Analysis of the Potential Impact of the Proposed Clear River Energy Center on Property Values in Burrillville, Rhode Island

Prepared for the:
Town of Burrillville, Rhode Island

Prepared by:
George E. Sansoucy, P.E., LLC
7 Greenleaf Woods Drive, Unit 102
Portsmouth, New Hampshire

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List of Acronyms

BCS	Burrillville Compressor Station
CREC	Clear River Energy Center
dBA	Decibels
DEMs	Digital Elevation Models
EFSB	Energy Facility Siting Board
EIA	Energy Information Administration
EPA	Environmental Protection Agency
GES	George E. Sansoucy, P.E., LLC
GIS	Geographic Information System
HRSG	Heat Recovery Steam Generator
HVTLs	High-Voltage Transmission Lines
kV	Kilovolt
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NSAs	Noise Sensitive Areas
OSP	Ocean State Power
ROW	Right-of-Way
SIZ	Significant Impact Zone
ULSD	Ultra-Low Sulfur Diesel
USPAP	Uniform Standards of Professional Appraisal Practice

1.1 Purpose and Scope

George E. Sansoucy P.E., LLC (GES) was retained by the Town of Burrillville (Town) to prepare a report on the impact the Clear River Energy Center (CREC) (Facility) will have on property values in the Town and on the abutters. The purpose of this report is to assist the Town in providing an advisory opinion to the Rhode Island Energy Facility Siting Board (EFSB) on the potential property value impact of the proposed Facility. The specific research and analyses undertaken as part of this report are as follows:

- Literature review of case studies or authoritative literature that address the impact on property value disamenity[1] such as power plants and high-voltage transmission lines (HVTLs);

- Analysis of sales and assessments in the Town in proximity to the existing Ocean State Power (OSP) plant owned by TransCanada and the Burrillville Compressor Station[2] (BCS) owned by Spectra Energy Algonquin (Spectra);

- Survey of communities that have similar power plants and the impact these communities see from such development; and

- Visual inspection of the area by Glenn C. Walker, ASA on August 25, 2016 in addition to multiple visits to the Town.

In addition to these specific areas of research and analyses, GES has drawn upon its experience in the appraisals of power plants for numerous municipalities and the impact these power plants have on the communities that host such a facility. In providing our conclusions, we have utilized both quantitative and qualitative analyses. The specific research, analyses, and conclusions are summarized in this report.

This report is considered to conform to the requirements of the *Uniform Standards of Professional Appraisal Practice* (USPAP) and our conclusions with respect to property value impact of the proposed Facility are based on the following analyses and/or our professional judgment. There are no extraordinary assumptions or hypothetical conditions included in our analyses.

1.2 Report Organization

This report has been organized into chapters for the ease of use. The following is an overview of each chapter.

Chapter 2 summarizes the regional and local characteristics along with providing an overview of the Town's interrelationship with existing electric and natural gas infrastructure. The Town

[1] Disamenity is a disadvantage or drawback, especially of a location.
[2] CREC Rhode Island EFSB Application dated 10/28/15, 3.3 Land Area, p. 9.

currently hosts the 560 megawatt (MW) OSP natural gas-fired plant which went on-line in 1990. This original power plant was located on the northeastern edge of the Town due to the existence of two natural gas transmission lines and 345 kV HVTLs in the Town. This utility infrastructure is the reason Invenergy Thermal Development LLC (Invenergy) proposed the Facility in the Town, where it will be constructed on Spectra's 730-acre site.

Chapter 3 is a description of the proposed Facility and the characteristics that will potentially impact property values. These are each summarized below based on the information submitted to the EFSB.

- Increased traffic during construction and operation;
- Potential visual impact associated with the improvements and 200-foot high stacks;
- Potential noise impact from the proposed Facility which are anticipated to be at or below 43 decibels (dBA) during operation, but likely higher during construction; and
- Increased emissions from the proposed Facility which will meet all federal and state requirements to assure no impact to human health and/or welfare. These emissions are considered to be a regional issue, not just a Town issue, as state and federal regulations assure no negative impact to the health and welfare of the population close to the proposed Facility. Therefore, while there may be a perception that emissions will have a local impact, this is considered to be addressed by the regulations.

Chapter 4 discusses the market value effects and methods of measuring the impact of the proposed Facility. The measure of value used in this report is the empirical market value that can be provided by actions of buyers and sellers in the marketplace. This differs from the perceived impact that a proposed power plant has on surrounding property values, which is more emotional and subjective.

Chapter 5 summarizes the published literature of the value effects of power plants and HVTLs on property values. The published literature suggests that there is the potential for a 3 to 7% decline in property values within two miles of the power plant, with no indication of any negative impact beyond two miles. The studies suggest that property value impact is greater closer to the power plant and that existing disamenities or other non-conforming uses will dilute or eliminate the impact of a new power plant in the area.

Chapter 6 addresses specific empirical evidence in the Town and the sale of properties in proximity to the OSP plant as well as the existing BCS at the site. A review of several sales, both close to and away from the OSP plant and BCS improvements, did not identify any significant differences in the site values.

Chapter 7 analyzed the assessed value of property abutters to the OSP plant and compared these with randomly selected properties through the Town. This review failed to identify any indication that the OSP plant had a negative impact on property values.

Chapter 8 discusses a survey of communities within a 30-mile radius of the Town that host one or more power plants. Based on the results of this survey, the evidence suggests power plants have no long-term impact on property values in the neighborhoods that surround the plant or the town in general. There is some evidence that when the plant is in the development or construction stage, property values are impacted which may reflect the property's marketability and days on the market. However, as the plant becomes the "norm" property values do not appear to be negatively affected.

1.3 Conclusions and Potential Impact

As a result of our research and analyses, it is our opinion that there is little evidence to suggest that the proposed Facility will have a negative impact to property values in the Town or on the abutting properties. This opinion is based upon the following:

- The literature shows the proposed Facility will have no impact on property values beyond two miles.

- The literature suggests that within a two-mile radius, a power plant may impact property values by 3-7% with the greatest impact being to those properties closest to the plant.

- A review of sales and assessment data does not support the results of the large-scale survey. The town-specific analyses found no negative value impact for proximity to disamenities such as the OSP plant or the BCS.

- A survey of other communities that host power plants indicates that these communities could not identify any negative impact on property values surrounding the power plant.

Limited Property Impact:

- There is one set of properties that are likely to be negatively impacted on a temporary basis. These are the residential properties directly across the street from the proposed Facility's entrance. During the construction phase it is likely that the properties along Route 100 directly across from the entrance will experience lower marketability and potential negative impact to market value. This impact is not anticipated to be permanent but only during the construction phase. The exact impact to each specific property is considered to be beyond the scope of this report.

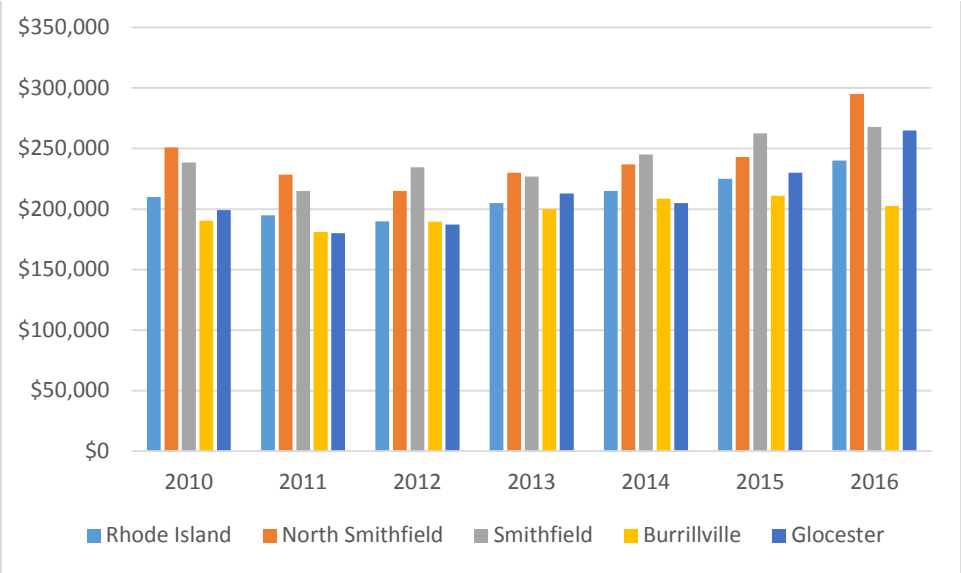
2.1 Introduction

The proposed Facility will be located in the Town which is part of Providence County in the northern part of Rhode Island. According to the U.S. Census Bureau, the population of the county was estimated to be 633,473 as of July 1, 2015. Major north-south transportation routes in the state include Interstates 95 and 295. The state's capital and largest metropolitan area is Providence. The northern part of Rhode Island is primarily rural and hosts substations, natural gas transmission lines, and HVTLs infrastructure.

The Town is a semi-rural community located in the northwest corner of the state, abutting both Connecticut and Massachusetts. The Town's area is relatively large with approximately 57 square miles. The population of the Town was approximately 15,955 as of 2010 which is a slight increase from 15,796± in the 2000 census. This slow trend in population growth is characteristic of rural settings such as the Town and considered representative of the rural areas of Rhode Island, Connecticut, and Massachusetts. The median age of residents in the Town as of 2010 was 42.4 years which is consistent with that of Rhode Island at 42.3 years. The median household income of the Town in 2013 was $68,540 which is higher than the Rhode Island median of $55,902 for 2013.

The residential development in the Town is primarily single family homes with median home prices that are below the statewide average but similar to the surrounding rural communities. A summary of median single family home prices is set forth in Figure 1 and illustrates the regional and local real estate trend.

Figure 1
Median Prices of Single Family Home Sales



Source: http://riliving.com

The Town is generally rural with limited commercial and industrial activity. The Town hosts two industrial parks along with significant utility infrastructure which includes the OSP plant located off Route 146, the multiple 345 kilovolt (kV) transmission lines owned by National Grid along the northern section of Town, as well as the Spectra pipeline and BCS site. This utility infrastructure and available land are the primary reasons that the Town attracted the OSP plant in the early 1990s and the proposed Facility.

Figure 2 sets forth the Town, the OSP plant, and the general locations of the proposed Facility relative to the region.

