RESPONSE TO OPSB STAFF DATA REQUESTS
Oregon Clean Energy Center
12-2959-EL-BGN
Set #1 – Received February 5, 2013
Response – February 12, 2013

Each comment is provided below in italics followed by the applicant's response.

1. *Why did you choose Calypso Communications LLC to prepare the Economic and Fiscal Impacts Study? Can you provide any background information on this company? Is this company frequently used in the industry to provide these types of studies?*

Oregon Clean Energy, LLC (OCE) selected Calypso Communications LLC (Calypso) in part due to their past working experience with Calypso in working on the Fremont Energy Center and the Lawrence Energy Center. Through those projects, Calypso demonstrated an ability to work well in Ohio and within the OPSB process. More importantly, Calypso is expert in power plant projects of the type proposed.

Calypso has been in business since July 2000. The firm was founded by two energy industry veterans with a combined tenure of 25 years developing and implementing strategic communications campaigns for utility, waste-to-energy, biomass, renewable energy, and independent power projects across the United States. Today the firm employs 13 professionals in managing strategic marketing, community relations, public affairs, and communications for several dozen energy and environmental companies, as well as the healthcare and technology industries, with experience in the states of Ohio, New Hampshire, Virginia, New Mexico, New York, Texas, Oregon, Michigan, Georgia, Mississippi, West Virginia, and Illinois. For more information, visit www.calypsocom.com.

2. *Page 42 of the application states:*
"A temporary access will be required across Johlin Ditch during the construction period, as the adjacent parcel is planned for construction laydown use. The temporary access is anticipated to be approximately 16 feet wide, allowing for two travel lanes but no road shoulders. Although temporary in nature, the road crossing will be designed to maintain flow through Johlin Ditch, and is anticipated to require installation of 36-inch culvert. Once construction of the Project is completed, OCE can determine through consultation with the City whether removal of the culvert or surface restoration with the culvert in place would be preferable."
Please clarify what impacts for this access road will be permanent and/or temporary. Will the access road or culvert remain after construction?

The crossing of Driftmeyer Ditch will be permanent, as it will provide the sole access for the Project during construction and operation. The crossing of Johlin Ditch will provide access to the adjacent parcel, which will be used for temporary equipment laydown during the construction period. However, pending confirmation through discussions with the City, we should assume that the culvert installed to create this access point will also be permanent. Once in place, and designed to allow appropriate water flow, removing the access point could result in additional impact to the ditch. Although no specific uses are proposed for the adjacent parcel following construction, it could be beneficial to have the Johlin Ditch crossing to access the small portion of the Site that is located east of Johlin Ditch. Details of the ditch crossing require approval by the City of Oregon.

3. *Page 46 of the application states that "OCE will coordinate with the USACE to determine potential jurisdiction and the need for applicable Nationwide Permits." What coordination has occurred so far with USACE? What was the USACE's decision on the jurisdictional determination?*

Discussions have occurred with the USACE regarding the segments of Driftmeyer and Johlin Ditch that extend across the Site. The USACE has indicated that they consider those segments to be jurisdictional resources; if a permit were required, it would likely be covered under Nationwide Permit 14 - Transportation. However, the level of impact proposed for the roadway crossings of each ditch result in impacts less than the 0.1-acre threshold that would trigger the need for USACE review. Discussions with the USACE have indicated that impacts of jurisdictional resources that are less than 0.1 acre that have no impacts to special aquatic sites are automatically covered and do not require either application or notification (through Preconstruction Notification [PCN]). Additional communication will occur with the USACE to formalize this information and determine their interest in conducting a site walk. Work with and approval by the City of Oregon will be required in association with these crossings.

4. *Page 76 of the application states that "The OCE Center is expected to produce less than significant impacts on air quality, and will thus qualify for a pre-construction monitoring waiver." Please provide evidence to support this statement. What data is being used to support that the ambient air level thresholds will be met once the OCE Center is in operation?*

The air permit application for the Project was submitted to Ohio EPA on February 1, 2013, with dispersion modeling documentation provided on February 6, 2103. In the Dispersion Modeling Report, details of the modeling completed for the Project to demonstrate compliance with air quality standards is provided. As noted in Section 5.4 of that document, major sources that can demonstrate through modeling that their impacts are less than defined Significant Monitoring Concentrations that have been established by the United States Environmental Protection Agency (USEPA) can be exempted from preconstruction monitoring requirements that might otherwise apply. The modeling results for both the Mitsubishi and Siemens technologies are at levels below the established Significant Monitoring Concentrations, and a formal waiver request from Ohio EPA is included in that application.

The modeling used to demonstrate results below Significant Monitoring Concentrations and Significant Impact Levels are based on evaluation of a range of potential operating conditions and reflect maximum-impact cases in a conservative composite and relies upon emissions data provided from each major equipment vendor. This provides a high level of certainty that representative operating scenarios are properly reflected in the analysis. Once the facility is operating, it will continuously monitor emissions to confirm that permit conditions resulting from application review are met.

5. *Page 82 of the application states that "an airport is located approximately 2 miles from the Site." What is the name of this airport? Is this airport publicly owned and used, privately owned and publicly used, or privately owned and privately used? What coordination has occurred with the FAA?*

The nearest airport is Culver Field Airport, Location ID 50OH, located approximately 2 miles to the southeast of the Project Site. This grass surface single runway airport is privately owned and privately used.

A request for review by the FAA was submitted on January 7, 2013 for each of the Project's 240-foot stacks, and was provided on that date as well to the Ohio Department of Transportation Division of Aviation. Since that filing, Determinations of No Hazard to Navigation have been received from the FAA (dated 1/30/13 and 2/2/13 for the north and south stacks, respectively), as provided in Attachment A. Additional coordination will continue to clarify the marking and lighting requirements for the stacks. Lighting anticipated to be required will be at least three top-mounted red aviation obstruction lights.

6. *Page 83 of the application describes the list of air permits applicable to the proposed Project, including a PTI, a Title V, and a Title IV. When will these permits be in place? What is the anticipated schedule for obtaining these permits?*

As noted above, the PTI air permit application was filed with Ohio EPA on February 1, 2013, with additional information to complete the application (the Dispersion Modeling Report) provided on February 6, 2013. Completeness review and technical review are now ongoing. We are hopeful that a permit will be issued by May 2013.

The Title V Operating Permit is not required prior to Project operation. In accordance with regulatory requirements, that application will be completed and filed within 12 months following commencement of Project operation in order to be in place timely. The Title IV permit must be submitted at least 24 months prior to commencing operation of the affected units. The Project is scheduled to commence operation in May 2015. As such, the Title IV permit will be submitted prior to May 2013.

7. *Please clarify the 2010 population numbers provided in Table 07-1 on page 95 of the application. How was the population of each community within the 5-mile radius calculated? The application indicates that the data was obtained from census block files, but it is unclear whether the distribution of population among the census blocks in each community was taken into account in calculating the percentage of population within the 5-mile radius.*

Census TIGER/Line Shapefile 2010 datasets were used in the base analysis. The special release Block shapefiles containing 2010 Census population and housing counts data was used as the basis for the population analysis. From these data, population densities were calculated for each block. County Subdivisions (Townships, Cities, Villages, etc.) within 5 miles of the Project Site were selected and intersected with the 2010 block-level data. New areas were calculated for the county subdivisions within 5 miles and measured against the population densities of the blocks, resulting in the estimated population numbers found in Table 07-1. In order to calculate estimated future population change, the community 2010 population calculations were measured against the Ohio Department of Development, Office of Strategic Research "Projected Percent Population Change 2000 to 2020" (June 2007) county-level summaries to result in the population change.

8. *What acreage of the parcel(s) owned by Oregon Clean Energy, LLC is currently tilled for agricultural production?*

Approximately 28 acres of the 30-acre Project Site is currently tilled for agricultural production. Only the approximately 18-acre portion of the construction laydown site located south of Johlin Ditch will be utilized for Project construction laydown and parking. All of that property is currently tilled for agricultural production.

9. *What mode of transportation will be used to deliver materials and components (including turbines) to the project site?*

Once the specific turbine vendor and engineering, procurement and construction (EPC) contractor are selected the details for transportation management can be developed. Conceptually, large power train components could be barged into Toledo, with the adjacent rail line used for transport to the Site. Some road transport is anticipated to occur as well. OCE is continuing to coordinate closely with the City of Oregon regarding potential delivery needs. Due to several similar facilities present in the City and the location of the Site within the City's designated Foreign Trade Zone, roadway infrastructure has been designed and upgraded to support just this type of heavy transport activity.

10. *Please provide an access plan for delivery of materials and components. The plan should include any road and/or bridge improvements that would need to be made to deliver material and components.*

A preliminary access plan for delivery of material and components has been completed assuming road transport from major highways, rail nodes and/or ports in the Project vicinity. Potential load, width or height restrictions have been considered in this assessment. Attachment B illustrates the node locations from which potential road or rail travel was assessed, as well as likely routes to the site. This preliminary assessment – which will be updated pending final equipment vendor and EPC contractor selection – indicates that no significant bottlenecks exist along the identified routes. Note that the City will require the EPC contractor to submit details prior to construction, and that Haul Route Permits may be required from the City for certain components depending upon their characteristics.

11. *Please provide any public interaction program materials and a history of public interaction.*

Attachment C provides an introductory PowerPoint presentation used for early discussions of the Project, as well as copies of the content of the display boards used to present information at the public Open House. A press package that is posted on the City's website and associated with a press conference held on September 5, 2012 to announce the project is also provided, as are copies of several newspaper articles and legal notices that have appeared locally. No other formal public interaction program materials have yet been developed for the Project.

As outlined in the OPSB application, informal discussions regarding the Project began in 2010. Visits associated with the Project have included a range of activities such as site selection, meeting with service firms (such as for legal and other services), interviewing area contractors, interviewing gas companies, meeting with City representatives such as the Mayor, the City Council, the City Manager, and City and County Economic Development representatives, as well as for the public Open House. In 2010, Project representatives attended Chamber of Commerce and Economic Development meetings, with additional meeting with local officials held on 10/22 and 10/26 for introductory purposes. On 11/29/10, Project representatives met with the City Council. In 2011, periodic visits occurred on 3/22, 6/29, 9/23, and 11/16; a meeting with the Governor's office occurred on 8/10/11. Meetings continued throughout 2012, including on 3/13 and 6/13 with the Toledo Division of Environmental Services (TES); 6/12 with the Governor's office; with City officials and staff on 6/13, 6/20, 6/26, 9/5, 9/11, 10/25; with the Oregon Economic Development Foundation on 10/19; with the City and BP on 10/26; and with the City Council on 11/29. The public Open House for the Project was held on 10/17. Meetings are continuing in 2013, with City meetings held to date on 1/15, 1/16, 2/4, 2/5 and 2/6.

12. *What is the average daytime and nighttime ambient Leq for the area within one mile of the project site?*

As discussed in Section 4906-13-07(A)(3) of the OPSB application, long-term and short-term measurements were conducted in the Project area.

The ambient field noise measurement data for long-term Measurement Location 1 shows that the average daytime noise levels range from 51.1 dBA Leq to 62.1 dBA Leq and the average nighttime noise levels range from 50.4 dBA Leq to 58.1 dBA Leq. The overall singular average Leq over the two week noise monitoring period during the daytime hours was 55.5 dBA Leq and during the nighttime hours was 54.6 dBA Leq.

The ambient field noise measurement data for long-term Measurement Location 2 shows that the average daytime noise levels range from 47.1 dBA Leq to 58.1 dBA Leq and the average nighttime noise levels range from 46.1 dBA Leq to 60.6 dBA Leq. The overall singular average Leq over the two week noise

monitoring period during the daytime hours was 51.6 dBA Leq and during the nighttime hours was 51.3 dBA Leq.

To document existing daytime ambient noise levels at several residential locations, a series of spot-check, short-term equivalent sound level measurements (15-minute dBA Leq, A-weighted) were conducted. A single spot-check, short-term noise measurement was conducted at a total of four locations within the vicinity of the proposed Project site. The noise measurement data shows that the noise levels measured at the four identified sensitive noise receptors range from 52.7 dBA Leq to 64.4 dBA Leq.

13. *Please provide a list of sensitive noise receptors, as defined in activity categories A-E in table below, within one mile of the project site, that would experience an increase in noise. For each of the potentially impacted receptors, provide the number of dBA above the average nighttime ambient Leq for the area within one mile of the project site.*

Based on the Ohio Department of Transportation (ODOT) noise abatement criteria there are a total of 77 land uses with an activity Category B (Residential) and 17 land uses with an activity Category E (Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in Categories A through D or F) located within a 1-mile radius from the Project Site (as shown on the map in Attachment D). A conservative approach was taken to identifying locations potentially considered as within Category E in order to thoroughly consider this question. No other activity categories were represented within a 1-mile radius.

Activity Category B has a noise level criteria threshold of 67 dBA Leq and the activity Category E has a noise level criteria threshold of 72 dBA Leq. The mitigated noise impact levels calculated for both the Mitsubishi and Siemens layouts were compared to each activity category noise level criteria threshold (detailed comparison tables are provided in Attachment D). At none of these receptors did the calculated mitigated noise levels exceed the activity category noise threshold. Therefore, in accordance with ODOT methodology, no noise impact is anticipated to occur. The Project is also in full compliance with City of Oregon noise standards.

14. *The peak and minimum design cases of the preliminary water balance (Figure 02-5) seem to have losses and gains at various points in the system. Please explain.*

Note that a transcription error was identified on the submitted water balances for the peak case; although not a material change, an updated water balance is provided as Attachment E. As is evident from the various cases presented, power output and water demand for the Project varies with ambient temperature conditions. Each gas turbine is able to generate roughly 28 percent more power on the coldest day (0°F dry bulb, 100% relative humidity) than it can on the hottest day (95°F dry bulb, 50% relative humidity). In order to reach the 799 MW desired output during hot days, supplemental duct firing is used to generate more steam in the HRSGs and subsequently produce more power in the steam turbine. However, this additional steam requires more cooling water to condense it back to liquid form. At the same time, the cooling towers are less efficient because there is a smaller temperature difference between the water flowing through the cooling tower and the ambient air. Separately, the evaporative inlet air coolers are only used at temperatures above roughly 50°F. For all of these reasons, water consumption is significantly greater in the summer than in the winter.

The water balances for the Oregon Clean Energy Project show the anticipated flow of water throughout the plant at three different conditions: minimum, average, and peak. In each of these three scenarios, the cycle has two different types of water flowing in (potable water and raw water) and two ways for water to leave the cycle (water vapor evaporated to the environment and wastewater sent down the drain). In order to conserve water, these flows are cascaded through the cycle in a way that reduces the need for water

while ensuring sufficient water quality for all components. There are four major consumptive uses of water on site:

- Wet cooling tower (utilizing raw water, requires some basic water treatment)
- Steam cycle/boiler drums (potable water, requires strict demineralization treatment)
- Evaporative inlet air coolers (potable water, no additional treatment)
- Hoses, washdown, restrooms, etc. (potable water, no additional treatment)

The water balance figure shows the specific flow quantities and the high-level cascading arrangement for reuse water. Blowdown from the evaporative coolers and steam cycle (as well as effluent from the potable water treatment process) can still be used in the cooling towers. Both the cooling towers and evaporative coolers lose water to the environment via evaporation. In doing so, the concentration of chemicals and particles would increase, posing water quality concerns. To address this problem, a certain amount of water is taken off of this cycle (referred to as "blowdown") and cascaded down to the next component, as shown in the water balance. Blowdown from the evaporative coolers is still of high enough quality to cascade to the makeup flow for the cooling tower. In the case of the cooling tower blowdown, this water is returned to the city via the sewer. The majority of the water consumed on site leaves in the form of water vapor to the environment, not as liquid through the sewer.

Also sent to the cooling tower makeup flow is the liquid condensate from the steam cycle blowdown tank. Blowdowns taken from the steam cycle are at high temperatures and pressures and therefore must be "flashed," or expanded/cooled, before they are sent to the cooling tower. During this flashing process, some of this water is lost to the environment in the form of water vapor.

Additionally, raw water is retained in a large tank on-site in the event of a fire. Similarly, a smaller tank houses a potable water supply to buffer against any potential unavailability of water.

