

Nutrient Recycling Challenge 2016

GSR SOLUTIONS LLC

Abstract

GSR's patent pending nutrients recovery technology is targeted for enhancing livestock industry sustainability in manure nutrients runoff vulnerable regions by combining soil enrichment and alternative energy production solutions via capture of nitrogen, phosphorus (and carbon). For that GSR has brought together the complete supply chain for commercialization of this technology in the dairy farms setting to help decrease the non-point source farm waste discharges and generation of revenue sources from valuable by-products production in rural America. The nutrient rich wastewater from farm digester effluents and runoff is mostly organic material especially the nutrients (mainly nitrogen and phosphorus), which otherwise is a threat to natural water bodies. Besides recovering *nitrogen and phosphorus* from livestock manure effluents and reducing environmentally harmful runoff, this technology also benefits food & beverage industries requiring nutrients management. Added benefits include carbon capture and offsets fossil fuel energy use to meet on-farm energy needs plus the *economic benefits* from marketable products and job creation to manage this process across farms and industrial sites nationwide. By implementing GSR's nutrient capture commercially technology at the farms offers broad and significant impact on quality of life and environment by moving the energy, the wastewater treatment and rural sectors forward. GSR's nutrient recovery path will first materialize at our mid-size farm partner in Vermont followed by a commercial scale implementation with our technology as per the MoU signed with Green Mountain Power. We believe this model can be replicated across the country at the livestock-based farms and industries producing nutrient rich effluents.

- any edits to how your name/affiliation will be listed in the challenge results:
please change contact email to: adkrivov@gensysresearch.com
- indication of preference if you do not wish to share your full submitted concept paper with the Partners in the challenge or publicly:
PLEASE DO NOT PUBLISH OUR FULL SUBMITTED CONCEPT PAPER PUBLICALLY, however it is okay to share with the potential investors.