

June 13, 2016

Via Federal Express/Electronic Mail

Todd Anthony Bianco, EFSB Coordinator
RI Energy Facilities Siting Board
89 Jefferson Blvd.
Warwick, RI 02888

Re: *Invenergy Docket No. SB-2015-06*


Dear Mr. Bianco:

On behalf of Invenergy Thermal Development LLC (“Invenergy”), enclosed please find an original and 10 copies for each of the following responses in connection with the above docket:

1. Invenergy’s Response to the Town of Burrillville’s 10th Set of Data Requests;
2. Invenergy’s Response to the Town of Burrillville’s 11th Set of Data Requests; and
3. Invenergy’s Response to the Town of Burrillville’s 12th Set of Data Requests.

Please let me know if you have any questions.

Very truly yours,


ALAN M. SHOER
ashoer@apslaw.com

Enclosures

cc: Service List

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 10th SET OF DATA REQUESTS**

10-1 Should breakthrough occur during the use of the Town's granular activated carbon treatment system, and the well water supplied to the facility contains MTBE at levels currently present in the groundwater, what fraction of the MTBE present in the untreated well water would be expected to volatilize and be released as an air emission and what fraction of the MTBE would be expected to discharged to the Burrillville Sewer?

RESPONSE: 10-1 Any untreated water supply to the Clear River Energy Center ("CREC") that contains MTBE will be mixed and diluted in CREC's raw water storage tank. None of this untreated water would be volatilized and be released as an air emission through the combustion turbine as any MTBE would be thermally destroyed in the high temperature combustion processes of the combustion turbines. Any waste water that would come from the demineralized water treatment system that contained the diluted untreated raw water would be discharged with the wastewater from the CREC facility to the Burrillville Wastewater Treatment facility.

The activated carbon treatment system being designed to treat PUD's Well #3A will have two carbon vessels that work in series to prevent breakthrough of MTBE from occurring. The majority of the water supplied to the CREC facility will be used for makeup to the evaporative coolers that will cool the inlet air to the combustion turbines during natural gas firing in the summer or will be used for direct injection into the combustion turbines to control NOx emissions when firing distillate oil. Any MTBE volatilized into the inlet air to the combustion turbines or injected into the combustion turbines when firing distillate oil will be carried into the combustion zone of the combustion turbine where it will mix with either natural gas or distillate oil, depending on which fuel is being used, with the MTBE being thermally oxidized in the high temperature combustion process.

The temperature in the combustion zone of the combustion turbines will be greater than 2,000 degrees Fahrenheit (F). As a result, any MTBE

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 10th SET OF DATA REQUESTS**

carried into the combustion processes will be oxidized and destroyed by the high temperature present in the combustion process. MTBE is a gasoline additive originally intended to reduce automobile emissions and as a result MTBE was formulated to be destroyed by the combustion processes within automobile engines.

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 10th SET OF DATA REQUESTS**

10-2 Regarding the "3.865 Kilometer, significant impact zone" referenced in the EFSB application, please explain in detail what it means and provide all information on any potential impacts to anyone residing within the radius.

RESPONSE 10-2: The significant impact zone is an area that the emissions levels are above a threshold called the Significant Impact Levels ("SILs") that if exceeded a more detailed analysis must be performed that includes emissions from other nearby sources. The SILs are much lower than the National Ambient Air Quality Standards ("NAAQS"), and the air quality in an area where the modeled concentration is greater than the SIL is still considered safe with regard to human health and public welfare. Modeled impacts above the SILs are considered safe by the EPA and therefore there is no potential impact to anyone residing within the radius, the only issue is more detailed modeling is required.

As required by the Clean Air Act ("CAA"), the EPA has established NAAQS for six commonly found (criteria) pollutants: carbon monoxide ("CO"), lead ("Pb"), nitrogen dioxide ("NO₂"), ozone ("O₃"), particulate matter (less than 10 microns in diameter ("PM₁₀") and less than 2.5 microns in diameter ("PM_{2.5}") and sulfur dioxide ("SO₂").

The United States Environmental Protection Agency ("EPA") has established two types of NAAQS. The primary standards protect public health, including the health of sensitive populations such as asthmatics, children and the elderly. The secondary standards protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation and buildings.

Based on the most recent monitoring data, Rhode Island is an attainment area with regard to the NAAQS. Therefore, any new proposed source, such as the CREC, must demonstrate that the maximum air quality impacts resulting from its operation, when combined with existing background air quality concentrations and the maximum air quality

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 10th SET OF DATA REQUESTS**

impacts resulting from the operation of other nearby sources, will not cause an exceedance of the NAAQS.

Such a demonstration has been made for the CREC, as detailed in the Air Dispersion Modeling Report submitted to RIDEM on October 30, 2015. The results of the air dispersion modeling analysis have demonstrated that the maximum air quality impacts resulting from its operation, when combined with existing background air quality concentrations and the maximum air quality impacts resulting from the operation of other nearby sources, will result in criteria pollutant ambient air quality concentrations which will remain at levels which are protective of human health and public welfare.

The EPA has also established Significant Impact Levels ("SILs") for each of the criteria pollutants. The SILs are much lower than the NAAQS and represent the impact concentration levels at which the ambient air impacts from nearby sources must be considered. Because the SILs are lower than the NAAQS, the air quality in an area where the modeled concentration is greater than the SIL is still considered safe with regard to human health and public welfare; however, a more in-depth air quality analysis is required. Modeled impacts below the SILs are considered by the EPA to be insignificant, and therefore the ambient air impacts from nearby sources are not required to be considered in the modeling analysis.

The results of the CREC air dispersion modeling analysis, which included the modeled impacts from the Algonquin Compressor Station, Ocean State Power, and the Tennessee Gas Compressor Station, indicated maximum CO, annual NO₂, annual PM₁₀ and SO₂ impacts below their respective SILs, and therefore insignificant. The maximum modeled 1-hour NO₂ and 24-hour PM₁₀ impacts exceeded their respective SILs. The PM_{2.5} SILs have been vacated by the EPA as a result of a court order.

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC'S RESPONSES TO
THE TOWN OF BURRILLVILLE'S 10th SET OF DATA REQUESTS**

Figure 8 of the Major Source Permit Application (attached as **Exhibit 1**) graphically depicts the areas where the maximum modeled impacts exceeded their respective SILs. The concentrations are above the SIL threshold, however the resulting air quality concentrations will remain well below the NAAQS, and thus at levels still protective of human health and the public welfare. Any increases in criteria pollutant ambient air concentrations in all other areas resulting from the operation of the CREC will be insignificant, as defined by the EPA.

The air quality impact analysis completed for the CREC Project has demonstrated that the air quality both within the Significant Impact Area and as far away as 50 kilometers in every direction, will remain at levels deemed protective of human health and the public welfare by the EPA during CREC operation.