Attachment A: FAA Determinations

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76137

Aeronautical Study No.
2013-AGL-239-OE

Issued Date: 01/30/2013

William J. Martin
Oregon Clean Energy, LLC
20 Park Plaza, Suite #400
Boston, MA 02116

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Chimney - North Stack
Location:	Oregon, OH
Latitude:	41-40-03.54N NAD 83
Longitude:	83-26-36.85W
Heights:	590 feet site elevation (SE)
	240 feet above ground level (AGL)
	830 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, paint/red lights - Chapters 3(Marked),4,5(Red),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part I)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 07/30/2014 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

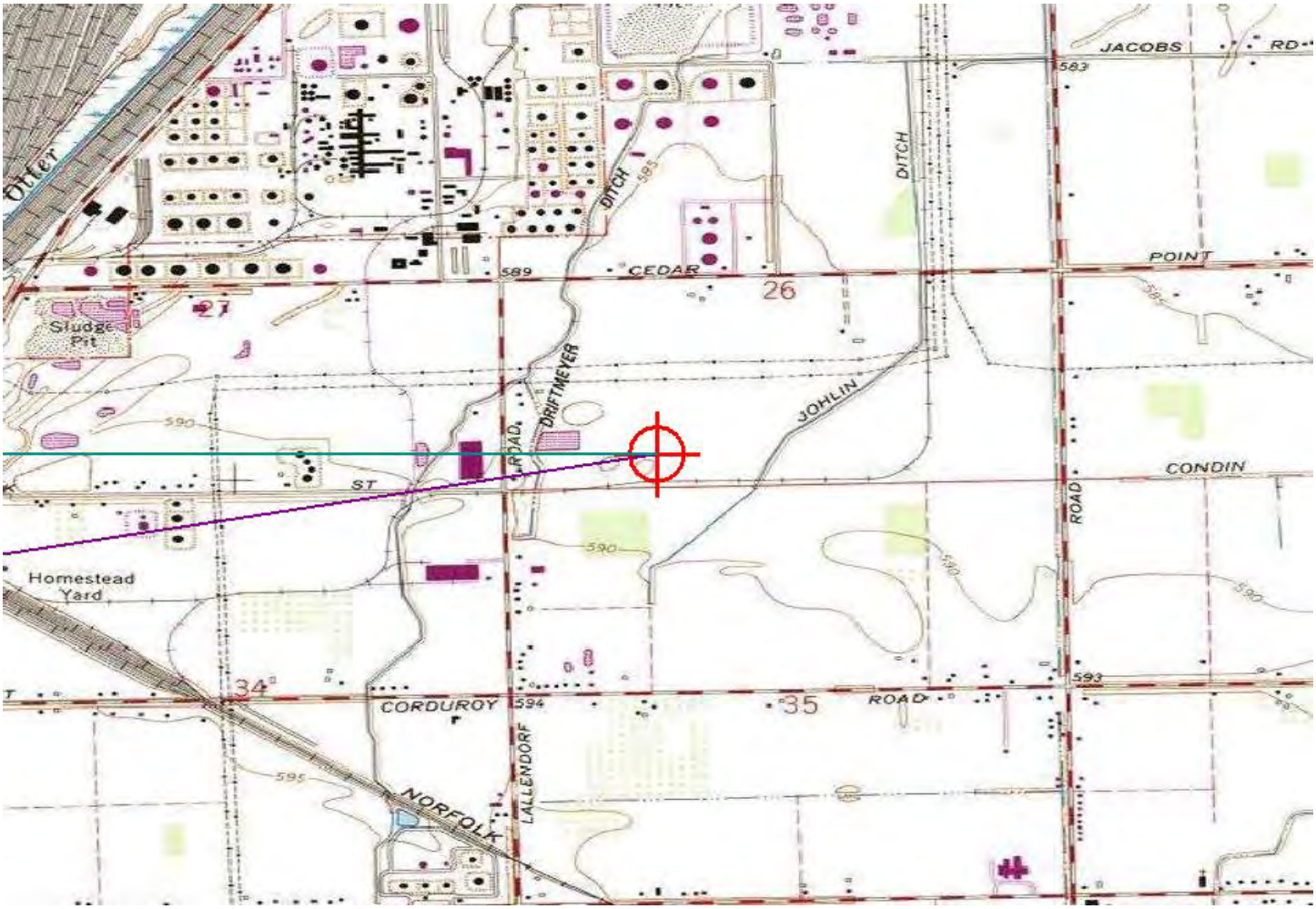
Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

If we can be of further assistance, please contact our office at (310) 725-6558. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2013-AGL-239-OE.

Signature Control No: 180444820-182171213 (DNE)
LaDonna James
Technician

Attachment(s)
Map(s)

Verified Map for ASN 2013-AGL-239-OE



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76137

Aeronautical Study No.
2013-AGL-240-OE

Issued Date: 02/02/2013

William J. Martin
Oregon Clean Energy, LLC
20 Park Plaza, Suite #400
Boston, MA 02116

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Chimney - South Stack
Location:	Oregon, OH
Latitude:	41-40-02.13N NAD 83
Longitude:	83-26-36.77W
Heights:	590 feet site elevation (SE)
	240 feet above ground level (AGL)
	830 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, paint/red lights - Chapters 3(Marked),4,5(Red),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part I)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 08/01/2014 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

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This determination is based, in part, on the foregoing description which includes specific coordinates , heights, frequency(ies) and power . Any changes in coordinates , heights, and frequencies or use of greater power will void this determination. Any future construction or alteration , including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

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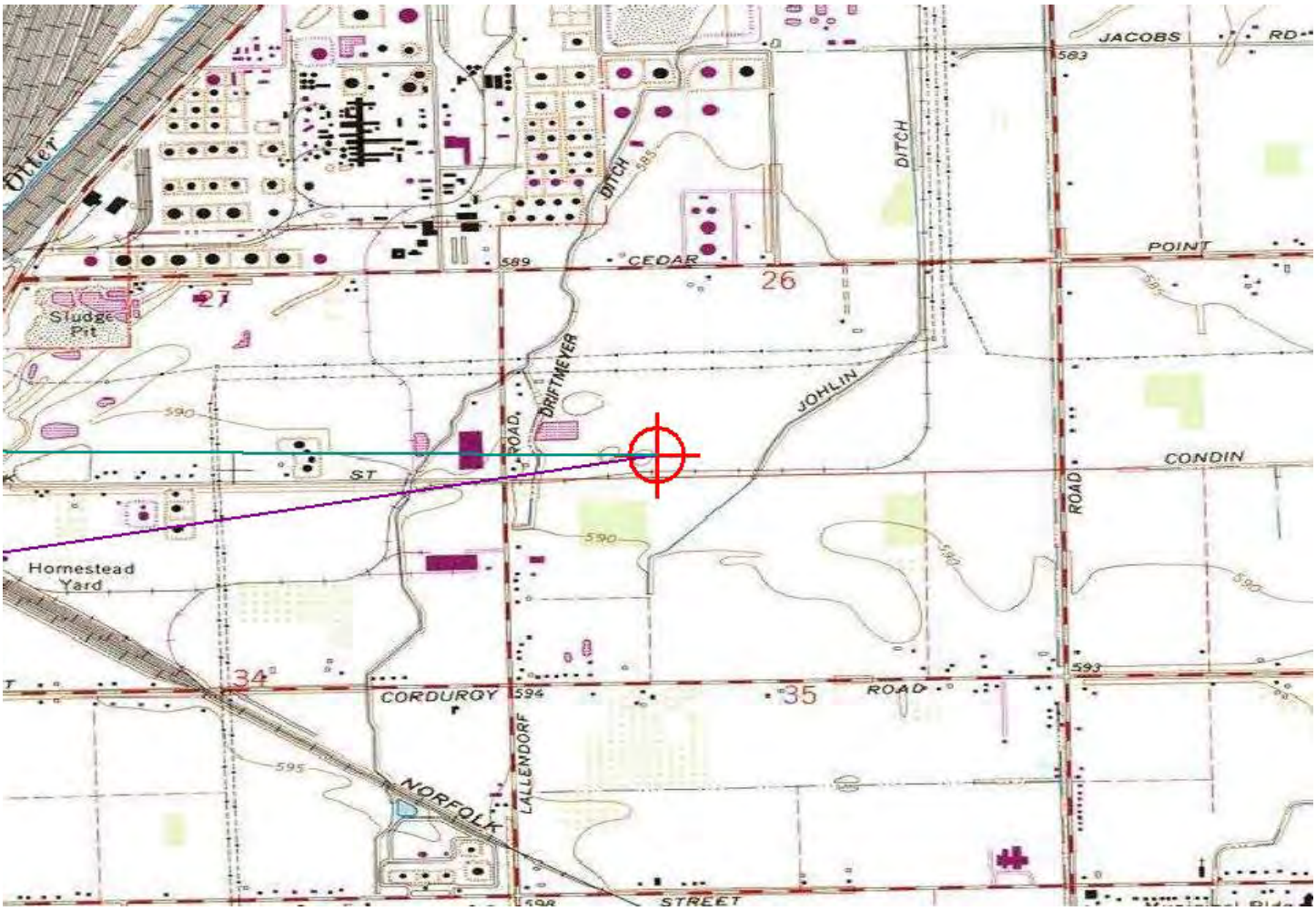
If we can be of further assistance, please contact our office at (310) 725-6558. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2013-AGL-240-OE.

Signature Control No: 180444821-182347172 (DNE)
LaDonna James
Technician

Attachment(s)
Map(s)

Verified Map for ASN 2013-AGL-240-OE



Attachment B: Preliminary Site Access Plan

OREGON CLEAN ENERGY CENTER
Preliminary Site Access Plan

1.0 Introduction

This preliminary site access plan considers delivery of material and major components assuming final transportation to the site via road or rail spur from major highways, rail nodes and/or ports in the Project vicinity. The site access plans will be finalized following Power Train Equipment Supplier and EPC Contractor selection and finalized calculations of the load and dimensional requirements for equipment transportation.

Equipment deliveries to the site will primarily be by truck and will be planned to minimize impact to local traffic patterns. **Figure 1** contains a preliminary list of the largest / heaviest Power Train equipment expected to be transported to the site. Delivery of this equipment to the site may be via truck or local rail spur, with the anticipated delivery method indicated. Please note that all dimensions and weights shown are preliminary estimates and do not reflect final shipping weight.

Preliminary Estimate of Largest / Heaviest Power Train Items		(PRELIMINARY DIMENSIONS AND WEIGHTS - FINAL VALUES TBD)							
		Length		Width		Height		Weight	Anticipated
Gas Turbine and Generator		(ft)	(in)	(ft)	(in)	(ft)	(in)	(lbs)	Site Access via
	Lube Oil Package	33	6	12	6	12	0	75,000	truck
	Electrical Package	40	4	12	0	11	6	60,000	truck
	Generator	47	5	12	10	13	4	738,000	rail
	Gas Turbine	36	3	14	0	15	10	617,000	rail
	Largest/Heaviest Inlet Filter-house Piece	59	8	14	6	37	6	52,000	truck
	Largest/Heaviest Inlet Duct/Silencer Piece	32	6	11	0	16	6	63,000	truck
	Largest/Heaviest Exhaust Gas Diffuser Piece	27	0	13	6	12	0	20,000	truck
Steam Turbine and Generator									
	HP/IP Turbine assembled	32	0	12	0	13	0	324,000	rail
	Main steam valves (2) each	12	0	12	0	10	0	19,500	truck
	Reheat steam valves (2) each	12	0	11	0	10	0	48,000	truck
	LP rotor	30	0	12	0	13	0	168,000	rail
	LP inner casing – Top Section	19	0	15	0	15	0	80,500	rail
	LP inner casing – Bottom Section (incl. stationary blade rings lower part and guide blade carrier lower parts)	20	0	19	0	12	0	151,000	rail
	LP casing Upper Part GS	32	0	12	0	14	0	67,000	truck
	LP casing side wall (2)	32	0	18	0	9	0	106,000	rail
	HP/IP Front Bearing Pedestal	13	0	8	0	8	0	23,000	truck
	HP/IP Rear Bearing Pedestal	20	0	6	0	8	0	35,500	truck
	LP Rear Bearing Pedestal	19	0	6	0	8	0	35,500	truck
	Generator	38	4.8	14	9.6	13	1.2	697,200	rail
	Lube Oil Package	28	0	12	0	14	0	40,000	truck

Figure 1: Preliminary Estimate of Largest / Heaviest Power Train Equipment

2.0 Rail Access to OCEC Site

Rail access to the site is via the Norfolk Southern Spur, as shown on in **Figure 2: Rail Access to OCEC Site**. The nearby rail transfer capability at the port will allow incoming shipments to be loaded onto rail cars at the port. The equipment will be removed from rail cars by crane at the OCEC site. All systems, including rail and rail car capacity, crane access and lifting capacity and impact to rail traffic patterns, will be analyzed in a detailed off-loading plan prior to any transportation.

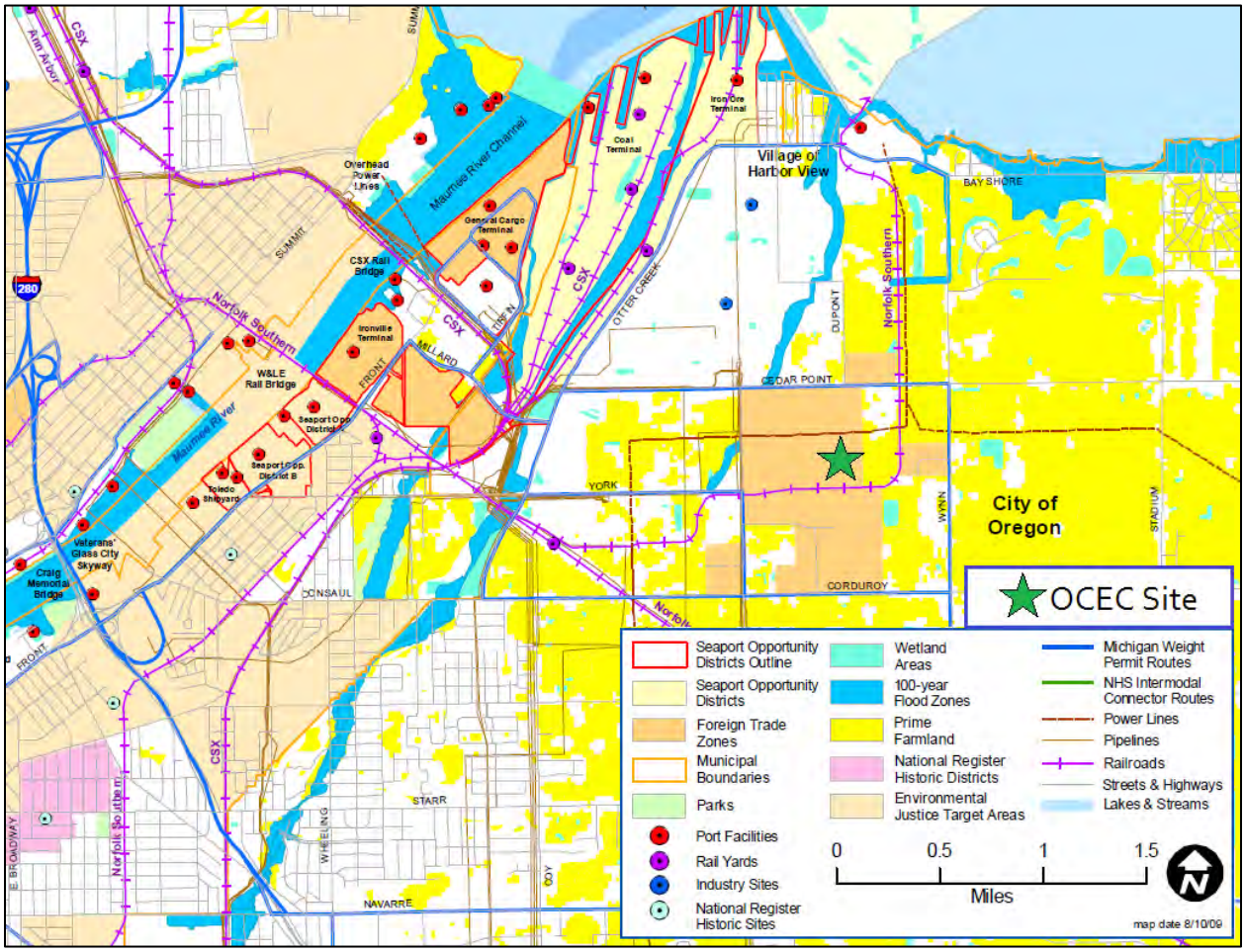


Figure 2: Rail Access to OCEC Site (Ref: www.toledoseaport.org)

3.0 Road Access to OCEC Site

The roadways adjacent to the site are connected to the Port of Toledo and the US Interstate Highway system by designated heavy haul routes known as “Michigan Legal” routes. These reinforced routes allow trucks to load up to 154,000 lbs. gross when moving cargo with special permits. Other roads in Ohio typically have a maximum weight restriction of 80,000 lbs. gross. As shown in **Figure 3: MI Permit Routes in Lucas County,** access to the site via these upgraded roadways is available from either the port or the interstate highway system. The two routes outlined below indicate potential site access approaches utilizing the heavy haul “Michigan Legal” routes.