Figure 2
General Location of Proposed Facility

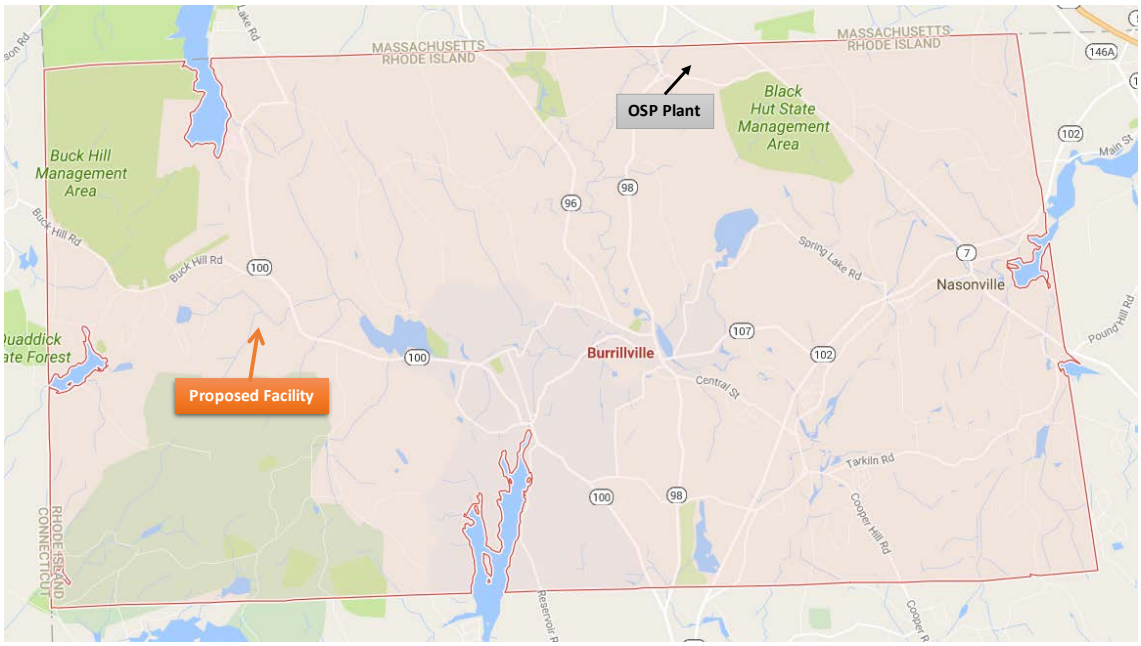
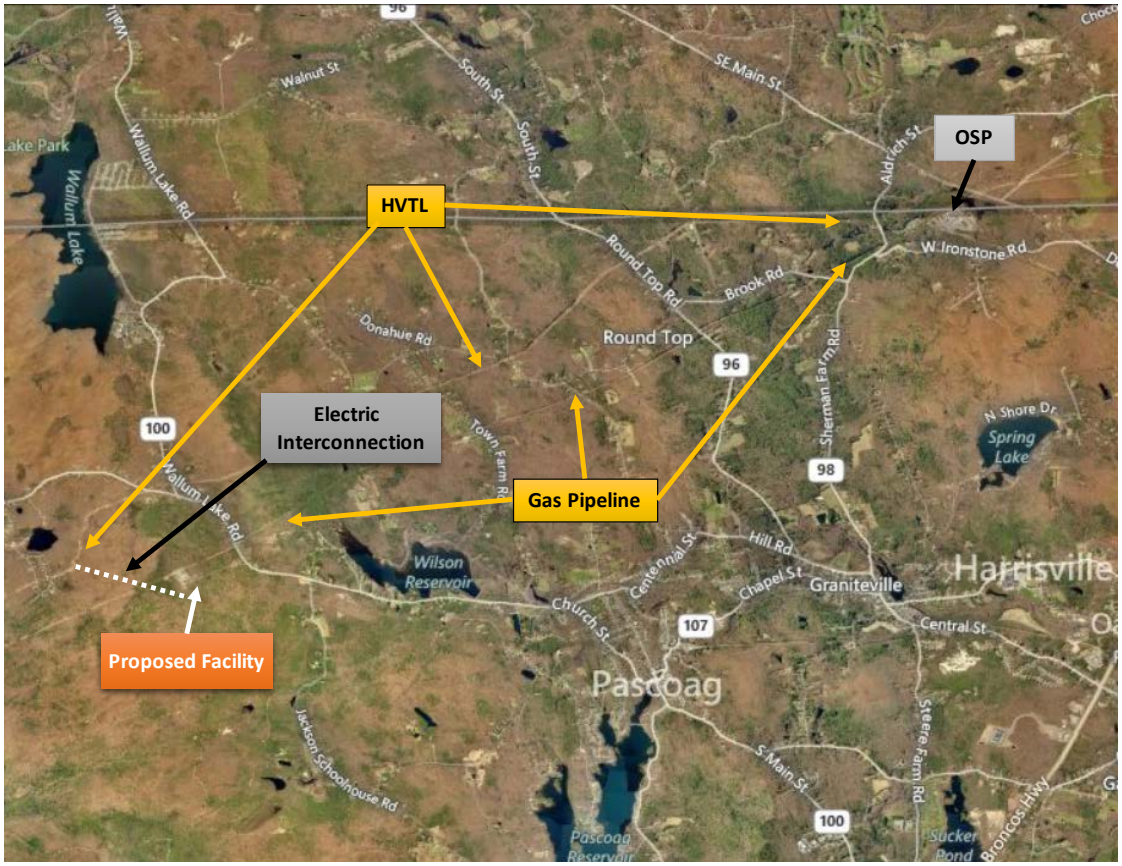


Figure 3 is an overview of the electric and gas infrastructure in the Town.

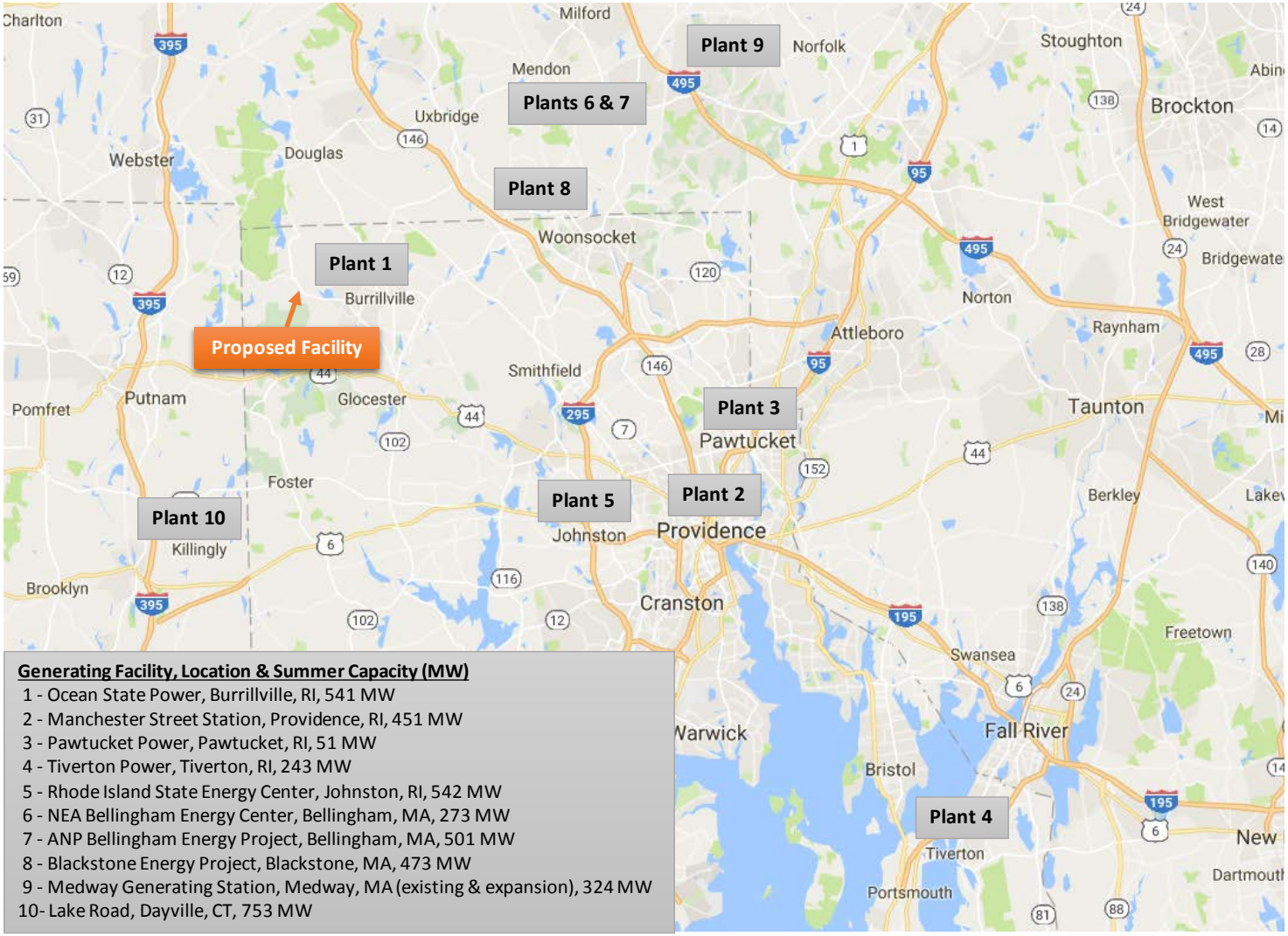
Figure 3
Location of Proposed Facility and Surrounding Area



The natural gas transmission lines and HVTLs have resulted in the development of several other power plants in and around the state, as well as a several proposals to build additional new facilities in the region. For example, TransCanada has proposed to expand the OSP facility in Town with an additional 250-300 MW.

Figure 4 sets forth an overview of the surrounding area and the general locations of surrounding power plants. The development of the power plants illustrated in Figure 4 corresponds to the location of the natural gas transmission lines and HVTLs. This infrastructure runs from the Killingly, Connecticut area to the Town and then north towards Massachusetts.

Figure 4
Electric Generating Facilities in Rhode Island and Surrounding Locations



2.2 Immediate Neighborhood of the Proposed Facility

The proposed Facility's neighborhood is generally rural in nature and currently improved with the BCS. The proposed Facility will be located on a 67-acre parcel within a larger 730-acre parcel owned by Spectra. The closest residential abutter is 2,000± feet from the proposed Facility and the existing BCS. The proposed Facility will connect to the Sherman Road Substation on the northeastern end of Town via an existing easement owned by National Grid. The proposed Facility and its interconnection are illustrated in Figure 5.

Figure 5
Proposed Facility and Electric Interconnection

The neighborhood where the proposed Facility will be located is already improved with the BCS to the west of Route 100. The BCS is further buffered by a 2,820± acre wood parcel located to the south of the BCS which is owned by the State of Rhode Island.

The neighborhood to the east of Route 100 is predominantly single family residential properties. These residential properties are approximately 2,000 feet from the proposed Facility. Figures 6 through 8 illustrate the closest residential neighborhoods to the proposed Facility.