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

INVENERGY THERMAL DEVELOPMENT LLC
By its Attorneys,

/s/ Alan M. Shoer

Alan M. Shoer, Esq. (#3248)
Richard R. Beretta, Jr. Esq. (#4313)
Nicole M. Verdi, Esq. (#9370)
ADLER POLLOCK & SHEEHAN, P.C.
One Citizens Plaza, 8th Floor
Providence, RI 02903-1345
Tel: 401-274-7200
Fax: 401-751-0604

Dated: June 13, 2016

CERTIFICATE OF SERVICE

I hereby certify that on June 13, 2016, I delivered a true copy of the foregoing responses to the Energy Facilities Siting Board via electronic mail to the parties on the attached service list.

/s/ Alan M. Shoer



Clear River Energy Center
Burrillville, Rhode Island

1 inch = 4,238 feet

Source: 1) ESRI, imagery, 2014
2) ESS, Site Location, 2014

Legend

- Stack Locations
- Significant Impact Area - 3.56km
- 1-hr NO2 - 7.5 ug/m3
- 24-hr PM10 - 5 ug/m3

Significant Impact Area

Figure 8

Office of Energy Resources Andrew Marcaccio, Esq. Nick Ucci, Chief of Staff Chris Kearns, Chief Program Development One Capitol Hill Providence, RI 02908	Andrew.Marcaccio@doa.ri.gov ;	401-222-3417
	Nicholas.Ucci@energy.ri.gov ;	401-574-9100
	Christopher.Kearns@energy.ri.gov ;	
Rhode Island Building and Construction Trades Council Gregory Mancini, Esq. Sinapi Law Associates, Ltd. 2374 Post Road, Suite 201 Warwick, RI 02886	gmancinilaw@gmail.com ;	401-739-9690
Residents of Wallum Lake Road, Pascoag, RI Dennis Sherman and Kathryn Sherman Christian Capizzo, Esq. Shechtman Halperin Savage, LLP 1080 Main Street Pawtucket, RI 02869	ccapizzo@shslawfirm.com ;	401-272-1400
	kags8943@gmail.com ;	
Residents of Wallum Lake Road, Pascoag, RI Paul Bolduc and Mary Bolduc Joseph Keough Jr., Esq. 41 Mendon Avenue Pawtucket, RI 02861 Paul and Mary Bolduc 915 Wallum Lake Road Pascoag, RI 02859	jkeoughjr@keoughsweeney.com ;	401-724-3600
	oatyss1@verizon.net ;	401-529-0367
Persons with pending motions to intervene (Electronic Service Only)		
Abutton David B. Harris Michael Sendley, Esq. 600 Putnam Pike, St. 13 Greenville, RI 02828	mSENDLEY@cox.net ;	401-349-4405
Residents of 945 Wallum Lake Road, Pascoag, RI (Walkers) 945 Wallum Lake Road Pascoag, RI 02859	edaigle4@gmail.com ;	401-473-5798
Interested Persons (Electronic Service Only)		
Peter Nightingale, member Fossil Free Rhode Island 52 Nichols Road Kingston, RI 02881	divest@fossilfreeri.org ;	401-789-7649
Sister Mary Pendergast, RSM 99 Fillmore Street Pawtucket, RI 02860	mpendergast@mercyne.org ;	401-724-2237

Patricia J. Fontes, member Occupy Providence 57 Lawton Foster Road South Hopkinton, RI 02833	Patfontes167@gmail.com ;	401-516-7678
Burrillville Land Trust Marc Gertsacov, Esq. Law Offices of Ronald C. Markoff 144 Medway Street Providence, RI 02906	marc@ronmarkoff.com ;	401-272-9330
Paul Roselli, President Burrillville Land Trust PO Box 506 Harrisville, RI 02830	proseli@cox.net ;	401-447-1560
Rhode Island Progressive Democrats of America Andrew Aleman, Esq. 168 Elmgrove Avenue Providence, RI 02906	andrew@andrewaleman.com ;	401-429-6779
Fighting Against Natural Gas and Burrillville Against Spectra Expansion Jillian Dubois, Esq. The Law Office of Jillian Dubois 91 Friendship Street, 4 th Floor Providence, RI 02903	jillian.dubois.esq@gmail.com ;	401-274-4591
Burrillville Town Council c/o Louise Phaneuf, Town Clerk 105 Harrisville Main Street Harrisville, RI 02830	lphaneuf@burrillville.org ;	401-568-4300
Thomas J. Kravitz, Town Planner Town of Burrillville 144 Harrisville Main Street Harrisville, RI 02830	tkravitz@burrillville.org ;	401-568-4300
Joseph Raymond, Building Official	jraymond@burrillville.org ;	
Michael C. Wood, Town Manager Town of Burrillville 105 Harrisville Main Street Harrisville, RI 02830	mcwood@burrillville.org ;	401-568-4300 ext. 115
Mr. Leo Wold, Esq. Department of Attorney General 150 South Main Street Providence, RI 02903	LWold@riag.ri.gov ;	401-274-4400
Public Utilities Commission Cynthia Wilson Frias, Esq., Dep. Chief of Legal Alan Nault, Rate Analyst	Cynthia.Wilsonfrias@puc.ri.gov ; Alan.nault@puc.ri.gov ;	401-941-4500
Division of Public Utilities and Carriers	john.spirito@dpuc.ri.gov ;	401-941-4500

John J. Spirito, Esq., Chief of Legal Steve Scialabba, Chief Accountant Tom Kogut, Chief of Information	steve.scialabba@dpuc.ri.gov ; thomas.kogut@dpuc.ri.gov ;	
Matthew Jerzyk, Deputy Legal Counsel Office of the Speaker of the House State House, Room 302 Providence RI, 02903	mjerzyk@rilin.state.ri.us ;	401-222-2466
Hon. Cale Keable, Esq., Representative of Burrillville and Glocester	Cale.keable@gmail.com ;	401-222-2258
Nick Katkevich	nkatkevich@gmail.com ;	
Ambar Espinoza	aespinoza@ripr.org ;	
Joseph Bucci, Acting Administrator Highway and Bridge Maintenance Operations RI Department of Transportation	joseph.bucci@dot.ri.gov ;	
Jared Rhodes, Chief Statewide Planning Program	jared.rhodes@doa.ri.gov ;	
Jennifer Sternick Chief of Legal Services RI Department of Administration	Jennifer.sternick@doa.ri.gov ;	
Doug Gablinske, Executive Director TEC-RI	doug@tecri.org ;	
Tim Faulkner ecoRI News 111 Hope Street Providence, RI 02906	tim@ecori.org ;	401-330-6276
Robert Tormey Conanicut Energy, LLC	rtormey@conanicutenergy.com ;	617-306-1601
Sally Mendzela	salgalpal@hotmail.com ;	
Keep Burrillville Beautiful Paul LeFebvre	paul@acumenriskgroup.com ;	401-714-4493
Mark Baumer	everydayyeah@gmail.com ;	
Nisha Swinton Food & Water Watch New England	nswinton@fwwatch.org ;	
Kaitlin Kelliher	Kaitlin.kelliher@yahoo.com ;	
Joe Piconi, Jr.	jiggzy@hotmail.com ;	
Hon. Aaron Regunberg Representative of Providence, District 4	Aaron.regunberg@gmail.com ;	

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 11th SET OF DATA REQUESTS**

11-1 Does Invenergy intend to perform any pump tests and water sampling and testing at the PUD Well #3A? If so, please provide details on the pump test, including duration and flow rate and information on water sampling testing.