Michigan Weight Designated Permit Routes - Lucas County

Toledo Metropolitan
Area Council of Governments
300 Martin Luther King Jr. Dr., Toledo, Ohio 43604
Phone 419-241-9155, Fax 419-241-9116
www.tmacog.org

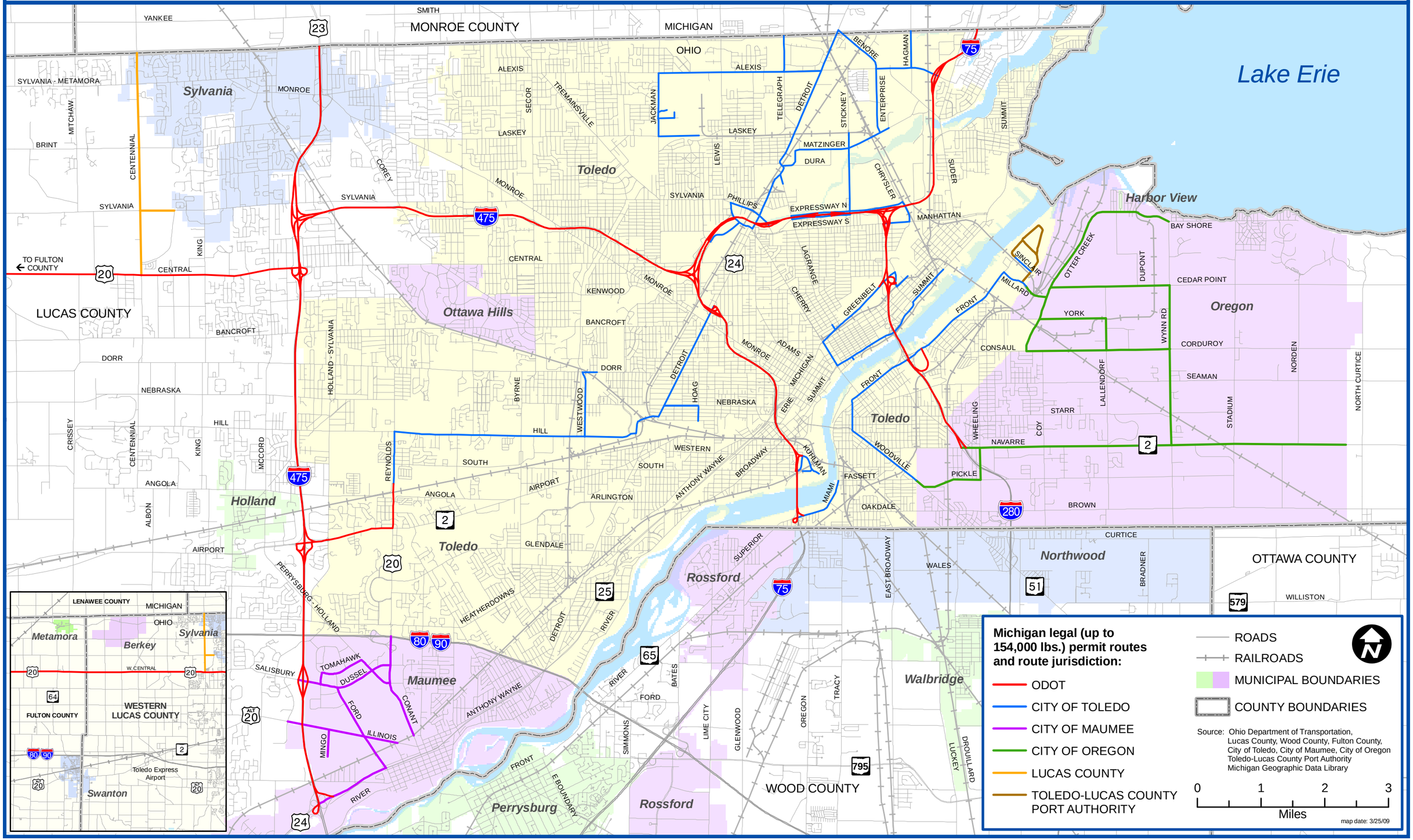


Figure 3: Michigan Weight Designated Permit Routes - Lucas County

3.1 Anticipated Route for Road Access to the site from the Interstate Highway system

From I-280 N, take exit 9 for Front St toward OH-65 (0.6 mi). Turn right onto OH-65/Front St (2.1 mi). Turn right onto Millard Ave (0.8 mi). Turn right onto Otter Creek Rd (0.4 mi). Take the 1st left onto York St (1.0 mi). Turn left onto N Lallendorf Rd (141 ft).

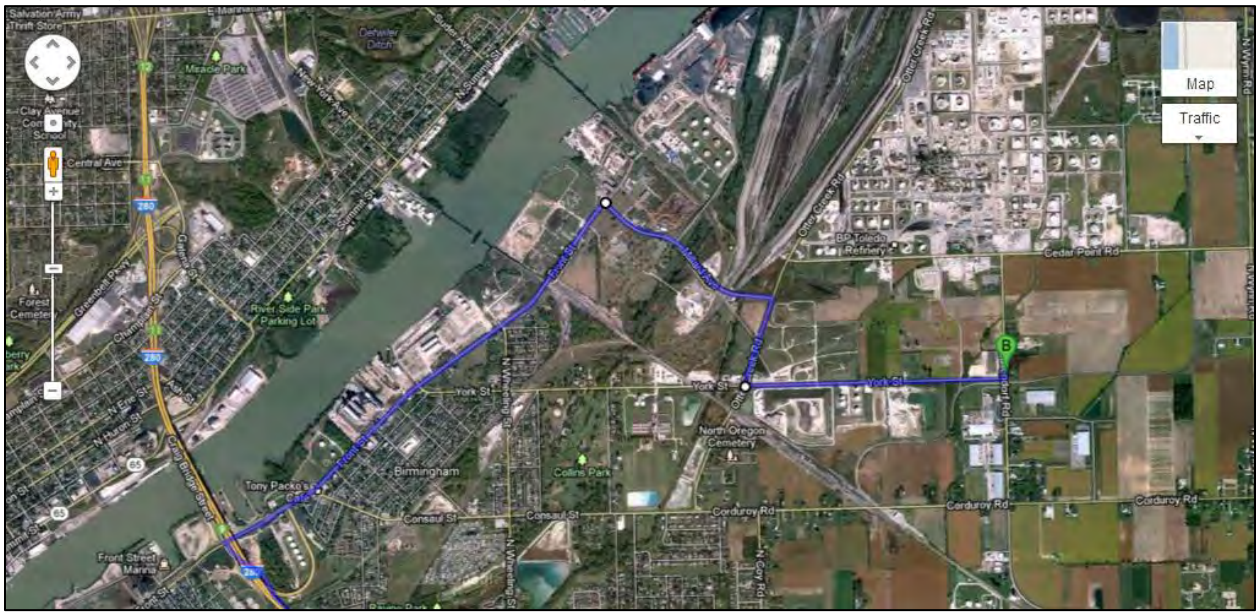


Figure 4: Anticipated Route for Road Access to the OCEC site from the Interstate Highway

3.2 Anticipated Route for Road Access to the site from the Port of Toledo

Turn left onto Millard Ave (0.5 mi). Turn right onto Otter Creek Rd (0.4 mi). Take the 1st left onto York St (1.0 mi). Turn left onto N Lallendorf Rd (141 ft).

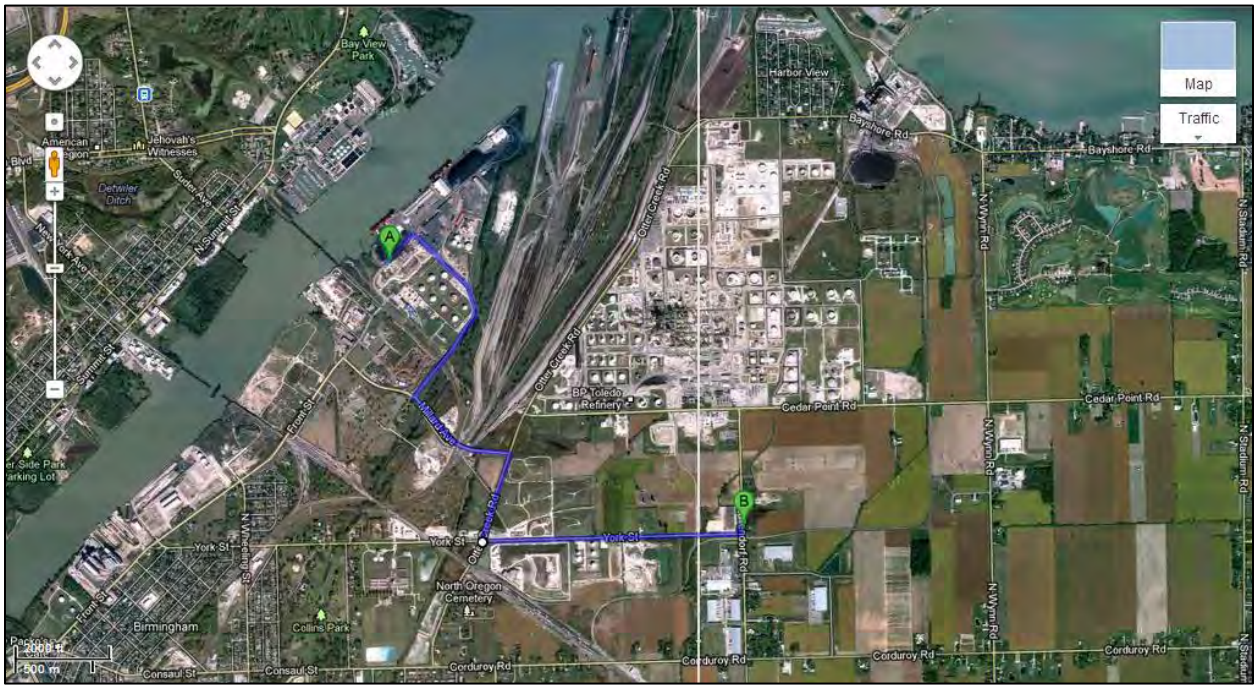
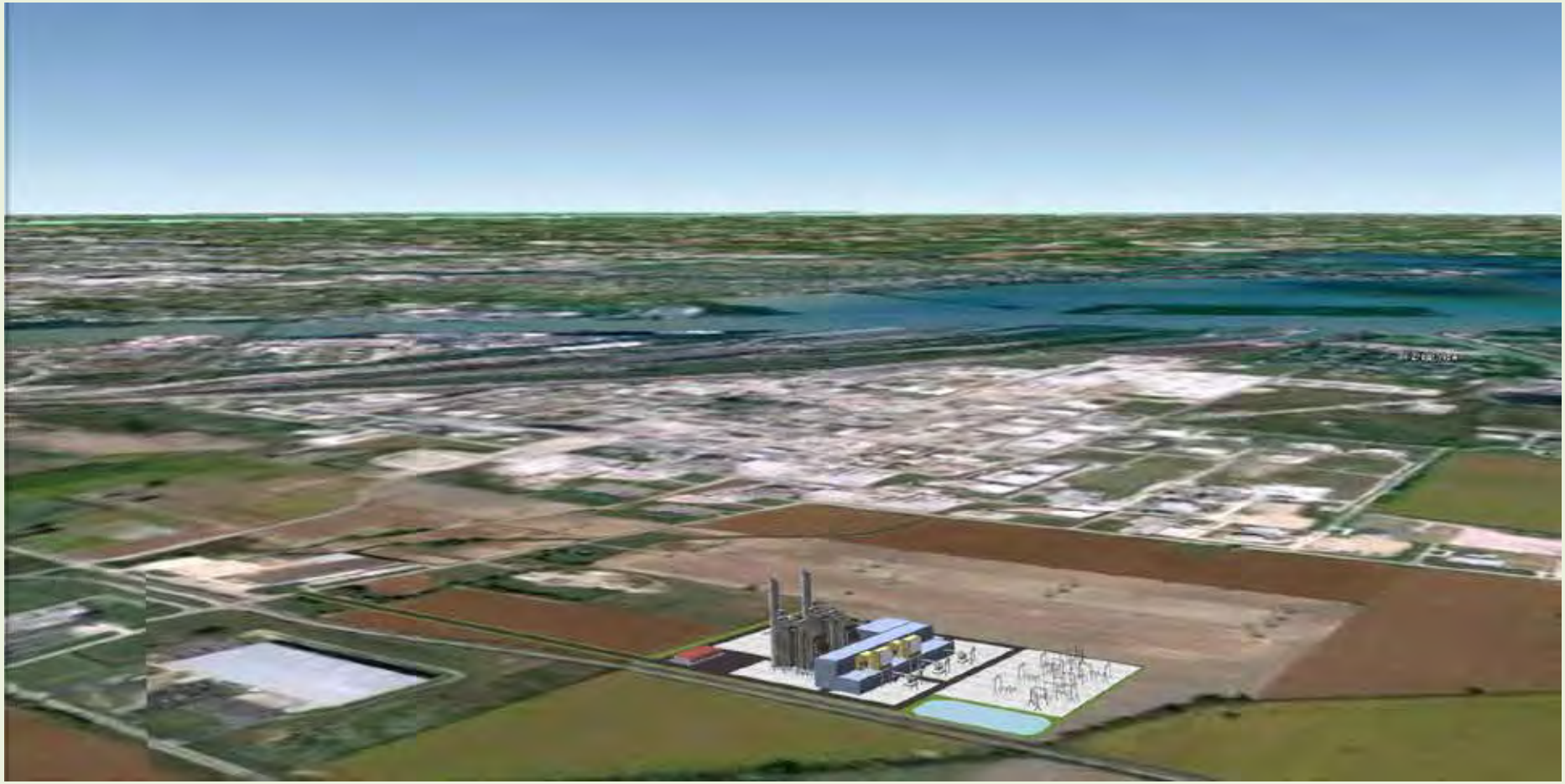


Figure 5: Anticipated Route for Road Access to the OCEC site from the Port of Toledo

As with any rail transportation to the site, all systems involved in roadway transport, including roadway capacities and clearances, crane access and lifting capacity and impact to affected road traffic patterns, will be analyzed in a detailed off-loading plan prior to any transportation.

Attachment C: Outreach Materials



Overview: Oregon Clean Energy Project

OCE Project Team

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

North America Project Development, LLC has assembled an extremely experienced project team to ensure success of the Oregon Clean Energy Project (OCE Project).

