R009-D: "G F Truss Plant Gasification System Redesign"
Submitted by EERC
Principal Investigator: Kerryanne Leroux
Request for $245,656; Total Project Costs $491,313

Technical Advisor Comments

- Two reviewers recommended do not fund, one recommended funding may be considered.
- Applicant will provide a 50% match. Match will come from a federal source. No industry letters of support were provided.
- All 3 reviewers stated that no methodology was provided. This in turn affected the reviewers' ability to judge the timetable and achievability.
- 2 reviewers felt the project had low technical contribution. One stated "The PI does not seem to demonstrate a basic understanding of downdraft gasifier technology." 1 reviewer felt that the project could "be very beneficial in bringing the manufacture and use of distributed gasification to ND."
- All 3 reviewers had concerns regarding the project management plan. The reviewer that recommended funding be considered stated, "…I have an issue with a potential for over-management, which is manifested in the budget. The amount of hours/money includes time for a project manager, a PI, and an EERC senior manager. This is in addition to a facilities and administration rate of 60% (NDIC funds), of which a portion should be going to administration of projects. This seems overkill for a redesign of an existing system."
    - The applicant has stated that, "…Since no subcontractors are proposed, no communication plan was given... The personnel listed as PI and Project Manager work closely together to perform project tasks. Also included in the total labor hours is the supervisory time utilized by senior management to ensure quality of work conducted maintains EERC standards."
- All 3 reviewers had concerns regarding the justification of proposed equipment purchases as well as the value of the budget. 1 reviewer stated, "…I think that the proposal is more expensive than is justified based on their submitted text..." that reviewer also questioned the purchase of a chipper and conveyor as part of the project, stating "…While very useful in working with a gasifier, they are not part of the study and I would say they should be leased or paid for from other sources. The length of their research use (2 months spread over a year grant?) may not justify their full purchase on NDIC sponsored funds."
    - The applicant has responded, "…The controls, chipper, and conveyor are needed to provide continuous, automated operation of the gasification system for demonstration testing and investor marketing."
- 1 reviewer questioned the expense categories of personnel, equipment, and travel, stating "This is a 1 year grant for redesigning an existing piece of equipment. The budget does not reflect this. Expenses should have further justification, as should a 5% escalation of personnel costs in a 1 year grant, starting 2 months after grant proposal submission…I would also say that for this study, the conference travel budget is excessive (national conferences for 6 people for a 1 year grant). I would focus some of that money on in-state work with stakeholders."
    - The applicant has responded, "The 5% escalation reflects the estimated budget increase for personnel labor after the new fiscal year, which began July 1, 2010. The estimated travel expenses are for two people to attend three regional and national conferences."

Technical Advisor Recommendations

Do not fund. The concerns of this proposal are overwhelming. All 3 reviewers expressed concern regarding the lack of detail in the methodology. This is a critical component to the proposal. The lack of detail regarding methodology has respectively made it difficult, if not impossible, for the reviewers to judge the budget, timeline, scientific value, and achievability.

Several valid questions were raised in the review process regarding budget components. While the applicant has provided explanation for some of the questions raised, sufficient justification has not been provided.

The overall purpose of the proposal may not be as high of a priority as other applications. The applicants state that "Demonstrating a near-commercial technology will garner interest from potential investors willing to generate

renewable industry in ND…The closer the technology is to commercialization, the more attractive it is for investors to commercialize and manufacture." They go on to state that "the path to commercialization is expected to take 5-10 years." However, in the clarification of the methodology provided, the applicants state that they are redesigning a commercially available system. There is no indication industry is providing any support in making the system more efficient.

Additionally, in the clarification the applicant mentions that the feedstock will be wood chips. This feedstock may not be abundant enough in ND to merit limited Renewable Energy Program funds.

Suggested contingencies if funded:

- Chipper and conveyor are rented, or are not paid for with NDIC funds.
- Travel for conferences are reduced to 1 conference for 2 people and applicant provides a strategy detailing how attendance at conference will increase likeliness of investment.
- A more prominent ND feedstock is utilized in a chip or pellet format.
- Reduction of personnel costs for project management.
- A communication plan is provided.