RESPONSE: 11-1 Invenergy Thermal Development LLC (“Invenergy”) plans to perform pump testing on PUD Well #3A to verify that it has sufficient capacity to supply the Clear River Energy Center (“CREC”) with its water supply and to assess the impact of reactivating the well on the aquifer. Water level monitoring and environmental sampling will be conducted from surrounding monitoring wells during the pump tests as required by Rhode Island Department of Environmental Management (“RIDEM”).

Invenergy is currently preparing a detailed protocol for the PUD Well #3A pump testing. The protocol outlines the objectives of the testing, the proposed pre-test monitoring and sampling, the wells that will be monitored during the test and the test duration and anticipated pumping rates. The pump test set up will include activated carbon filtration of all water pumped from the well. The pump test protocol has been discussed with RIDEM and is in the process of being submitted to RIDEM for their review and approval prior to commencing with any pump testing on the well. A draft copy of the test protocol is included as Exhibit 1.

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

**REQUEST FOR WELL INVESTIGATION
FOR THE
REACTIVATION OF
PASCOAG UTILITY DISTRICT WELL 3A
Burrillville, Rhode Island**

Prepared by:

Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865

**DRAFT
JUNE 8, 2016**



TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
Table of Contents.....	i
Section 1.0 Introduction.....	1
1.1 Background and Purpose,	1
Section 2.0 Well Investigation.....	3
2.1 Well Development.....	3
2.2 Pumping Test.....	4
2.2.1 Proposed Pumping Rate.....	5
<u>Step-drawdown Test</u>	5
<u>Maximum Day Flow Pump Test</u>	5
<u>Pumping Test Discharge Line</u>	5
2.2.2 Water Treatment.....	6
2.3 Water Quality Sampling and Testing.....	6
2.4 Data Evaluation.....	7

TABLES

Table 1: Groundwater Monitoring Wells	4
Table 2: Historical MTBE Levels - Monitoring Wells	6

FIGURES

- Figure 1: Locus Plan
- Figure 2: Monitoring Well Locations
- Figure 3: Pump Test Discharge Plan

APPENDICES

- A Well 3A: Well Completion Report and Construction Diagram
- B Monitoring Well Logs
- C Water Quality Parameters



SECTION 1.0 INTRODUCTION

1.1 Background and Purpose

A modern combined cycle electric generating facility, referred to as the Clear River Energy Center (CREC), is being proposed by Invenergy in the Town of Burrillville, Rhode Island. The facility will be located approximately 2.8 miles west of Pascoag Utility District's (PUD) drinking water Well 3A. The water demand of the CREC will vary with the level of generation output and will vary seasonally to meet the needs of specific processes within the facility. PUD's Well 3A was taken offline in 2001 when it was found that the water pumped from the well was contaminated with methyl tertiary butyl ether (MTBE). Invenergy is proposing this well investigation to confirm that this well is suitable for use as a supply for process water to the CREC.

Well 3A is located off of Silver Lake Avenue as shown on Figure 1 and is within the Clear River drainage basin. According to available records the well is a 16-inch diameter bedrock water supply well installed to a depth of 64 feet below grade. The well is finished with 7 feet of 140-slot stainless steel V wire screen and was installed in September 1999. The well completion report and well construction diagram is attached as Appendix A. The water table is approximately 7 feet below grade under non-pumping conditions.

The information in this report is based on information obtained from the following sources:

1. *Borehole Video Inspection Report, Well PW 3A, Pascoag Utility District, Silver Lake Avenue Well Field, Pascoag, RI.* Groundwater Resources International, October 8, 2015.
2. *Evaluation of Groundwater Monitoring Well Sampling,* Northeast Water Solutions, Inc., March 2, 2015.
3. *Evaluation of Historical Monitoring Well Data, Pascoag Utility District, Pascoag, RI,* Northeast Water Solutions, Inc., July 3, 2014.
4. *Summary of 2005 Aquifer Test and Groundwater Flow Dynamics,* Pascoag, Rhode Island, University of Rhode Island, July 2006.

The major water uses for this facility are for high purity water for steam cycle makeup (required throughout the year), water for makeup to the evaporative coolers that cool the combustion turbine inlet air (increases overall efficiency and output - required only in the summer), and high purity water for injection into the combustion turbine combustors to control emissions (only needed when firing distillate oil which will likely only occur during the winter, typically January



or February based on recent years). The maximum water demands would only be during the most severe winter conditions when natural gas supplies may be under severe stress and electric generation plants are required by the electric grid operator (ISO-NE) to fire distillate oil to conserve the natural gas supplies for home heating and commercial use. The Project's air permit will restrict the total amount of distillate oil that can be fired on an annual basis. The projected water demands are listed in the following table.

Table 1: CREC Water Demands

Description	Demand, gpm
Annual Average	71
Summer Season	156
Winter (Maximum Day)	642

gpm = gallons per minute

The summer season demand is projected to last for approximately 4 months. The winter maximum day demand is limited to 3 consecutive days.

Two phases of pump testing are proposed. The purpose of the first phase of the well investigation (maximum day flow rate test) is to determine if PUD Well 3A can sustain the maximum day demand for a limited period and to assess the impacts to the aquifer during pumping by measuring drawdown levels and MTBE levels at various nearby monitoring wells. The objective of the second phase of the proposed pump testing (prolonged pumping test) will be to assess the impact of the water withdrawal on the surrounding water resources while operating the well at the summer demand flow rate (156 gpm) for an extended period. A separate pump test proposal will be developed and submitted for the second phase of testing following the successful completion of the maximum day flow rate test.



SECTION 2.0 WELL INVESTIGATION

Presented in this section is a description of the scope of the first phase of the well investigation program (maximum day flow rate test). Procedures described in detail are the pumping rate, groundwater monitoring, and the water quality analysis to be performed.

2.1 Well Development

A video inspection of Well 3A was performed in October 2015. The video inspection revealed that the well screen and well casing are slightly to moderately fouled with inorganic iron oxide precipitate and bio-encrustation. These coatings must be removed prior to any testing. The casing appears to be in good condition but the presence of encrustation prevented a full inspection of the screen. In addition, there appears to be approximately 4 feet of accumulated sediment in the bottom of the screened section.