Figure 6
West Side of Site

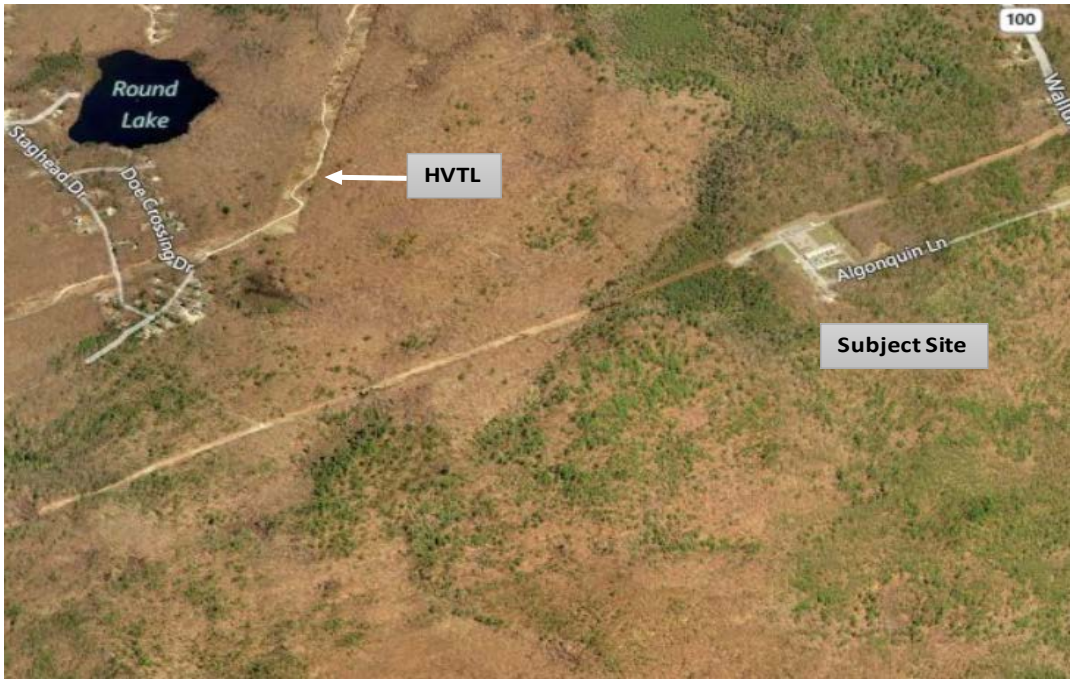
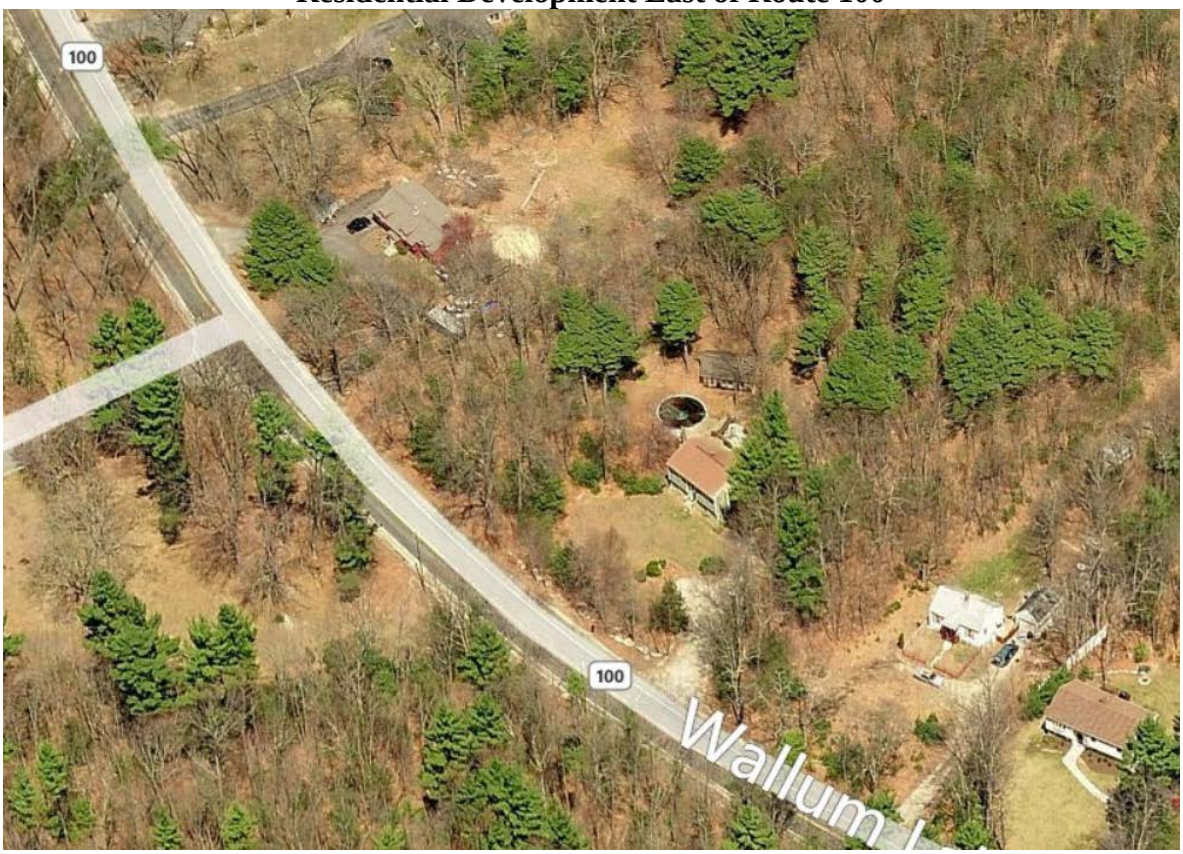


Figure 7
Neighborhood East of Route 100

Figure 6 illustrates the buffer between the proposed Facility and the neighbors to the west. Figure 7 illustrates the buffer between the proposed Facility and the neighbors to the east along Route 100. This neighborhood consists primarily of single family homes as illustrated in Figure 8.

Figure 8
Residential Development East of Route 100



The followings photographs show the gas meter station and a representation of the houses along Route 100 across from the BCS entrance.

3.1 Introduction

The proposed Facility is a 1,000 MW natural gas-fired combined cycle generating facility and associated infrastructure being developed by Invenergy. The proposed Facility will be located at the BCS site on Wallum Lake Road (State Route 100) in the Town. The proposed infrastructure includes the combined cycle plant, natural gas interconnection, and HVTLs that connect the National Grid system. The following sections provide a more detailed description of the proposed Facility along with the expected visual, noise and traffic characteristics, and impact to the surrounding area.

The proposed Facility will be configured as a two-unit one-on-one (1x1), duct fired, combined cycle generation station. Each unit will consist of an advanced class gas turbine operated in a combined-cycle configuration with a heat recovery steam generator (HRSG) equipped with natural gas-fired duct burners and one steam turbine. The combustion turbine, steam turbine, and generator of each unit will be connected via a common shaft, (single shaft). Each gas turbine will fire natural gas as a primary fuel and ultra-low sulfur diesel (ULSD) fuel as a backup fuel for limited periods when natural gas is unavailable. The ULSD will be stored in two 1,000,000-gallon on-site storage tanks. ULSD will be delivered by truck. The natural gas supply will be provided via pipeline from the adjacent BCS.

The proposed Facility will have a nominal power output at base load of approximately 1,000 MW. The electrical power generated will be transmitted through a new 345-kV transmission line to be installed from the proposed Facility along the existing National Grid right-of-way (ROW) to the Sherman Road Substation.

In reviewing the impact to the Town and/or abutters, there are four primary categories that include traffic, visual, noise, and emissions. These will vary depending on the proximity to an abutting neighborhood or property, mode of the proposed Facility's operation, and during the construction phase when traffic and noise levels will likely be higher. These are each summarized below based on the information submitted to the EFSB.

- Increased traffic during construction and operation;
- Potential visual impact associated with the improvements and 200-foot high stacks;
- Potential noise impact from the proposed Facility which is anticipated to be at or below 43 dBA during operation, but likely higher during construction; and
- Increased emissions from the proposed Facility which will meet all federal and state requirements to assure no impact to human health and/or welfare. These emissions are considered to be a regional issue, not just a Town issue, as state and federal regulations assure no negative impact to the health and welfare of the population in the area of the proposed Facility. Therefore, while there may be a perception that emissions will have a local impact, this is considered to be addressed by the regulations.

The potential impact of some, but not all, of these is minimized by the proposed Facility's location within the 720-acre Spectra site. The following is a summary of the characteristics of the proposed Facility that could impact the Town and/or abutters' property values.

3.2 Traffic Impact

Major roads and highways within the immediate vicinity of the proposed Facility area include Algonquin Lane, Wallum Lake Road (Route 100), and Church Street (Route 100). These roads in the immediate vicinity of the proposed Facility area, as well as main roads leading to major highways, will experience an increase in traffic flow due to the construction and minor changes during operation of the proposed Facility.

Construction will commence in the first quarter of 2017 and the expected construction duration is 30 months with commercial operation in June of 2019. Construction personnel will consist of construction craft (laborers, welders, etc.) and staff (professional staff, engineers administrative, etc.). Most staff traffic will occur between 6:00am-7:00am with change of shift at 5:00pm-6:00pm. Staff will peak at approximately 150 people in the second quarter of 2018. Construction craft will also peak at 440 people the second quarter of 2018. Site mobilization will take place in the first three months of construction.

The average daily deliveries will be 10 to 12 trucks per day, though traffic could be 60 or more per day during certain aspects of construction. According to the application to the EFSB, the traffic is planned to come up Wallum Road.

After construction, the operation of the proposed Facility will have minimal, if any, impact on traffic. Employees will commute to and from on a daily basis but these vehicle trips will be spread out over multiple work shifts. In addition to employee traffic, the proposed Facility will take deliveries of supplies and equipment on an intermittent basis as well as ULSD supplied via truck. However, any impact on traffic resulting from such deliveries is considered to be minimal. Therefore, during construction traffic will increase in the neighborhood of the proposed Facility significantly but during operation there will be little impact to traffic.

3.3 Visual Impact

The proposed Facility will potentially be visible from various vantage points within the Town. The degree to which the proposed Facility is visible from various locations in the Town is described below and considered in determining the impact to property values.

The following discussion is based on the proposed Facility's EFSB application prepared by ESS Group. ESS Group established a visual study area that extended five miles from the BCS site. This analysis did not specifically address the new HVTLs which are considered to have minimal visual impact.

3.3.1 Visual Study Area

The visual study area, which GES considers reasonable, includes the Towns of Burrillville and Glocester both in Providence County, Rhode Island, the Town of Douglas in Worcester County, Massachusetts, and the Towns of Tompson, Putnam, and Killingly in Windham County, Connecticut. The study area, which is primarily located within Rhode Island consists of heavily forested land interspersed with lakes, ponds, reservoirs, and villages. Elevations generally range from 300 to 800 feet and the terrain can be characterized as rolling to steep hills. The study area consists of over 80% forest vegetation which are generally large, contiguous stretches of undeveloped land interrupted occasionally by roads or other types of development.

3.3.2 Viewshed Analysis

The purpose of the viewshed analysis is to determine the geographic areas within which there is a reasonable probability of the proposed Facility being visible. The viewshed analysis considers the highest point of the proposed Facility components and the stacks, at a height of 200 feet.

To create the viewshed analysis, Digital Elevation Models (DEMs) were created to illustrate the five-mile study area. The proposed stack locations are used as the predominant feature at 200 feet. A Geographic Information System (GIS) software program was then used to the study area to simulate the viewer eye height to determine whether an uninterrupted line of sight to the proposed Facility is available. The resulting data includes a combination of those areas with visibility of the proposed Facility and represents the geographic area in which the project would be visible under bare earth conditions.

Based on the ESS Group results, the stacks were the only portion of the proposed Facility visible from the various simulation locations. These were modeled to reflect the design intent so that the simulation accurately reflects how the proposed Facility will look from the various locations. The viewpoints from the ESS Group study are set forth in the following photographs.

Photo 1 - Wilson Reservoir, Burrillville, RI
(Simulated View)

Photo 2 - Wallum Lake State Park, Douglas, MA
Not Visible

Photo 3 - Callahan School Ball Field, Burrillville, RI
Not Visible

Photo 4 - Emerson Road, Burrillville, RI
Not Visible

Photo 5 - Hauser Field, Pascoag, RI
Not Visible

Tompson Raceway Golf Club, Thompson, CT
Not Visible

Existing View

Simulated View

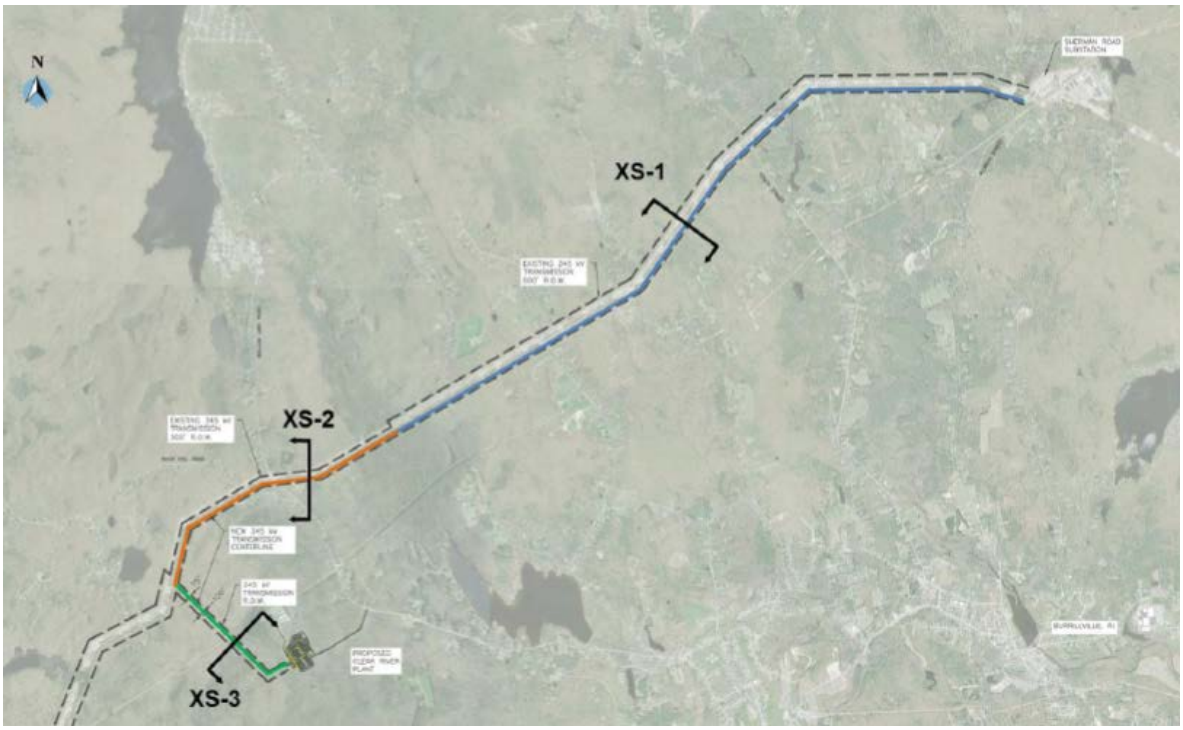
The conclusion of the ESS Group study, which is consistent with our expectations, is that the proposed Facility will have minimal visual impact on most locations in the surrounding neighborhoods. From the locations with visibility, it will be a partial view, often with only the upper section of the stacks visible. Based on the existing mitigating factors such as vegetation

and structures, the proposed Facility is not likely to have any significant visual impact during daytime viewing conditions. Additionally, because the proposed Facility is dry cooled, the presence of a plume will not extend the visibility.

