



# CLEAN ENERGY RAIL CENTER

*Industrial Solutions for a Renewable Future*

## Waste to Energy & Building Materials Concept

The Clean Energy Rail Center (CERC) is a large clean energy and manufacturing industrial park located in Northern Nevada with convenient rail and highway links to the western region of the United States. The CERC project features geothermal resources, abundant utility services and large sites which incorporate design and development components that increase operational efficiencies and reduce costs.

The Clean Energy Rail Center is a project that we envision will be the largest Waste to Energy and Waste to Building Materials location in the United States. We are requesting funding: (a) to confirm the commercial viability of the waste to conversion technologies and the material handling systems; (b) to connect the essential design components; (c) and to demonstrate that the technologies and systems are scalable.

The goal of CERC is to become an assemblage of : (a) the nation's largest Bio-fuels, Waste to Energy and Waste to Building Materials center, (b) a large Union Pacific and/or BNSF Intermodal and Transloading facility; (c) an updated "Terminating" location for all fuels and solvents in Northern Nevada ; and (d) and a clean energy power generation site offering Geothermal Direct Use and NV Energy "Plug and Play" Interconnect Infrastructure.

### Technology

The technologies we are seeking to attract to the CERC project will be able to process municipal solid waste, tires, and hazardous and non-hazardous industrial materials, thus offering the promise of (a) greatly reducing landfills, (b) eliminating hazardous waste, (c) providing an abundant source of clean energy power and new composite building materials, and (d) recapturing valuable commodities such as water, metals, glass and chemicals. These solid waste materials are already being transported to Nevada to be dumped in landfills with no application of modern recycling and pollution reduction technologies. Currently existing technologies have already demonstrated that solid waste materials are an excellent source of feedstock to make ethanol, bio-diesel, clean energy electricity, building materials and other products.

### Design

The proposed waste to energy facilities would be designed to be fully enclosed, to be esthetically pleasing and to generate no odors. The solid waste materials would be transported to CERC by rail cars, which is the most environmentally efficient way to move these materials. The waste material would enter the facilities' sites, the solid waste material would be fully processed within the individual facility, and then the resulting metals and other solid products precipitated from the process would be shipped by rail, and the power generated by the specific waste to energy process would be transferred to the power grid through the local power interconnect system.

### Pilot Facility

The initial objective of the CERC developers and their strategic technology partners is to design and build a 100,000 square foot pilot waste to energy facility. The long-term plan is to scale up the successful facilities to 1,000,000 square foot modules. The CERC development site offers the ability to support at least 10 facilities of this larger size, for a total capacity of 10,000,000 square feet of Waste to Energy and Waste to Building Material facilities all within the boundaries of our 109,000,000 square foot property.

### Development Proposal

The current development proposal is comprised of the following objectives: (a) to fund the evaluation of the technology and material handling systems, (b) to build a pilot plant to validate the technologies and related processes, and then (c) to develop a plan to scale up the system to handle enormous amounts of waste materials. The result will be to initiate and implement modern self-contained processes to create clean energy and commercially valuable products while eliminating solid waste landfills in Northern Nevada. Once these innovative processes have been established in Northern Nevada, they should be readily applicable to any other appropriate site in the world.