BEFORE

THE OHIO POWER SITING BOARD

In the Matter of the Application of Lima Energy Company for a Certificate of Environmental Compatibility and Public Need to Construct a Power Plant in Allen County, Ohio	)	Case No. 00-513-EL-BGN
In the Matter of the Application of Lima Energy Company for an Amendment to its Certificate of Environmental Compatibility and Public Need to Construct a Power Plant Allen County, Ohio	)	Case No. 04-1011-EL-BGA

PROJECT STATUS REPORT:
RESPONSE TO OHIO POWER SITING BOARD'S JULY 30, 2012 ENTRY

On July 30, 2012, The Ohio Power Siting Board issued an Entry granting a request for the extension of the Certificate of Environmental Compatibility and Public Need ("Certificate") issued to Lima Energy Company ("Lima Energy" or the "Company") until September 1, 2014 to commence construction of a Power Plant to be located in Allen County, Ohio. In the Entry granting the extension of the Certificate, the Board, in Finding 8, required Lima Energy to file information in the docket by August 1, 2013 updating the information filed on June 20, 2012. This Project Status Report is submitted to meet this requirement of the July 20, 2012 Entry.

Although the primary focus in the period since approval of the Certificate extension has been on project finance, and technical configuration decisions affecting finance, the Company has been actively engaged in preparing applications for all necessary regulatory approvals for the Power Plant. In particular, the Company is nearing completion of updates to the OEPA air permit for the Power

Plant that reflect changes to the proposed configuration of the Facility. Lima Energy anticipates that the final configuration of the facility, as discussed in more detail below, will require a final Certificate amendment application, which it anticipates filing in the 4th Quarter of 2013.

This Project Status Report responds to the issues raised in the July 20, 2012 Order, as follows:

There were eight (8) questions in the Order of July 20, 2012 that the Board requested a response from Lima Energy by August 1, 2013. Of those questions, the most important one for understanding the status of the overall project is the status of the intent of Lima Energy to "reconfigure" the facility. Lima Energy respectfully believes that providing an update of that response, Item (h), first will provide the most helpful context for understanding the responses to questions (a) through (g) that follow.

(h) In its motion to extend its certificate, Lima Energy stated that "... the facility may have to be reconfigured." Provide a thorough discussion of the extent to which and why Lima Energy makes this statement including an explanation of how the proposed facility will be reconfigured.

Update:

Switch to Production of Ultra Clean Synthetic Crude ("UCSC")

The Company has determined that production of UCSC for sale into the oil refining market will provide superior economic returns than would be possible with the manufacture of Synthetic Natural Gas (SNG) or the previously planned Integrated Gasification Combined Cycle (IGCC) system. The plans for the UCSC facility do not currently include further processing of UCSC into transportation liquids such as diesel and jet fuel. As stated in previous submittals to the Board,

Fischer-Tropsch ("FT") is a well-known and proven technology for the conversion of gasification derived synthetic gas into synthetic hydrocarbons. The catalytic FT conversion process is exothermic, and the high quality steam generated enables steam turbine electric power generation. As with the first amendment to the original Certificate, the primary feedstock will be petroleum coke, but coal and modest quantities of biomass are viable alternative feedstock materials. Although the biomass content may be limited, including a portion of biomass into the feed mix is expected to enhance the value of the product to refiners. As stated in the previous filing, CO_2 production and capture is an inherent aspect of preparing synthetic gas for further processing in the FT conversion process. Lima Energy continues to anticipate capturing essentially 100% of the CO_2 produced in this process which will be sold for use in enhanced oil recovery and/or stored for sequestration. The carbon footprint of UCSC production from this technology pathway is expected to be on par with production of conventional petroleum.

Importantly, the conversion of solid hydrocarbon feedstock into synthetic liquid hydrocarbons is a closed-loop process system without primary emission points. Transportation by pipeline to refinery customers, or rail shipment to other customers, also minimizes overall emissions from the facility. Fugitive emissions from solid material handling and startup and shutdown emissions are controllable events.

Phased Project Plan

The Lima Energy Project will be implemented in two phases. First (Gas-1), is expected to consist of one gasifier designed to produce synthetic gas, which in turn will be converted to approximately 9,500 barrels per day of UCSC. The second phase (Gas-2) will consist of three additional gasifiers, one of which will serve as a connected spare. The two operating units of Gas-2 will produce approximately 19,000 barrels per day of UCSC, bringing the plant total to approximately 28,500 barrels per day. Importantly, having multiple gasification units, including a connected spare, will enhance plant availability and reliability, which is expected to materially improve annual operating results.