3.3.3 Electric Interconnection

The HVTLs that interconnect the proposed Facility to the electric system will require a new 345 kV line within the existing National Grid ROW of approximately six miles to the Sherman Road Substation. The route of transmission lines is shown in Figure 9.

Figure 9
Proposed Transmission Line



Figures 10-A through 10-C set forth the configuration of the existing and proposed lines.

Figure 10-A
Existing and Proposed Lines in XS-1
(view facing southwest)

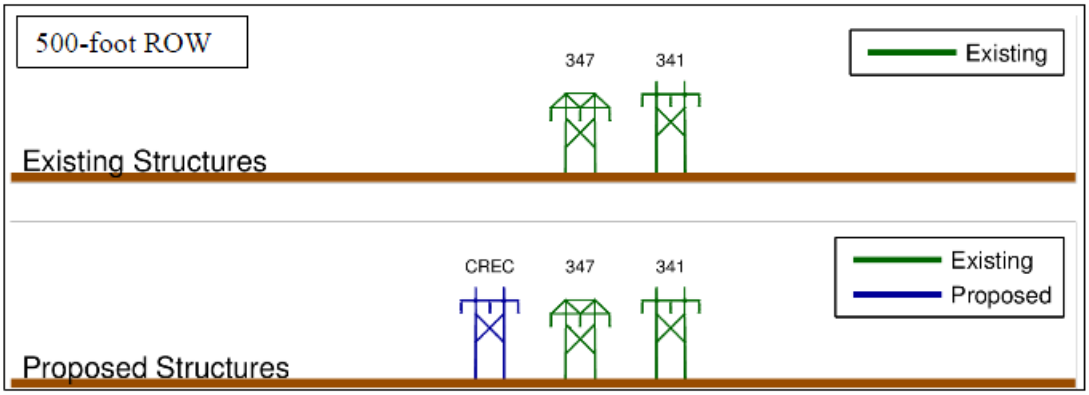


Figure 10-B
Existing and Proposed Lines in XS-2
(view facing west)

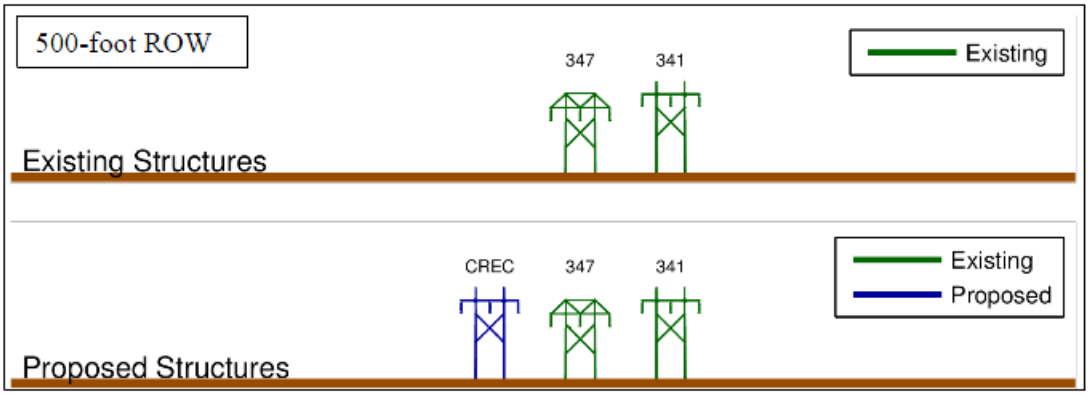
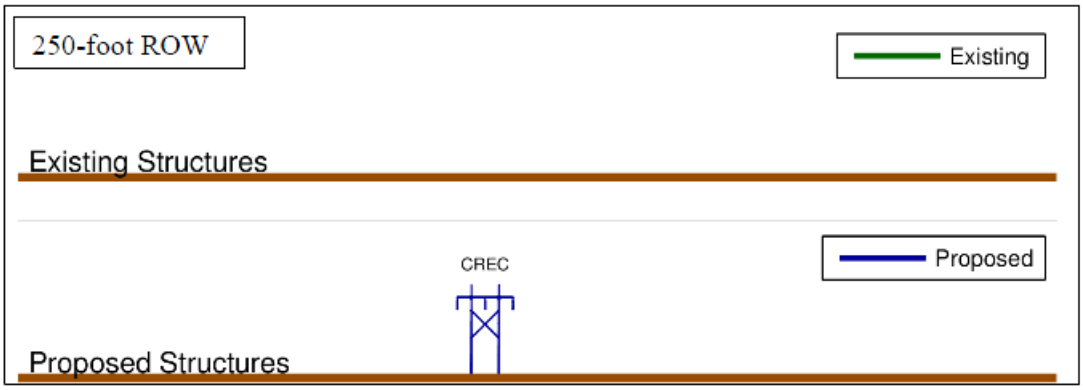


Figure 10-C
Existing and Proposed Lines in XS-3
(view facing southeast)



These lines being proposed are not considered to produce any greater visual impact than the existing 345 kV lines in the Town which have recently been upgraded by National Grid.

3.4 Noise

The noise levels in the neighborhood are currently impacted by the BCS and typically louder than other areas in the Town. The noise levels during operation of the proposed Facility must conform to the levels approved by the EFSB. These noise levels are anticipated to be 43 dBA at the closest residence and lower at further distances from the proposed Facility, and fall at the low end of the noise level for a power generating facility based on a review conducted by the ESS Group of approvals for combustion turbine merchant power projects similar to the proposed Facility.

ESS Group conducted a noise level survey from April 21 through April 24, 2015 in the Town to characterize the existing acoustical environment at the nearest Noise Sensitive Areas (NSAs). Results of short-term noise monitoring (20-minute intervals) showed that background ambient levels at noise sensitive receivers ranged from the high-20s to high-40s (dBA) during daytime hours, and from the low-30s to mid-40s (dBA) during nighttime hours.

In the absence of natural sounds and traffic, noise from the BCS is a major contributor to ambient background levels at nearby residences. During the ambient survey, the quietest levels were observed when the BCS operated at reduced loads. As such, ambient increases due to the proposed Facility will be lower during normal BCS operation.

BCS levels were found to be 2 to 7 dBA higher (45 to 50 dBA) than the maximum predicted noise level for the proposed Facility (43 dBA). In general, the proposed Facility levels are expected to be below those when the BCS is operated at or near full capacity.

It is anticipated that the noise level of the proposed Facility at all residences will remain reasonably low and less than limits found in most laws, ordinances, regulations and standards promulgated throughout the U.S. for the control of industrial noise at residential land uses.

3.5 Air Emissions and 3.45 Km Significant Impact Zone

The air emissions from the proposed Facility are regulated at the federal level and impact both the Town and the region. There is a complex set of federal rules and regulations that are designed to insure the proposed Facility will have no negative or adverse impact to the public health and human welfare.

The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act identifies two types of national ambient air quality standards. Primary standards provide public health protection, including protecting the health of ‘‘sensitive” populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The EPA has set NAAQS for six principal pollutants, which are called "criteria" air pollutants. Periodically, the standards are reviewed and may be revised. The six principal pollutants are:

- Carbon Monoxide (CO)
- Lead (Pb)
- Nitrogen Dioxide (NO_2)
- Ozone (O_3)
- Particle Matter (PM) less than 2.5-microns – $PM_{2.5}$
- Particle Matter (PM) less than 10-microns – PM $_0$
- Sulfur Dioxide (SO,)

At present, the Burrillville area is in attainment with NAAQS established by the U.S. EPA for all criteria pollutants. These are the same criteria pollutants that are addressed for the siting and development of all new power plants. In measuring the effects of the pollutants, Invenergy's consultant modeled these pollutants and concluded that the proposed Facility will not cause any contribution to air pollution in violation of the NAAQS.

The modeling of the proposed Facility is based upon a 3.45 Km Significant Impact Zone (SIZ) which is a term of art used in air modeling to reflect the impact of particular pollutants from the proposed Facility. The 3.45 SIZ relates only to the modeled emissions from the proposed Facility and the impact these have on the ambient air quality as defined by the NAAQS within the 3.45 Km SIZ and not a specific impact to the health and human welfare within this area.

The 3.45 Km SIZ will vary depending on the modeling assumptions such as operation of the proposed Facility and data sets used. The purpose of using the 3.45 Km SIZ is to assure that if certain thresholds are exceeded, that not only the proposed Facility be modeled but also all other sources of pollution in the area. The modeling tends to look at the worst case scenario to assure that there is no impact to public health and human welfare as required by the NAAQS with in the 3.45 SIZ.

In order to obtain an air permit, the proposed Facility's emissions must comply with these federal standards. While it is true that there will be an overall increase in air emissions in the region and the Town, there is no reason to believe that emissions from the proposed Facility represent a risk to public health and welfare or have an impact on property values, if it obtains an air permit.

4.1 Introduction

In measuring the effects of externalities such as a power plant or HVTLs on the value of property, it is useful to acknowledge and try to separate the difference between the empirical evidence versus the public perception. In developing the impact in this report on property value, the value referenced is market value[3] which is defined as:

> The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
>
> 1. buyer and seller are typically motivated;
> 2. both parties are well informed or well advised, and acting in what they consider their own best interests;
> 3. a reasonable time is allowed for exposure in the open market;
> 4. payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
> 5. the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

The impact on market value is based on the analysis of both buyers and sellers' perspectives and with no bias. The market value of property will typically be based on the supply and demand in a particular market. Factors that impact market participants' actions include macro-economic trends, location of a property, schools, property tax levels, condition of a property, and other factors in the marketplace. While it is beyond the scope of this report to address all the factors that impact value, it is rarely the case that one factor alone will determine the purchase price or market value of a property. Therefore, in reaching our conclusion, we have focused on the market value impact the proposed Facility will have on the surrounding property which may differ from the perceived impact on value.

4.2 Empirical Evidence v. Public Perception of Market Value Effects

There is typically a difference between the perceived value impact and the empirical evidence of such impact. This perception stems from the fact that all things being equal, a property in close proximity to a power plant or HVTLs would generally be less desirable than one without such a location. However as discussed above, in the real estate market all things are never equal and there are numerous economic, geographic, and social norms impacting the decision of buyers and sellers. While there might be a perception that the proximity to a power plant or

[3] As defined by the Comptroller of the Currency, Department of the Treasury, 12 CFR, Chapter 1, part 34.42.