North America Project Development, LLC (NAPD)

- Project developer and owner
- NAPD principals originated and developed Fremont (Ohio) Energy Center 700 MW-CCGT

ENERGY INVESTORS FUNDS

- Project equity provider
- Eventual owner of the Project
- Private equity fund with 25 year history of energy investments
- Mobilized over $15 Billion in project capital for over 100 Projects

R·W·BECK
Owner's Engineer

NTE ENERGY LLC
Power Contracting, Fuel, Engineering, and Commercial Services

Power Plant Management Services, LLC
Construction Management
Asset Management
Operations Management

Bricker & Eckler ATTORNEYS AT LAW
Legal Representation

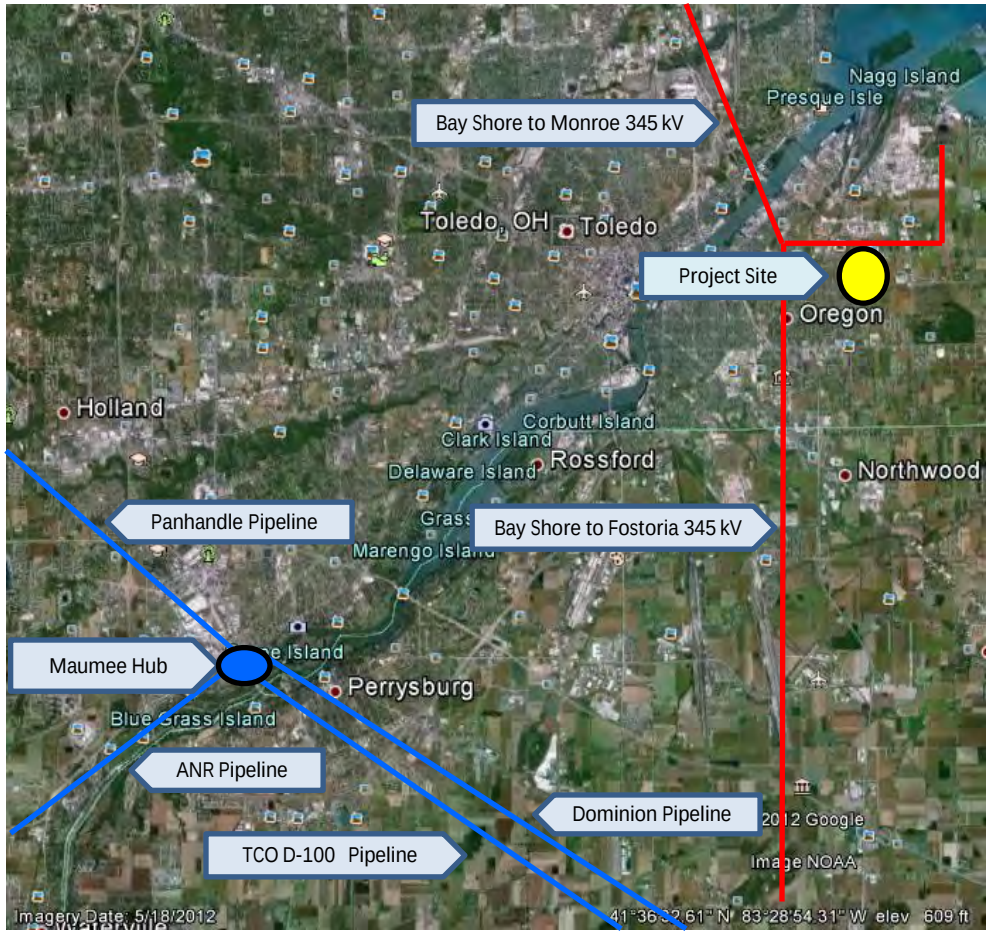
ess group
Water Advisory Services

ARCADIS
Environmental Permitting

OCE Project Overview

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

- Oregon Clean Energy Project
  - ü 800 MW combined cycle power station
  - ü Located in Oregon, Ohio
  - ü PJM Interconnection – First Energy Zone
  - ü Commercial Operations – May 2016 (Expected)
- State-Of-The-Art Generating Technology
  - ü Combined cycle generating technology consisting of high efficiency combustion turbines (CT) with heat recovery steam generators (HRSG)
  - ü HRSG supplemental firing provides incremental output at low capital cost
- Natural Gas Interconnection
  - ü New OCE Project lateral will interconnect adjacent to Maumee Hub
  - ü Access to ANR and Panhandle interstate pipelines from lateral with future access to TCO, Dominion, and/or NEXUS
  - ü Maumee Hub natural gas supply provides reliable natural gas procurement and transportation optionality from multiple low-cost production areas
- Transmission Interconnection
  - ü Double circuit 345 kv transmission interconnection provides direct access to PJM energy markets to south and east as well as MISO energy markets
- Water / Wastewater Services
  - ü City has adequate supply for wet cooling tower use
  - ü Economical local water and wastewater solutions



OCE Project
Commercial Benefits

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

The OCE Project site was selected to provide long-term economic advantages including:

- May 2016 Commercial Operation Date
  - ü Y1 PJM Queue position allows 2016 COD
  - ü Any competitor filing a transmission request with PJM after April 30, 2012 cannot meet a 2016 COD
- Optimum PJM Market Location
  - ü May 2012 RPM capacity prices for PY 2015/2016 in Northern Ohio cleared highest of all PJM regions at $357.00/MW-day
  - ü PJM estimates up to 5,000 MW of coal unit retirements on a system wide basis
  - ü Three nearby coal unit retirements will further reduce regional supply by 1,611 MW
  - ü Coal closures are: Bay Shore '12 (500 MW); J.R. Whiting ' 15 (345 MW); and Avon Lake '15 (766 MW)
- Access to Both PJM and MISO
  - ü Transmission grid modeling shows viable transmission reach from Chicago to Baltimore
  - ü Dual 345 kv interconnection allows north-south and east-west transmission access
  - ü Project has PJM queue position of Y1 – 069
  - ü Grid injection location provides valuable system reliability and VAR support to "Lake Loop"
- Favorable Heat Rate and MW Output
  - ü Wet cooling tower for increased performance
  - ü Latest state-of-the-art gas turbine technology with high efficiency supplemental firing
  - ü Evaporative cooling for output improvement
  - ü Auxiliary boilers for rapid start-up
  - ü Can achieve 800 MW net for all seasons

OCE Project
Commercial Benefits – cont.

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

Additional long-term economic advantages include:

- Low-cost 345 kv Transmission Interconnection
  - ü Approximately 200 feet from existing 345 kv circuits
  - ü Connection to 345 kv Bay Shore to Fostoria
  - ü Connection to 345 kv Bay Shore to Monroe
- Favorable Air Permit
  - ü Permit filed August 24, 2012; Facility permit No. 0448040102
  - ü Project is located in attainment area, no need to purchase expensive emissions offsets
  - ü Mode/method of CCGT operations will not be restricted by Air Permit conditions
- Favorable Water / Wastewater Services
  - ü Allows for City water usage
  - ü Wet cooling towers will be utilized
  - ü City will accept all wastewater
- Economical Cost Environment
  - ü Low land cost
  - ü Additional land available for future expansion
  - ü Tax environment reasonable
  - ü Labor and benefit costs reasonable
  - ü High labor productivity
  - ü Lower power production cost than gas fired plants in region providing dispatch benefits
  - ü Access to four high pressure interstate gas pipelines with broad production area reach
- Public Benefit Value
  - ü New project will displace old local "coal plant"
  - ü Favorable reputation of Project in local and regional communities
  - ü Project will create approximately 400 construction jobs and 25 permanent jobs

OCE Project Schedule

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

The OCE Project has completed a number of major milestones and is on-schedule for its May 2016 Commercial Operation Date.

• Site Control	April 2011
• Initial Feasibility Study Complete	June 2011
• PJM Interconnection Process Started	April 2012
• PJM Feasibility Study Complete	July 2012
• Natural Gas Lateral Options Initiated	July 2012
• Air Permit Filed	August 2012
• Equipment Bids Received	August 2012
• PJM System Impact Study Initiated	August 2012

• All Required Permits Complete	May 2013
• Financial Closing	June 2013
• Construction Start	June 2013
• Natural Gas Lateral Complete	December 2015
• Substantial Completion	February 2016
• Commercial Operations	May 2016

OCE Project
Facility Rendering

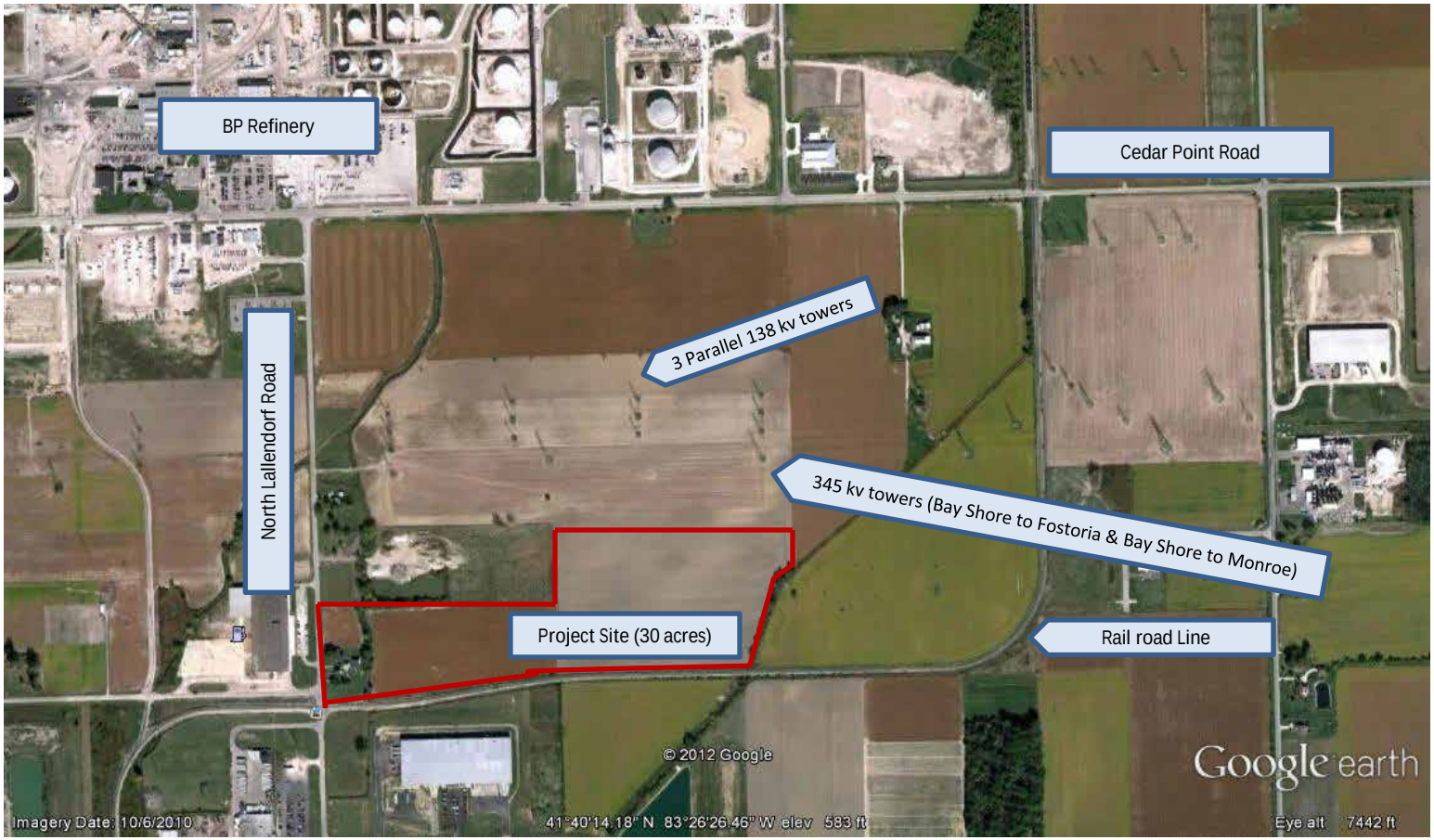
Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

- Combined cycle generating facility consisting of high efficiency combustion turbines (CT) with heat recovery steam generators (HRSG) and a single steam turbine
- HRSG supplemental firing allows 800 MW net generation during all seasons
- Evaporative coolers increase combustion turbine output
- Wet cooling with cooling water sourced from City of Oregon

OCE Project
Transmission Interconnection

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

PJM Feasibility Study indicates modest transmission upgrades are necessary for transmission system injection of up to 800 MW at OCE Project site and double circuit 345 kv interconnection provides transmission optionality.

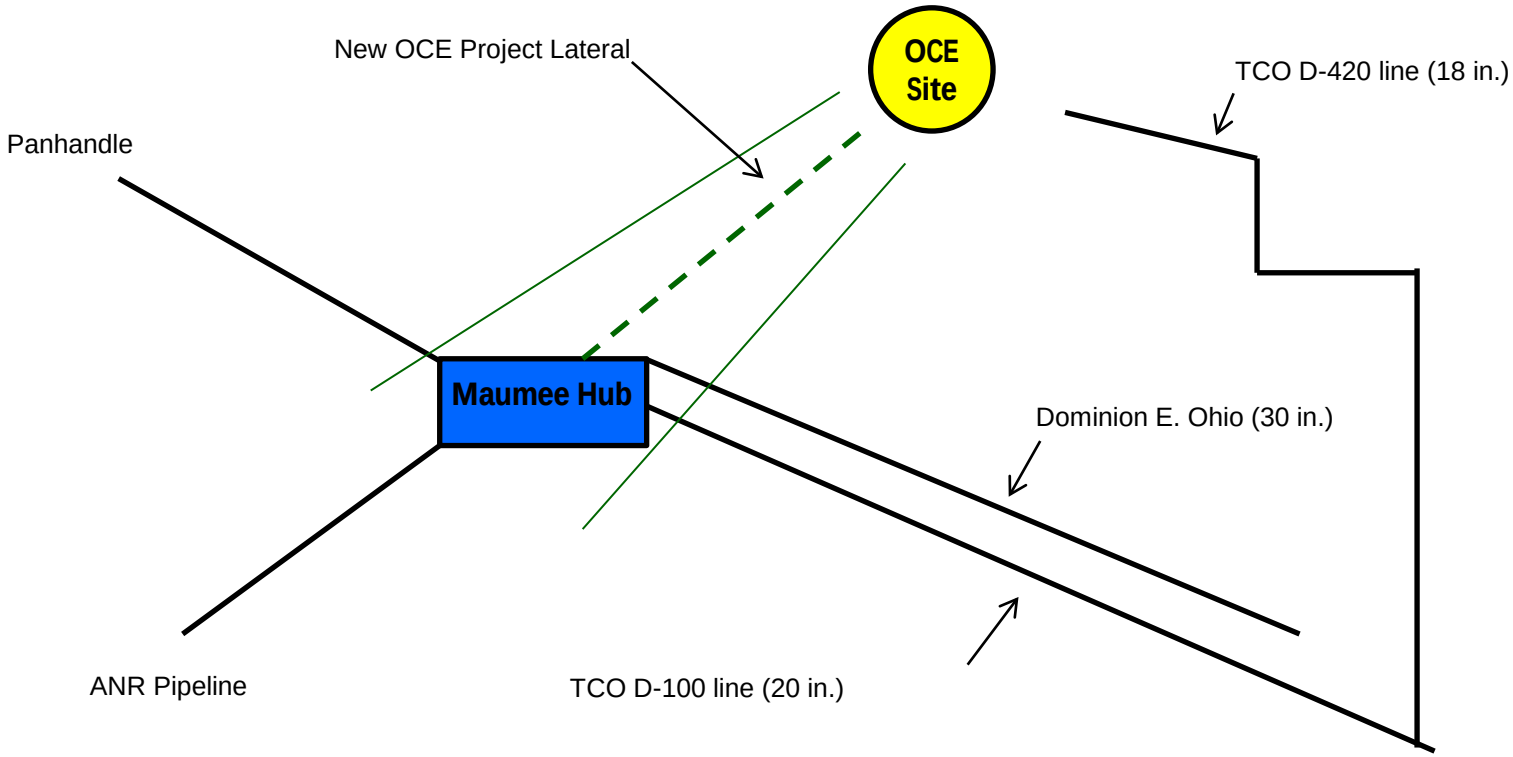


- Double circuit 345 kv interconnection includes 5 breaker ring bus scheme
- Bay Shore / Monroe provides direct transmission access to MISO and PJM
- Bay Shore / Fostoria provides direct transmission access to PJM

OCE Project
Natural Gas Interconnection

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

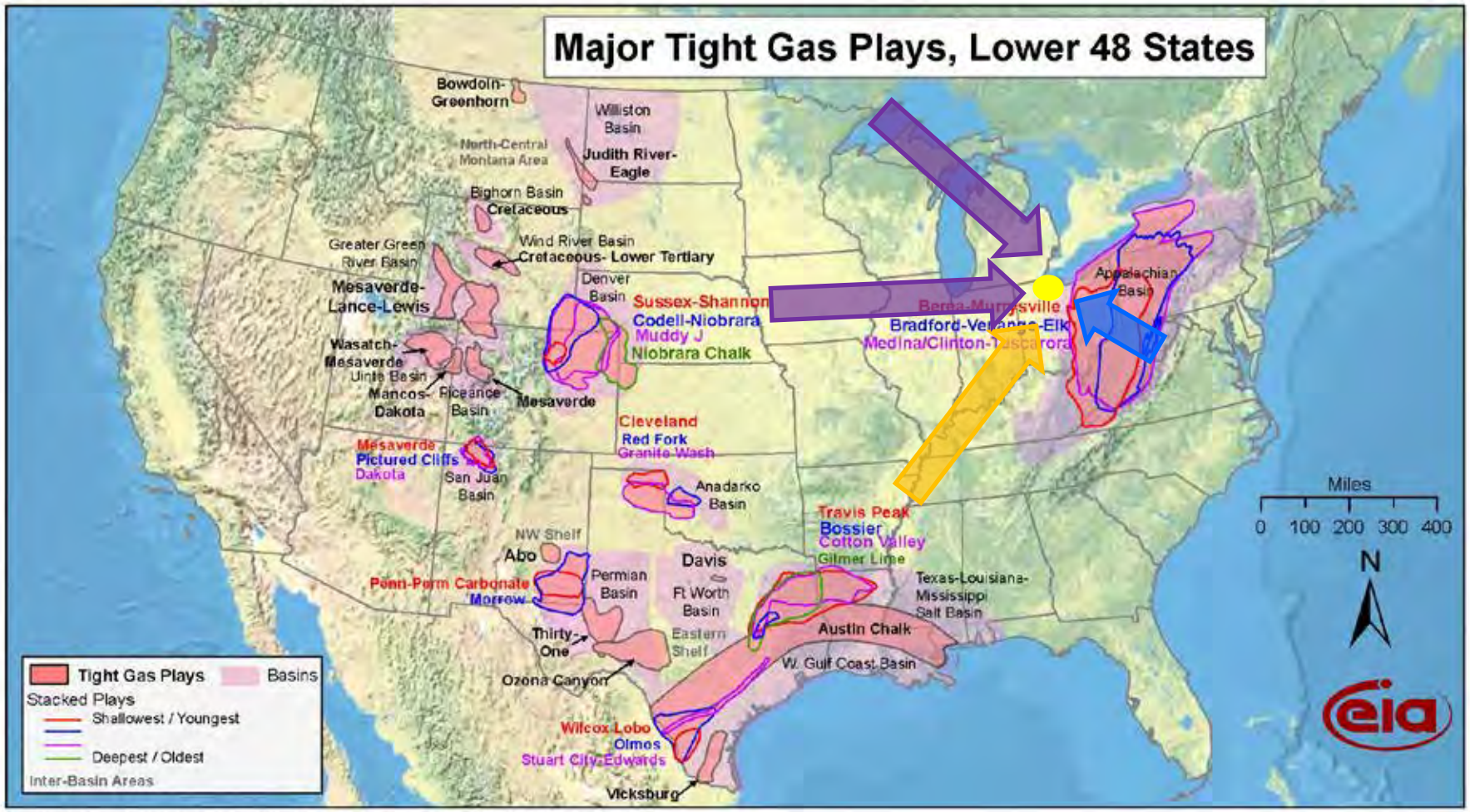
Natural gas interconnection at Maumee Hub provides the OCE Project with optionality of delivery from multiple interstate pipelines and access to Canadian, Gulf Coast, Michigan, Midcontinent, and Shale natural gas production areas and storage fields.