The exothermic nature of the FT technologies results in a significant quantity of high quality steam production, which enables steam turbine electric power production. While most of this energy will be used internally for site load requirements, there may be some opportunity for a modest export quantity; though a decision to export may be deferred until the second phase.

The Company currently does not intend to include a third phase of a combined cycle power generation system. If implemented in the future, based on market conditions, it would be a natural gas-fueled, combined cycle unit under separate certification and ownership.

As noted above, carbon capture is proposed for the production of UCSC. The volumes of CO_2 from each phase are sufficiently large to enable a robust enhanced oil recovery ("EOR") program in central and eastern Ohio. Initial

investigation and development of this aspect has already been conducted , including assessment of the oil horizons and their geophysical and miscibility characteristics. Similarly, the potential for carbon storage and sequestration in the Mt Simon Sandstone, via a USEPA UIC Class VI injection well in Lima, has been assessed and post injection dispersion modeling on an indicative 1000-year basis has been conducted, with very favorable results.

a) A detailed discussion of the status of the electric grid interconnection for the proposed project, including interconnection studies that have been performed and the validity of such interconnection studies, any interconnection studies to be performed and system upgrades.

Update:

As the first phase of the project may not produce significant electric energy beyond internal site load use, we have not yet begun the process of seeking a new Interconnection Service Agreement (ISA) with PJM Interconnection. That said, PJM has previously advised that executing an ISA, can be accomplished once the initial "Feasibility Study" is completed, (leaving the other intermediate studies to continue in due course).

Lima Energy anticipates installing an interconnection to AEP's West Lima Substation in order to receive (backflow) approximately 50MW of energy for plant start-up, and until the steam turbine can be brought on-line to serve the facility. Initially, we may elect to throttle the turbine and limit its output to site load requirements.

Historically, the Company completed an Interconnection Agreement with AEP and, after AEP joined PJM, began the process of completing a new Interconnection Service Agreement with PJM, as required by PJM. The PJM

process continued through feasibility and short circuit and stability analysis before the Company withdrew from the Queue. These studies were provided to the Siting Board when they were received from PJM. The PJM studies identified a system upgrade that was then needed in the vicinity of south-central Pennsylvania. Due to the intervening time, that and other upgrades may or may not still be required. The Company anticipates initiating a new interconnection process with PJM after the first project phase (Gas-1) is fully funded and approved.

b) A list and detailed description of the initial site preparation activities that have been completed and the activities to be undertaken prior to construction activities (Condition 5).

Update:

Initial Activities:

Our original contractor began work in late 2004 and mobilized on site in 2005 and, after a kickoff meeting with Board Staff, constructed the foundation for the feedstock storage building; and (i) demolished four existing structures; (ii) cleared the site for brush and plant growth; (iii) removed the existing concrete pond, while relocating the resident native fish (blue gill) to a county reservoir; and (iv) began removing existing foundation concrete and staging it for future crushing. All existing foundations and concrete structures must be removed to enable unrestricted construction access for the Facility's new foundations. By crushing this concrete into stone or aggregate, we intend to recycle and reuse this material onsite for constructing the new facility. The scrap steel railroad rails and other steel will be

sold for salvage value, to the extent economically feasible. This contractor was demobilized in late 2006.

Recent Activities:

Lima Energy acquired the 63-acre property from the City of Lima in September 2012. This real estate consists of two parcels. The main facility will be on the 57-acre parcel and the Technology Innovation Center, also serving as the administration building for Lima Energy, will be constructed on the 6-acre parcel adjacent to South Main Street. *See,* Attachment, Photo 1: *Aerial view of Tear Drop Lima Energy site with Refinery in Background*

Lima Energy engaged a contractor in October 2012 to continue and complete the removal and crushing of all existing concrete structures. This task includes demolishing the one remaining structure. Originally estimated at 140,000 tons of concrete in place, the contractor has crushed nearly 200,000 tons. We anticipate this aspect of site preparation will be completed in July or August 2013. The photos that follow show the equipment and large pile of stone generated to date from this site preparation activity. *See,* Attachment, Photo 2: *Photo of 200,000 tons of Stone derived from crushing concrete foundations being removed from site;* Photo 3: *Concrete Crusher being loaded by excavator.*