HVTLs should be negative, their influence on property value is typically not given sufficient consideration by market participants to have any consistently measurable effects on market value. This may be explained by considering the different perspectives for which individuals will approach the impact such disamenity will have on market value.

There is the market value perspective which investigates whether the price arrived at through an arms-length transaction is impacted by the proximity to these types of disamenities. This data is objective and considers all of the positive and negative characteristics and features of a particular property. Then there is the owner's perspective of how a new externality or disamenity will impact the market value of their property. This subjective view of the effects on market value is more personal and/or emotional rather than empirical. However, it is typically the case that a prospective buyer, or the market in general, will be less emotionally impacted by the close proximity of a disamenity such as a power plant and discount the impact on market value. While both of these perspectives must be recognized, the empirical evidence of what actually occurs in the marketplace is often quite different than the perceived negative impact from the owner's perspective.

4.3 Methods of Measuring Value Impact

The most common evidence of the effects of power plants or HVTLs on the value of real estate compares the sales of properties that lie in close proximity to these improvements with the sales of properties without these influences (located away from the power plant). This may be based on a small number of sales close to a particular plant or a large sampling of data looking at multiple plants and statistical analyses. The following is a summary of the research and analysis utilized in this report.

4.3.1 Literature Review

A literature review was conducted to establish if in general, power plants such as the proposed Facility are typically found to impact property value. Several studies were identified, most of which cited to work conducted by Professor Lucas W. Davis of the Haas School of Business, University of California Berkeley between 2008 and 2011. His work on the impact power plants have to neighboring property is summarized below in Chapter 5.

4.3.2 Paired Sale Analysis

A paired sales analysis of property around both OSP plant and the BCS was undertaken to determine if these improvements appear to impact property values in the Town. Paired data analysis is based on the premise that when two properties are equivalent in all respects but one, the value of the single difference can be measured by the difference in price between the two properties.[4] For example, if one property that abuts a power plant or is in close proximity sold for $200,000 and another that has no influence, but is similar in all regards, sold for $210,000,

[4] Appraisal Institute *The Appraisal of Real Estate*, 14th ed., 2013, p. 398.

the diminution would be $10,000 on this particular property. This analysis is set forth in Chapter 6.

4.3.3 Review of Assessment Levels

Another method used to determine the influence of power plants or HVTLs is by reviewing the assessment data to identify if properties within a particular proximity are assessed for less than those that do not have this effect. A review of assessment data in the Town in close proximity to the OSP plant was conducted to determine if there was any impact on values for proximity to this plant. This data is based upon a large set of sales data to establish values for assessment purposes. If the market perceived that properties close to a power plant had lower value, it would be reflected in the assessed value of this property. This analysis is set forth in Chapter 7.

4.3.4 Survey Research

A survey of other communities that host power plants was conducted to determine if there was an identifiable neighborhood or town-wide impact on property values associated with these types of improvements. The survey was intended to see if property near a power plant was assessed at levels similar to other properties in the community, if the assessor was aware of property abatements due to a property being in close proximity to these power plants, and if the assessor could see a trend of lower property value. The process used for the survey, as well as the results, are set forth in Chapter 8.

5.1 Introduction

A literature review was undertaken relative to the impact power plants and HVTLs have on surrounding property values, primarily residential. This review resulted in the identification of several studies and papers on the subject. In regards to power plants, the literature most often referenced is the work by Davis between 2008 and 2011. In addition, several studies by Chalmers & Associates, LLC were identified and reviewed in regards to the impact of HVTLs on surrounding property values.

The following is a summary of the findings associated with these two bodies of work and the conclusions that can be drawn with respect to the proposed Facility, including the additional HVTLs in the National Grid ROW. A summary of the reports and studies reviewed is found in Appendix A.

5.2 Power Plant Impact

In the period 2008 to 2011, Davis used restricted census microdata[5] to examine housing values and rents for neighborhoods in the U.S. where power plants were opened during the 1990-time period. The study looked at both coal and natural gas-fired plants and the sample includes significantly more natural gas-fired plants than coal-fired plants. However, whether a plant uses coal or natural gas as the primary fuel source appears to have little impact on the results of the analysis.

The findings indicated that neighborhoods within two miles of plants could experience a 3 to 7% decline in housing values with the greatest impact being under one mile of the power plant. These findings are based on the assumption that power plants are a "source of numerous negative local externalities" including "visual disamenities, noise, traffic, 'fugitive' emissions, and fuel residue." Davis' work found that the highest level of impact was at distances under one mile with a decline on impact between one and two miles and no impact beyond two miles.[6]

The Davis work assumes 3 to 7% decline in property values is based only on the power plant, however in the case of the proposed Facility, there is already a disamenity in the form of the BCS and associated infrastructure. Therefore, it is difficult, if not impossible, to distinguish between the impact of the proposed Facility and that currently present from the BCS. In addition, the literature suggests that over time the impact of the decline is overcome or ignored by the market as the power plant or disamenity becomes the "norm."

[5] A restricted version of the U.S. census data that must be accessed at a census research data center under authorization from the Census Bureau and includes all of the demographic and housing characteristics in the decennial census and identifies households at the census block, the smallest geographic unit tracked by the Census Bureau. This precision is important for the analysis because the impact of many of the externalities from power plants is highly localized. In addition, the large (one in six) national sample ensures broad geographic coverage even in nonurban areas.

[6] This is consistent with prior work on industrial disamenities done by Glen Blomquist in the 1970s which shows the greatest impact at one-half mile and no impact after two miles.

This later trend is consistent with our observations and those of local municipalities that host power plants. In our survey, there was no evidence that power plants negatively impact abutting property values long-term. This is discussed more fully in Chapter 8. Therefore, while it is possible that there will be some impact to property values in the 3 to 7% range, with the greatest impact on residential properties closest to the proposed Facility, it is difficult, if not impossible, to prove with empirical evidence that the effects are permanent or solely caused by the proposed Facility.

5.3 Literature Review for the HVTLs

In regards to the impact of the additional HVTLs, the literature would suggest that a newly constructed transmission line will have some impact of approximately 3 to 4% for property within 500 feet. However, in the case of the HVTLs being constructed to connect the proposed Facility to the Sherman Road Substation, there are already two sets of transmission towers and lines to which a third will be added. This is considered to eliminate the impact of the third line as it is impossible to distinguish the visual impact on the abutting properties of the proposed line versus the existing lines.

In addition, the properties in question were purchased after National Grid had the rights to expand the improvements within its ROW. From a legal and practical point, this additional set of towers and lines is a use to which property owners should have been aware of and accounted for in the decision to purchase a property abutting the National Grid ROW. Therefore, it is difficult to see a scenario where the additional lines along the ROW will impact the abutting property owners.

5.4 Conclusion

The conclusions that can be drawn from the literature review are as follows:

- A large scale study suggests there is no impact of power plants on property value beyond two miles.
- The impact to property value will be the greatest closest to the proposed Facility.
- A large-scale study conducted on power plants suggests that impact could be in the 3 to 7% range.
- It is difficult to distinguish between the impact on property value from the existing BCS versus the proposed Facility.
- The new HVTLs connecting the proposed Facility to the Sherman Road Substation is not considered to have an additional negative impact on property values along this ROW.

6.1 Introduction

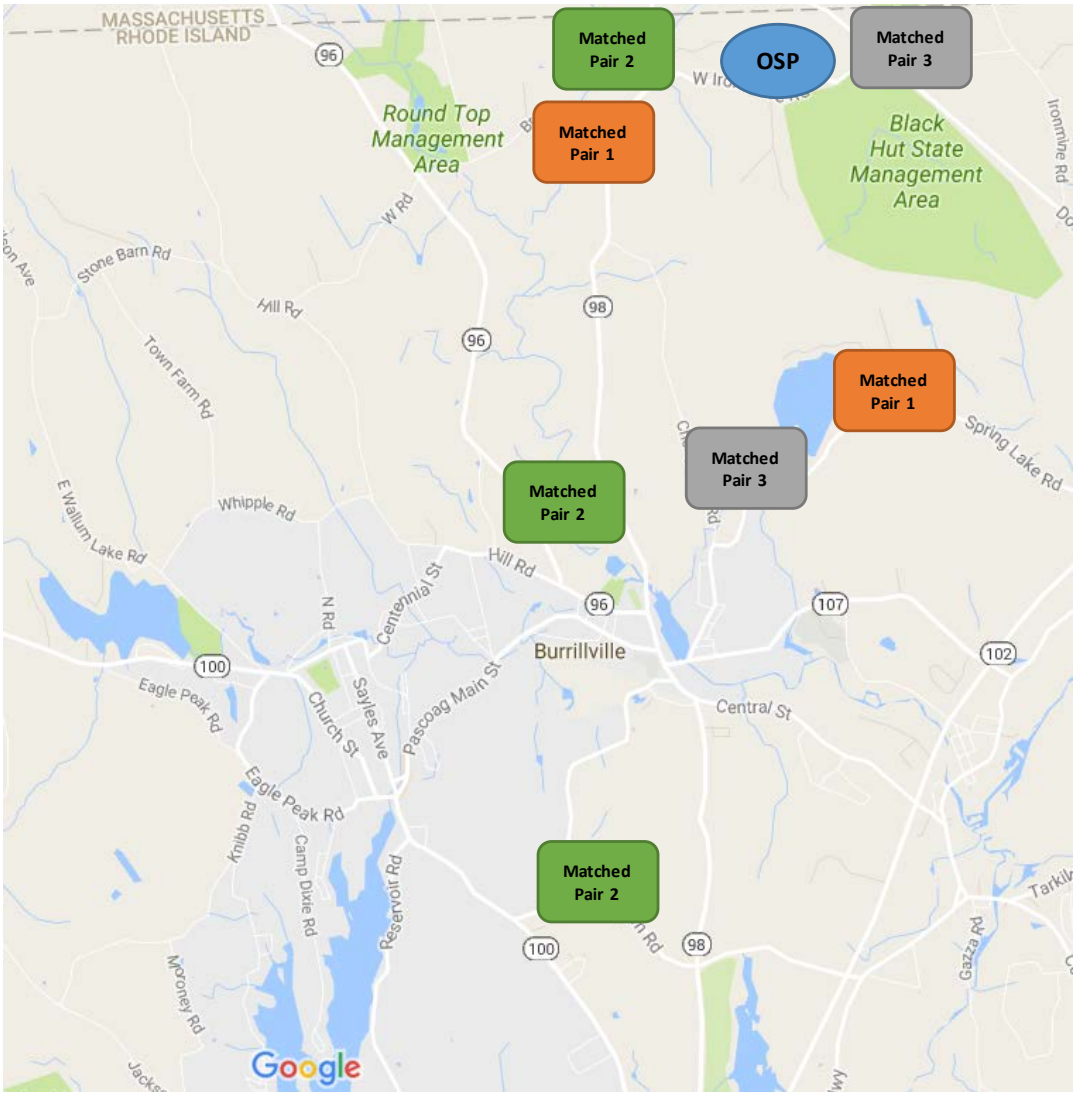
A paired sales analysis is an appraisal technique that analyzes the impact of a selected property characteristic such as location, number of bedrooms, number of bathrooms or a two car garage. The impact of the characteristic is measured by analyzing the sale of two properties, one with a specific characteristic and one without that characteristic. For example, one could look at two similar properties, one with a two car garage and one without to determine the contribution the garage makes to the property, or the discount the property will receive for the lack of a garage. The difference in sale price will measure the market's opinion of the contribution such a characteristic makes to the market value of the property. In this case, the analysis compares the sales of properties in close proximity to either the OSP plant or the BCS to the sale price of similar properties that have no location impact for these disamenities.

While it is difficult to find properties that are identical, with the exception of proximity to a particular disamenity, this review identified several properties that could provide a meaningful comparison. The following sections compare the recent sales of properties in close proximity to the BCS and the OSP plant with properties that are not considered to have any impact for these disamenities. The results of the analysis did not identify any differences between locations close to these facilities relative to the prices paid for properties at greater distances.

