

**TECHNICAL REVIEWERS' COMMENTS**  
**LRC-LXXXI (81) – A**  
**"Annual Lignite Energy Council Education Program"**

1. **OBJECTIVES**

The objectives or goals of the proposed project with respect to clarity and consistency with North Dakota Industrial Commission/Lignite Research Council goals are: 1 – very unclear; 2 – unclear; 3 – clear; 4 – very clear; or 5 – exceptionally clear.

**Reviewer 01-01 (Rating 5)**

This project fits exceptionally well with North Dakota Industrial Commission and Lignite Research Council goals. The seminar stresses the job/career opportunities for those interested in the coal industry. This program will help maintain and enhance North Dakota lignite resources.

**Reviewer 01-02 (Rating 5)**

The varying components of the overall educational plan were laid out and seemed to tie together into a cohesive approach from multiple angles. The goals of the grant aligned with LRC's goals by providing key topics to teachers who will pass that on to students in ND and surrounding states. This will instill information in the upcoming generation about the value of lignite, which impacts economics, growth, jobs, etc. I really appreciate seeing the survey metrics.

2. **ACHIEVABILITY**

With the approach suggested and time and budget available, the objectives are: 1 – not achievable; 2 – possibly achievable; 3 – likely achievable; 4 – most likely achievable; or 5 – certainly achievable.

**Reviewer 01-01 (Rating 5)**

The Lignite Energy Council has shown consistent ability to coordinate and execute this seminar. There is no reason to believe, given the history and expertise of those involved, that this year would be any different.

**Reviewer 01-02 (Rating 4)**

I would have liked to have seen more information related to the timetable with the video phases. It wasn't entirely clear whether the four video ideas were targeted for completion in this grant cycle or in future requests.

**Applicant Response:**

**At this time, one video per year is slated to be completed unless additional funding sources can be identified and secured. Future requests would evaluate funds available and request money ear-marked for one or more of the video phases as funds and means are available.**

3. **METHODOLOGY**

The quality of the methodology displayed in the proposal is: 1 – well below average; 2 – below average; 3 – average; 4 – above average; or 5 – well above average.

**Reviewer 01-01 (Rating 4)**

The applicant uses statistics to show how teachers' opinions have changed after the course and as they incorporated materials in lessons. This is a clear example of the benefits of the course. I am also encouraged to see the "lesson plan" challenge. It's a great way to reward teachers but also take ideas to share with other teachers.

**Reviewer 01-02 (Rating 4)**

The evolution of the seminar approach and the educational plan demonstrate to me that the LEC has taken careful consideration of the audience and the best way to get their message across. By consistently gathering survey results, they are well-poised to engage with instructors to meet their goal of promoting the industry in a fashion to which students will be more likely to respond. Video seems to be a really good avenue to reach a wider audience and engage a modern generation.

4. **CONTRIBUTION**

The scientific and/or technical contribution of the proposed work to specifically address North Dakota Industrial Commission/Lignite Research Council goals will likely be: 1 – extremely small; 2 – small; 3 – significant; 4 – very significant; or 5 – extremely significant.

**Reviewer 01-01 (Rating 5)**

I was very impressed at the additional biographies of the technical contributors. This is the best of the best in terms of experts. Extremely impressive.

**Reviewer 01-02 (Rating 4)**

Via the seminar, educating teachers will give them more confidence to approach the material with their students and make the message more effective with students. And by reaching students at a younger age, that will open the door for improvements in public perception, career awareness, etc.

5. **AWARENESS**

The principal investigator's awareness of other current research activity and published literature as evidenced by literature referenced and its interpretation and by the reference to unpublished research related to the proposal is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

**Reviewer 01-01 (Rating 5)**

I think it is very clear of their awareness by determining the need for additional material. They realize there isn't much and need to generate new, up-to-date, engaging content.

**Reviewer 01-02 (Rating 3)**

The PI seems knowledgeable regarding past surveys; in addition, the speakers recruited for the seminar are experts in their field.

6. **BACKGROUND**

The background of the investigator(s) as related to the proposed work is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.

**Reviewer 01-01 (Rating 5)**

Again, evident by the bios included and the continued commitment over the years by staff.