- OCE Project will be interconnected to one or more of four possible interstate pipelines
- Interconnection point located approximately 12 miles to 15 miles from OCE site

OCE Project
Natural Gas Production Areas

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future



Source: Energy Information Administration based on data from various published studies
Updated: June 6, 2010

Shale supply via Dominion East Ohio and Columbia Gas Transmission

Gulf Coast and Midcontinent supply via ANR Pipeline

Canadian, Michigan, and Midcontinent supply via Panhandle Eastern

OCE Project
Power Purchase Agreements

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future

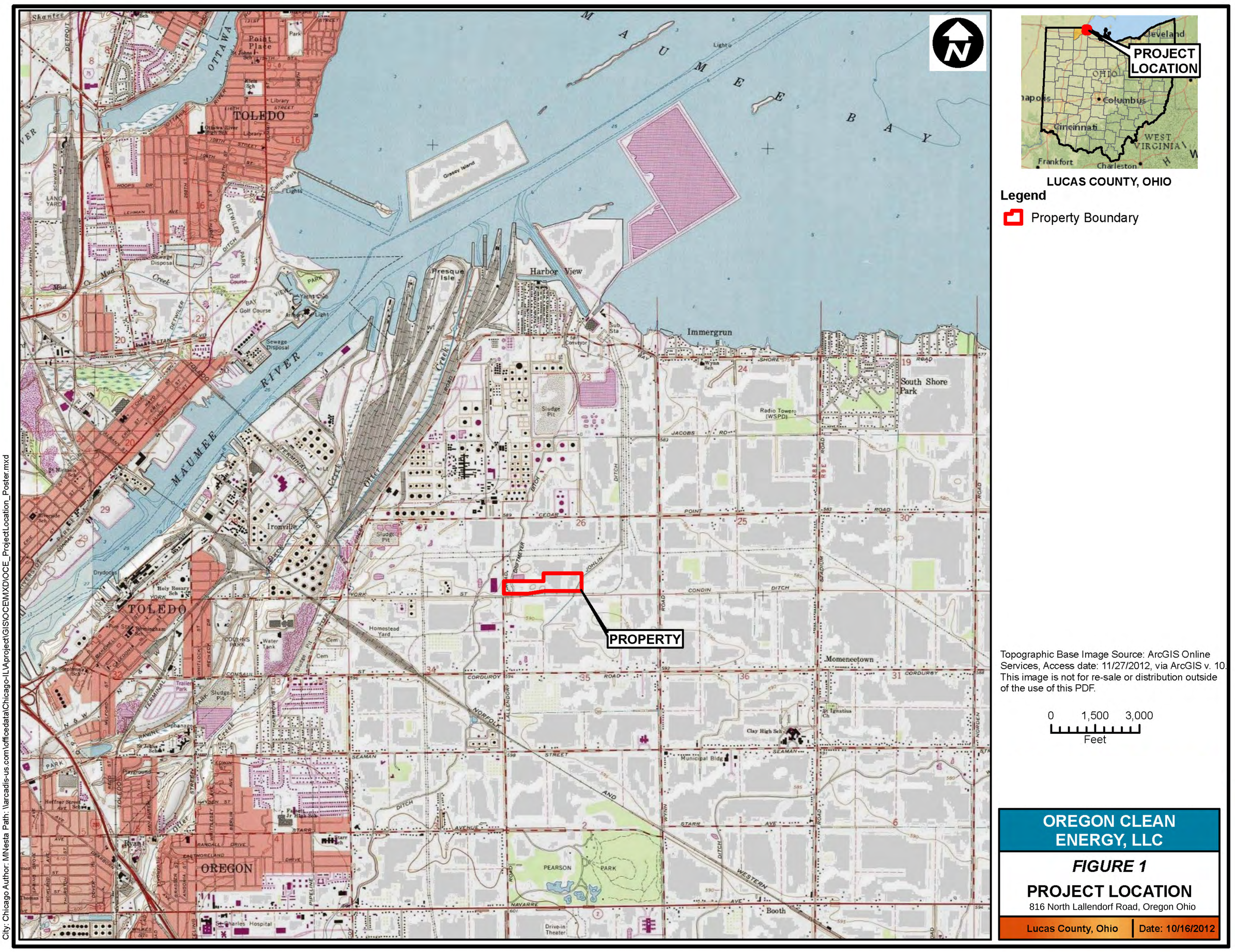
Oregon Clean Energy, LLC is open to a wide variety of mutually beneficial Power Purchase Agreement structures.

Power Purchase Agreements may include the following transaction structures and general provisions:

- Traditional Power Purchase Agreement
  - ü Unit contingent capacity and energy supply from OCE Project
  - ü Associated natural gas supply provided by OCE Project with cost pass through to counterparty
  - ü PJM RPM capacity can be included or excluded from transaction
- Tolling Agreement
  - ü Unit contingent capacity and energy supply from OCE Project
  - ü Natural gas supply provided by purchaser
  - ü PJM RPM capacity can be included or excluded from transaction
- Physical Delivery or Financial Settle
  - ü Physical delivery at the OCE Project busbar
  - ü Financial Settle based on OCE Project nodal pricing
- Term
  - ü Project will consider a variety of contract terms
- Contract Quantity
  - ü Contract quantity may include partial or full output of the Project
- Ancillary Services
  - ü Buyer retains rights to all applicable ancillary services
- Credit Support
  - ü Provided by project company as part of financing package

Oregon Clean Energy Center

PROJECT LOCATION



LUCAS COUNTY, OHIO

Legend

Property Boundary

Topographic Base Image Source: ArcGIS Online Services, Access date: 11/27/2012, via ArcGIS v. 10. This image is not for re-sale or distribution outside of the use of this PDF.

0 1,500 3,000
Feet

OREGON CLEAN ENERGY, LLC	
FIGURE 1	
PROJECT LOCATION	
816 North Lallendorf Road, Oregon Ohio	
Lucas County, Ohio	Date: 10/16/2012

City: Chicago Author: MNesta Path: \\arcadis-us.com\officedata\Chicago-L\Aproject\GIS\OCEMXD\OCE_ProjectLocation_Poster.mxd

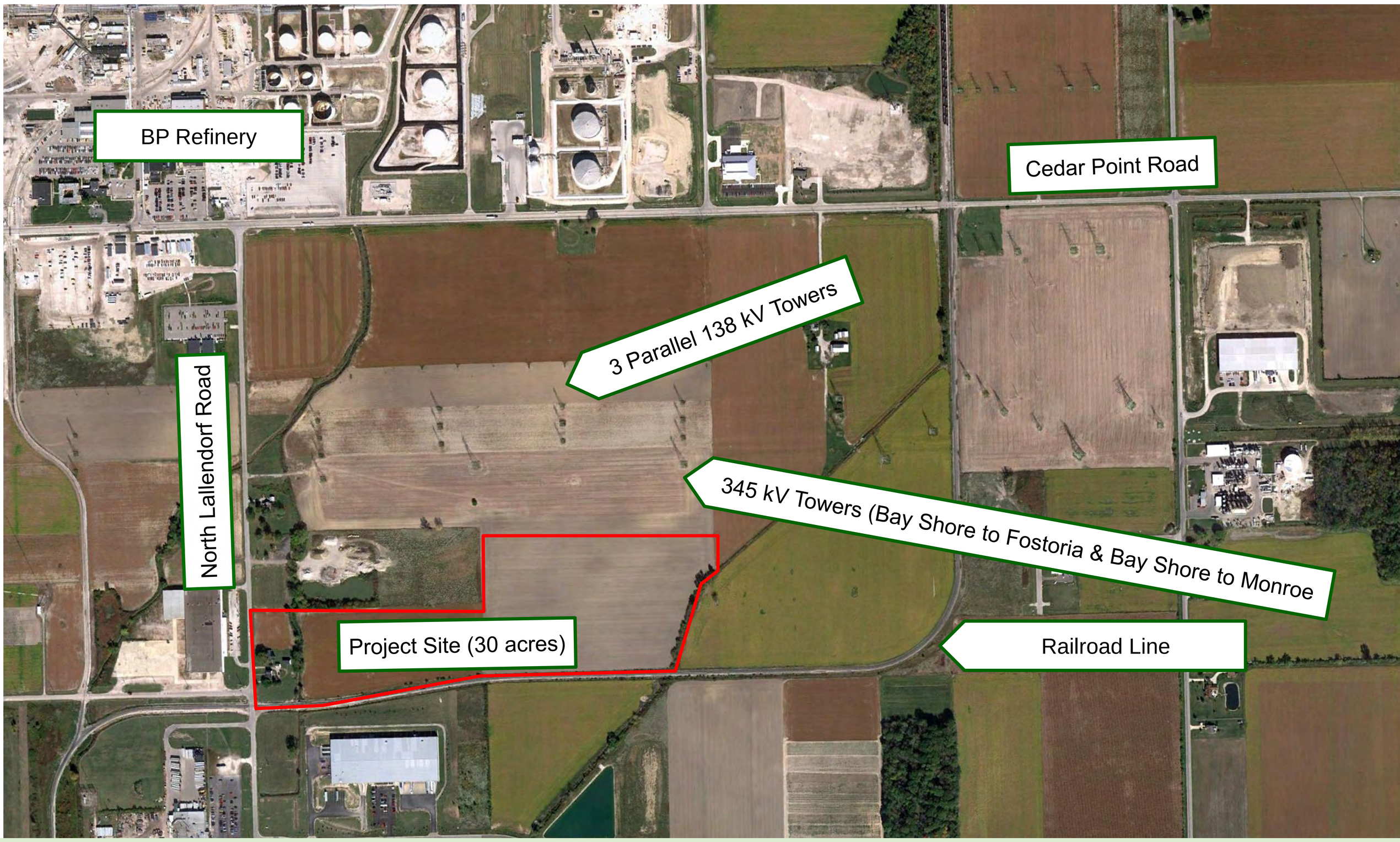
Oregon Clean Energy, LLC

Natural Gas Energy for Ohio's Future

Oregon Clean Energy Center

SITE CHARACTERISTICS

- Approximately 30-acre parcel
- Area for construction supplies adjacent to the Site
- Neighborhood includes numerous commercial and industrial companies
- Zoned Commercial/Industrial
- Electric transmission lines immediately north of the Site
- Strong transportation network and potential for rail deliveries of heavy equipment



Oregon Clean Energy, LLC

Natural Gas Energy for Ohio's Future

Oregon Clean Energy Center

PROJECT CHARACTERISTICS

800 MW Combined Cycle Power Station

- High efficiency facility, providing power demand flexibility during peak power periods
  - Two natural gas fired, high efficiency combustion turbines
  - Two heat recovery steam generators
  - One steam turbine
- State-of-the-art emission controls
- Stormwater best management practices
- High efficiency wet cooling towers, using City of Oregon raw water
- Limited potable water demand
- City of Oregon sewer plant will accept wastewater via gravity main sewer adjacent to the Site

Transmission Interconnection

- Project Site approximately 300 feet south of existing power lines
- Direct access to existing 345 kV transmission system
- Replaces power from 1,611 MW of coal fired power that will be closing – maintaining electric system “reliability”
- Electric grid “reliability” yields steady supply of power to customers

Gas Supply

- East Ohio has some of the lowest priced natural gas in the U.S.
- Project can connect to one or more regional gas pipelines
- New gas lateral will be constructed
- A highly efficient power project using low-cost gas yields low-cost power

Oregon Clean Energy, LLC

Natural Gas Energy for Ohio’s Future

Oregon Clean Energy Center

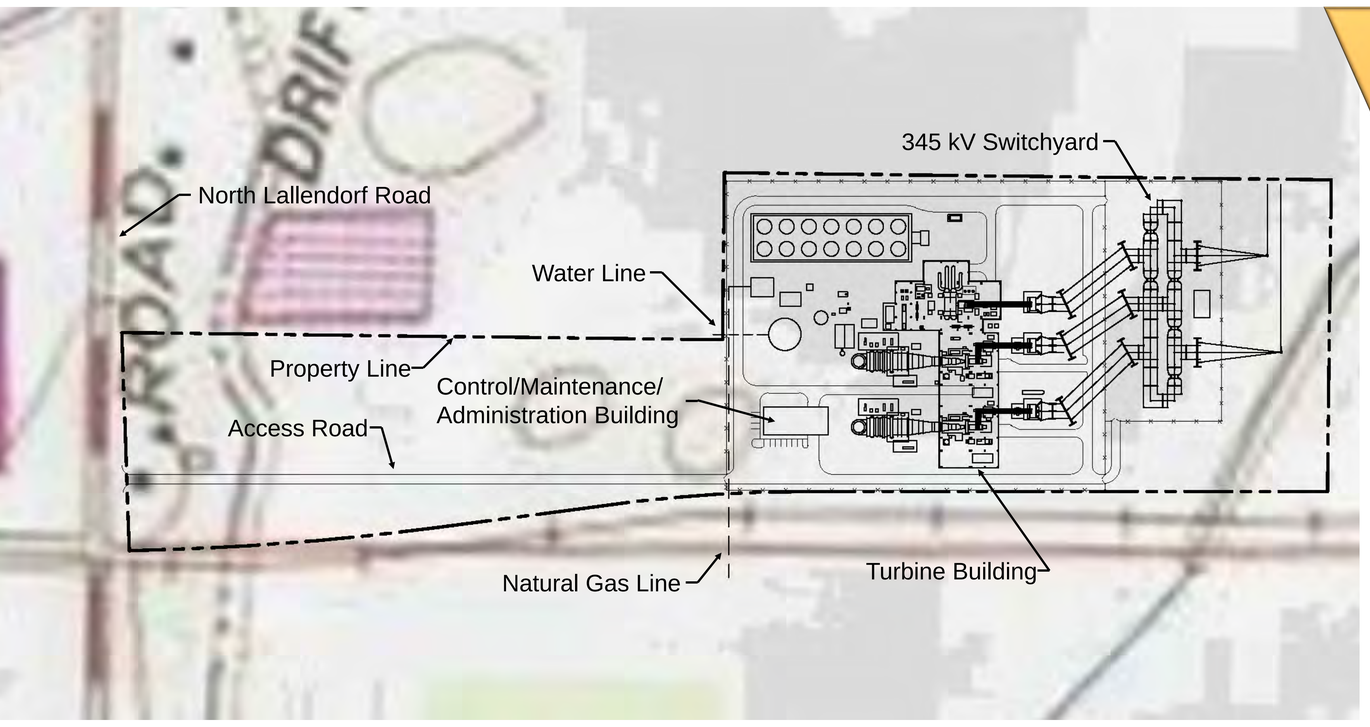
PROJECT SCHEDULE

- **Site Control** — **April 2011**
- **Initial Feasibility Study Complete** — **June 2011**
- **PJM Interconnection Process Started** — **April 2012**
- **PJM Feasibility Study Complete** — **July 2012**
- **Natural Gas Lateral Options Initiated** — **July 2012**
- **Air Permit Application Filed** — **August 2012**
- **Equipment Bids Received** — **August 2012**
- **PJM System Impact Study Initiated** — **August 2012**

- **File OPSB application** — **December 2012**
- **PJM System Impact Study Complete** — **February 2013**
- **All Required Permits Complete** — **May 2013**
- **Construction Start** — **June 2013**
- **Commercial Operations** — **May 2016**