6.2 OSP Comparison

Three sets of sales were identified which could be used to measure if there is any identifiable discount for proximity to the OSP plant. Three properties within one mile of the OSP plant that sold between May 2014 and June 2016 were identified. Figure 11 is a map which illustrates the location of the sales in close proximity to the OSP plant as well as the comparables located further from the plant. A discussion of each paired sales analysis is set forth below.

Figure 11
Ocean State Power (OSP) Plant Sales



■ OSP Matched Pair 1

This sale is a contemporary home at 1305 Sherman Farm Road, approximately 3,600 feet from OSP. The property consists of a 2.15-acre site improved with three bedrooms and two and one-half baths that sold in May 2014 for $225,000. This property was compared to a contemporary home at 33 Pinecrest Lane. A comparison of the properties is set forth below.

Match Pair Ocean State Power (OSP) No. 1

Address	1305 Sherman Farm Rd Burrillville, RI	33 Pinecrest Ln Burrillville, RI
Map/Lot	040/017	093/121
Ft. from Power Plant[1]	3,595	9,768
Grantor	Munsen, Shawn	RI Property Wire LLC
Grantee	Proulx, Jason E	Surtel, Justin S
Sale Date	5/30/2014	10/19/2015
Sale Price	$225,000	$215,000
Year Built	1988	1987
Living Area (sq. ft.)	1,960	1,566
Lot Size (acres)	2.15	0.31
Style	Contemporary, 2-story 3 BR, 2.5 baths	Contemporary, 2-story 3 BR, 1 bath
Basement	Unfinished	Unfinished
Other	2-car attached garage, decks, shed, oil heat	Detached garage, decks, oil heat

[1] Approximate distance measured in a straight line.

The property at 33 Pinecrest Lane sold for approximately $10,000 less than the comparable at 1305 Sherman Farm Road (close to OSP) and there is no identifiable impact associated with the location close to OSP.

■ OSP Matched Pair 2

This sale is a raised ranch home at 4 Brook Road, approximately 3,700 feet from OSP. The property consists of a 2.2-acre site improved with three bedrooms and two baths that sold in March 2016 for $225,000. This property was compared to two raised ranch homes at 185 Lapham Farm Road and 304 Round Top Road. A comparison of the properties is set forth below.

Match Pair Ocean State Power (OSP) No. 2

Address	4 Brook Rd Burrillville, RI	185 Lapham Farm Rd Burrillville, RI	304 Round Top Rd Burrillville, RI
Map/Lot	040/008	211/012	125/001
Ft. from Power Plant[1]	3,699	22,759	12,833
Grantor	Bonin, Arthur L et al.	Withington, Nathan & Jill	Therien, George A & Eliz
Grantee	Moore, John	Robinson, Wm I & Kelly A	O'Connors, Mathew R
Sale Date	3/31/2016	5/20/2015	6/1/2015
Sale Price	$225,000	$215,000	$224,000
Year Built	1971	1977	1977
Living Area (Sq. Ft.)	1,536	1,132	1,188
Lot Size (acres)	2.19	1.998	1.00
Style	R Ranch, 1-story, 3 BR, 2 baths	R Ranch, 1-story, 3 BR, 1 bath	R Ranch, 1-story, 3 BR, 1 bath
Basement	Unfinished	Unfinished	Unfinished
Other	2-car bsmt garage, deck, shed, oil heat	1-car bsmt garage, deck, shed, carport, oil heat	Detached garage, deck, shed, inground pool, oil heat

[1] Approximate distance measured in a straight line.

The properties are all three bedroom raised ranches and sold in the same general price range. There does not appear to be any impact associated with the 4 Brook Road location close to the OSP plant.

■ OSP Matched Pair 3

This sale is a log home at 2175 Douglas Pike, approximately 4,900 feet from OSP. The property consists of a 3.2-acre site improved with three bedrooms and two baths that sold in June 2016 for $198,000. This property was compared to a log home at 560 Cherry Farm Road. A comparison of the properties is set forth below.

Match Pair Ocean State Power (OSP) No. 3

Address	2175 Douglas Pike, Burrillville, RI	560 Cherry Farm Rd Burrillville, RI
Map/Lot	026/010	092/010
Ft. from Power Plant[1]	4,887	9,559
Grantor	Huguenin, Dennis R & Gertrude R	Deschamps, Kevin T & Lynn M
Grantee	Zariczny, Mark K & Angelique E	White, Matthew J
Sale Date	6/3/2016	6/25/2015
Sale Price	$198,000	$260,000
Living Area (sq. ft.)	1,200	1,344
Lot Size (acres)	3.21	2.14
Style	Log, 1.5-story, 3 BR, 2 baths	Log, 1.75-story, 3 BR, 1 bath
Basement	Unfinished	Unfinished
Other	Detached garage, open porch, greenhouse, oil heat	Detached garage, deck, canopy, basketball court, oil heat

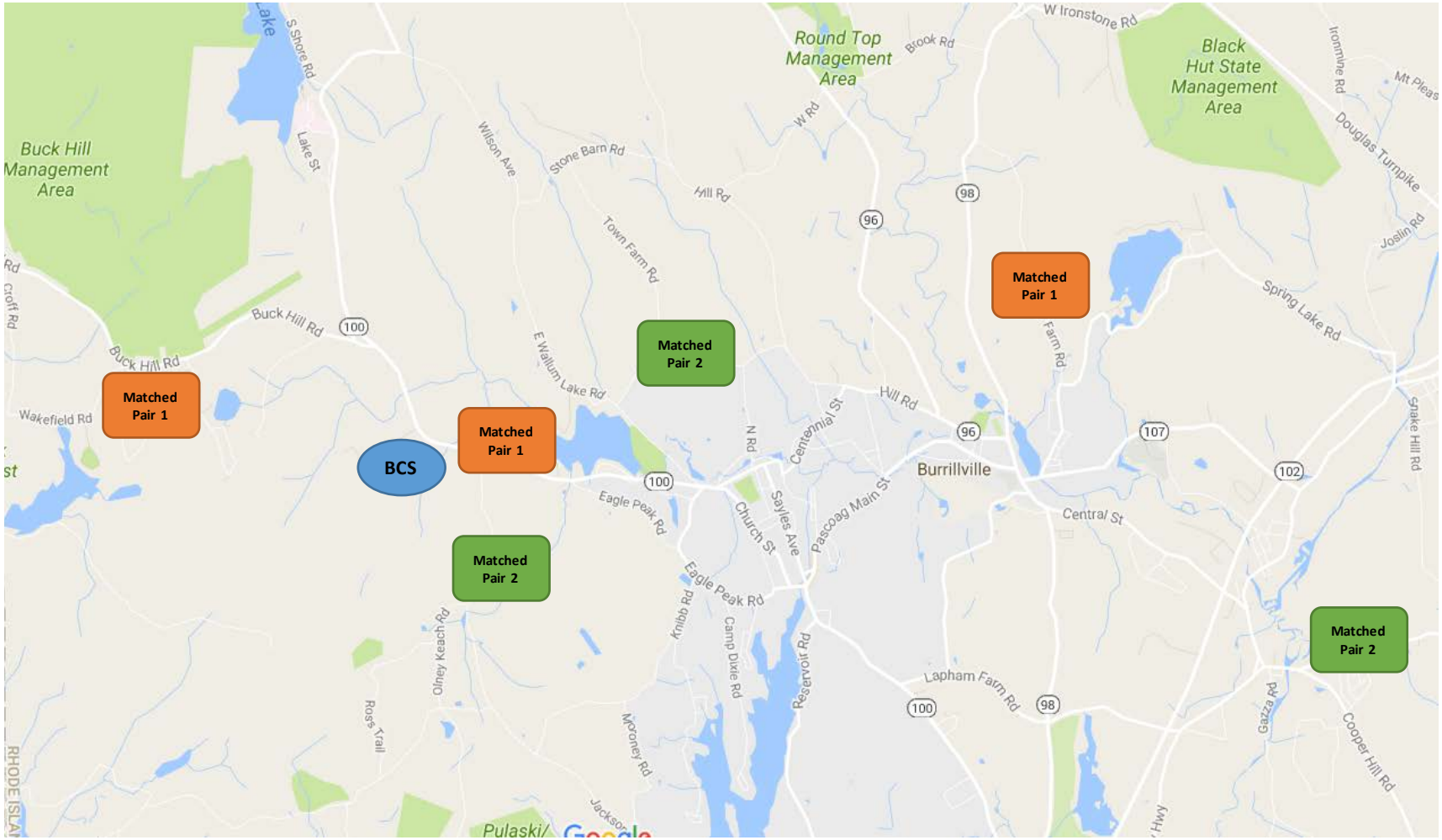
[1] Approximate distance measured in a straight line.

The property at 560 Cherry Farm Road sold for approximately $60,000 more than the comparable at 2175 Douglas Pike (close to OSP). However, as illustrated in the photos, this is considered to be due to the desirability of the improvements and not a locational issue. The assessment of the 560 Cherry Farm Road property is approximately $50,000 more for the improvements than the 2175 Douglas Pike property and this is considered to be the reason for the difference in sale prices.

6.3 BCS Comparison

Two sets of sales were identified which could be used to measure any identifiable discount for proximity to the BCS. The two properties in close proximity to the BCS sold in January 2014 and November 2014. Figure 12 is a map which illustrates the locations of these two sets along with similar sales further from the BCS. A discussion of each paired sales analysis is set forth below.

Figure 12
Burrillville Compressor Station (BCS) Sales



■ BCS Matched Pair 1

This sale is a raised ranch home at 965 Wallum Lake Road, approximately 2,200 feet from the BCS. The property consists of a 0.44-acre site improved with three bedrooms and two baths that sold in January 2014 for $250,000. This property was compared to two raised ranch homes at 524 Cherry Farm Road and 123 Stag Head Drive. A comparison of the properties is set forth below.

Match Pair Burrillville Compressor Station (BCS) No. 1

Address	965 Wallum Lake Rd Burrillville, RI	524 Cherry Farm Rd Burrillville, RI	123 Stag Head Dr Burrillville, RI
Map/Lot	137/011	109/001	117/028
Ft. from BCS[1]	2,224	22,284	5,547
Grantor	Brunelle, Patrick W & Meli	Karolyshyn, Anna	Cabral, Daniel R & Meghan
Grantee	Whitty, William & Marita	Marcotte Glen P et al.	Hebert, Jonathan S & Trisha M
Sale Date	1/27/2014	9/23/2015	9/29/2015
Sale Price	$250,000	$252,000	$255,000
Year Built	2002	1988	2007
Living Area (Sq. Ft.)	1,234	1,242	1,196
Lot Size (acres)	0.44	2.03	0.21
Style	R Ranch, 1-story, 3 BR, 2 baths	R Ranch, 1-story, 3 BR, 2 baths	R Ranch, 1-story, 3 BR, 2 baths
Basement	Unfinished	Unfinished	Unfinished
Other	2-car bsmt garage, deck, shed, gas heat	1-car bsmt garage, deck, shed, oil heat	1-car bsmt garage, deck, oil heat

[1] Approximate distance measured in a straight line.

All three properties reflect three bedroom raised ranches that sold for between $250,000 and $255,000. There appears to be no impact associated with the proximity to the BCS and associated infrastructure.

■ BCS Matched Pair 2

This sale is a raised ranch home at 360 Jackson School House Road, approximately 5,400 feet from the BCS. The property consists of a 1.8-acre site improved with three bedrooms and two baths that sold in November 2014 for $289,000. This property was compared to two raised ranch homes at 450 Tarkiln Road and 370 Whipple Road. A comparison of the properties is set forth below.

