreme winter conditions (0° F), as compared to the 548 MW that the approved Facility could have generated using distillate fuel under those conditions. *See Tetra Tech Report, Table 2.2.* Further, the updated Facility will have the capability to more rapidly switch between natural gas and ULSD than the approved Facility and to operate in compliance with environmental regulations over a wider emission compliance range. *See id., Section 2.1.4 and 2.1.5.* 

Finally, over the last fifteen years, virtually all of the major generation constructed in New England has been constructed pursuant to state-mandated procurements and associated contract for differences ("CfDs") with electric utilities. In Connecticut, state-mandated CfDs with electric utilities involve over 1,200 MW of facilities, including Kleen-Energy, Waterbury Generation and the two GenConn facilities, as described in Section II of this Petition. However, two recent federal appeals court decisions have called into serious question the future viability of CfDs. *See PPL EnergyPlus, LLC v. Solomon*, 766 F.3d 241 (3rd Cir. September 11, 2013); *PPL EnergyPlus, LLC v. Nazarian*, 753 F.3d 467 (4th Cir. June 2, 2014). The CEA Report discusses these developments in more detail on pages 34-36. Based on these court decisions, the most

viable mechanism for acquiring the capacity needed in New England is through the FCA, to which the updated Towantic configuration is favorably suited to compete effectively.

In summary, the CEA and Tetra Tech Reports describe the changed conditions that have occurred since 1999 in the energy markets, environmental regulations, and combustion turbine technology. Further, these Reports demonstrate that permitting, financing and constructing the Facility approved in 1999 would be challenging in today's environment while the Facility with the changes described in this Petition will have significant benefits for Connecticut and New England.

### VI. COMMUNICATIONS

Communications regarding this Petition should be directed to the following persons who should be added to the service list for this proceeding:

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### VI. <u>CONCLUSION</u>

Based on the foregoing and pursuant to Conn. Gen. Stat. § 4-181a(b), Towantic respectfully requests that the Council reopen and modify the Decision in Docket No. 192 to authorize the changes to the Facility as described in this Petition.

Respectfully submitted,

CPV TOWANTIC, LLC

By: \_

Philip M. Small Franca L. DeRosa Brown Rudnick LLP CityPlace I, 185 Asylum Street

Hartford, CT 06103-3402

Phone: (860) 509-6500 Fax: (860) 509-6501

Its Attorneys

### **LIST OF EXHIBITS**

Exhibit 1 – Environmental Overview in Support of Petition for Changed Conditions, dated October 2014, and prepared by Tetra Tech, Inc.

Exhibit 2 – New England Wholesale Power Market Changes 1999-Present, dated October 2014, and prepared by Concentric Energy Advisors.

Exhibit 3 – Letter from the Town of Oxford, Tanya Carver, Chair Planning & Zoning Commission, to Mr. Robert Stein, Chairman of the Connecticut Siting Council, dated October 9, 2014.

## CERTIFICATE OF SERVICE

This is to certify that on this 3rd day of November, 2014, the foregoing Petition of CPV Towantic, LLC (f.k.a. Towantic Energy, LLC) to Reopen and Modify the Decision in Docket No. 192 Due to Changes Conditions was sent, via first class mail, to the persons on the attached service list.

By:

Philip M. Smal

Date: October 2, 2012

Docket No. 192 Page 1 of 4

# LIST OF PARTIES AND INTERVENORS <u>SERVICE LIST</u>

	Status Holder Representative			
Status Granted	(name, address & phone number)	(name, address & phone number)		
Applicant	Towantic Energy, L.L.C.	John W. Cannavino Cummings & Lockwood LLC Six Landmark Square Stamford, CT 06901 (203) 351-4447 (203) 708-3849 –fax jcannavino@cl-law.com		
Party	Jay Halpern 58 Jackson Cove Road Oxford, CT 06478 h: 203-888-4976 zoarmonster@sbcglobal.net			
Intervenor	Town of Middlebury	Attorney Dana A. D'Angelo Law Offices of Dana D'Angelo, LLC 20 Woodside Avenue Middlebury, CT 06762 (203) 598-3336 (203) 598-7283 – fax Dangelo.middlebury@snet.net  Raymond Pietrorazio, Town Representative 764 Charcoal Avenue Middlebury, CT 06762-1311 (203) 758-2413 (203) 758-9519 – fax ray@ctcombustion.com		
Intervenor	The Connecticut Light and Power Company (CL&P)	Stephen Gibelli, Esq. Associate General Counsel The Connecticut Light and Power Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5513 (860) 665-5504 –fax gibels@nu.com		

Date: November 2, 2010

Docket No. 192 Page 2 of 4

# LIST OF PARTIES AND INTERVENORS $\underline{SERVICE\ LIST}$

	Status Holder	Representative
Status Granted	(name, address & phone number)	(name, address & phone number)
	CL&P continued	John R. Morissette Manager-Transmission Siting and Permitting The Connecticut Light and Power Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-2036 morisjr@nu.com
		Christopher R. Bernard Manager, Regulatory Policy (Transmission) The Connecticut Light and Power Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5967 (860) 665-3314 – fax bernacr@nu.com
		Stella Pace, Senior Engineer The Connecticut Light and Power Company Transmission and Interconnection Dept. P.O. Box 270 Hartford, CT 06141-0270 (860) 665-3569 pacess@nu.com
Party	Town of Oxford	Francis A. Teodosio, Esq. Winnick, Vine, Welch & Teodosio, LLC 481 Oxford Road Oxford, CT 06478 (203) 881-3600 (203) 881-3606 fax

Date: April 23, 2012

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# LIST OF PARTIES AND INTERVENORS $\underline{SERVICE\ LIST}$

	Status Holder	Representative
Status Granted	(name, address & phone number)	(name, address & phone number)
Party	Naugatuck Valley Chapter Trout Unlimited	Robert M. Perrella, Vice President TU Naugatuck/Pomperaug Valley Chapter 278 W. Purchase Road Southbury, CT 06488-1004 johnnytroutseed@chartner.net
Intervenor	Town of Southbury	Ed Edelson First Selectman Town of Southbury 501 Main Street Southbury, CT 06488 (203) 262-0647 (203) 264-9762 - fax
Party	The Pomperaug River Watershed Coalition	James Belden, Executive Director Pomperaug River Watershed Coalition 39 Sherman Hill Road, C103 Woodbury, CT 06798 203-263-0076 www.pomperaug.org
Intervenor (approved 06/07/06)	Raymond Pietrorazio 764 Charcoal Avenue Middlebury, CT 06762-1311 (203) 758-2413 (203) 758-9519 – fax ray@ctcombustion.com	
Intervenor (approved 10/10/06)	GE Energy Financial Services, Inc.	Jay F. Malcynsky The Law Offices of Jay F. Malcynsky, P.C. One Liberty Square New Britain, CT 06051 (860) 229-0301 (860) 225-4627 – fax Jmalcynsky@gaffneybennett.com pclarke@gbact.com

Date: February 7, 2013

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# LIST OF PARTIES AND INTERVENORS $\underline{SERVICE\ LIST}$

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
No status granted Request for intervenor status dated 1/29/13 never taken up because record is closed (considered interested organization-must take up if docket reoepened)	Preservation Middlebury	Marian Larkin Acting President of Preservation Middlebury P.O. Box 177 Middlebury, CT 06762