Oregon Clean Energy Center

PROJECT BENEFITS



Project Purpose and Features

- Replace power from closing of local and regional coal plants
- Respond to potential energy and capacity supply gap, with the ability to supply power for the region
- Maintain reliability of local electric grid system
- Low-cost gas and high-efficiency technology yield favorable power cost
- State-of-the-art environmental and safety features

Construction Benefits

- A peak of 400+ jobs over the 2½ year construction period
- Benefits from 1,300,000 construction labor person-hours
- Local economy boost from purchase of goods and services: concrete, gravel, rebar, fuel, lumber, supplies, hotels and food
- Union labor
- 100% private funding – no City of Oregon funds

Operational Benefits

- More than 25 full time highly skilled jobs
- Additional revenue for City of Oregon
  - Raw water sales
  - Potable water sales
  - Sewer services
- Ongoing local economy boost through purchase of supplies/services
- Educational tours and workshops on energy
- New tax-paying entity for City of Oregon

Oregon Clean Energy, LLC

Natural Gas Energy for Ohio's Future

North America Project Development, LLC

Press Package
Oregon Clean Energy Project
New Gas-to-Electricity Project

in

Oregon, OH

September 5, 2012

20 Park Plaza - Suite #400 • Boston, MA 02116 • Office: (617) 948-2165 • Fax: (617) 948-2501

Oregon Clean Energy Project
Oregon, Ohio

1. Project Proponents

A. Oregon Clean Energy, LLC (OCE)

- Project company for new facility

- Owned by North America Project Development, LLC (NAPD)

-Wm. Martin and Wm. Siderewicz, principals

-Developers of Fremont, OH Energy Center (705 MW)

-Collectively 65 years of private power development experience

B. Energy Investors Funds (EIF)

-Project financing partner

-$ 4.5 billion energy equity fund

-Have participated in over 100 energy projects, since 1987 founding

-Will arrange for 100% of funds needed for construction

-Will be operator of OCE Plant and its owner

C. OCE Advisors

- ARCADIS – Toledo/Columbus permitting experts

- Mannick and Smith – Toledo Phase 1 Environmental

- Bricker & Eckler – Columbus legal analysis

- NTE Energy – power marketing

- Pterra Consulting – electrical grid analysis

- SAIC – power engineering

- PPMS – plant economics

- ESS Group – water resources

2. Project Overview

A. 800 MW gas-fired combined cycle plant

B. Will convert clean natural gas to electricity

C. Will use same clean natural gas that's used for home cooking and heating

D. Will use modern gas turbines (2) and a steam turbine (1)

E. New construction with latest technology and environmental controls

F. Like a car, equipped with **catalytic converter** for NOx and CO control

G. Project will be **twice as efficient** as local coal plants, in converting fuel to electricity

H. Displaces power from aging/closing regional coal plants

I. Allows for maintaining reliability of local power grid

J. Enough new electricity for 500,000 homes

3. Replacement for Regional Coal Closures

A. First Energy announced September 2012 closing of Bay Shore (500 MW)

B. Avon Lake, OH (766 MW) and J.R. Whiting, MI (345 MW) also closing in 2015

C. OCE Project a cleaner emissions profile vs. aging coal plants

D. OCE Project produces **50% less CO_2** per kwh of electricity vs. **coal** combustion

E. No need to stockpile coal or coal ash in the region

4. Permitting Considerations

A. Air Permit submitted : Aug. '12

B. OCE will host "Open Houses" for two-way communication and feedback : Fall '12

C. Ohio Power Siting Board requirements must be met

- OCE Project
- Grid interconnection
- Gas connection

D. Meet all State and Federal regulations

E. Meet all local zoning and construction standards

5. **PJM Interconnection (PJM)**

   A. Entity that controls where/how/when power generation can connect to grid
   B. PJM primarily controls : OH, PA, NJ, MD, DE, VA and WVa
   C. OCE Project has PJM queue position Y 1-069
   D. Securing a queue position represents a $ 500,000 investment
   E. PJM/First Energy determine the cost for OCE Project to connect to local grid system

6. **Project Timetable**

   A. Preliminary Engineering : June '12
   B. Submit Air Permit Application : Aug '12
   C. Commitment to Purchase Power: Nov. '12
   D. Obtain all Permits including OPSB approval : Sept '13
   E. Break ground : Oct. '13
   F. Commercial Operations : May '16

7. **Financing of OCE Project**

   A. Project represents a potential $ 800+ million private investment in Ohio
   B. Public/private cooperation being contemplated to utilize State resources for improved infrastructure
   C. EIF and NAPD will arrange for 100% of the Project's debt and equity
   D. There is NO need for:

      - Federal loan guarantees
      - Federal subsidies
      - Special Federal tax credits

8. **Jobs and Economic Development Impacts**

   A. Construction Period

      -26-30 month construction period

      -Utilize local construction labor

-1,100,000+ worker hours

-Purchase of local goods (concrete, rebar, lumber, etc.)

-Purchase of local services (meals, hotels, contractors, etc.)

-"Multiplier effect" with local companies

-Direct expenditures easily $ 110 million

-"Multiplier effect" can add at least additional $ 75+ million

B. Long Term Operations

-Likely will operate 70% of the time

-25-27 new full time jobs

-Purchase of local goods to support O+M

-Purchase of local services to support O+M

-Added "multiplier effect" of local expenditures

-Direct expenditures over 20 years equal $ 150+ million

-Local "multiplier effect" may well increase impact to $ 250 million

9. <u>Participation by Local Businesses</u>

A. Expressions of interest should be mailed to :

- Oregon Clean Energy, LLC
  c/o Jeff Ruggiero
  240 10th Street
  Toledo, OH 43604

B. Selection of contractors will occur during summer 2013

Coal Closures Impacting Oregon Clean Energy (OCE) Project

1. **Bay Shore (First Energy) :**
   - Closing coal units 2-5 in Sept. 1, 2012
   - Plant located 2 mi. north of OCE
   - 500 MW closing
   - Built 1959 - 68

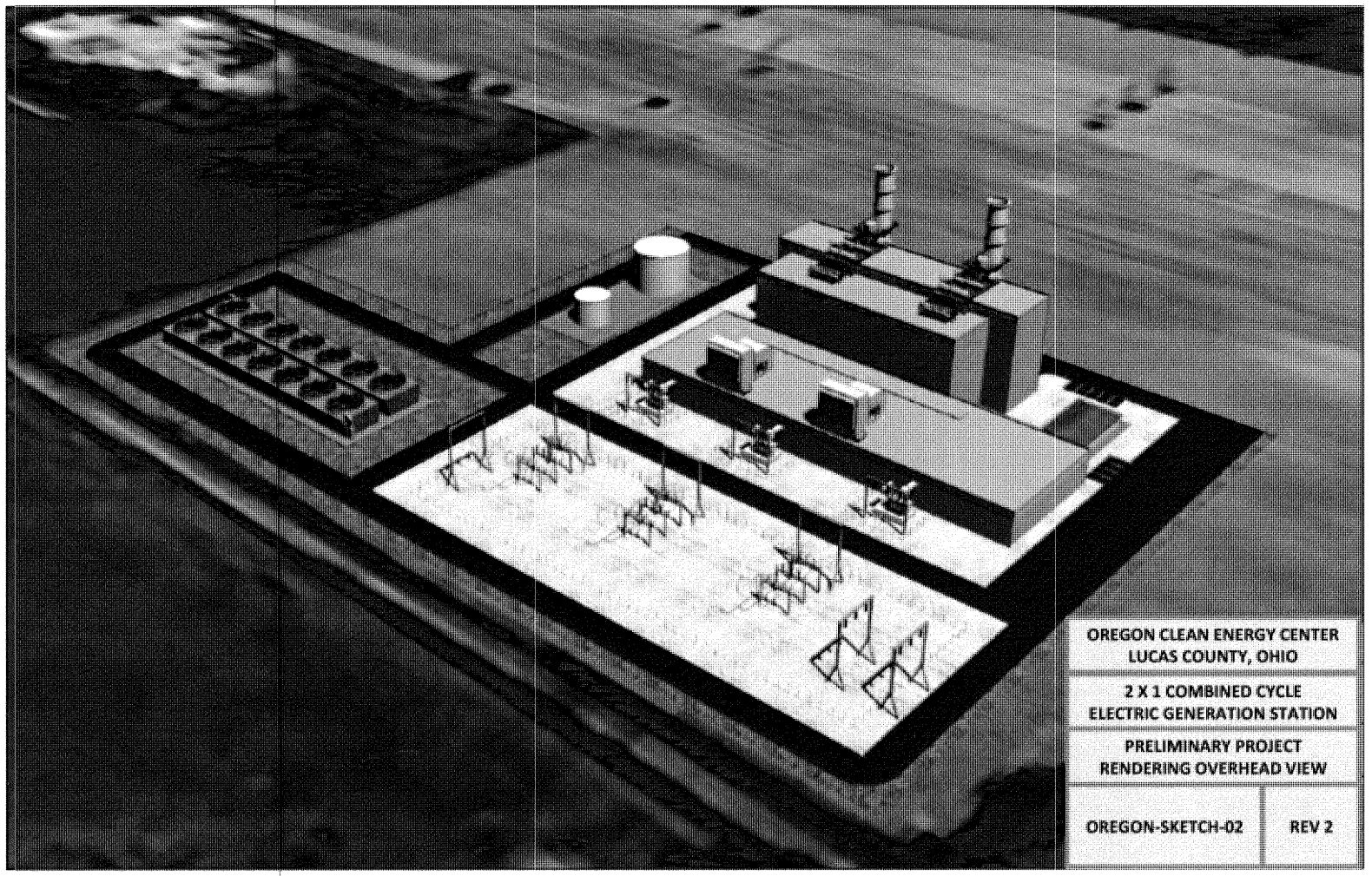
2. **J.R. Whiting Generating Plant (CMS Energy) :**
   - Closing in 2015
   - Located at 4525 E. Erie Rd., Erie, MI
   - Built in 1952 – 53
   - Three (3) coal boilers
   - 345 MW closing
   - Located 15 mi. north of OCE, just over OH/MI border, on Lake Erie

3. **Avon Lake (GenOn – NRG) :**
   - Closing in 2015
   - Located at 33570 Lake Rd., Avon Lake, OH
   - Built in 1949 and '70
   - Two coal boilers
   - 766 MW closing
   - Located 65 mi east of OCE, on Lake Erie
   - GenOn formed Dec. 3, 2010 (Reliant-Mirant merger)
   - July 22, 2012 NRG to buy GenOn for $ 1.7 B

4. **Total Nearby MW Coal Closures (1,611 MW)**

OCE Project Facility Rendering

Oregon Clean Energy, LLC
Natural Gas Energy For PJM's Future



- Two (2) General Electric 7FA.05 or Siemens F-5 EE combustion turbines (CT) with two (2) heat recovery steam generators (HRSG) and a single steam turbine
- HRSG supplemental firing allows 800 MW net generation during all seasons
- Evaporative coolers increase combustion turbine output
- Wet cooling with cooling water sourced from City of Oregon

toledoBlade.com

Printed Thursday, September 06, 2012

Natural-gas-fired power plant planned on 30 acres in Oregon

BY TYREL LINKHORN BLADE BUSINESS WRITER

Artists rendering of the Oregon Clean Energy Center, Lucas County, Ohio.

If all goes as planned, in less than four years the Toledo suburb of Oregon will be home to a new natural-gas-fired power plant that developers say will be one of the most efficient generation plants in the United States.

North American Project Development LLC, a Boston-based energy group, announced plans Wednesday to build an 800-megawatt plant on a 30-plus-acre site just south of the BP-Husky Oil Toledo Refinery in Oregon. Officials say the plant would provide enough power to meet the annual electricity needs of about 500,000 homes. The project is expected to cost about $850 million.

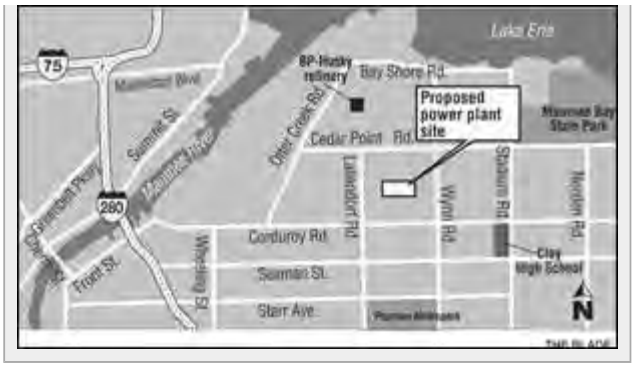
The developers behind the project include members of the same team that built a 700-megawatt gas-fired plant near Fremont a decade ago. They say the projects are very comparable.

"If you want a feel for what it may look like, you can drive over to Fremont and that will be pretty much it," said William J. Martin, a managing partner with North American Project Development. "Ten years have passed since that project was created, so there's been refinements in technology. We believe we'll be probably the most efficient power plant in American and also one of the lowest environmental emissions, which is really important to us."

Mr. Martin was co-developer of the Fremont plant with **Calpine Corp.** When Calpine was going through a bankruptcy, the plant was sold to Akron-based **FirstEnergy Corp.** in 2008. FirstEnergy sold it to **American Municipal Power Inc.** in 2011, and it went online this year.

The proposed plant would use two gas turbines and one steam turbine. The natural gas the plant would use is the same fuel that many people use to cook and heat their homes.

Construction is still at least a year away and is expected to take 26 to 30 months, but North American Project Development officials said they've submitted their air permit application and felt the project was far enough along to make their plans public. They joined Oregon city officials and others Wednesday to give an overview of their plans.



Michael Beazley, Oregon city administrator, said city officials have been in talks about the plant for about a year.

"We think it's the sort of project that can put a lot of people to work, be a reliable source of power, and it's good for the community," he said. "Oregon is one of the most significant energy centers if you look at it in the Midwest, and this will continue to position us that way."

Bill Siderewicz, a managing partner with North American Project Development, said he hoped construction crews would break ground on the new plant sometime in the early fall of 2013.

"None of these projects are simple," he said. "They're incredibly complex technically, and commercially, and legally. So we'll work our way through, go step by step. We know exactly what we need since we were involved in the Fremont project, so there shouldn't be any surprises."

Part of the reason North American Project Development is moving forward with the project is theexpected downsizing and shut-downs of several regional coal-fired plants, including FirstEnergy Corp.'s Bay Shore plant in Oregon. The Toledo Edison parent firm is retiring three coal-fired generators that together represent about 500 megawatts of capacity. North American Project Development says a total of 1,611 megawatts of coal-fired capacity will be going offline in coming years.

"The market [for generation] started coming back about two years ago so I started looking all through Ohio, not just here," Mr. Martin said. "But I saw this was a real load center. Northwest Ohio has industry, it has electrical load. It became clear some of the coal plants that were supplying the area are going to shut down. So then I started looking for the other ingredients, not just gas, not just water, not just high-tension lines, but also a community that would really support this kind of development."

Officials say they have the necessary funding through the Energy Investors Fund, a private equity firm that works exclusively in the independent power and electric utility industry.

The developers would retain ownership of the plant, tie into the grid, and sell power to a utility.

Mr. Martin said PJM Interconnection, a group that serves as an independent grid manager for the eastern United States, has finished an initial feasibility study that looks favorable. Further studies still need to be completed, and the company still needs to arrange for a high-capacity gas supply line and negotiate with a buyer for the electricity generated.

"We're getting a very favorable response from the market, but we have to turn that into contracts," Mr. Martin said.

Mr. Siderewicz said he can easily envision 400 to 600 construction workers on the project site at any time. Once finished, the plant will create about 25 full-time jobs.

Oregon City Council President Tom Susor said council is very receptive to the project and is "looking to progress this thing as seamlessly as we possibly can, and help or stay out of the way."

Contact Tyrel Linkhorn at:
tlinkhorn@theblade.com or
419-724-6134.

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`Clean energy' power plant proposed in Oregon

Written by Kelly Kaczala
Thursday, 06 September 2012 14:38

A plan to construct a new power plant that will provide electricity for up to 500,000 homes in Oregon was announced on Wednesday.

North America Project Development, LLC officials stated at a press conference that the Oregon Clean Energy (OCE) project includes the construction of a 800 megawatts (MW) gas fired combined cycle plant, using local labor up to 1,100,000 worker hours, over a 26-30 month period. The plant would convert clean natural gas to electricity.

The project represents a potential $800 million private investment.

"This is good for Oregon and Oregon's construction industry," Administrator Mike Beazley said on Wednesday. "Oregon is one of the largest energy economies in the Midwest, with our two refineries, and FirstEnergy's Bay Shore power plant. As some of the Bay Shore plant is being phased out, it's nice to replace that production with this gas fired plant, which is the direction that the market seems to be going right now."

Plans call for the plant to be constructed just south of the BP Husky Refinery, between Wynn and Lallendorf roads, according to Beazley.

