

Minutes of a Meeting of the Clean Sustainable Energy Authority Advisory Board

held January 23rd, 2024, at 8:00 a.m.

Bank of North Dakota, 1200 Memorial Highway, Bismarck, ND

Present: Rep. Glenn Bosch, Chair
Sen. Dale Patten
Al Christianson
Chris Friez
Jim Arthaud
Joel Brown
Kathy Neset
Mac McLennan
Terry Goerger
Courtney Heiser
Reice Haase
Erin Stieg
Brenna Jessen

Also Present: Not all attendees are known, as this meeting was held through Microsoft Teams.

Rep. Glenn Bosch called the meeting of the Clean Sustainable Energy Authority (CSEA) Advisory Board meeting to order at 8:01 a.m.

Rep. Bosch stated a quorum was present.

Sen. Dale Patten said he appreciated the interest shown in the program, which has one of the most thorough vetting processes at the state level. Rep. Bosch said the Advisory Board is seeing some transformational projects, where the energy and ag industries come together for the benefit of all.

A motion was made by Ms. Kathy Neset and seconded by [inaudible] to approve the July 25, 2023, meeting minutes as presented. The motion carried unanimously.

Rep. Glenn Bosch asked the CSEA Advisory Board members to document any Declarations/Consideration of Conflict of Interest. Mr. Joel Brown noted North American Iron banks at First International Bank and Trust, where he works. He stated he is not involved in the relationship, and he does not view it as a conflict. Rep. Bosch agreed. Ms. Kathy Neset noted her team offers engineering support for the Dickinson renewable fuel facility. The committee did not view it as a conflict.

Mr. Reice Haase, Industrial Commission Deputy Executive Director, provided a CSEA project management and financial report. He gave an overview on the North Dakota Industrial Commission as a whole, as well as its grant programs and managed funds.

In relation to CSEA Funds, Haase's report detailed:

- 17 cumulative projects funded
- 14 active projects, including eight grant projects and six loan projects

- \$38,785,992.37 cash balance, which includes \$21,899,867.37 available for future commitments
- Funding sources included 25 million from the general fund (2021-2023 biennium), 30 million from the general fund (2023-2025 biennium) and 10 million federal ARPA (hydrogen)
- Cumulative value is \$42.7 million granted, \$392.5 million loaned, and \$5.2 billion project value

Mr. Haase noted in the last Legislative session under House Bill No. 1546, in addition to CSEA funding, \$125 million was received as a forgivable loan that CSEA is directed to use for fertilizer projects in the state of North Dakota.

Mr. Haase provided a list of active projects and asked if members have questions. Two projects have been completed, including Cerilon's "Gas-to-Liquids Plant" and Wellspring Hydro's "Produced Water Recycling." He also noted a highlight from a loan project balance, and the return on investment for the State of North Dakota has been more than \$31 million in additional tax revenue back to the State because of the gas capture project they were able to complete with CSEA funding.

Mr. Haase also displayed a list of current grant and loan applicants.

Ms. Courtney Heiser with Bank of North Dakota provided this financial update. Seven loans have been committed from the fund so far, and three are in the repayment stage. There is \$607,000 in cash on-hand, and \$28.2 million is available for new funding.

Rep. Bosch stated if time permits, he might ask the Advisory Board to enter into Executive Session twice.

Mr. Haase provided a report on the Jan. 16, 2023, CSEA Technical Review Committee Meeting. He showed the results of the Technical Review Committee recommendations. All but one project was recommended as feasible; some projects were assigned "conditions." The Committee had a robust discussion on the infrastructure needs of each project including water. To summarize, there were no major concerns with water supply, but there may be some delays in getting water to the southwest area project due to an intake issue. There was also a report from the Pipeline Authority related to the availability of natural gas and infrastructure. There were no significant concerns. There was also a report from the Transmission Authority, and there were no significant concerns on power availability.