As part of this investigation the well will be cleaned and redeveloped. Prior to any pumping, baseline MTBE levels will be obtained in Well 3A and nearby monitoring wells as discussed in Section 2.3. At the start of the cleaning, the well will be dry surged and then redeveloped to remove some of the encrustation and buildup of material adjacent to the screen. Chlorine solution followed by muriatic acid will be injected to the well for cleaning and backwashing. The complete chemical treatment shall be agitated and allowed to react for at least a 12-hour period before any further surging and/or pumping to waste. Based on the results of the treatment, a decision of whether to continue treatment by means of surging without chemicals, surging with a repeat of one or more of the chemicals outlined above, or ceasing the redevelopment operation and proceeding with the balance of the work involved will be made.

All water pumped to waste during the cleaning operation will be discharged in the area adjacent to the well. The waste discharge will be neutralized and verification will be by means of colorimetric strips. Sufficient precautions shall be taken during the work to minimize the runoff of polluting substances such as silt, clay, fuels, oils, bitumens, calcium chloride, or other polluting materials harmful to humans, fish or other life, into the surface water. Control measures will be in place to minimize discharge turbidity prior to any discharge to a receiving water. Special precautions shall be taken to prevent operations which promote erosion.



When completed, a post-cleaning video inspection of the well components will be performed to assess integrity of the well. We anticipate the well cleaning and inspection to take approximately one week to complete.

2.2 Pumping Test

Based on a review of historical records and information for PUD Well 3A, we propose to perform a one-day (eight hour) drawdown step test, followed by a 24-hour high rate pumping test. The purpose of these tests is to evaluate well performance at the highest rate anticipated to verify that the well and aquifer can sustain elevated pumping rates for the limited duration anticipated to meet winter demand (See Table 1). In addition to collecting drawdown and recovery data, we propose to collect water quality samples from Well 3A and from a limited network of monitoring wells at the site.

Over the past decade, numerous groundwater monitoring wells have been installed and sampled by various entities including the RI Department of Environmental Management (RIDEM). The overburden monitoring wells were screened at various depths within the unconsolidated deposits plus additional wells were screened within the underlying bedrock. A total of 8 observation wells will be monitored for drawdown and recovery during this phase of the Program. Well information is listed in Table 2 and provided in Appendix B. The approximate well locations are presented on Figure 2.

Table 2: Groundwater Monitoring Wells

Well ID	Diameter, inches	Depth, ft
MW-D	2.5	51
LE-1	2	50
LE-2	2	71
LE-3I	1	56
LE-3D	1	68
MW-14D	2	45
MW-31S	2	15
MW-31D	2	27.5

The data presented in Table 2 is based on information provided to Pare by various entities. The locations and well construction will be field verified.



Prior to conducting any pump testing, the water level in Well 3A and the monitoring wells identified in Table 2 will be measured using programmable electronic data loggers for a minimum of a 5 day period to establish static water level fluctuation trends.

2.2.1 Proposed Pumping Rate

The maximum day design flow during operation of the CREC facility is currently estimated at 642 gallons per minute (gpm). The objective of this testing is to verify that the aquifer and PUD Well 3A have the capacity to meet this winter maximum day demand during periods of oil firing.

Step-drawdown Test

Prior to performing a step-drawdown pump test the water level in Well 3A shall be monitored for a minimum of a 5 day period to establish static water level fluctuation trends. The step-drawdown test shall be conducted at 200, 400, 600, and 800 gpm. Each step will be sustained for a minimum of two hours. Aquifer response during both pumping and recovery will be monitored in the pumping well and the eight monitor wells identified in Table 2 using programmable electronic data loggers. The water level in Well 3A will be allowed to recover to at least 95% of the pre-pumping water level prior to the commencement of the maximum day flow rate pumping test. The data and information generated during the step-test shall be used to project if the well has the capacity to continue with the higher rate pumping test.

Maximum Day Flow Pump Test

The target pumping rate for the maximum day flow rate pumping test will be 700 gpm pending the results of the step-drawdown test. The duration of the test will be a minimum of 24 hours. The pumping rate will be recorded every 2 hours. A flow measuring device capable of providing instantaneous flow measurements accurate to within $\pm 3\%$ of the pumping rate will be used. All drawdown data collected using electronic data logging equipment will be corrected for barometric pressure.

Pumping Test Discharge Line

The discharge from the pumping test will be located to minimize recirculation of water. A new temporary 8" discharge pipe will be used and positioned as shown on Figure 3. Special precautions shall be taken to prevent operations which promote erosion. It is expected that approximately 1,000,000 gallons will be discharged during the maximum day flow rate pumping test. The water will either infiltrate into the ground at the discharge area or flow to the Clear River.



2.2.2 Water Treatment

The review of historical water quality data indicates that MTBE concentrations in the nearby monitoring wells have decreased significantly over time. In 2005 an aquifer pump test was conducted at Well 3A for a period of 36 days at approximately 240 gpm. During this test the MTBE level in the well started from non-detect and did not reach 40 parts per billion (ppb), the discharge limit permitted without treatment, until after 27 days of pumping. The data collected during this test will be used, along with historic data from previously completed pumping tests, to determine if treatment will be required in the next phase of investigation with the prolonged pumping test. Historical MTBE sampling results of nearby wells are presented in Table 3.

Table 3: Historical MTBE Levels - Monitoring Wells

Well ID	Maximum Level		Most Recent	
	MTBE, ppb	Sampling Date	MTBE, ppb	Sampling Date
MW-A	30	12/2014	30	12/2014
LE-1	2,800	5/2005	0	8/2011
LE-3I	2,800	5/2005	33	12/2014
MW-31D	3	8/2008	0	12/2014
MW-33BR	28,000	10/2002	28	12/2014

Due to the potential presence of MTBE in the aquifer and concern of drawing MTBE in to the well, a carbon treatment system is proposed on the discharge for both the step test and pump test. The treatment system will consist of three filter vessels, each with a 5,000 pound capacity of granular activated carbon. The filters will be operated in parallel to accommodate the high flow.

2.3 Water Quality Sampling and Testing

To assist in the design of the proposed Well 3A groundwater treatment system, water quality sampling will be performed during this phase of the Well Investigation Program. The data collected will be used to determine if potential contamination is being drawn to the well during pumping and to provide data on other important water quality parameters.

Prior to conducting the well cleaning and redevelopment and pump test, monitoring well sampling will be conducted to assess baseline volatile organic compound (VOC) concentrations at select wells including MW-A, MW-D, LE-1, LE-3I, MW-31D, and MW-33BR. VOC testing will be analyzed using EPA Method 524.2. Baseline samples will be collected by either peristaltic pump or bladder pump, as appropriate depending on depth to groundwater. These locations will



also be sampled for VOCs at the start of each day prior to pumping and at the completion of the maximum day flow rate pumping test. Samples will be collected before and after the treatment system.