Oregon officials have been talking to North America Project Development, LLC officials about the project for over a year, said Beazley.

"As they've been going through their due diligence, we started exploring this location and doing site assembly over a year ago," he said. Oregon was attractive, he added, because of "the availability of land and access to the grid."

"We also have sufficient water resources to meet their needs. The power plant will need millions of gallons of water per day. That makes Oregon a good location," said Beazley.

The facility's modern technology will consist of two combustion turbines with two Heat Recovery Steam Generators (HRSG) and a single steam turbine. The HRSG supplemental firing will allow a net generation of 800 MW throughout the year. Evaporative coolers will increase the combustion turbine output. And wet cooling with cooling water will come from the city.

The technology and environmental controls displaces power from aging/closing regional coal plants. The process is being compared to a vehicles catalytic converter, which converts toxic pollutants into less harmful emissions. The plant will produce 50 percent less carbon dioxide per kilowatt hour (kwh) of electricity versus coal combustion, say officials. There is also no need to stockpile coal or coal ash in the region.

"This plant will fill the void from the government regulations that negatively impact coal plants that produce electricity," said Councilman James Seaman. "Natural gas is a lot cleaner and is the future for us. It doesn't produce heavy metals like coal burners can. Natural gas is like a compromise between renewable energy and coal. It's not as clean as solar and wind, but significantly cleaner than coal burning."

The plant will likely operate 70 percent of the time, and add between 25-27 new full-time jobs in Oregon.

According to the project's timeline, preliminary engineering was completed in June of this year; an air permit application to the Ohio EPA was submitted last month; a commitment to purchase power will be in November of this year; the facility will obtain all permits, including approval by the Ohio Power Sitting Board, by September, 2013; groundbreaking is planned for October, 2013; and commercial operations are expected to start in May, 2016.

The project's advisors include:
• ARCADIS – Toledo/Columbus permitting experts;
• Mannick and Smith – Toledo Phase 1 environmental;
• Bricker & Eckler – Columbus legal analysis;
• NTE Energy – power marketing;

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• Pterra Consulting – electric grid analysis;

• SAIC – power engineering;

• PPMS – plant economics;

• ESS Group – water resources.

"Obviously, on any project, it's not done until it's built," said Beazley. "We expect it to happen. We feel great about this partnership. It's an experienced team."

Seaman, chairman of the city's Finance Committee and a member of the Economic Development & Planning Committee, said Energy Investors Funds (EIF), a $4.5 billion energy equity fund, will arrange for 100 percent of the financing to build the project. EIF will also be the operator of the plant.

"There's no risk to the city. There is no need for federal loan guarantees, federal subsidies, and special federal tax credits," said Seaman.

The Oregon Clean Energy project will host open houses for the public this fall.

Comments (0)

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By: **Kelly Kaczala**

Contact e-mail: kkaczala@presspublications.com

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Water operator class

Area residents 18 years and older who may be interested in working in a water treatment facility can join a 16-week water operator's course beginning in January.

Participants in the course will receive a certificate of completion and be eligible to take the state test in May. The classes will be conducted by the Operator Training Committee of Ohio Inc. (OTCO). Internships are a required part of the course and will be conducted at area water treatment facilities.

Classes will be held Mondays and Wednesdays from 5:30 to 9:30 p.m. at the Ottawa County Resource Center on SR 163, Oak Harbor.

The ideal participant for the program would be someone who has a strong interest in hands-on applications, who has a desire to learn, has an interest in technology, and who has a strong work ethic. Previous participants have documented about a 46 percent pass rate.

The training is made possible by a partnership of WSOS Community Action Commission Inc., the Operator Training Committee of Ohio and the Ohio Department of Job and Family Services.

To register or for more information, call Roger at WSOS at 1-800-775-9767 or e-mail info@wsos.org.

Free computer class

Owens Community College, in conjunction with the non-profit Connect Ohio, will offer free continuing education computer classes throughout December.

The six-hour classes will be offered at JOBsolutions of Wood County, 1928 E. Gypsy Lane Rd., Bowling Green; the Owens Learning Center at The Source in downtown Toledo, and the Owens Learning Center at Arrowhead Park in Maumee.

The educational initiative, titled "Every Citizen Online," is led by Connect Ohio as part of a $6.9 million federal grant the organization has received to help expand access to broadband Internet to consumers across the state. Each class will highlight computer

Groundbreaking planned for $800 million plant

By Melissa Burden
Special to The Press

North America Project Development, LLC (NAPD) officials are planning on breaking ground on a new power plant by May, 2013.

The plan for the new plant was announced in September. Dubbed the Oregon Clean Energy (OCE) project, plans include constructing an 800 megawatt (MW) gas fired combined cycle plant over a 26-30 month period. The plant would convert clean natural gas to electricity.

Plans call for the plant to be constructed on 30 acres of land just south of the BP Husky Refinery, between Wynn and Lallendorf roads. The project represents an $800 million private investment in Oregon.

During a public hearing held Thursday in the Oregon Municipal Building, both NAPD and city officials expressed excitement about the new plant.

James Seaman, chairman of the city's Finance Committee and a member of the Economic Development & Planning Committee, said the new plant will help fill the gap being left by the phase out of FirstEnergy's Bay Shore power plant.

"This is just a very exciting project," Seaman said. "During the construction phase, there will be several hundred people employed for three years which will be great for our local tradesmen."

The facility's modern technology will consist of two combustion turbines with two Heat Recovery Steam Generators (HRSG) and a single steam turbine. The HRSG supplemental firing will allow a net generation of 800 MW throughout the year. Evaporative coolers will increase the combustion turbine output. The plant will produce 50 percent less carbon dioxide per kilowatt hour (kwh) of electricity versus coal combustion.

"The environmental impact should be minimal," Seaman said. "Natural gas is a good, clean, energy source."

William Siderewicz, NAPD managing partner, said the process of converting

> **"The result is that we will have very good, long term construction jobs."**

natural gas to electricity will work similarly to a vehicle's catalytic converter, which converts toxic pollutants into less harmful emissions.

"You should be able to be near the plant and not notice any emissions coming from the plant when it is running," Siderewicz said. "We are also hoping to have tours for high school and college students so they can see the technology and science being used. The plant will be a learning tool. It will make both an educational and economic contribution to the community."

Siderewicz added the project is being 100 percent privately funded. Energy Investors Funds (EIF), a $4.5 billion energy equity fund, will arrange for 100 percent of the financing to build the project.

Jeff Ruggiero, NAPD director of development, said the company has been steadily working on garnering permits from the Ohio Environmental Protection Agency and the Ohio Power Siting Board.

When initially announced, the plan was to break ground in October, 2013. According to Ruggiero, the permitting and planning process has pushed the timeline up.

"So far everything has been going smoothly and we are somewhat ahead of schedule," Ruggiero said. "The city has been wonderful to work with. They have been very accommodating, helpful and professional."

The initial economic boost should be felt during the construction phase, Ruggiero said.

"We are looking at approximately 400 jobs during the construction phase and we will be using local contractors as much as we can," he said.

Councilman Jerry Peach said the additional jobs coming to the community will help bolster the local economy.

"The result is that we will have very good, long term construction jobs," Peach said. "This is a very considerable investment in our community."

Police Beats

Crime log

Lake Twp. – Melinda I. Williamson, 32, Toledo, was charged Nov. 17 with criminal trespassing at the Super 8 Motel.

- Two tool chests, a kerosene heater, and gas cans were reported stolen Nov. 16 from a residence in the 27000 block of Cummings Road.
- Katherine N. Shull, 63, Millbury, was charged Nov. 11 with assault after police were called for a report of a family dispute.
- A resident of the Owens Lake Apartments Nov. 9 reported the theft of a snow board, laptop computer, head phones, I Phone, and debit card.
- Police charged John Broadway, 26, Toledo, with criminal mischief on Nov. 23. Police said he had moved lawn furniture around at a residence in the 6800 block of Wagner Road as a threat to the resident.
- The Toledo Edison facility on Lemoyne Road reported Nov. 27 that 150 feet of copper wire and copper fittings had been stolen.
- An employee of the McDonalds restaurant on Libbey Road reported a stolen wallet on Nov. 26.
- An audio cable priced at $29.95 was reported stolen Nov. 23 from the Pilot Truckstop.
- Someone spray painted graffiti on the 4000 block of Libbey Road on Nov. 27.

Notice of Public Informational Meeting for Proposed Major Utility Facility

Oregon Clean Energy, LLC Schedules November 29, 2012 Public Meeting to Outline Plans for a 800 Megawatt Gas Fired Generation Plant To Be Built in Oregon, Ohio

Oregon Clean Energy, LLC invites residents of Oregon, Ohio and other interested members of the public, to attend a public informational meeting regarding company plans to build an 800 megawatt (MW) gas fired, combined cycle power station.

The electric generating facility will be located on approximately 30 acres in a commercial/industrial zoned area located on North Lallendorf Road near the intersection of York Road in the City of Oregon, Lucas County, Ohio.

The project will consist of two gas fired, high efficiency combustion turbines with two heat recovery steam generators and a single steam turbine. It will have a cooling tower and state of the art pollution controls. The plant will be served by natural gas from one or multiple pipelines. The generating station will be interconnected at two points to allow for both north-south and east-west access to electric transmission facilities. Water and wastewater services will be supplied by the City of Oregon. Construction of the project is estimated to begin in fall 2013, with projected commercial operation to begin in mid-2016.

This facility will fill a need caused by the retirement in the next several years of several coal fired generating stations in northeastern Ohio that will reduce the regional electricity capacity by 1,611 MW.

The public meeting will take place from 6:00 p.m. to 7:30 p.m., on Thursday, November 29, 2012 at the City Council Meeting Room, 5330 Seaman Road, Oregon Ohio, 43616. Company representatives will present stations throughout the room with each having information about the various aspects of the project, and they will be available to respond to inquiries from those attending.

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Timeline to build Oregon power plant moved up

Written by Kelly Kaczala
Thursday, 06 December 2012 15:08

The North America Project Development, LLC, has moved up the timeline to build a new power plant in Oregon to next summer.

"They have moved up the groundbreaking to June, 2013," Administrator Mike Beazley said at a committee of the whole meeting on Dec. 3. The groundbreaking had previously been planned for October, 2013.

Oregon officials are pleased that plans are apparently moving forward without a glitch.

"There seems to be broad community based support for the project," said Beazley.

He was also happy that the company was willing to publish the timeline to build the 800 megawatts (MW) gas fired combined cycle plant.

Beazley has been in almost daily contact with company officials to discuss the $800 million project, he said.

"I did have communication with the leadership team again today, making it almost every day, because there are so many things in the air on it. But they feel very good on their timeline," he said.

"Among the challenges, the industrial sector in Oregon is relatively pinched for natural gas supply. That's not going to be a problem after this plant. The pipeline north to the industrial area will help ensure we can meet the service needs of other industrial customers as we go along. We're working on that together. That's good news for us," said Beazley

Known as the Oregon Clean Energy (OCE) project, the power plant would convert clean natural gas to electricity. The technology and environmental controls displace power from aging/closing regional coal plants. The plant will produce 50 percent less carbon dioxide per kilowatt hour (kwh) of electricity versus coal combustion. There will be no need to stockpile coal or coal ash in the region.

Local labor will spend up to 1,100,000 worker hours, over a 26-30 month period, to build the facility.

Plans call for the plant, which will provide electricity for up to 500,000 homes, to be constructed just south of the BP Husky Refinery, between Wynn and Lallendorf roads.

The plant is expected to operate 70 percent of the time and add between 25-27 new full-time jobs in Oregon.

Oregon officials have been talking to North America Project Development, LLC officials about the project for over a year.

"Just to give you an idea of the magnitude of this," said Mayor Mike Seferian, "they came to us just over a year ago. For a project that's going to be close to a billion dollars, to break ground in virtually less than two years from the point of it just being a concept is pretty amazing. It's more amazing they chose us as the location of that project to move that quickly along. It's pretty cool."

Councilman James Seaman, who attended a public forum on the power plant in council chambers last week, said city and company officials were upbeat about the project.

"There was a lot of enthusiasm," said Seaman, who is also chairman of the Finance Committee. The project's advisors, including ARCADIS, a Toledo/Columbus permitting expert, were also at the meeting, he added.

"There were not a lot of residents involved, other than some of the people who work for some of these companies who happen to live in Oregon," said Seaman. "But it was very positive. Things are moving along very well, as far as I can see."

The city had announced in September that the project would be built in Oregon.

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By: **Kelly Kaczala**

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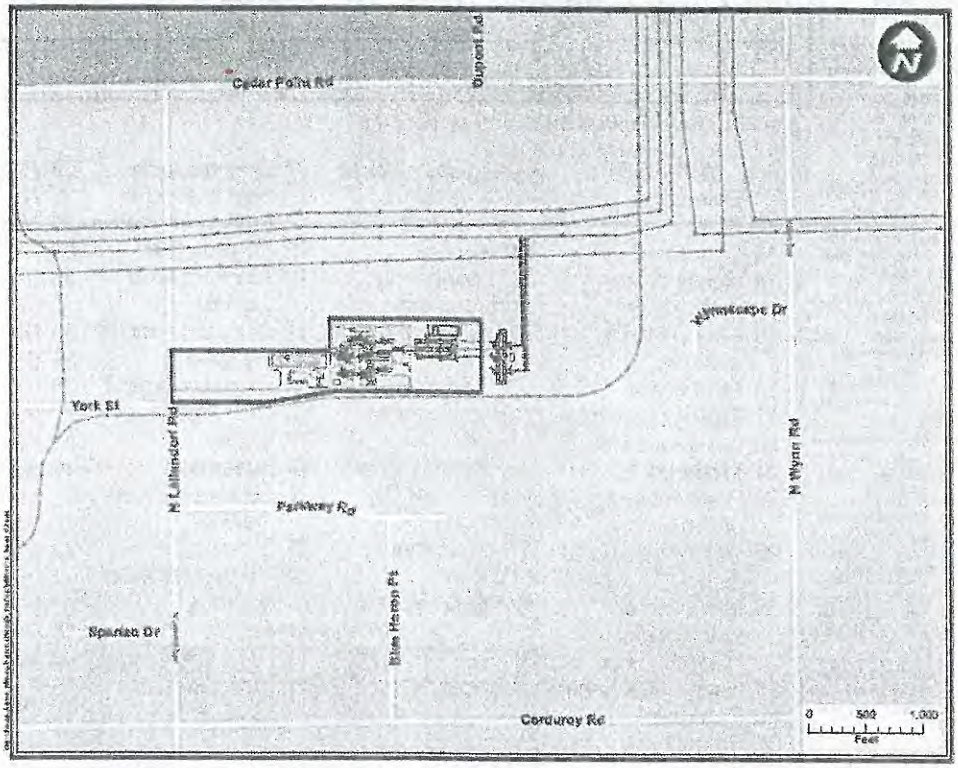
Notice of Proposed Major Utility Facility

FACILITY DESCRIPTION

Oregon Clean Energy, LLC proposes to construct, own and operate an 800 megawatt (MW) gas fired, combined cycle power station, Oregon Clean Energy Center, to be located on approximately 30 acres in a commercial/ industrial zoned area located on North Lallendorf Road near the intersection of York Road in the City of Oregon, Lucas County, Ohio.

LOCATION AND GENERAL LAYOUT

The general location and planned project layout of Oregon Clean Energy Center is shown on the map below.



APPLICATION NOW PENDING

Oregon Clean Energy, LLC has an Application pending before the Ohio Power Siting Board. The assigned docket number for the Application is Case No. 12-2959-EL-BGN, and copies of all filings in the case can be located at the Ohio Power Siting Board website at http://www.opsb.ohio.gov by scrolling down to "Pending Cases" and selecting the case by name or docket number. To view the filings, click the case number for the case record.

PUBLIC OFFICIALS SERVED WITH COPIES OF THE APPLICATION

The following public officials were served with a copy of the Application: City of Oregon Mayor Michael J. Seferian; City of Oregon Administrator Michael J. Beazley; City of Oregon Director of Public Service, Paul Roman; Lucas County Commissioners Carol Contrada, Tina Skeldon Wosniak and Peter Gerkin (in care of Lucas County Administrator, Peter S. Ujvagi); and Toledo-Lucas County Health Commissioner David L. Grossman, MD. A copy of the Application is also available for public inspection at the Toledo-Lucas County Public Library, 3340 Dustin Road, Oregon, Ohio 43616.

