

ABSTRACT

By

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The main aim of the study is to scientifically evaluate a new approach to produce biogas that will be based on new types of biomass e.g. reed and algae from the Baltic Sea. From the biomass and the rest products from the biogas production alternative products may also be developed. The project has several relevant aspects that will contribute to both a positive sustainable and environmental development both locally, regional and globally. The use of biogas for transportation and electricity production will reduce the release of Carbon dioxide and reduce problems with global warming. The use of biomass from the coastal area of the Baltic Sea will reduce the amount of nitrogen and phosphorus and reduce eutrophication problems. The development of the demonstration project will generate new business opportunities and thus contribute to both social and economical values. The study is system oriented and based on new solutions and is covering ecological, environmental, technical, social and economical aspects. The project is a co-operation between university, municipality and industry and will be an important part in the building of a sustainable municipality. There are very few scientific studies that evaluate the sustainability of a project that tries to take a holistic approach to environmental problems in a coastal area. To develop technological solutions to environmental problems is a high priority research field in today's society if the project appears successful, it can serve as a model on how to solve sustainability problems in coastal areas.