Mr. Shayden Akason from the Department of Commerce presented on the [North Dakota Development Fund](#). It was established in the early 1990s. Since that time, they have accounted for more than 9,200 jobs and 892 projects funded. He stated the Development Fund is a flexible gap-financer that vets projects that can't attain funding and financing elsewhere.

- One Development Fund program they recently created is [Advance ND](#), which awards "deal-closing" low-interest loans to companies considering a new industrial project in North Dakota. The Advisory Board did not have questions.
- Another Development Fund program Mr. Akason discussed is the [Child Care Loan Program](#), which provides financial assistance to new and expanding child care providers. It offers two-percent interest on the loan, and in the last Legislative session, the funding limit was increased from \$100,000 to \$1 million. Mr. Akason expressed excited about the impact of that program. Ms. Kathy Neset asked how they measure return on investment. Mr. Akason said they take

into account a number of different factors including job creation and families served.

- Another Development Fund program Mr. Akason discussed is the [Angel Match Program](#), which supports high-growth, early-stage primary sector North Dakota businesses by matching investor commitments of up to \$250,000 per business. Ten investments have been made to-date.

The review of Grant Round Five applications began. Each application started with a review from the Industrial Commission, followed by a presentation from the applicant and then questions from the Committee.

C-05-A Clean H₂ and N-fertilizer Production Facility

- Applicant: Prairie Horizon Energy Solutions LLC
- Description: Installation of facilities capable of 73,000 tons/year (200 tons/day) of clean hydrogen via electrolysis, 419,750 tons/year (1,150 tons/day) of clean ammonia, and a urea production facility associated with the Heartland Hydrogen Hub; CO₂ reduction of 650,000 tons/year
- Category: Fertilizer
- \$125,000,000 Loan Requested
- \$2,200,000 Total Project Cost
- Other state programs and incentives include a \$10,000,000 CSEA grant for Liberty H₂ Hub and a \$65,000,000 request pending with the ND Development Fund
- Independent Technical Review Average Score: 210.75/315 (fair)
- Comments: It aligns with CSEA goals, offers economic opportunities for North Dakota, and the project has strong technical viability. Concerns included the cost to produce, regulatory and policy dependence, and the need to bid out manufacturing components.
- Technical Review Committee Score: 41.75/50
- Determination: Feasible With Conditions; metrics for determining “commercial viability” to be determined and approved later

C-05-B Spiritwood Fertilizer Project

- Applicant: NextEra Energy Resources Development LLC
- Description: Construction of production facility near Jamestown, ND, capable of 100,000 tons/year zero-carbon anhydrous ammonia through electrolysis of water; CO₂ reduction of 190,000 tons/year
- Category: Fertilizer
- \$125,000,000 Loan Requested
- \$1,293,000 Total Project Cost
- Other state programs and incentives include none in the last five years
- Independent Technical Review Average Score: 178.5/315 (questionable)
- Comments: This innovative technology aligns with CSEA goals and could lead to increased fertilizer production. Concerns include the cost to produce and scale-up the project, regulatory and policy dependence, and reliance on renewable energy
- Technical Review Committee Score: 39.13/50
- Determination: Feasible With Conditions; metrics for determining “commercial viability” to be determined and approved later

Rep. Bosch asked the Advisory Board if they wanted to enter into Executive Session to discuss confidential matters related to the first two projects or wait until all presentations are completed.

A motion was made by Mr. Chris Friez and seconded by Mr. Mac McLennan that under the authority of the N.D.C.C. 54-63.1-06 and 44-04-19.2.1 that the Clean Sustainable Authority Advisory Board enter into Executive Session for the purpose of considering Clean Sustainable Energy confidential information.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

Rep. Glenn Bosch stated that the Clean Sustainable Energy Authority Advisory Board is entering into Executive Session to discuss confidential information. He stated that only CSEA members and ND Industrial Commission staff will be present during Executive Session. Any formal action will be taken in Open Session. Sen. Patten reminded those present that the discussion must be limited to the announced purpose, which is projected to last approximately 45 minutes.

