

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
 Thursday, December 8, 2022  
 1:00 pm (CT)  
 TEAMS Meeting Via Conference/Video Call  
 ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

<b>Members Present</b>	<b>Staff Present</b>	<b>Guests Present</b>
Josh Teigen	Reice Haase, NDIC	Dr. Srivats Srinivasachar
Gerald Bachmeier	Karen Tyler, NDIC	Yun Ji
Al Christianson	Brenna Jessen, NDIC	Junior Nasah
Terry Goerger	Rich Garman, Commerce Dept.	Johannes van der Watt
Tony Grindberg	Joleen Leier, Commerce Dept.	Daniel Laudal
Rodney Holth		Dongmei Wang
		Mat Hirst
		Steve Kemp
		Mark Watson
		William Gosnold

**WELCOME & OPENING COMMENTS**

Rich Garman called the Renewable Energy Council (REC) meeting to order at 1:03 pm and stated Chairman Teigen will join later. Garman welcomed the members and guests in the conference room and on the TEAM video/audio platform. Reice Haase, Deputy Executive Director of the Industrial Commission introduced himself in his new role.

**APPROVAL OF MINUTES**

The minutes from the March 30, 2022 meeting were presented to the board. Bachmeier noted that he provided the “second motion” for approval of the September 22, 2021 minutes. **With that change noted, it was moved by Goerger and seconded by Bachmeier to approve the March 30, 2022 meeting minutes. The motion carried unanimously.**

**PRESENTATION OF FINANCIAL STATEMENT**

Reice Haase presented the financial report that had been posted on the Industrial Commission/Renewable Energy website. As of September 30, 2022, the uncommitted funds for the current biennium are \$2,942,853.45. **It was moved by Goerger and seconded by Bachmeier to approve the financials as presented. The motion carried unanimously.**

**REPORT ON GRANT ROUND 50 APPLICATIONS**

Six applications were received, six were sent to Technical Reviewers for peer review. All six applications received scoring that supported funding and will be reviewed today for the Council’s consideration. Total amount being considered for Round 50 is \$2,232,159. Rich Garman, of the Commerce Department, presented the Grant Round Requests.

**CONSIDERATION OF SPECIAL GRANT ROUND 50 REQUESTS**

**R-050-A – Novel process for Biocoal Production with CO2 Mineralization to Achieve Negative Carbon Emissions**

Principal Investigator: Dr. Srivats Srinivasachar  
 Project Duration: 180 months  
 Requesting: \$174,830  
 Total Project Cost: \$349,825

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
Thursday, December 8, 2022  
1:00 pm (CT)  
TEAMS Meeting Via Conference/Video Call  
ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

**Reviewers' Ratings**

- Fund – 189/250
- Fund – 205/250
- Fund – 223/250
- Average Weighted Score – 205.67/250

Dr. Srivats Srinivasachar presented on the project.

**R-050-B - Flexible Direct Air Capture System – Flex-DAC**

Principal Investigator: Junior Nasah  
Project Duration: 2 years  
Requesting: \$499,452  
Total Project Costs: \$1,670,138

**Reviewers' Ratings**

- Fund – 188/250
- Fund – 184/250
- Fund – 197/250
- Average Weighted Score – 189.67/250

Junior Nasah presented on the project.

Nasah confirmed they do have a federal grant.

**R-050-C - Enhanced Sweep Efficiency for Geothermal Renewable Energy Using Bio-Polymer Supplement**

Principal Investigator: Dongmei Wang  
Project Duration: 2 years  
Requesting: \$468,877  
Total Project Costs: \$942,877

**Reviewers' Ratings**

- Fund – 220/250
- Fund – 192/250
- Fund – 205/250
- Average Weighted Score – 205.67/250

Garman stated the lower scores in the reviewers' ratings appear to pertain to the budget that should be addressed in the presentation.

Dongmei Wang presented on project.

There was a question regarding the charge of \$418,000. Wang clarified this is for three software licenses (one license per machine) to utilize the software for two years.

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
Thursday, December 8, 2022  
1:00 pm (CT)  
TEAMS Meeting Via Conference/Video Call  
ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

**R-050-D – Production of Hydrogen and Valuable Carbons from Methane-Sources**

Principal Investigator: Johannes van der Watt

Project Duration: 1 year

Requesting: \$180,000

Total Project Costs: \$360,000

**Reviewers' Ratings**

- Funding May be Considered – 136/250
- Fund – 198/250
- Fund – 209/250
- Average Weighted Score – 181/250

Johannes van der Watt presented on the project.

There was a question regarding the carbon capture process. Van der Watt explained the process and how the optimization tools could bridge a gap by utilizing the new technology.

There was a question about how this research different than what the other companies out there are doing? This technology is the best to store the hydrogen, we don't produce carbon dioxide. This technology also brings together the optimization tool.

**R-050-E – Unlocking Lithium Extraction in Produced Water**

Principal Investigator: Mat Hirst

Project Duration: 6 months

Requesting: \$500,000

Total Project Costs: \$1,000,000

**Reviewers' Ratings**

- Fund – 200/250
- Fund – 205/250
- Fund – 184/250
- Average Weighted Score – 196.33/250

Mat Hirst presented on the project.

There was a question to confirm if they have capital if they receive grant funds. Hirsch confirmed they do have capital.