Match Pair Burrillville Compressor Station (BCS) No. 2			
Address	360 Jackson School House Rd Burrillville, RI	450 Tarkiln Rd Burrillville, RI	370 Whipple Rd Burrillville, RI
Map/Lot	171/003	198/022	122/010
Ft. from BCS[1]	5,388	34,956	10,879
Grantor	Manning & Kenneth J & Cyn	Pluchino, Joseph F &	Premium Construction LLC
Grantee	Nelson, Jason	Lizio, Melissa & Bryan	Minchillo, Donna M
Sale Date	11/3/2014	3/6/2015	12/29/2015
Sale Price	$289,000	$271,500	$299,900
Year Built	2014	1978	2015
Living Area (Sq. Ft.)	1,584	1,404	1,184
Lot Size (acres)	1.78	1.89	5.00
Style	R Ranch, 1-story, 3 BR, 2 baths	R Ranch, 1-story, 3 BR, 2 baths	R Ranch, 1-story, 3 BR, 2.5 baths
Basement	Unfinished	Unfinished	Unfinished
Other	2-car bsmt garage, deck, propane heat	1-car attached garage, deck, open porch, shed, oil heat	2-car bsmt garage, patio, deck, propane heat

[1] Approximate distance measured in a straight line.

All three properties are three bedrooms raised ranches that are of newer construction or are in good condition. The prices range from $271,000 to $299,900 and there appears to be no impact associated with the location of the 360 Jackson School House Road property in close proximity to the BCS and associated infrastructure.

7.1 Introduction

In addition to properties that have sold, a review of the assessments for properties abutting or in close proximity to the OSP plant were compared with properties in locations over two miles from the OSP plant. The properties were selected at random and are illustrated in Figure 13.

Figure 13 illustrates that the properties are scattered throughout the Town and primarily in rural settings comparable to the property around the OSP plant and the proposed Facility. The assessments of these properties is summarized in Table 1, along with the distance each property is from the OSP plant.

Figure 13
Randomly Selected Comparable Sales

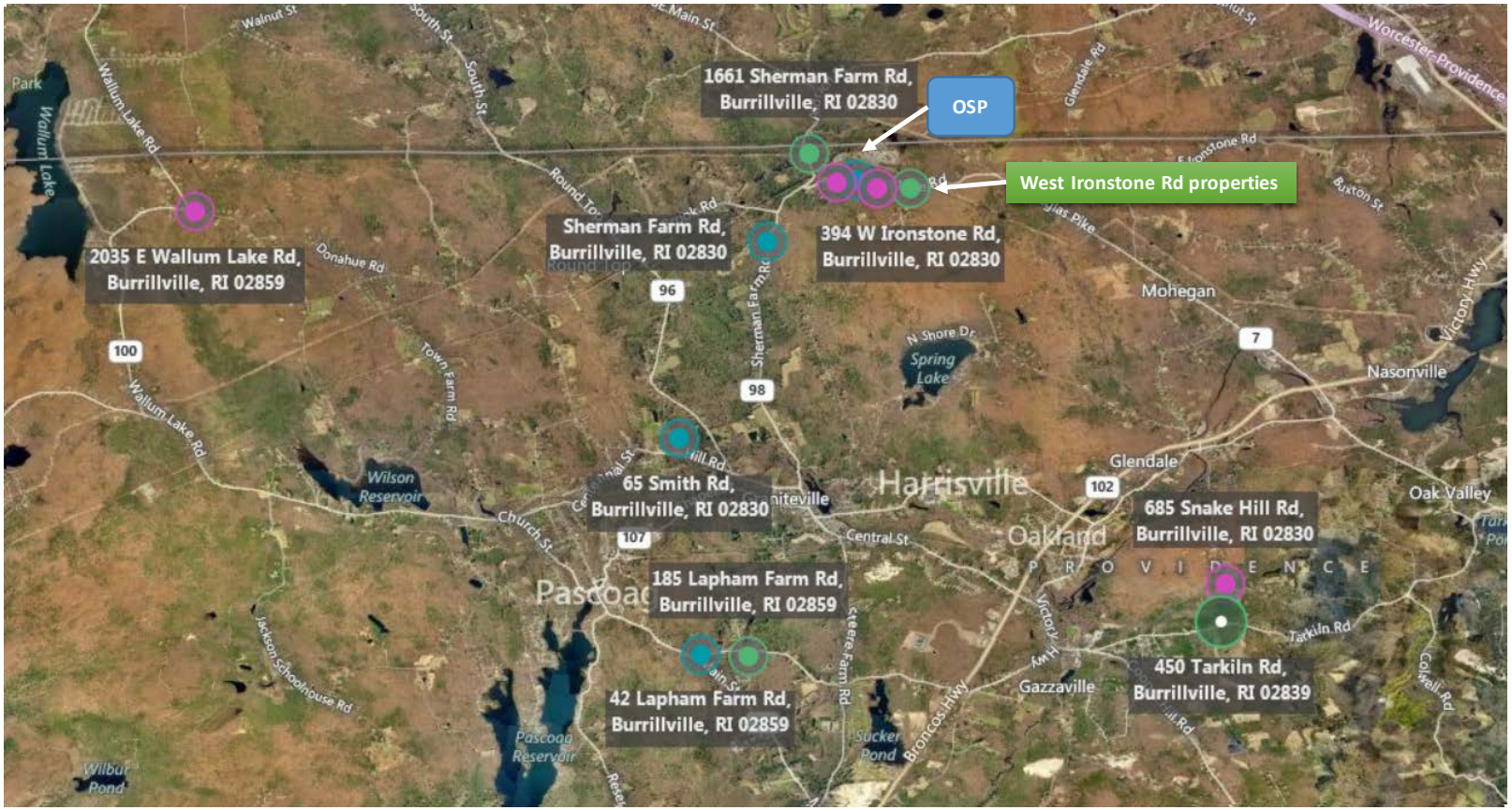


Table 1
Assessment Comparison of Property in Various Distances from OSP

A	B	C	D	E	F	G	H	I	J
					Land Assessment				
Property No.	Address	Map/Lot	Approx. Distance from OSP (feet)	Land Area (acres)	Primary Site	Excess	Total	Improvement Assessment	Total
Properties Less Than 0.5 Mile from OSP									
1	1661 Sherman Farm Rd	007/002	1,616	5.26	$74,300	$13,600	$87,900	$213,000	$300,900
2	271 West Ironstone Rd	024/012	985	2.86	$74,300	$6,000	$80,300	$138,800	$219,100
3	394 West Ironstone Rd	025/002	1,147	2.00	$74,300	$3,200	$77,500	$113,000	$190,500
4	148 West Ironstone Rd	024/003	1,224	5.00	$74,300	$12,800	$87,100	$114,900	$202,000
5	180 West Ironstone Rd	024/004	881	5.00	$74,300	$12,800	$87,100	$152,700	$239,800
6	394 West Ironstone Rd	025/002	1,210	2.00	$74,300	$3,200	$77,500	$113,000	$190,500
Properties Greater Than 2.0 Miles from OSP									
7	2035 East Wallum Lake Rd	035/004	21,384	2.40	$74,300	$4,500	$78,800	$163,000	$241,800
8	42 Lapham Farm Rd	211/027	23,126	2.02	$74,300	$3,300	$77,600	$168,800	$246,400
9	685 Snake Hill Rd	181/010	22,598	1.11	$74,300	$400	$74,700	$147,400	$222,100
10	65 Smith Rd	124/018	13,992	1.05	$74,300	$200	$74,500	$145,100	$219,600
11	185 Lapham Farm Rd	211/012	22,759	2.00	$74,300	$2,200	$76,500	$121,900	$198,400
12	450 Tarkiln Rd	198/022	23,918	1.89	$74,300	$2,800	$77,100	$172,200	$249,300

7.2 Assessing Review Results

As illustrated in Table 1, when comparing the value of the primary site (column F), which would reflect differences in neighborhood or location, all of the primary sites are assessed at $74,300. There are differences due to lot size, improvements, and or property condition reflected in the additional value of excess acreage or the improvement value. Therefore, no adjustment in the site value has been made for locations within close proximity to the OSP plant. The data suggests that there is no significant difference between assessments in close proximity to the OSP plant versus other locations in the Town.

8.1 Introduction

A survey was conducted of communities which host one or more power plants in a 30-mile radius of the Town. This included plants within Rhode Island as well as Connecticut and Massachusetts. The survey was intended to see if other communities that host power plants identified any negative impact on property values. The process used to identify the communities and undertake the survey are set forth below.

8.2 Study Area

A geographic area was identified to include the surrounding area of the Town. Within this area we identified ten natural gas-fired power plants that were less than 30 miles from the Town.

The following is the list of these ten plants:

1. Ocean State Power, Burrillville, RI, 541 MW (1991)
2. Manchester Street Station, Providence, RI, 451 MW (1995)
3. Pawtucket Power, Pawtucket, RI, 51 MW (1990)
4. Tiverton Power, Tiverton, RI, 243 MW (2000)
5. Rhode Island State Energy Center, Johnston, RI, 542 MW (2002)
6. NEA Bellingham Energy Center, Bellingham, MA, 273 MW (2002)
7. ANP Bellingham Energy Project, Bellingham, MA, 501 MW (1991)
8. Blackstone Energy Project, Blackstone, MA, 473 MW (2001)
9. Medway Generating Station, Medway, MA (existing & expansion), 324 MW (1970)
10. Lake Road Generating Plant, Dayville, CT, 753 MW (2002)

8.3 Summary of Questions

It was determined that the best person to ask about property values was the town/city assessor. The assessor was identified in each community and contacted. A list of general questions was developed to include the following:

- Based on your experience, have the residential property values within your community been impacted by the presence of the power plant, particularly those neighborhoods closest to the plant?

- If so, do you have an opinion as to the magnitude of the impact?

- During the development stages of the plant, did the town have a property value guarantee agreement or similar agreement to protect abutters against the negative impact on values associated with the plant?

- Has your office issued any abatements and/or have there been any claims seeking compensation associated with a loss in property values that can be linked back to the power plant?

- Are you aware of any studies that were commissioned by the town, developer or other group that examined the impact of the plant on property values?

8.4 Summary of Conversations with Assessors

The following is a summary of the conversations with each community's assessor that was available for comments.

■ Burrillville, RI

Plant: Ocean State Power (OSP) (1991)
350 West Ironstone Road, Burrillville, RI

Neighborhood: Plant is located in a rural setting abutting West Ironstone Road and Sherman Farm Road. The plant is surrounded by single family residential properties and undeveloped land along with the National Grid transmission line and substation. The nearest residence is 800± feet from the plant.

Susan Makar, Assessor
1-401-568-4300 x 125

Spoke with Ms. Makar numerous times in regards to the impact on value during the process.

Discussion:

- Ms. Makar does not believe the OSP plant has any impact on the surrounding property values. There was an original agreement from OSP to purchase property around the plant. However, she is unaware of the specifics. If there was an impact on residential property, it was when the plant was built, but there is no evidence today of any impact on property values. In addition, the impact would have been for the properties in close proximity to the plant, within say 2,000± feet. However, she continues to monitor the situation for changes that may impact property values in this neighborhood. She also indicated that residents can raise issues with the Town during revaluation.

■ Providence, RI

Plant: Manchester Street Station (1995)
40 Point Street, Providence, RI

The plant is located in the downtown area and was not considered comparable.

■ Pawtucket, RI

Plant: Pawtucket Power (1990)
181 Concord Street, Pawtucket, RI

Neighborhood: Plant abuts a large park, and is right off of I-95. The immediate area consists of what appears to be commercial/industrial property and within a mile of the plant there are several dense residential neighborhoods.

Robert Burns, City Assessor
1-401-728-0500, X 218
Called 08/22/2016, 9:25 AM – Left message
Called 08/23/2016, 1:54 PM – Out at lunch
Called 08/23/2016, 2:30 PM – Spoke with Assessor

Discussion:

- Mr. Burns indicated that the plant has had no impact on residential property values and referenced several factors. Noted that the plant is in an industrial area off the highway and there is large green space between the plant and the residences. In addition, he considers the distance between the plant and the residential property to be substantial enough to limit any impact. Also, the plant is a peaker[7] and he cannot remember the last time it ran – it stays dormant most of the time.