Executive Session began at 9:55 a.m.

The Meeting Closed to the Public for Executive Session Pursuant to NDCC 54-63.1-06 and 44-04-19.2.1.

CLEAN SUSTAINABLE ENERGY AUTHORITY ADVISORY BOARD EXECUTIVE SESSION

Present:

Rep. Glenn Bosch
Sen. Dale Patten
Al Christianson
Chris Friez
Jim Arthaud
Joel Brown
Kathy Neset
Mac McLennan
Terry Goerger
Courtney Heiser
Reice Haase
Erin Steig
Brenna Jessen

Executive Session concluded and Open Session resumed at 11:18 a.m.

Rep. Bosch recapped the discussion by noting there are two excellent fertilizer projects being proposed, and the Advisory Board had a robust discussion and had to make difficult decisions.

A motion was made by Mr. Mac McLennan to split the dollars, with \$75 million going to Prairie Horizon Energy Solutions LLC and \$50 million going to NextEra Energy Resources. Each applicant has 30 days to accept the offer of the funds and successful collusion of the loan convenance with the bank as it relates to final completion in terms of eligibility. If one participant chooses not to accept

the offer, the full \$125 million would go to the other participant. Mr. Jim Arthaud seconded the motion.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-C “Green” Pig Iron Production Facility

- Applicant: Scranton Holding Company/North American Iron, Inc.
- Description: Construction of processing facility in ND capable of producing 2 million tons/year of near carbon-neutral pig iron; 0.1 ton CO₂/ton pig iron vs. 2.3 tons CO₂/ton traditional pig iron, over a 96% CO₂ reduction; CO₂ sequestration of 1.6 million tons/year
- Category: Low-carbon materials
- \$12,000,000 Grant Funding Requested
- \$2,000,000,000 Total Project Cost
- Other state programs and incentives include a request pending with the ND Development Fund for \$3,000,000 equity investment.
- Independent Technical Review Average Score: 188/315 (questionable)
- Comments: The project is a significant economic opportunity for the state of North Dakota, as well as a technically sound proposal. Concerns included waste and permitting, if there is a need for waste disposal in North Dakota, and if there is a regulatory risk surrounding the waste disposal and permits needed. The Advisory Board would have liked to have seen firmer commitments.
- Technical Review Committee Score: 39.13/50
- Determination: Feasible With Conditions; need to clarify how project waste will be disposed of

C-05-D Unlocking the Full Potential of Produced Water as a Key Component of Clean Sustainable Energy

- Applicant: Wellspring Hydro
- Description: Continued engineering and design, as well as an “issue for purchase,” to make downpayments on equipment for its proposed produced water recycling facility in Williams County
- Category: Produced Water Recycling
- \$5,000,000 Grant Funding Requested
- 25,000,000 Loan Requested
- \$324,730,000 Total Project Cost
- Other state programs and incentives include a \$110,000 grant from the Renewable Energy Program; two promissory notes of \$1,000,000 from the ND Development Fund, and CSEA grants for \$6,000,000
- Independent Technical Review Average Score: 260/315 (good)
- Comments: This project is technically sound and presents a significant opportunity for reducing oilfield waste in North Dakota. Concerns included addressing naturally occurring radioactive materials and economics on producing from waste.
- Technical Review Committee Score: 36.25/50
- Determination: Feasible With Conditions; previous grant project (C-04-11) must be completed first before funding for this request is recommended