**R-050-F – Modular Biomass Gasification for Co-Production of Hydrogen and Power**

Principal Investigator: Junior Nasah

Project Duration: 2 years

Requesting: \$500,000

Total Project Costs: \$2,120,000

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
Thursday, December 8, 2022  
1:00 pm (CT)  
TEAMS Meeting Via Conference/Video Call  
ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

**Reviewers' Ratings**

- Fund – 179/250
- Fund – 197/250
- Fund – 186/250
- Average Weighted Score –187.33/250

Junior Nasah presented on the project.

The number of man hours needed was questioned. Nasah explained they will have approximately 4.5 full-time employees and 3 full-time graduate students.

There was a question asking if they have contacted anyone else for funding. Nasah responded “No”.

**CONSIDERATION OF CONFIDENTIAL INFORMATION**

Reice Haase explained the next portion of the agenda would be the Executive Session to consider confidential information. The purpose of this Executive Session would be to discuss the confidential information in your packets and ask questions of the applicant in private. If the board has questions, we will need to go hold Executive Session separately for each application.

The board members indicated they did not have any questions for the applicants.

**DISCUSSION/COMPLETION OF BALLOTS**

**R-050-A – Novel process for Biocoal Production with CO2 Mineralization to Achieve Negative Carbon Emissions**

**Project Duration: 180 months**

**Requesting: \$174,830**

**Total Project Cost: \$349,825**

**Conflict of Interest: None**

**Fund: 4      Do Not Fund: 1      Abstain: 0**

**R-050-B – Flexible Direct Air Capture System – Flex-DAC**

**Project Duration: 2 years**

**Requesting: \$499,452**

**Total Project Costs: \$1,670,138**

**Conflict of Interest: None**

**Fund: 1      Do Not Fund: 4      Abstain: 0**

**R-050-C – Enhanced Sweep Efficiency for Geothermal Renewable Energy Using Bio-Polymer Supplement**

**Principal Investigator: Dongmei Wang**

**Project Duration: 2 years**

**Requesting: \$468,877**

**Total Project Costs: \$942,877**

**Conflict of Interest: None**

**Fund: 4      Do Not Fund: 1      Abstain: 0**

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
Thursday, December 8, 2022  
1:00 pm (CT)  
TEAMS Meeting Via Conference/Video Call  
ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

**R-050-D – Production of Hydrogen and Valuable Carbons from Methane-Sources**

**Project Duration: 1 year**

**Requesting: \$180,000**

**Total Project Costs: \$360,000**

**Conflict of Interest: None**

**Fund: 3          Do Not Fund: 2          Abstain: 0**

**R-050-E – Unlocking Lithium Extraction in Produced Water**

**Project Duration: 6 months**

**Requesting: \$500,000**

**Total Project Costs: \$1,000,000**

**Conflict of Interest: None**

**Fund: 5          Do Not Fund: 0          Abstain: 0**

**R-050-F – Modular Biomass Gasification for Co-Production of Hydrogen and Power**

**Project Duration: 2 years**

**Requesting: \$500,000**

**Total Project Costs: \$2,120,000**

**Conflict of Interest: None**

**Fund: 5          Do Not Fund: 0          Abstain: 0**

**ADMINISTRATIVE BUSINESS**

Reice Haase presented the project management update. The program has 13 active projects and have awarded \$4.3 million. There is \$3.5 Million outstanding committed dollars and have paid \$0.8 Million to date. The projects submit reports to us that includes receipts. We review and information to ensure compliance with the rules prior to issuing payment to the projects.

Haase gave an update on the following completed projects:

- Fargo Smart Energy Ramp – start date was 12/1/2018. This is an installed rooftop solar, smart meter, AI battery charging and was installed at Roberts Commons Parking garage in Fargo. REC provided \$305,000 of \$610,000 project.
- Low-Pressure Electrolytic Ammonia – start date was 6/15/18. This is electrolytic ammonia production at ambient pressure; EERC-NDSU developed membrane. This is successful synthesis of ammonia within a temperature range of 200-300 degrees Celsius. They found they could produce ammonia at \$700/ton versus Tampa Spot price of \$1,400/ton. REC provided \$437,000 of \$3,164,010 project.
- Feed Study for Creosote Treated Railroad Ties – start date was 2/1/22. They evaluate creosote railroad ties as alternative fuel source. They found there is competition for used ties which could limit supply. Use of other preservatives could damage the boilers. Cost to modify boilers is up to \$52 million. REC provided \$66,500 of \$133,000 project.

There was discussion regarding the next grant round. Proposed Round 51 deadline is May 1, 2023 (after legislative session). The next Renewable Energy Council meeting will be June 22 or 23, 2023. It was noted that June 22 is preferred.

Minutes of the  
**RENEWABLE ENERGY COUNCIL (REC)**  
Thursday, December 8, 2022  
1:00 pm (CT)  
TEAMS Meeting Via Conference/Video Call  
ONSITE Location: WSI Boardroom, 1600 E. Century Ave., Ste. 1, Bismarck

**ADJOURNMENT**

**Motion made by Holth and seconded by Christianson to adjourn the meeting. Garman adjourned the meeting at 3:55 pm.**



---

Josh Feigen- Chairman