



August 9, 2016

Mr. Michael Wood
Town Manager
Town of Burrillville
100 Main Street
Harrisville, RI 02830

Re: Clear River Energy Center RI Data Request 1-1 Review

Dear Mr. Wood:

At your request, CDR Maguire and Alares LLC (Alares) has provided a review of the Invenegy Supplemental Response to Data Request 1-1. We have reviewed the document and offer the following comments and recommendations:

EFSB 1 – 1: Construction and Operation Mitigation Measures

Please describe the environmental disturbance expected with the construction and operation of the Clear River Energy Center and detail what mitigation efforts will be engaged to address those disturbances.

***Response 1-1: Paraphrased as applicable to the CDR Maguire & Alares Review Team
Groundwater and Surface Water***

A Spill Prevention, Control, and Countermeasure (SPCC) Plan and a Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented to prevent impacts to groundwater or surface water during CREC operation. A Water Quality Certification will also be required. During CREC construction, dewatering will be performed as needed to avoid groundwater impacts. If any contaminated groundwater is encountered in any of the construction areas potentially requiring dewatering, the appropriate state and/or local permits will be obtained to address discharge of off-site management of the pumped water. Invenegy will apply for and obtain a RIPDES Construction General Permit, including a Soil Erosion and Sediment Control Plan to ensure that area surface waters are adequately protected for potential impacts during construction.

Review Team Comments and Recommendations: Please advise on construction schedule and timeframe for the generation of these documents. The Town of Burrillville and it's CREC review team requests the opportunity to review the documents prior to the submittal to the applicable regulatory agencies.

Water Use & Wastewater Discharge

The stream depletion analysis completed for CREC has demonstrated that there will be adequate water supply from Pascoag Utility District (PUD) Well 3A, even in the summer months when the river is at its lowest points, to support it's operation. Invenegy is working with RIDEM to put in place measures that

can be taken to minimize CREC's water use during its operation if a stream depletion event were to occur.

Review Team Comments and Recommendations: Supplemental water sources need to be developed for the proposed process water usage at the proposed CREC facility. Alares questions the adequacy of using Well 3A during the summer months when a large component of the Clear River 7Q10 stream flow is likely or reportedly reserved by the Pascoag and Harrisville Utility Districts. In an effort to ensure that an adequate supply of process water is available to the proposed CREC facility, please provide additional information regarding the adequacy of using Well 3A as the sole source for process water at the proposed CREC facility in consideration of the reserves that have been placed on the 7Q10 stream flow for the Clear River.

Wetlands

The CREC has been designed to avoid and minimize impacts to jurisdictional wetland resource areas. Invenergy will apply for a Permit to Alter Freshwater Wetlands from RIDEM and an Individual Permit from the United States Army Corps of Engineers (ACOE) for all proposed wetland impacts, including the power plant, the transmission line and the water treatment facility to be installed at PUD Well #3A. In order to obtain these permits, Invenergy must demonstrate that the proposed CEREC wetland impacts have been minimized and that all feasible alternatives to future avoid permanent wetland impacts have been considered.

Invenergy is currently investigating construction laydown locations that would minimize any additional impacts to wetlands associated with construction. Any unavoidable temporary impacts to wetlands associated with the staging of construction vehicles, equipment and materials during CREC construction will be restored once construction is completed where feasible.

In coordination with RIDEM and the ACOE, Invenergy will develop a Wetlands Mitigation Plan (WMP) to compensate for all unavoidable direct, indirect and secondary wetland impacts from the CREC. The WMP will include a combination of proposed wetland restoration, creation, enhancement and preservation measures within the affected watershed in the required compensatory mitigation ratios.

Review Team Comments and Recommendations: As part of the avoidance and minimization required by both RIDEM and ACOE, the construction laydown areas should be further reduced from the original proposal to not include parking of vehicles. Parking of vehicles and placement of building materials will compact soils in this area. These forested wetland soils also need to be further investigated as the substrate may not be adequate for support of heavy materials. This may cause sinking of equipment and additional unnecessary destruction to the wetland and sedimentation. The "temporary" removal of forested wetland should be considered as a wetland which requires additional consideration. This wetland will not be restored with its original functions and values. Forested wetlands requires a substantial amount of time to return to their original state and usually with some successional forest issues (invasive/undesirable species) taking place of mature growth. This creates less suitable habitat for displaced species.

Invenergy should try to utilize the existing drive which leads into Spectra, which it will be sharing its energy supply with. This would eliminate additional wetland crossings and additional unnecessary impervious areas. This was never addressed if this option was fully considered.

Though the construction site itself, may not be within a 100-year flood zone, wetlands as a whole act as flood storage areas, the removal of these wetlands and placement of impervious surface should also be considered from a compensatory flood storage perspective. This should be taken into consideration for the entire project area.

Please predict the amount of compensatory mitigation needed for the wetlands which will be impacted. Please identify suitable areas and the type of planned wetlands which will be created. Have original wetland functions and values been considered? Is the shared driveway with Spectra possible? What secondary wetlands impacts are expected? How has the project reduced the impact to wetlands from its original concept design?