C-05-E Blue Ammonia Facility

- Applicant: Catalyst Midstream (USA) LLC
- Description: Construction of blue ammonia facility in Berthold, ND, capable of producing 1,080,000 tons/year; would use approximately 120,000 mcf gas/day; CO₂ sequestration of 2.5 million tons/year
- Category: Fertilizer
- \$10,000,000 Grant Funding Requested
- \$960,000,000 Total Project Cost
- Other state programs and incentives include a request pending loan application with the ND Development Fund for \$27,500,000.
- Independent Technical Review Average Score: 266/315 (good)
- Comments: This project has a strong economic impact for our State, is in a great location, has solid engineering, and is technically sound. Concerns included the lower amount of private funding for the upfront feed work, reliance on Asian export markets, and a lack of information on long-term storage.
- Technical Review Committee Score: 38.88/50
- Determination: Feasible With Conditions; need to clarify if there is a firm commitment for rail transportation. Mr. Haase noted that he received communication with BNSF, and they indicated they are a carrier and there are no concerns with the transport of ammonia.

C-05-G Marathon Petroleum Dickinson Renewable Fuel Facility Expansion

- Applicant: EERC
- Description: Expansion of Dickinson renewable fuels refinery to add sustainable aviation fuel production; would reduce carbon-intensity of the facilities products by more than 20%
- Category: Low-Carbon Fuels
- \$10,000,000 Grant Funding Requested
- \$21,761,930 Total Project Cost
- Other state programs and incentives include a \$100,000 Renewable Energy Program grant for a carbon capture project.
- Independent Technical Review Average Score: 259/315 (good)
- Comments: This project aligns with CSEA goals, has a strong market, interest in sustainable aviation fuel, and clear synergies with existing projects. Concerns include that it is unclear if feed stock for oils is ready to scale up for the facility, and what criteria must be met for the project to proceed past the feed study.
- Technical Review Committee Score: 41.86/50
- Determination: Feasible

C-05-H Demonstration and Scale-Up of a Low-Cost, Long-Duration Energy Storage Technology for Lithium-Ion Batteries

- Applicant: Dakota Lithium Materials
- Description: Construction of demonstration facility at UND for production of 1,000 tons/year of lithium iron phosphate materials; feedstock for lithium-ion batteries; 99% reduction in water use, 51% reduction in electric use, 51% reduction in CO₂ emissions
- Category: Low-Carbon Manufacturing
- \$4,000,000 Grant Funding Requested
- \$10,250,000 Total Project Cost
- Other state programs and incentives: none
- Independent Technical Review Average Score: 267/315 (good)

- Comments: This project has strength of product produced, a demonstrated track record of sponsors, and a technically sound proposal. Concerns included an aggressive timeframe and availability of out-of-state project management partner.
- Technical Review Committee Score: 37.57/50
- Determination: Feasible

C-05-I Grand Power North Dakota Battery Manufacturing Plant

- Applicant: Packet Digital
- Description: Construction of high-energy density lithium-ion battery manufacturing facility in Fargo, ND; 10x life cycle of currently available batteries; 2,000 batteries/day
- Category: Low-Carbon Manufacturing
- \$10,000,000 Grant Funding Requested
- \$17,355,992 Loan Requested
- \$56,558,592 Total Project Cost
- Other state programs and incentives include \$500,000 revolving working capital from the ND Development Fund, \$999,999 equity investment (New Venture Fund) from the ND Development Fund, \$200,000 interest-rate buydown from BND PACE, and \$2,225,000 grants for five phases of work from the Renewable Energy Program.
- Independent Technical Review Average Score: 223/315 (good)
- Comments: This project offers great domestic opportunities with most batteries currently being imported, a demonstrated track record with battery technology, and strong partnerships. Concerns included that the proposal would have been stronger if it was focused on sourcing raw materials for the batteries in North Dakota, the availability of raw materials in the market, and if the data in the proposal justifies the large “ask”
- Technical Review Committee Score: 39.29/50
- Determination: Feasible