As noted above additional samples will be collected at the discharge piping near the start and completion of the maximum day flow rate pumping test to monitor for the parameters identified in Appendix C to assist in the design of the Well 3A treatment system and to provide data to support the design of the CREC facility.

2.4 Data Evaluation

The data from this phase of the Well Investigation Program will be assessed to determine if PUD Well 3A can meet the maximum day flow rate requirements of the proposed CREC facility and to evaluate the effects of pumping at this rate on the groundwater levels within the unconsolidated deposits and bedrock in the vicinity of the well and to evaluate the effects from pumping on the MTBE plume migrating from the Main Street Mobil site.



DRAFT



APPENDIX A

**Well 3A: Well Completion Report
and Construction Diagram**

DRAFT



APPENDIX B

Monitoring Well Logs

DRAFT



APPENDIX C

2002 Pump Test Drawdown Curve

DRAFT



APPENDIX D

Water Quality Parameters

DRAFT



**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 11th SET OF DATA REQUESTS**

11-2 Does Invenergy intend to perform any vapor intrusion assessments on the properties in the vicinity of PUD Well #3A? If so, please provide details on the testing.

RESPONSE 11-2: Invenergy does not intend to perform any vapor intrusion assessments on the properties in the vicinity of PUD Well #3A at this time. RIDEM performed a Soil Vapor Intrusion Study in 2006 for this area and found no significant VOC concentrations. Given the significant reductions in monitored groundwater concentrations following the performance of site cleanup activities by RIDEM and their subcontractors at the North Main Street Mobil site and considering the results of the 2006 RIDEM Study, additional vapor intrusion assessments are not warranted at this time.

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 11th SET OF DATA REQUESTS**

11-3 Will Invenergy be conducting an impact zone analysis for the proposed 40,000 gallons of 19% aqueous ammonia storage at CREC?

RESPONSE 11-3: The United States Environmental Protection Agency ("EPA") requires facilities with large quantities of hazardous chemicals to prepare and implement a Risk Management Program to prevent the accidental release of those chemicals and mitigate the consequences of any releases that do occur. The EPA only requires a Risk Management Plan for the storage of aqueous ammonia when the concentration is 20% or greater, because it does not consider aqueous ammonia stored at a concentration less than 20% to pose a public health risk upon release.

Acute Exposure Level Guidelines ("AEGLs") are used by emergency planners and responders as guidance in dealing with accidental releases of chemicals into the air. AEGLs are expressed as concentrations of airborne chemicals at which health effects may occur and are designed to protect the elderly and children, as well as other individuals who may be susceptible.

AEGL levels are dictated by the severity of the toxic effects caused by the exposure, as follows:

- AEGL-1 (Level 1): Notable discomfort, irritation, or certain asymptomatic non-sensory effects. Any effects are not disabling and are transient and reversible upon cessation of exposure.
- AEGL-2 (Level 2): Irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
- AEGL-3 (Level 3): Life-threatening health effects or death.

Airborne concentrations below the AEGL-1 are exposure levels which could produce mild, transient, odor, taste and sensory irritation. These effects are non-disabling, allowing for safe evacuation from any

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 11th SET OF DATA REQUESTS**

impacted areas.

For ammonia, the 1-hour AEGL concentrations have been defined as follows:

- AEGL-1: 30 parts per million ("ppm")
- AEGL-2: 160 ppm
- AEGL-3: 1,100 ppm

The 19% aqueous ammonia will be stored in a single-walled steel above-ground storage tank. The ammonia storage tank and its associated transfer pumps, valves and piping will be contained within a concrete containment area designed to contain up to 110% of the storage tank capacity. Ammonia sensors within the containment area will alert plant operators of any system leaks. To minimize the evaporation rate of ammonia into the ambient air, the containment area will be filled with passive evaporative controls to reduce the exposed surface area of any aqueous ammonia within the containment area by 90 percent.

Although the CREC is not subject the Risk Management Program, a worst-case accidental release scenario has been evaluated to assess the potential consequences in the extremely unlikely event of a release of the full 40,000 gallons of 19% aqueous ammonia into the containment area. This assessment was performed using the Area Locations of Hazardous Atmospheres ("ALOHA") Model developed by the EPA and the National Oceanic and Atmospheric Administration and included as a prescribed technique under the Risk Management Program. It was completed in accordance with the procedures contained in the EPA's "Risk Management Program Guidance for Offsite Consequence Analysis."

The results of the worst-case accidental release scenario assessment completed for the CREC aqueous ammonia storage tank are shown in

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 11th SET OF DATA REQUESTS**

both tabular and graphical form in **Exhibit 1**. Based on the ALOHA modeling results, the furthest downwind distances from the ammonia storage tank at which the in-air ammonia concentrations would exceed each of the ammonia AEGL levels during a worst-case accidental release are as follows:

- AEGL-1: 121 yards
- AEGL-2: 53 yards
- AEGL-3: 20 yards

As shown on the figure in Exhibit 1, all of the areas in which the in-air ammonia concentration would exceed the AEGL-1 level are within the facility fenceline. Emergency procedures will be established to evacuate facility personnel from these areas in the event of a release and to require emergency personnel to utilize the proper personal protective equipment before entering these areas until the released ammonia has been properly recovered.

The in-air ammonia concentrations in all other areas of the facility and in all areas beyond the facility property line during a worst-case accidental release would be below the AEGL-1 level, thus resulting in no adverse health effects upon exposure. Although there would be no public health risk, Invenergy will work with local emergency responders to establish emergency procedures in the unlikely event there is an accidental release of ammonia from the facility.

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

INVENERGY THERMAL DEVELOPMENT LLC
By its Attorneys,

/s/ Alan M. Shoer

Alan M. Shoer, Esq. (#3248)
Richard R. Beretta, Jr. Esq. (#4313)
Nicole M. Verdi, Esq. (#9370)
ADLER POLLOCK & SHEEHAN, P.C.
One Citizens Plaza, 8th Floor
Providence, RI 02903-1345
Tel: 401-274-7200
Fax: 401-751-0604

Dated: June 13, 2016

CERTIFICATE OF SERVICE

I hereby certify that on June 13, 2016, I delivered a true copy of the foregoing responses to the Energy Facilities Siting Board via electronic mail to the parties on the attached service list.