Toledo Blade
Feb. 8, 2013

1/2

OHIO POWER SITING BOARD APPLICATION REVIEW CRITERIA

Pursuant to Ohio Revised Code Section 4906.10(A) the Ohio Power Siting Board shall not grant a certificate for the construction, operation, and maintenance of a major utility facility, either as proposed or as modified by the Board, unless it finds and determines all of the following: (1) The basis of the need for the facility; (2) The nature of the probable environmental impact; (3) That the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations; (4) In the case of an electric transmission line, that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving this state and interconnected utility systems and that the facility will serve the interests of electric system economy and reliability; (5) That the facility will comply with Chapters 3704., 3734., and 6111. of the Revised Code and all rules and standards adopted under those chapters and under Sections 1501.33, 1501.34, and 4561.32 of the Revised Code. In determining whether the facility will comply with all rules and standards adopted under Section 4561.32 of the Revised Code, the Board shall consult with the office of aviation of the division of multi-modal planning and programs of the department of transportation under Section 4561.341 of the Revised Code; (6) That the facility will serve the public interest, convenience, and necessity; (7) In addition to the provisions contained in divisions (A)(1) to (6) of this section and rules adopted under those divisions, what its impact will be on the viability as agricultural land of any land in an existing agricultural district established under Chapter 929 of the Revised Code that is located within the site and alternative site of the proposed major utility facility; rules adopted to evaluate impact under Division (A)(7) of this section shall not require the compilation, creation, submission, or production of any information, document, or other data pertaining to land not located within the site and alternative site; and (8) That the facility incorporates maximum feasible water conservation practices as determined by the Board, considering available technology and the nature and economics of the various alternatives.

STATEMENT PURSUANT TO OHIO REVISED CODE SECTION 4906.07

Upon the receipt of an application complying with Section 4906.06 of the Revised Code, the Ohio Power Siting Board shall promptly fix a date for a public hearing thereon, not less than sixty nor more than ninety days after such receipt, and shall conclude the proceeding as expeditiously as practicable. The public hearing for this case shall consist of two parts:

(1) A local public hearing, pursuant to Section 4906.08(C), Revised Code, where the Board shall accept written or oral testimony from any person. The local public hearing date is **Tuesday, April 2, 2013, at 6:00 p.m.**, at Oregon City Council Chambers, 5330 Seaman Road Oregon, Ohio 43616; and,

(2) The date for the adjudicatory hearing has been scheduled for **Tuesday, April 9, 2013 at 10:00 a.m.**, at the offices of the Public Utilities Commission of Ohio, 11th Floor Hearing Room 11-C, 180 East Broad Street, Columbus, Ohio 43215-3793.

The chairman of the Ohio Power Siting Board shall cause each application filed with the Ohio Power Siting Board to be investigated and shall, not less than fifteen days prior to the date any application is set for hearing, submit a written report to the Ohio Power Siting Board and to the applicant. A copy of such report shall be made available to any person upon request. Such report shall set forth the nature of the investigation, and the report shall contain recommended findings with regard to division (A) of Section 4906.10 of the Revised Code and shall become part of the record and served upon all parties to the proceeding.

STATEMENT OF OHIO REVISED CODE SECTION 4906.08(C)

The Ohio Power Siting Board shall accept written or oral testimony from any person at the public hearing, but the right to call and examine witnesses shall be reserved for parties. However, the Board may adopt rules to exclude repetitive, immaterial, or irrelevant testimony.

Petitions to intervene in the adjudicatory hearing will be accepted by the Board up to 30 days following the publication of this notice required by Rule 4906-5-08(C)(1), O.A.C., or later if good cause is shown. However, the Board strongly encourages interested persons who wish to intervene in the adjudicatory hearing to file their petitions as soon as possible but by no later than March 25, 2013. Petitions should be addressed to the Ohio Power Siting Board, 180 East Broad Street, Columbus, Ohio 43215-3793 and cite the above-listed Case No. 12-2959-EL-BGN.

Attachment D: ODOT Noise Data Comparison

1 mile Boundary

Project Location

Otter Creek Rd

Cemetery Rd

York St

N Lallendorf Rd

Corduroy Rd

N Coy Rd

N Wynn Rd

Seaman Rd

No Scale

Oregon Clean Energy, LLC
Oregon Ohio

Aerial Image Showing Receptor Locations wtihin a 1 mile Radius of the Project Site

ARCADIS

FIGURE
1

Table D-1. Mitsubishi Layout – Mitigated Noise Level Compared to ODOT Noise Abatement Criteria

Receiver	Category	Criteria Level (dBA Leq)	Predicted Mitigated Noise Levels (dBA Leq)	Noise Impact
C1	E	72	61.7	No
C2	E	72	67.3	No
C3	E	72	58.8	No
C4	E	72	57.6	No
C4	E	72	61.0	No
C5	E	72	46.5	No
C6	E	72	50.8	No
C7	E	72	49.0	No
C8	E	72	48.9	No
C9	E	72	55.5	No
C10	E	72	56.0	No
C11	E	72	47.5	No
I1	E	72	56.8	No
I2	E	72	51.4	No
I3	E	72	53.9	No
I4	E	72	51.8	No
I5	E	72	48.6	No
I6	E	72	49.2	No
R1	B	67	62.8	No
R2	B	67	56.5	No
R3	B	67	55.4	No
R4	B	67	54.6	No
R5	B	67	53.6	No
R6	B	67	52.9	No
R7	B	67	52.4	No
R8	B	67	51.8	No
R9	B	67	51.2	No
R10	B	67	51.4	No
R11	B	67	51.6	No
R12	B	67	51.9	No
R13	B	67	51.9	No
R14	B	67	52.0	No
R15	B	67	48.9	No
R16	B	67	48.7	No
R17	B	67	48.2	No
R18	B	67	47.9	No
R19	B	67	47.0	No
R20	B	67	48.4	No
R21	B	67	51.2	No
R23	B	67	51.9	No
R24	B	67	51.7	No

R25	B	67	51.0	No
R26	B	67	50.2	No
R27	B	67	49.4	No
R28	B	67	48.0	No
R29	B	67	47.5	No
R30	B	67	48.3	No
R31	B	67	48.2	No
R32	B	67	48.8	No
R33	B	67	46.7	No
R34	B	67	50.1	No
R35	B	67	49.5	No
R36	B	67	49.2	No
R37	B	67	48.9	No
R38	B	67	48.6	No
R39	B	67	48.1	No
R40	B	67	47.4	No
R41	B	67	47.1	No
R42	B	67	46.7	No
R43	B	67	46.6	No
R44	B	67	46.4	No
R45	B	67	45.9	No
R46	B	67	46.1	No
R47	B	67	46.2	No
R48	B	67	46.2	No
R49	B	67	45.6	No
R50	B	67	45.2	No
R51	B	67	44.8	No
R52	B	67	44.5	No
R53	B	67	45.5	No
R54	B	67	45.3	No
R55	B	67	45.2	No
R56	B	67	45.1	No
R57	B	67	44.9	No
R58	B	67	44.8	No
R59	B	67	48.9	No
R60	B	67	49.3	No
R61	B	67	48.9	No
R62	B	67	51.1	No
R63	B	67	52.7	No
R64*	B	67	57.8	No
R65	B	67	45.8	No
R66	B	67	54.8	No
R67	B	67	45.2	No
R68	B	67	44.9	No

R69	B	67	44.7	No
R70	B	67	45.0	No
R71	B	67	45.3	No
R72	B	67	45.7	No
R73	B	67	45.0	No
R74	B	67	45.1	No
R75	B	67	46.0	No
R76	B	67	46.5	No
R77	B	67	46.9	No

*Structure has been demolished and no longer exists, although has been included to demonstrate anticipated sound levels at that distance. Several additional residences exist at the edge of the 1-mile radius that would also not experience noise impact.

Table D-2. Siemens Layout – Mitigated Noise Level Compared to ODOT Noise Abatement Criteria

Receiver	Category	Criteria Level (dBA Leq)	Predicted Mitigated Noise Levels (dBA Leq)	Noise Impact
C1	E	72	63.3	No
C2	E	72	69.1	No
C3	E	72	61.0	No
C4	E	72	59.5	No
C4	E	72	63.6	No
C5	E	72	50.0	No
C6	E	72	54.0	No
C7	E	72	52.3	No
C8	E	72	52.0	No
C9	E	72	56.7	No
C10	E	72	58.6	No
C11	E	72	50.6	No
I1	E	72	58.5	No
I2	E	72	54.4	No
I3	E	72	56.9	No
I4	E	72	54.3	No
I5	E	72	51.5	No
I6	E	72	51.2	No
R1	B	67	64.7	No
R2	B	67	58.5	No
R3	B	67	57.5	No
R4	B	67	57.1	No
R5	B	67	56.1	No
R6	B	67	55.5	No
R7	B	67	55.1	No
R8	B	67	54.7	No
R9	B	67	54.2	No
R10	B	67	54.5	No
R11	B	67	54.7	No

R12	B	67	55.1	No
R13	B	67	55.2	No
R14	B	67	55.3	No
R15	B	67	51.5	No
R16	B	67	51.3	No
R17	B	67	50.8	No
R18	B	67	50.3	No
R19	B	67	49.7	No
R20	B	67	50.7	No
R21	B	67	54.5	No
R23	B	67	54.8	No
R24	B	67	54.0	No
R25	B	67	53.4	No
R26	B	67	52.8	No
R27	B	67	52.2	No
R28	B	67	51.3	No
R29	B	67	51.0	No
R30	B	67	51.6	No
R31	B	67	51.7	No
R32	B	67	52.5	No
R33	B	67	50.4	No
R34	B	67	52.7	No
R35	B	67	52.2	No
R36	B	67	51.9	No
R37	B	67	51.7	No
R38	B	67	51.5	No
R39	B	67	51.1	No
R40	B	67	50.7	No
R41	B	67	50.4	No
R42	B	67	50.1	No
R43	B	67	50.0	No
R44	B	67	49.9	No
R45	B	67	49.5	No
R46	B	67	49.7	No
R47	B	67	49.9	No
R48	B	67	50.0	No
R49	B	67	49.5	No
R50	B	67	49.2	No
R51	B	67	49.0	No
R52	B	67	48.8	No
R53	B	67	49.2	No
R54	B	67	49.0	No
R55	B	67	48.9	No
R56	B	67	48.8	No

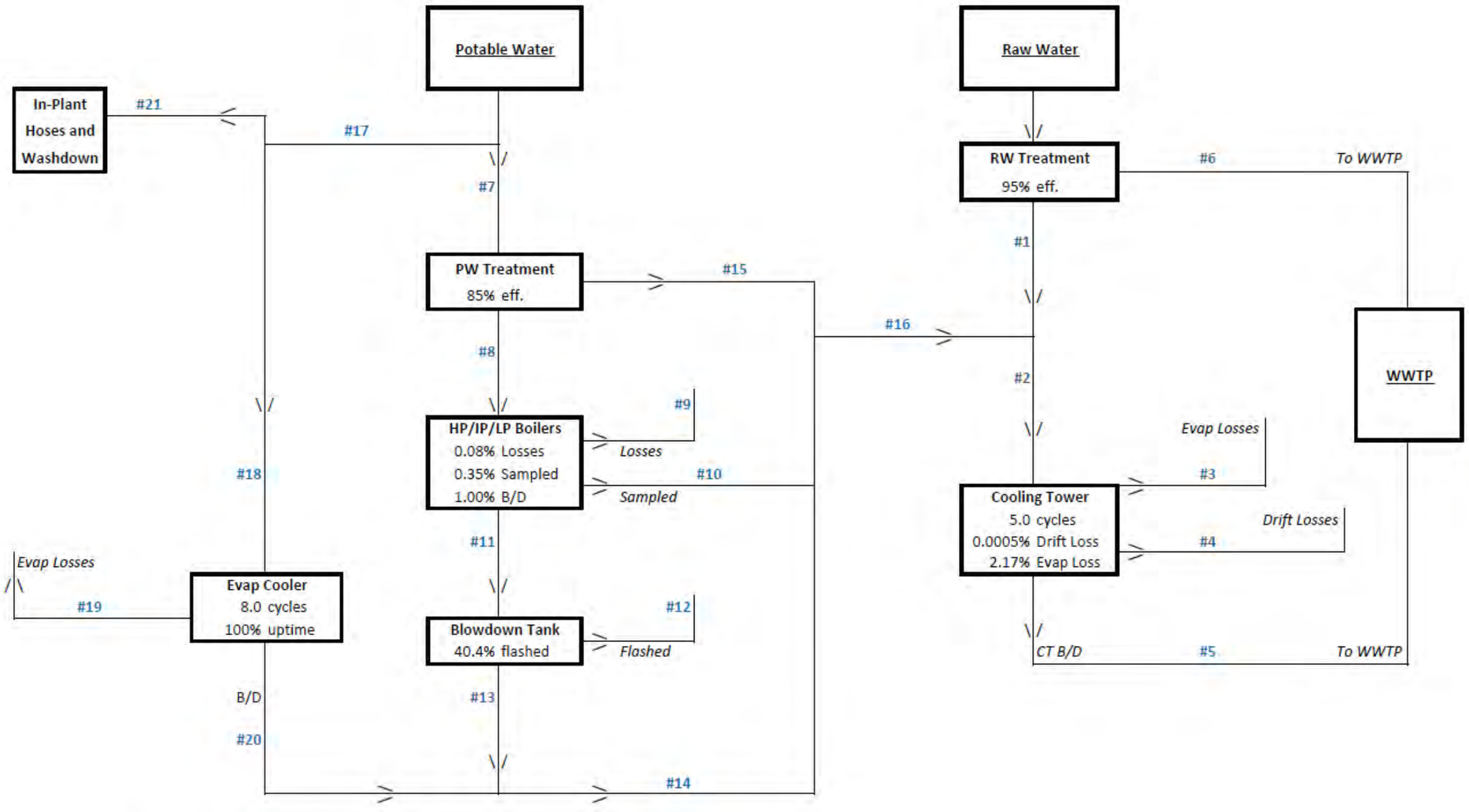
R57	B	67	48.7	No
R58	B	67	48.6	No
R59	B	67	52.5	No
R60	B	67	52.6	No
R61	B	67	52.1	No
R62	B	67	53.8	No
R63	B	67	55.4	No
R64*	B	67	58.1	No
R65	B	67	49.5	No
R66	B	67	55.9	No
R67	B	67	48.6	No
R68	B	67	49.0	No
R69	B	67	48.7	No
R70	B	67	49.0	No
R71	B	67	49.2	No
R72	B	67	49.4	No
R73	B	67	48.9	No
R74	B	67	48.9	No
R75	B	67	49.6	No
R76	B	67	50.0	No
R77	B	67	50.4	No

*Structure has been demolished and no longer exists, although has been included to demonstrate anticipated sound levels at that distance. Several additional residences exist at the edge of the 1-mile radius that would also not experience noise impact.

Attachment E: Revised Water Balance

INPUTS [MGD]	MIN[2]	AVG[3]	PEAK[4]
Steam Cycle Circ Flow	4.18	4.29	4.95
Cooling Cycle Circ Flow	78.80	135.86	466.47
Evap Cooler Makeup	0.00	0.03	0.06

OUTPUTS [MGD]	MIN[2]	AVG[3]	PEAK[4]
Raw Water Needed	2.59	3.82	6.68
Potable Water Needed	0.07	0.11	0.16
Sent to WWTP	0.63	0.93	1.61



SUMMARY FLOW TABLE [MGD]			
ID	MIN[2]	AVG[3]	PEAK[4]
#1	2.462	3.629	6.346
#2	2.511	3.685	6.418
#3	2.009	2.948	5.131
#4	0.000	0.001	0.002
#5	0.503	0.736	1.280
#6	0.130	0.192	0.334
#7	0.071	0.072	0.084
#8	0.059	0.060	0.071
#9	0.003	0.003	0.004
#10	0.014	0.014	0.017
#11	0.042	0.043	0.049
#12	0.017	0.017	0.020
#13	0.024	0.026	0.029
#14	0.024	0.030	0.037
#15	0.010	0.010	0.013
#16	0.050	0.056	0.068
#17	0.000	0.039	0.080
#18	0.000	0.036	0.067
#19	0.000	0.032	0.058
#20	0.000	0.004	0.009
#21	0.000	0.003	0.014

= Values revised on 02/06/2013.

Notes:
1. All values shown are in units of million gallons per day (MGD).
2. The minimum case shown assumes duct burners and evap coolers off, operating at 800 MW net on a 0 F 100% RH day.
3. The average case shown assumes operation with duct burners off at ISO conditions, at 2 x 98% CT load, and evap coolers on.
4. The peak case shown assumes full duct-firing at the 95 F 50% RH design case, with both CTs at full load, and evap coolers on.

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PRELIMINARY WATER BALANCE

OREGON CLEAN ENERGY CENTER
LUCAS COUNTY, OHIO

DRAWING NO. OREGON-WB-001

REV. 6

Summary: Response to OPSB First Set of Data Requests electronically filed by Teresa Orahood on behalf of Sally Bloomfield for Oregon Clean Energy, LLC