Also in late 2012, Lima Energy engaged another contractor to design and construct the Technology Innovation Center. As of this Project Status Report, the design is complete pending finalization of cost estimate and review with the Company. Having obtained the City of Lima building permit approval to construct the foundation and underground utilities, the contractor has set a job trailer in place

and begun layout of the building footprint. The foundation will require excavation and engineered fill, using stone from the crushed concrete, prior to constructing the concrete foundation. We anticipate the building construction should be completed during the first half of 2014. *See,* Attachment, Photo 4: *Aerial Photo of Technology Innovation Center Site and Concrete Crushing Operation on Main Site with NS & Refinery Rail Yard in Background*; Photo 5: *Architect Rendering of Technology Innovation Center.*

The Company has selected and engaged a contractor team to lead the design and construction phase of the main facility on the larger parcel. We anticipate that the contractor initially will mobilize equipment to complete preparation of the site, while preliminary engineering and planning occur. *See,* Attachment, Photo 6: *Aerial photo of Main Facility Site with Most Concrete Foundations Remove, as well as Tech Center Site in foreground and Refinery in Background*

In early June 2013, Lima Energy hosted a site visit by Siting Board Staff to see firsthand the activities currently taking place. The Staff observed that the 6-acre parcel for the Lima Energy Technology Innovation Center and Administration building has been graded and fenced into a coordinated "campus" setting co-located with the planned 8-acre Ohio Energy and Advanced Manufacturing Center (OEAMC). An attractive wrought iron and stone fence surrounds the 14-acre campus setting. *See,* Attachment, Photo 7: *Wrought Iron & Stone Column Fence with Lima Energy Banner.*

c) A list of the electric and gas facilities the proposed facility will interconnect to and a discussion of the extent to which Lima Energy has made preparation for construction of such facilities and the status of the associated necessary filings with the Board (Condition 13).

Update:

Natural Gas Interconnection

The two phases of the Lima Energy facility will not include combined cycle power generation.

Any combined cycle power generation hosted at the site will be by separate owner at some future date when business conditions warrant. Any future natural gas-fueled combined cycle power plant will require its own Power Siting Certificate by the separate owner.

The Lima Energy facility will manufacture Ultra Clean Synthetic Crude (UCSC) for commercial sale, and will not manufacture Synthetic Natural Gas (SNG). The result of this combined with the absence of natural gas-fueled combined cycle power generation, is that a large capacity natural gas supply or SNG delivery line will neither be required nor be a part of the plant design.

The Lima Energy Facility will include steam turbine power generation that will essentially be a co-generation unit beneficially using heat recovery and optimization from process units.

The facility will require a local natural gas connection for process warm-up, but the volume will be relatively modest and will mostly likely be served from existing nearby pipelines.

Electric Power Interconnection

The Facility will have steam turbine power generation and no combined cycle generation. The co-generation unit beneficially will use the significant amount of high quality steam, associated with process heat management, to drive a steam turbine generator. Much of this electric energy will be used internally for site load requirements, especially for the first phase of the project.

The Facility will be designed to throttle the steam turbine output to limit early electric energy production to site load needs. However, export of a modest quantity of excess generation is possible as the first phase design evolves. As a result, we will initiate an application for an Interconnection Service Agreement with PJM to support any export from both project phases. The timing of this queue request is not viewed as critical path at this stage of project development.

The Facility will, however, require power for start-up of the process. We envision a connection to AEP's West Lima Substation in order to receive approximately 50MW to commission and operate the Gas-1 facility prior to the steam turbine generator being functional. This connection to the substation would also serve as a portion of the PJM Interconnection, when that is implemented.

Raw Water Supply

As Condition 13 of the Certificate also addresses water supply, the following is a brief update here on this subject. The raw water supply agreement with the City of Lima remains in effect. Since the original certificate was issued, wherein

the City certified that it has sufficient capacity to support the project, the City has constructed an additional 5 billion gallon storage reservoir and expanded pumping capacity, ensuring its ability to supply the full Lima Energy complex as well as its own growth objectives. The City will construct the supply line to the facility as well as a separate waste water line between the Lima Energy facility and the POTW. The City has not yet selected the final route for the lines, but Lima Energy has begun communications relative to the project schedule.