/s/ Alan M. Shoer

SB-2015-06 Invenergy CREC Service List as of 05/02/2016

Name/Address	E-mail	Phone/FAX
<p>File an original and 10 copies with EFSB: Todd Bianco, Coordinator Energy Facility Siting Board 89 Jefferson Boulevard Warwick, RI 02888</p> <p>Margaret Curran, Chairperson Janet Coit, Board Member Assoc. Dir., Div. of Planning Parag Agrawal Patti Lucarelli Esq., Board Counsel Susan Forcier Esq., Counsel Rayna Maguire, Asst. to the Director DEM</p>	Todd.Bianco@puc.ri.gov ;	401-780-2106
	Patricia.lucarelli@puc.ri.gov ;	
	Margaret.Curran@puc.ri.gov ;	
	janet.coit@dem.ri.gov ;	
	kimberly.Crabill@doa.ri.gov ;	
	susan.forcier@dem.ri.gov ;	
	rayna.maguire@dem.ri.gov ;	
<p>Parties (Electronic Service Only, Unless by Request)</p>		
<p>Invenergy Thermal Development LLC Alan Shoer, Esq. Richard Beretta, Esq. Elizabeth Noonan, Esq. Nicole Verdi, Esq. Adler, Pollock & Sheehan One Citizens Plaza, 8th Floor Providence, RI 02903</p>	ashoer@apslaw.com ;	401-274-7200
	rberetta@apslaw.com ;	
	enoonan@apslaw.com ;	
	nverdi@apslaw.com ;	
<p>John Niland, Dir. Of Business Development Tyrone Thomas, Esq., Asst. General Counsel Invenergy Thermal Development LLC One South Wacker Drive, Suite 1900 Chicago, IL 60600</p>	jniland@invenergyllc.com ;	312-224-1400
	Tthomas@invenergyllc.com ;	
<p>Town of Burrillville Michael McElroy, Esq., Special Counsel Leah Donaldson, Esq., Special Counsel Schacht & McElroy PO Box 6721 Providence, RI 02940-6721</p>	Michael@mcelroylawoffice.com ;	401-351-4100
	leah@mcelroylawoffice.com ;	
<p>Oleg Nikolyszyn, Esq., Town Solicitor 155 South Main St., Suite 303 Providence, RI 02903</p>	Nikolyszyn@gmail.com ;	401-474-4370
<p>Conservation Law Foundation Jerry Elmer, Esq. Max Greene, Esq. 55 Dorrance Street Providence RI, 02903</p>	Jelmer@clf.org ;	401-351-1102
	Mgreene@clf.org ;	
<p>Ms. Bess B. Gorman, Esq. Assistant General Counsel and Director Legal Department, National Grid 40 Sylvan Road Waltham, MA 02451</p>	Bess.Gorman@nationalgrid.com ;	781-907-1843

Office of Energy Resources Andrew Marcaccio, Esq. Nick Ucci, Chief of Staff Chris Kearns, Chief Program Development One Capitol Hill Providence, RI 02908	Andrew.Marcaccio@doa.ri.gov ;	401-222-3417
	Nicholas.Ucci@energy.ri.gov ;	401-574-9100
	Christopher.Kearns@energy.ri.gov ;	
Rhode Island Building and Construction Trades Council Gregory Mancini, Esq. Sinapi Law Associates, Ltd. 2374 Post Road, Suite 201 Warwick, RI 02886	gmancinilaw@gmail.com ;	401-739-9690
Residents of Wallum Lake Road, Pascoag, RI Dennis Sherman and Kathryn Sherman Christian Capizzo, Esq. Shechtman Halperin Savage, LLP 1080 Main Street Pawtucket, RI 02869	ccapizzo@shslawfirm.com ;	401-272-1400
	kags8943@gmail.com ;	
Residents of Wallum Lake Road, Pascoag, RI Paul Bolduc and Mary Bolduc Joseph Keough Jr., Esq. 41 Mendon Avenue Pawtucket, RI 02861 Paul and Mary Bolduc 915 Wallum Lake Road Pascoag, RI 02859	jkeoughjr@keoughsweeney.com ;	401-724-3600
	oatyss1@verizon.net ;	401-529-0367
Persons with pending motions to intervene (Electronic Service Only)		
Abutter David B. Harris Michael Sendley, Esq. 600 Putnam Pike, St. 13 Greenville, RI 02828	mSENDLEY@cox.net ;	401-349-4405
Residents of 945 Wallum Lake Road, Pascoag, RI (Walkers) 945 Wallum Lake Road Pascoag, RI 02859	edaigle4@gmail.com ;	401-473-5798
Interested Persons (Electronic Service Only)		
Peter Nightingale, member Fossil Free Rhode Island 52 Nichols Road Kingston, RI 02881	divest@fossilfreeri.org ;	401-789-7649
Sister Mary Pendergast, RSM 99 Fillmore Street Pawtucket, RI 02860	mpendergast@mercyne.org ;	401-724-2237

Patricia J. Fontes, member Occupy Providence 57 Lawton Foster Road South Hopkinton, RI 02833	Patfontes167@gmail.com ;	401-516-7678
Burrillville Land Trust Marc Gertsacov, Esq. Law Offices of Ronald C. Markoff 144 Medway Street Providence, RI 02906	marc@ronmarkoff.com ;	401-272-9330
Paul Roselli, President Burrillville Land Trust PO Box 506 Harrisville, RI 02830	proseli@cox.net ;	401-447-1560
Rhode Island Progressive Democrats of America Andrew Aleman, Esq. 168 Elmgrove Avenue Providence, RI 02906	andrew@andrewaleman.com ;	401-429-6779
Fighting Against Natural Gas and Burrillville Against Spectra Expansion Jillian Dubois, Esq. The Law Office of Jillian Dubois 91 Friendship Street, 4 th Floor Providence, RI 02903	jillian.dubois.esq@gmail.com ;	401-274-4591
Burrillville Town Council c/o Louise Phaneuf, Town Clerk 105 Harrisville Main Street Harrisville, RI 02830	lphaneuf@burrillville.org ;	401-568-4300
Thomas J. Kravitz, Town Planner Town of Burrillville 144 Harrisville Main Street Harrisville, RI 02830	tkravitz@burrillville.org ;	401-568-4300
Joseph Raymond, Building Official	jraymond@burrillville.org ;	
Michael C. Wood, Town Manager Town of Burrillville 105 Harrisville Main Street Harrisville, RI 02830	mcwood@burrillville.org ;	401-568-4300 ext. 115
Mr. Leo Wold, Esq. Department of Attorney General 150 South Main Street Providence, RI 02903	LWold@riag.ri.gov ;	401-274-4400
Public Utilities Commission Cynthia Wilson Frias, Esq., Dep. Chief of Legal Alan Nault, Rate Analyst	Cynthia.Wilsonfrias@puc.ri.gov ; Alan.nault@puc.ri.gov ;	401-941-4500
Division of Public Utilities and Carriers	john.spirito@dpuc.ri.gov ;	401-941-4500