- He is not aware of any agreements made in the development phases to insure property values. However, they lease the land where the plant is located and agreed to restore the property to its pre-plant state upon closing the plant (greenfield decommissioning).

■ Tiverton, RI

Plant: Tiverton Power (2000)
304 Progress Way, Tiverton, RI

Neighborhood: The plant is located within what appears to be a large wooded area and sits approximately 2,000 feet from Route 24 to the west and Stafford Pond to the east. The closest residential neighborhood sits more than 3,000 feet to the south of the plant.

David Robert, Assessor
1-401-625-6709
Called 08/22/2016, 9:00 AM – Out of office for the day will return on 08/23/2016.
Called 08/23/2016, 2:15 PM – No answer, answering machine – did not leave message.

[7] Peaking power plants generally run only when there is a high demand.

■ Johnston, RI

Plant: Rhode Island Energy Center (2002)
24 Shun Pike, Johnstone, RI

Neighborhood: The plant is located within an industrial area and is isolated from surrounding residential neighborhoods by other industrial properties, a highway, wooded areas, and a reservoir.

Kim Gallonio, Assessor
1-401-231-6618
Called 08/22/2016, 9:50 AM

Discussion:

- Ms. Gallonio says that it is difficult to say if the plant is impacting the surrounding property because it is in an industrial area near a landfill. If values are affected it would be difficult to point to the plant and say that it is the power plant's fault, and not the landfill.

- She is unsure if there was a value guarantee agreement. Referred us to the town clerk and asked that I send her an email with my inquiries so that she can forward it to the most appropriate person to provide the best information. – Emailed 08/22/2016 – 10:08 AM. – No reply to date.

■ Bellingham, MA

Plant: ANP Bellingham Energy Project (2002)
155 Maple Street, Bellingham, MA

NEA Bellingham Energy Center (1991)
92 Depot Street, Bellingham, MA

Neighborhood: The ANP plant is located in a wooded area that is quite isolated. Its closest abutters include a large golf country club and commercial property that includes a large cinema and retail properties. The NEA plant is also located in a wooded area with industrial/commercial abutters, however there are several residential neighborhoods that are within 500 to 1,000 feet of the plant (separated by a wooded area).

Elizabeth "Betsy" Cournoyer, Administrative Assessor
1-508-657-2862
Called 08/22/2016 at 11:00AM

Discussion:

- The power plants have had "absolutely no effect on property values."
- The NEA Plant was one of the first plants in the area and there have been no negative effects. Noted that it is in an area that is more remote.
- The ANP Plant was built sometime later (10+ years) in closer proximity to residential neighborhoods – there has been no negative impact on Bellingham values. There was some negative reaction from the neighboring town, Franklin. The town set up a litigation fund to make whole any property owner affected – as far as she knows there have been no payouts with the exception of possibly one small payment to quiet the person.
- In her experience there are two reactions – the first are people who hate the idea of any power plant in their neighborhood and the other are those who have no problem with it. A lot of the people moving into Bellingham are coming from the Boston area and they are accustomed to industrial surroundings and have no issue with living a mile from a power plant.
- She has seen absolutely NO evidence suggesting a negative effect on the resale value of homes and has paid no claim or abatement in relation to the proximity of a property to the power plant.
- She also noted that Bellingham is "the power plant capital of the world' and she cannot believe that no one from Burrillville has called her to get her input on this topic.

■ Blackstone, MA

Plant: Blackstone Energy Project, Blackstone, MA (2001)
204 Elm Street, Blackstone, MA

Neighborhood: The plant is located in a wooded area abutting a large sand yard. There are several small residential areas within a mile of the plant with the closest measuring nearly 2,000 feet from the plant.

Patricia Salamone, Assistant Assessor
1-508-883-1500, X 121
Called 08/22/2016, 11:25 AM

Discussion:

- In Ms. Salamone's experience, the power plant has had no long-term effect on property values.

- When the plant was in development and being built (2001) there were some protests to the plant and the impact on property values was one of the issues. In response, Blackstone purchased surrounding properties to protect the abutters. The value of these properties may have gone down initially but since then the values have increased and Blackstone has been able to sell the parcels for prices that are consistent with the pre-plant market values.

- Other than the purchase of abutting properties, she is not aware of any agreements that were made to protect landowners.

■ Medway, MA

Plant: Medway Generating Station (1970)
9 Summer Street, West Medway, MA

Neighborhood: The plant is located in a rural setting with a mix of commercial and residential properties. The majority of abutting properties are buffered from the plant by wooded areas and large green spaces.

Donna Greenwood, Principal Assessor
1-508-533-3203
Called 08/25/2016, 8:40 AM

Discussion:

- Ms. Greenwood indicated that she has not seen any evidence of a negative impact on residential property values.

- She has been studying this issue due to a proposed expansion of the existing facility and during her research she contacted the assessors in Bellingham and Franklin, Massachusetts. The assessors from both communities reported that they couldn't attribute any negative impact on residential values to the power plants in their communities.

- She is not aware of any agreements that the facility developers had made to insure property values for the original plant.

■ Village of Dayville in Town of Killingly, CT

Plant: Lake Road Generating Plant (2002)
56 Alexander Parkway, Dayville, CT

Neighborhood: The plant is located within an industrial area that includes warehouses, hotels and factories. The closest residential neighborhood is lakeside community approximately 2,500 feet from the plant along the shores of Alexander Lake.

Paul Hopkins, Assessor
1-860-779-5324
Called 08/22/2016, 11:45 AM

Discussion:

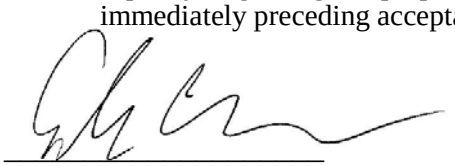
- Mr. Hopkins has been the assessor for only two months but has researched this topic due to a similar power plant proposed in the same area as the Lake Road plant.
- The residential area closest to the plant is an affluent area along Alexander Lake. Based on his research and information left by the former assessor, the plant has had zero impact on the property values.
- There may have been a drop in values at the time that the plant was being developed and directly following the construction but he feels that these recorded drops in property value had more to do with the economic market crash than the power plant.
- He is currently performing some analysis of this topic as there has been a proposal for a similar plant within a mile of the current facility. This new plant would affect the same lakeside residential properties. It is his opinion that the new plant will have no effect on the properties and his research has shown that over the past few years the homes on Alexander Lake have increased in value by 1% per year. He expects that trend to continue even with the new plant.
- There are no agreements with the town relative to guaranteeing abutting property values. He has spoken with people associated with the current plant and they indicated that they did talk to abutters at the time of the development of the plant but, to his knowledge, there were no agreements made – certainly none that were filed with the town.

8.5 Conclusion

Based on the results of this survey, the evidence suggests that power plants have no long-term impact on property values in the neighborhoods that surround the plant or the town in general. There is some evidence that when the plant is in the development or construction stage, property values are impacted which may reflect the property's marketability and days on the market. However, as the plant becomes the "norm" property values do not appear to be negatively affected.

I certify that, to the best of my knowledge and belief,

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased and professional analyses, opinions and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, and no personal interest or bias with respect to the parties involved.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the requirements of the *Uniform Standards of Professional Appraisal Practice* (USPAP) and the Principles of Appraisal Practice and Code of Ethics of the American Society of Appraisers.
- An inspection of the neighborhoods along Route 100 was made by Glenn C. Walker, ASA on August 25, 2016 as part of this report.
- No one provided significant professional appraisal assistance to the person signing this report.
- The person signing this report meets the competency rule requirements of USPAP.
- George E. Sansoucy, P.E., LLC has not performed any services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.



Glenn C. Walker, ASA
Rhode Island #CGA.0020031

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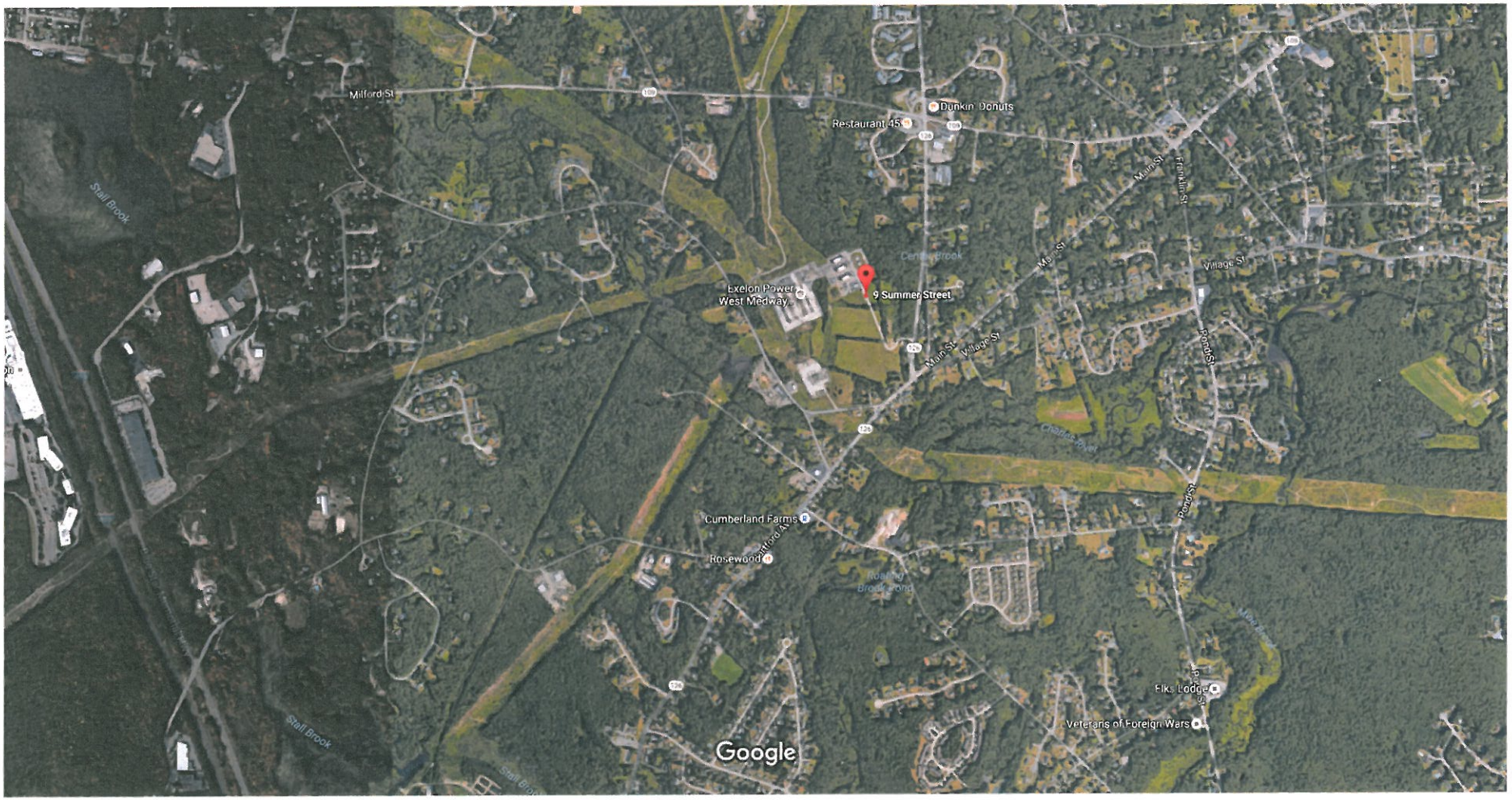
Google Maps 9 Summer St

MEDWAY GENERATING STATION



Google Maps 56 Alexander Park Way

LAKE RD GENERATING, DAYVILLE, CT

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