Rail Traffic and Noise Abatement

Condition 15 of the Certificate calls for the project to work with the City to mitigate adverse effects of project related rail activity on vehicle and pedestrian traffic in proximity to the facility. Lima Energy supported a City initiative to construct a grade separation associated with the CSX and Norfolk Southern mainline tracks. In late 2011, the City completed construction of the vehicle underpass at the Vine Street crossing approximately one-quarter mile north of the Lima Energy Property. This separation also enables City public safety vehicles critical movement north and south during rail movements. *See,* Attachment, Photo 8: *View of Vine Street Vehicle Underpass Grade Separation.*

Condition 26 of the Certificate addresses control of adverse noise impacts, particularly to the homes and church adjacent to the Lima Energy facility along South Main and between 3rd and 4th Streets. As noted previously, the City of Lima acquired the homes between 3rd and 4th Streets, and the properties cleared, in preparation for further development. While the noise abatement

conditions have changed somewhat as a result, the project will continue to include noise mitigation in the plant design as required by the Certificate.

d) A discussion of the erosion and sedimentation control activities to be undertaken prior to and during construction, and the status of those activities at the construction site (Condition 16 & 17).

Update:

Soil excavated during construction of the feedstock storage building foundation was placed well away from any fence line property boundaries, and deemed not an erosion runoff hazard. The soil is generally of clayey nature and not prone to wind erosion or run off concerns. Consequently, seeding the spoil pile with grass cover was determined to not be necessary. Recent concrete excavation and crushing activities are similarly away from property boundaries. The crushing contractor has been using water from time to time for dust control associated with the large pile of stone being produced from the crushing operation.

Once a new construction contractor is in place and begins planning for mobilization, an erosion and runoff control plan will be produced and shared with Board staff in association with the required kick-off meeting.

Preparation for construction of the Technology Innovation Center on the 6-acre parcel will include plans for run-off control during construction.

e) A discussion of the hazardous soils, water, or debris encountered, to date, and any knowledge of the likelihood of encountering such materials during future construction activities at the construction site (Condition 18).

Update:

The City of Lima completed a Phase 2 environmental investigation under the OEPA VAP program, and a Covenant Not to Sue (CNS) was issued to the City by Ohio EPA prior to Lima Energy having access to the property. Lima Energy issued an Environmental Contingency policy and guidance letter to the original contractor, and this will be updated and issued to the new contractor. The policy stipulates expectations for how field personnel should respond to various circumstances that may be encountered during excavation of in-ground structures. The previous contractor, for example, found and tested water in an in-ground structure. The water was not contaminated and was disposed of appropriately and in consultation with Lima Energy representatives. Hardware and equipment or other materials found onsite are similarly disposed of by appropriate landfill procedures. To date, the current contractor has not reported any problematic or questionable soils or fluids. Once the foundations and other structures are removed, we believe that construction of the new facility will not be impeded by any residual materials of potential concern.

f) Association standards since issuance of the certificate and Lima Energy's coordination with fire, safety, and emergency personnel during all stages of the project (Conditions 21 & 22).

Update:

The City of Lima Building Department has issued, and will issue building permits that include consideration and requirements for NFPA fire protection

systems. This will include buildings and major structures within the Facility. These requirements will be incorporated into the plant design in the normal course of that process. The Company will require that the contractor has an enforceable safety plan and policy that will include regular and routine awareness and reminders of safe practice standards and expectation.

The scope and nature of the Facility will be presented in depth to local public safety and emergency response personnel early in the course of facility design, to solicit and incorporate recommendations relevant to the facility. The process of communications will be evolving and ongoing to benefit from shared experience and mutual aid. As a major energy Facility, Lima Energy also anticipates consultations from a homeland security perspective.

g) A discussion of the arrangements made to date to assure necessary backup pressure is provided to the local natural gas system prior to the proposed facility's connection to the system (Condition 24).

Update:

As noted in various sections above, Lima Energy currently does not plan to install a combined cycle combustion turbine for the generation of electric power. If at some future date one is installed, it will be by separate ownership and under a separate Certificate . As such, the issue of adequate backup pressure in the natural gas system to support the NGCC fuel consumption scenario will be addressed by that certificate application at that time. The Lima Energy Ultra Clean Synthetic Crude production operation will require only modest amounts of natural gas for plant warm-up prior to startup, or a few ongoing ancillary operations. We believe the two primary suppliers in the region will be able to

supply these quantities readily. The Company will approach the suppliers as the plant design progresses.

Respectfully Submitted,

Dwight N. Lockwood, PE, QEP
Project Director

ATTACHMENT

SITE PHOTOGRAPHS


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Summary: Report of Project Status electronically filed by Mr. Robert J Schmidt on behalf of Lima Energy Company