John J. Spirito, Esq., Chief of Legal Steve Scialabba, Chief Accountant Tom Kogut, Chief of Information	steve.scialabba@dpuc.ri.gov ; thomas.kogut@dpuc.ri.gov ;	
Matthew Jerzyk, Deputy Legal Counsel Office of the Speaker of the House State House, Room 302 Providence RI, 02903	mjerzyk@rilin.state.ri.us ;	401-222-2466
Hon. Cale Keable, Esq., Representative of Burrillville and Glocester	Cale.keable@gmail.com ;	401-222-2258
Nick Katkevich	nkatkevich@gmail.com ;	
Ambar Espinoza	aespinoza@ripr.org ;	
Joseph Bucci, Acting Administrator Highway and Bridge Maintenance Operations RI Department of Transportation	joseph.bucci@dot.ri.gov ;	
Jared Rhodes, Chief Statewide Planning Program	jared.rhodes@doa.ri.gov ;	
Jennifer Sternick Chief of Legal Services RI Department of Administration	Jennifer.sternick@doa.ri.gov ;	
Doug Gablinske, Executive Director TEC-RI	doug@tecri.org ;	
Tim Faulkner ecoRI News 111 Hope Street Providence, RI 02906	tim@ecori.org ;	401-330-6276
Robert Tormey Conanicut Energy, LLC	rtormey@conanicutenergy.com ;	617-306-1601
Sally Mendzela	salgalpal@hotmail.com ;	
Keep Burrillville Beautiful Paul LeFebvre	paul@acumenriskgroup.com ;	401-714-4493
Mark Baumer	everydayyeah@gmail.com ;	
Nisha Swinton Food & Water Watch New England	nswinton@fwwatch.org ;	
Kaitlin Kelliher	Kaitlin.kelliher@yahoo.com ;	
Joe Piconi, Jr.	jiggzy@hotmail.com ;	
Hon. Aaron Regunberg Representative of Providence, District 4	Aaron.regunberg@gmail.com ;	

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 12th SET OF DATA REQUESTS**

12-1 Would Invenergy be willing to float a sight balloon at the height and locations of the two smoke stacks? If not, please explain why not.

RESPONSE: 12-1 Invenergy Thermal Development LLC (“Invenergy”) would be willing to float a sight balloon at the height and locations of the two smoke stacks. However, the existing tree canopy in that area is too dense for a sight balloon to breach, without clearing trees.

A sight balloon may not be necessary to provide any additional information which is not already available. The Energy Facility Siting Board (“EFSB”) Application for the project included an extensive visual simulation indicating where the stacks would be seen from various surrounding areas. There is also an existing cell phone tower located approximately 400 feet from the proposed stack locations. This cell phone tower is 190 feet tall (or 192.9 feet with appurtenances/antennas), with an absolute height above grade of 769.7 feet, as shown on the FCC Registration for the tower which can be found at:

<http://wireless2.fcc.gov/UlsApp/AsrSearch/asrRegistration.jsp?regKey=2632611>

The stacks will be 200 feet tall and the site’s finish grade is 575.5 feet, which would make the top of stack 775.5 feet, or 5.8 feet taller than the adjacent cell tower. Because of its nearby location and similar height, the existing cell phone tower serves the same purpose as would be served by a sight balloon in this case. Any areas which currently cannot see the cell tower will almost certainly not be able to see the Clear River Energy Center (“CREC”) exhaust stacks.

RESPONDENT: John Niland, Invenergy Thermal Development LLC

DATE: June 13, 2016

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

**IN RE: INVENERGY THERMAL DEVELOPMENT LLC :
APPLICATION TO CONSTRUCT AND :
OPERATE THE CLEAR RIVER ENERGY : SB-2015-06
CENTER, BURRILLVILLE, RHODE ISLAND :**

**INVENERGY THERMAL DEVELOPMENT LLC's RESPONSES TO
THE TOWN OF BURRILLVILLE'S 12th SET OF DATA REQUESTS**

12-2 Please state the exact height of the existing cell phone tower located near the project site.

RESPONSE: 12-2 This cell phone tower is 190 feet tall (or 192.9 feet with appurtenances/antennas), with an absolute height above grade of 769.7 feet, as shown on the FCC Registration for the tower which can be found at:

<http://wireless2.fcc.gov/UlsApp/AsrSearch/asrRegistration.jsp?regKey=2632611>

According to the web-site of SBA Communications Corporation, the existing cell phone tower located near the project site is 190 feet above ground:

<http://map.sbasite.com/SiteInfo.aspx?SiteCode=RI07827-S>

RESPONDENT: Michael Feinblatt, ESS Group

DATE: June 13, 2016

INVENERGY THERMAL DEVELOPMENT LLC
By its Attorneys,

/s/ Alan M. Shoer

Alan M. Shoer, Esq. (#3248)
Richard R. Beretta, Jr. Esq. (#4313)
Nicole M. Verdi, Esq. (#9370)
ADLER POLLOCK & SHEEHAN, P.C.
One Citizens Plaza, 8th Floor
Providence, RI 02903-1345
Tel: 401-274-7200
Fax: 401-751-0604

Dated: June 13, 2016

CERTIFICATE OF SERVICE

I hereby certify that on June 13, 2016, I delivered a true copy of the foregoing responses to the Energy Facilities Siting Board via electronic mail to the parties on the attached service list.

/s/ Alan M. Shoer

SB-2015-06 Invenergy CREC Service List as of 05/02/2016

Name/Address	E-mail	Phone/FAX
<p>File an original and 10 copies with EFSB: Todd Bianco, Coordinator Energy Facility Siting Board 89 Jefferson Boulevard Warwick, RI 02888</p> <p>Margaret Curran, Chairperson Janet Coit, Board Member Assoc. Dir., Div. of Planning Parag Agrawal Patti Lucarelli Esq., Board Counsel Susan Forcier Esq., Counsel Rayna Maguire, Asst. to the Director DEM</p>	Todd.Bianco@puc.ri.gov ;	401-780-2106
	Patricia.lucarelli@puc.ri.gov ;	
	Margaret.Curran@puc.ri.gov ;	
	janet.coit@dem.ri.gov ;	
	kimberly.Crabill@doa.ri.gov ;	
	susan.forcier@dem.ri.gov ;	
	rayna.maguire@dem.ri.gov ;	
	Parag.Agrawal@doa.ri.gov ;	
<p>Parties (Electronic Service Only, Unless by Request)</p>		
<p>Invenergy Thermal Development LLC Alan Shoer, Esq. Richard Beretta, Esq. Elizabeth Noonan, Esq. Nicole Verdi, Esq. Adler, Pollock & Sheehan One Citizens Plaza, 8th Floor Providence, RI 02903</p>	ashoer@apslaw.com ;	401-274-7200
	rberetta@apslaw.com ;	
	enoonan@apslaw.com ;	
	nverdi@apslaw.com ;	
<p>John Niland, Dir. Of Business Development Tyrone Thomas, Esq., Asst. General Counsel Invenergy Thermal Development LLC One South Wacker Drive, Suite 1900 Chicago, IL 60600</p>	jniland@invenergyltc.com ;	312-224-1400
	Tthomas@invenergyltc.com ;	
<p>Town of Burrillville Michael McElroy, Esq., Special Counsel Leah Donaldson, Esq., Special Counsel Schacht & McElroy PO Box 6721 Providence, RI 02940-6721</p>	Michael@mcelroylawoffice.com ;	401-351-4100
	leah@mcelroylawoffice.com ;	
	Nikolyszyn@gmail.com ;	
<p>Oleg Nikolyszyn, Esq., Town Solicitor 155 South Main St., Suite 303 Providence, RI 02903</p>		401-474-4370
<p>Conservation Law Foundation Jerry Elmer, Esq. Max Greene, Esq. 55 Dorrance Street Providence RI, 02903</p>	Jelmer@clf.org ;	401-351-1102
	Mgreene@clf.org ;	
<p>Ms. Bess B. Gorman, Esq. Assistant General Counsel and Director Legal Department, National Grid 40 Sylvan Road Waltham, MA 02451</p>	Bess.Gorman@nationalgrid.com ;	781-907-1843