**Reviewer 01-02 (Rating 5)**

Investigator (LEC) has industry expertise.

7. **PROJECT MANAGEMENT**

The project management plan, including a well-defined milestone chart, schedule, financial plan, and plan for communications among the parties involved in the project, is: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – very good; or 5 – exceptionally good.

**Reviewer 01-01 (Rating 3)**

I noticed a discrepancy regarding the proposed budget. Listed three times as \$234,000, \$211,000, \$234,000 when it was clear the budget was \$234,000, it was confusing. I also think KAT needs to have a

better timeframe for delivering the different targeted items instead of “TBD”. Also the estimate from KAT was more than what is listed in the outlined budget.

**Applicant’s Response:**

The \$211,000 was a typo and should have read \$234,000. KAT has planned to execute the targeted items based on approval and direction from the Lignite Energy Council. Those instructions will rely heavily on funding approval from this process. The outlined budget includes only “new” money that will be required to complete the first video. Some money from the 2016 grant year will be spent on the project and that has not been included in the 2017 grant year application.

**Reviewer 01-02 (Rating 3)**

Nice, detailed budget and a good plan. However, as mentioned before, video timetable was lacking, as well as specific timeframes for the lesson plans and trunks.

**Applicant’s Response:**

The video timetable was addressed in a previous question/answer. A prototype trunk will be available by the end of 2016. The LEC and State Historical Society will announce the availability of the trunks in the April issues of educator newsletters and the trunks will be “unveiled” at the Lignite Education Seminar in June. Trunks will be available to “check-out” for the 2017 – 2018 school year. Lesson plans are slated to be completed by the end of 2017, if not sooner, depending upon the availability of teachers to complete and review the lesson plans.

8. **EQUIPMENT PURCHASE**

The proposed purchase of equipment is: 1 – extremely poorly justified; 2 – poorly justified; 3 – justified; 4 – well justified; or 5 – extremely well justified. (Circle 5 if no equipment is to be purchased.)

**Reviewer 01-01 (Rating 5)**

No equipment purchase.

**Reviewer 01-02 (Rating 5)**

No comment.

9. **FACILITIES**

The facilities and equipment available and to be purchased for the proposed research are: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – notably good; or 5 – exceptionally good.

**Reviewer 01-01 (Rating 5)**

The Bismarck Energy Center is one of the best facilities to hold a seminar. It sounds like the Audience Response System has been a good addition--and the proposed video project is a much needed addition from the sounds of the dwindling resources.

**Reviewer 01-02 (Rating 5)**

The investigator has access to facilities and equipment needed for the project.

10. **BUDGET**

The proposed budget value relative to the outlined work and the financial commitment from other sources is of: 1 – very low value; 2 – low value; 3 – average value; 4 – high value; or 5 – very high value.

**Reviewer 01-01 (Rating 4)**

More than 50% comes from other sources with many reliable in-kind donations. Most of the additional costs are for video production.

**Reviewer 01-02 (Rating 4)**

Though I understand it hard to put specific measurements on impact, education is always a great investment.

**OVERALL COMMENTS AND RECOMMENDATIONS:**

Please comment in a general way about the merits and flaws of the proposed project and make a recommendation whether or not to fund.

**Reviewer 01-01 (Rating: FUND)**

I think this project meets the goals of the Commission and should be funded. However, I see flaws: in the proposed budget which include different figures than what is in the proposal; inadequate timelines that are not clear regarding the completion of the video; and a mismatch of \$11,000 compared to the KAT video estimate (\$60,000) and what LEC listed (\$49,000) as costs for the video. I recommend funding but only once budget is clarified to better reflect cost estimate.

**Applicant's Response:**

The Lignite Energy Council has additional funding to allocate to the video project for the completion of the first video - some from the 2016 grant year as well as in-kind dollars from KAT. Until the project has been approved, we will not know the exact cost of each video. It is logical to believe that the proposal can and will come in under the high estimate of \$60,000 depending upon any current footage that is available from the LEC and its members.

**Reviewer 01-02 (Rating: FUND)**

Overall, this seems to be a well-established program that touches a large number of people each year. There seems to be a plan to continue providing options for teachers to use outside of the seminar which gives it a more lasting impact. Recommend to fund.