Stormwater

A Stormwater Management Plan (SMP) is being developed to minimize impacts to surface waters from stormwater runoff during operation. The SWP will meet all of the applicable criteria of the RI Stormwater Design and Installation Standards Manual and will utilize each of the required best management practices. A SWPPP will be developed and maintained to satisfy the requirements of the MSGP for Industrial Activities. A RIPDES Construction General permit will be obtained, which will include the development of a Soil Erosion and Sediment Control Plan.

Review Team Comments and Recommendations: Please advise on construction schedule and timeframe for the generation of these documents. The Town of Burrillville and it's CREC review team requests the opportunity to review the documents prior to the submittal to the applicable regulatory agencies.

Geology and Soils

CREC will have minimal impacts to earth resources as it has been designed to be compatible with the local geologic conditions. Detailed geotechnical evaluations will be performed prior to construction to further determine the subsurface conditions and the necessary design criteria. A Soil Erosion and Sediment Control Plan will be developed to protect resource areas throughout construction. Excavated material will be re-used when possible. Any off-site disposal of excavated materials will be in accordance with applicable regulations and guidance. Operational impacts to geology will be negligible.

Review Team Comments and Recommendations: Hydric soils should be conserved to the greatest extent possible, as practicable. Compaction of the wetland soils from laydown areas may not be able to be restored to pre-construction conditions. Site suitability and stability of soils should be considered for appropriate areas to place heavy machinery and materials. This will ensure that greater damage is not done to the site and that the soils will not erode more than necessary. This will also reduce sedimentation on site.

In an effort to ensure that the proposed CREC facility is not contaminated by incoming fill material, all imported fill material should include laboratory analysis in accordance with RIDEM requirements to ensure that clean fill is being used for construction activities at the Site.

Clean soil should be used in accordance with the 2011 Rhode Island Department of Environmental Management (RIDEM) "Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases." (2011 RIDEM Remediation Regulations). As defined in Section 3.12 of the 2011 RIDEM Remediation Regulations, **Clean Soil** shall be defined as soil that has not been impacted, contaminated, adversely affected, or subject to a Release of Hazardous Materials, State or federally defined Hazardous Waste, petroleum, asbestos, PCB's, radioactive materials, or solid waste. Soil meeting:

- i. The Department's Method 1 – Residential Direct Exposure Criteria (Table 1), and
- ii. The TPH direct exposure, and leachability criteria of 500 ppm, and
- iii. Meeting all other State, and federal requirements specific to petroleum, asbestos, radioactive material, PCB's, solid waste, and other criteria as determined by the Director;

shall be deemed "Clean Soil" as defined above. For cases where naturally occurring background levels of arsenic or beryllium may exceed the above standards (i, ii, and iii) the Department may be petitioned to make a site specific background determination for compliance with the regulatory definition.

Alares recommends that fill material coming onto the CREC project site be analyzed in 500 cubic yard increments for total petroleum hydrocarbons (TPH) by EPA Method 8100, volatile organic compounds (VOCs) by EPA Method 8260, polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270, Priority Pollutant (13) metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc), and polychlorinated biphenyls (PCBs) by EPA Method 8082.

To protect the liability of the Town and also CREC, Alares also recommends that any excavated soil exported from the site should also be evaluated in the same manner in 500 cubic yard increments.

Traffic

The CREC will have minimal impacts on traffic during operation. Employee vehicle trips will be spread out over multiple work shifts. There will be daily deliveries of supplies and equipment but such deliveries will be intermittent. There will be truck deliveries of ultra-low-sulfur diesel (ULSD) when ULSD is fired.

Invenergy will coordinate closely with the RI Department of Transportation (RIDOT) and the Town of Burrillville to implement a pragmatic Traffic management Plan during construction activities to minimize impacts on local roadways. Invenergy has engaged the services of an expert traffic consultant to help develop the CREC Traffic Management Plan, which will be made available to the public when completed.

Review Team Comments and Recommendations: We have reviewed and commented on the Traffic Study prepared by McMahon. Based on the Study and McMahon's response to our comments, we generally agree with the findings of the Study. Traffic impacts during operation of the CREC will be minimal. There will be noticeable delays to traffic during construction. Parking regulations near intersections should be strictly enforced and consideration should be given to extending parking restrictions in the vicinity of the impacted intersections. Pavement striping should be maintained.

Wastes

CREC will generate relatively little industrial solid waste during construction or operation, and the waste generated will be managed in accordance with the applicable regulations. All waste will be stored in an area with cover, secondary containment and an impervious surface. All waste accumulation areas will be equipped with appropriate spill response equipment. Employees will be trained to manage wastes safely and in accordance with applicable regulations.

Review Team Comments and Recommendations: Please provide the proposed construction and operations employee waste management and spill response training protocols to the Town for review 120 days prior to the initiation of either construction or CREC facility operations. Please provide the proposed coordination and training efforts with the local fire departments in Town for review 120 days prior to the initiation of either construction or CREC facility operations. Local fire department coordination should include Pascoag, Harrisville, Nasonville, Chepachet, Harmony, Oakland-Mapleville, Putnam-CT, and Webster-MA. In an effort to provide a higher level of safety to the Town and its residents, this recommendation is presented in light of the fact that a significant response event may require assistance from other fire departments in addition to the Pascoag Fire Department.

We appreciate the opportunity to assist the Town of Burrillville with these issues. If you have questions please contact me at your convenience

Very truly yours,

CDR MAGUIRE INC.



James A Jackson, P.E.
Project Manager