Renewable Energy Commodity Trading Educational Program
North Dakota State University
Response to Technical Reviewers' Rating Summary

1. Objectives

Reviewer C

I wish that the proposal would have better explained that the computer lab is absolutely essential to the trading program and provide reasons for why this is the case…especially since most students have computers, especially in grad student programs…is it for licensing the required software? Is this an undergrad or grad level course or both?

The technology of the room was specified considering the needs of the students, and that of the technology providers. Specifclaly, we will be buying 'liscenses' to Bloomberg and DTN; these are tied to individual work stations, and these have special function keys (specific keyboards are included); a special set of log-in protocols are being developed that are tied to each PC work-station. Hence, this is the reason why this is being built around PC-work-stations (not unlike current trading rooms at most commercial firms).

Admittedly, this technology is evolving (e.g., Bloomberg Anywhere is emerging that will be more mobile), but, it is not clear how this could accommodate a classroom situation in which there are multiple students assigned to each work-station.

Is this an undergrad or grad level course or both?

The course will be cross-listed as an upperclass/graduate course (4XX/6XX).

In an unrelated note, there is a mention of wind and electricity once or twice in the document but everything else (it seemed to me) was focused on feedstock procurement, biofuels, and new renewable energy, biomass or biofuel feedstocks. I'd like to hear more about how wind fits into the proposal. Is it strictly for RECs? Will there be electricity trading and futures? Since wind electricity trading, and RECs could be a core part of the program, I would have liked to have seen another sentence or two describing how it fits into this concept.

The inclusion of electricity within the scope of renewable energy trading is natural given the role of wind, biomass, and other renewables in power generation. Consideration will be given to electricity trading; however, the program's initial emphasis will be on biofuel.

2. Achievability

Reviewer A

I think a slight increase in the budget is needed for coarse materials and research supplies.

The budget for course materials and research supplies was based on an internal cost analysis and is expected to meet the development demands.

Reviewer B

A key issue will be his ability to work with other faculty and staff in the NDSU Agricultural Economics group to ensure that this program is supported within their Department and meshes with other ongoing teaching, research and extension activities. From speaking with other faculty at NDSU it appears that the Department overall is behind this effort. A lack of broad based departmental support would be the first place I would look to find a reason for this program to eventually not be successful.

There is broad-based support for the room across the university. At the Departmental level, new courses on risk management are being developed. NDSU is supporting the program through faculty salary. There is further very strong support from the NDSU president, the Deans, and funders all of whom toured Tulane, and have been engaged in the planning process. It is simply expected that as the program gets underway, other faculty will be engated. To date, NDSU has now developed a 2-course sequence at the MS level on risk analysis/measurement and management, which will be the core of a Certificate of Risk. This will include 3 additional faculty members (Drs. Wilson, Shaiek, and Larson)

Reviewer C

I'm a little concerned that since the curriculum still needs to be developed and there are so few people working on that piece that it may be difficult to be self-sustaining as a program within 2 years.

The Department and Dr. Wilson have a record of developing and delivering training that provides immediate, substantial, and desirable effort to university students and industry.

3. Methodology

Reviewer C

My only suggestion is that the educational curriculum should probably be developed in more detail before embarking on the computer room updates. Buying computers that will be a year old before the curriculum really takes hold may be a waste. And buying all those computers for a single course was new-age for 1995. I question whether it is absolutely required now. It is just a question that should be asked since the costs necessary to refurbish the room, buy computers, and provide maintenance is substantial. Perhaps ipads or tablets + keyboards would be the way to go so they can be cleared out of the way for student collaboration when not needed.

See response to 1.C.

4. Contribution

No comments require response.

5. Awareness

Reviewer C

It appears he has studied the Tulane trading room in good detail which is highly pertinent since this would also include a trading room. However, it would be nice to see collaborative work space comparisons to other schools even if comparing rooms with programs that are not trading programs. Basically, what is the best room design? Part of the point is to have a state-of-the-art room with the best educational reach and the Tulane trading room is just one example of this.

An analysis of trading rooms around the country was conducted prior to design. Tulane is unique as it focuses on commodities and energy in particular. Most (if not all) of the others are focused on financial analysis, as opposed to trading and commodities.

6. Background

No comments require response.

7. Project Management

Reviewer C

Some of the costs appear inconsistent since it appears they were developed at different times. I don't really understand the cost-sharing of the room and perhaps there could have been more detail there.

Cost sharing may appear confusing or inconsistent as costs must align with matching fund availability and use as well as the timing of activities funded under the REC grant (to comply with NDSU budget policies).

Who else will be using the room and who else is participating in this process?

The room will also be used for other risk management classes that are under preliminary development.

8. Equipment Purchase

Reviewer A

Some more discussion could be added to what the equipment's value brings to the success of the project.

The technology, including hardware, is fundamental to the room's effectiveness. The technology platforms employed are the most advanced and commonly used by industry today. Students will develop a mastery of these tools, including software and equipment, that will make them highly sought-after.

Reviewer B

If I were going to err in this project, I would err on the side of having more than enough equipment of high enough quality and capability to more than comfortably handle the number of students you hope to have involved in this program.

This is a design for a 1995 state-of-the-art room I saw, well, in 1995. Is this the best way to do it for 2012? Perhaps a smartboard is the best way to do it? Are ipads + keyboards the best way? Do most students have their own computers anyway? Could this be done in another lab? Is it better to have 5 computers with the licenses in the back of the room and a big collaborative space taking up most of the room + a lot of whiteboards? Are computers necessary to have the appropriate licenses?

I don't think the proposed budget is too much. I just think, what if you can forego the equipment (if it is redundant) and hire 1-2 more world-class instructors to really push the trading envelope?

See response to 1.C.

The classroom is configured to meet the needs of current NDSU upperclass and Northern Crops Institute course caps – using an economical combination of workstations and software licenses.

We are planning initially on 32 work stations. These will be 32 separate computers each with dual montiors. In part this number was to accommodate current class sizes at NDSU, as well as the NCI programs (which are 37). The room is expandable (up to 48) and should demand escalate to that level, we would revisit the optimal size of the room.

9. Facilities

No comments require response.

10. Budget

Reviewer A

I would re-evaluate the costs associated with course materials and research; I think they are a bit low.

The budget for course materials and research supplies was based on an internal cost analysis.

11. General Comments

Reviewer A

One element that I think needs to be acknowledged in this proposal and by the North Dakota Industrial Commission, the Renewable Energy Council, and the Renewable Energy Program is the need for "nimble flexibility" in this program as renewable energy information needs, logistical market issues, and renewable energy markets change in the current dynamic environment for U.S./Canadian/World energy markets and government policies. The focus of the types of information being emphasized at this time in this proposal for renewable energy education may change either slowly or rapidly or dramatically in the next few years.

In closing, if I were to add one element to this proposal it would be a disciplined system of annual internal and external program review, looking both internally as to what is occurring in development of the educational program resources and methods and externally as to what could be rapidly changing bioenergy information needs. Once in motion, this program should continue to be nimble and flexible in terms of the changing information needs of real world agri-bio-energy markets. If this element already exists in either an implicit or explicit manner, then it bears emphasis from the granting body that the program remain relevant via this process of periodic reexamination of information needs and program direction.

We agree with the reviewer about the dynamic nature of the renewable energy industry including information needs and availability, logistics challenges and solutions, changing market conditions, and government policy. NDSU's traditional and industry courses are regularly reviewed and updated to ensure that learning objectives, tools, and outcomes meet current needs.