Office of Energy Resources Andrew Marcaccio, Esq. Nick Ucci, Chief of Staff Chris Kearns, Chief Program Development One Capitol Hill Providence, RI 02908	Andrew.Marcaccio@doa.ri.gov ;	401-222-3417
	Nicholas.Ucci@energy.ri.gov ;	401-574-9100
	Christopher.Kearns@energy.ri.gov ;	
Rhode Island Building and Construction Trades Council Gregory Mancini, Esq. Sinapi Law Associates, Ltd. 2374 Post Road, Suite 201 Warwick, RI 02886	gmancinilaw@gmail.com ;	401-739-9690
Residents of Wallum Lake Road, Pascoag, RI Dennis Sherman and Kathryn Sherman Christian Capizzo, Esq. Shechtman Halperin Savage, LLP 1080 Main Street Pawtucket, RI 02869	ccapizzo@shslawfirm.com ;	401-272-1400
	kags8943@gmail.com ;	
Residents of Wallum Lake Road, Pascoag, RI Paul Bolduc and Mary Bolduc Joseph Keough Jr., Esq. 41 Mendon Avenue Pawtucket, RI 02861 Paul and Mary Bolduc 915 Wallum Lake Road Pascoag, RI 02859	jkeoughjr@keoughsweeney.com ;	401-724-3600
	oatyssl@verizon.net ;	401-529-0367
Persons with pending motions to intervene (Electronic Service Only)		
Abutton David B. Harris Michael Sendley, Esq. 600 Putnam Pike, St. 13 Greenville, RI 02828	mSENDLEY@cox.net ;	401-349-4405
Residents of 945 Wallum Lake Road, Pascoag, RI (Walkers) 945 Wallum Lake Road Pascoag, RI 02859	edaigle4@gmail.com ;	401-473-5798
Interested Persons (Electronic Service Only)		
Peter Nightingale, member Fossil Free Rhode Island 52 Nichols Road Kingston, RI 02881	divest@fossilfreeri.org ;	401-789-7649
Sister Mary Pendergast, RSM 99 Fillmore Street Pawtucket, RI 02860	mpendergast@mercyrne.org ;	401-724-2237

Patricia J. Fontes, member Occupy Providence 57 Lawton Foster Road South Hopkinton, RI 02833	Patfontes167@gmail.com ;	401-516-7678
Burrillville Land Trust Marc Gertsacov, Esq. Law Offices of Ronald C. Markoff 144 Medway Street Providence, RI 02906	marc@ronmarkoff.com ;	401-272-9330
Paul Roselli, President Burrillville Land Trust PO Box 506 Harrisville, RI 02830	proseli@cox.net ;	401-447-1560
Rhode Island Progressive Democrats of America Andrew Aleman, Esq. 168 Elmgrove Avenue Providence, RI 02906	andrew@andrewaleman.com ;	401-429-6779
Fighting Against Natural Gas and Burrillville Against Spectra Expansion Jillian Dubois, Esq. The Law Office of Jillian Dubois 91 Friendship Street, 4 th Floor Providence, RI 02903	jillian.dubois.esq@gmail.com ;	401-274-4591
Burrillville Town Council c/o Louise Phaneuf, Town Clerk 105 Harrisville Main Street Harrisville, RI 02830	lphaneuf@burrillville.org ;	401-568-4300
Thomas J. Kravitz, Town Planner Town of Burrillville 144 Harrisville Main Street Harrisville, RI 02830	tkravitz@burrillville.org ;	401-568-4300
Joseph Raymond, Building Official	jraymond@burrillville.org ;	
Michael C. Wood, Town Manager Town of Burrillville 105 Harrisville Main Street Harrisville, RI 02830	mcwood@burrillville.org ;	401-568-4300 ext. 115
Mr. Leo Wold, Esq. Department of Attorney General 150 South Main Street Providence, RI 02903	LWold@riag.ri.gov ;	401-274-4400
Public Utilities Commission Cynthia Wilson Frias, Esq., Dep. Chief of Legal Alan Nault, Rate Analyst	Cynthia.Wilsonfrias@puc.ri.gov ; Alan.nault@puc.ri.gov ;	401-941-4500
Division of Public Utilities and Carriers	john.spirito@dpuc.ri.gov ;	401-941-4500

John J. Spirito, Esq., Chief of Legal Steve Scialabba, Chief Accountant Tom Kogut, Chief of Information	steve.scialabba@dpuc.ri.gov ; thomas.kogut@dpuc.ri.gov ;	
Matthew Jerzyk, Deputy Legal Counsel Office of the Speaker of the House State House, Room 302 Providence RI, 02903	mjerzyk@rilin.state.ri.us ;	401-222-2466
Hon. Cale Keable, Esq., Representative of Burrillville and Glocester	Cale.keable@gmail.com ;	401-222-2258
Nick Katkevich	nkatkevich@gmail.com ;	
Ambar Espinoza	aespinoza@ripr.org ;	
Joseph Bucci, Acting Administrator Highway and Bridge Maintenance Operations RI Department of Transportation	joseph.bucci@dot.ri.gov ;	
Jared Rhodes, Chief Statewide Planning Program	jared.rhodes@doa.ri.gov ;	
Jennifer Sternick Chief of Legal Services RI Department of Administration	Jennifer.sternick@doa.ri.gov ;	
Doug Gablinske, Executive Director TEC-RI	doug@tecri.org ;	
Tim Faulkner ecoRI News 111 Hope Street Providence, RI 02906	tim@ecori.org ;	401-330-6276
Robert Tormey Conanicut Energy, LLC	rtormey@conanicutenergy.com ;	617-306-1601
Sally Mendzela	salgalpal@hotmail.com ;	
Keep Burrillville Beautiful Paul LeFebvre	paul@acumenriskgroup.com ;	401-714-4493
Mark Baumer	everydayyeah@gmail.com ;	
Nisha Swinton Food & Water Watch New England	nswinton@fwwatch.org ;	
Kaitlin Kelliher	Kaitlin.kelliher@yahoo.com ;	
Joe Piconi, Jr.	jiggzy@hotmail.com ;	
Hon. Aaron Regunberg Representative of Providence, District 4	Aaron.regunberg@gmail.com ;	