

R010-A: "Developing a Biomass Industry in North Dakota"

Submitted by NDSU

Principal Investigator: Larry Leistriz

Request for \$406,120; Total Project Costs \$812,240

Technical Advisor Comments

- Two reviewers recommended fund, one recommended funding may be considered.
- Applicant will provide a 50% match. The majority of the match will come from MBI; \$10,000 in-kind will come from GRE.
- All 3 reviewers feel that the project could provide a strong economic impact in ND.
- One reviewer wanted more detail on the hydrolysis, fermentation, and animal feeding trials. This is outside the scope of work for this proposal. However, the applicants have provided additional information about the work that has been completed and will be completed.
- One reviewer felt that public awareness needs to be addressed.
 - The applicant has indicated that they are working to address this outside of this project.
- One reviewer felt that the scientific/technical merits of research efforts on fermentation of biobased products, production of cellulose nanofibers, and preparation/evaluation of cellulose nanofiber bio-composites are minimum since they have been well-studied. The reviewer also stated that other states such as Kansas and Pennsylvania have conducted similar studies and a comparison would have helped identify the uniqueness of this proposal.
 - This was not addressed by the applicant.
- One reviewer requested detailed milestones and more justification for the budget.
 - The milestones were provided by the applicant, as well as justification for the budget. However, the applicant should list the major costs of the project, including all equipment when presenting to the Council to strengthen the proposal.
- One reviewer felt that more information on other pretreatments and the potential advantages/disadvantages this reactor system has over others would be beneficial.

Technical Advisor Recommendations

Fund. The concerns of this proposal were limited, and several were addressed by the applicant in the clarification. The proposal would be strengthened if the applicant would address the reviewer's concern regarding scientific/technical merit and similar studies in other states.

All three reviewers agreed that the project could have a significant impact economically in ND. One reviewer stated, "This project gives ND a potentially powerful "leg up" on the competition in providing abundant, low cost, pretreated biomass for biofuel production."

Suggested Contingency if Funded:

- Verification of match from MBI prior to contract.