C-05-K Cerilon GTL

- Applicant: Cerilon
- Description: Continued front-end engineering and design of Trenton gas-to-liquids facility; conversion of 240,000-280,000 mcf natural gas/day into 24,000 bpd of base oils and synthetic lubricants with carbon capture up to 2 million tons per year
- Category: Value-Added Natural Gas Processing
- \$20,000,000 Grant Funding Requested
- \$80,000,000 Loan Requested
- \$3,600,000,000 Total Project Cost
- Other state programs and incentives include a \$40,000,000 loan and \$7,000,000 grant with CSEA, and a \$3,000,000 loan from the ND Development Fund. In addition, there is a \$16,000,000 loan with Williams County and a \$5,000,000 loan with McKenzie County.
- Independent Technical Review Average Score: 267/315 (good)
- Comments: The proposal is technically sound, has a strong team, and a large user of natural gas which is a strategic need for North Dakota. Concerns include a high reliance on state and local funding, and external forces could be the greatest threat with regulatory changes that could lead to challenges
- Technical Review Committee Score: 44.57/50
- Determination: Feasible

C-05-L NDeV Flare Gas Mitigation Project

- Applicant: ND Energy Ventures
- Description: Demonstration project for conversion of natural gas into carbon black and zero-carbon hydrogen using absolute pyrolysis technology; focused on the capture of gas that would have otherwise been flared; up to 5.7 million tons/year of CO₂ emissions avoided
- Category: Natural Gas Capture
- \$3,000,000 Grant Funding Requested
- \$10,000,000 Loan Requested
- \$30,000,000 Total Project Cost
- Other state programs and incentives: none within the last five years
- Independent Technical Review Average Score: 157/315 (questionable)
- Comments: The project could present an opportunity to address flaring and the flare-gas conversion process. Concerns include a lack of information on other financial support, and there is a need for a large volume of gas, and if there are enough wells to meet the need. The Advisory Board would have liked to see a firm commitment from oil and gas producers related to the project.
- Technical Review Committee Score: 29.57/50
- Determination: Not Feasible

Rep. Glenn Bosch asked for a motion to be made to enter into Executive Session to discuss confidential information.

A motion was made by Mr. (inaudible) and seconded by Mr. Terry Goerger that under the authority of the N.D.C.C. 54-63.1-06 and 44-04-19.2.1 that the Clean Sustainable Authority Advisory Board enter into Executive Session for the purpose of considering Clean Sustainable Energy confidential information.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

Rep. Glenn Bosch stated that the Clean Sustainable Energy Authority Advisory Board is entering into Executive Session to discuss confidential information. He stated that only CSEA members and ND Industrial Commission staff will be present during Executive Session. Any formal action will be taken in Open Session. Sen. Patten reminded those present that the discussion must be limited to the announced purpose, which is projected to last approximately 1 hour.

Executive Session began at 3:50 p.m.

The Meeting Closed to the Public for Executive Session Pursuant to NDCC 54-63.1-06 and 44-04-19.2.1.

CLEAN SUSTAINABLE ENERGY AUTHORITY ADVISORY BOARD EXECUTIVE SESSION

Present:

Rep. Glenn Bosch

Sen. Dale Patten

Al Christianson

Chris Friez

Jim Arthaud
Joel Brown
Kathy Neseet
Mac McLennan
Terry Goerger
Courtney Heiser
Reice Haase
Erin Steig
Brenna Jessen

Executive Session concluded and Open Session resumed at 5:11 p.m.

Rep. Glenn Bosch stated it was time to vote on funding recommendations for each applicant.

Voting results are as follows:

C-05-C:

A motion was made by Ms. Kathy Neseet and seconded by Mr. Chris Friez to recommend funding a \$7,000,000 grant for the “Green” Pig Iron Production Facility. No discussion was offered.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neseet, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-D:

A motion was made by Mr. Joel Brown and seconded by Mr. Terry Goerger to recommend funding in the amount of \$2.5 million loan for the Unlocking the Full Potential of Produced Water. Discussion included Sen. Dale Patten noting this was an exception to the CSEA policy of the \$10 million minimum. A committee member stated he thought the project was worthy of merit and funding in the past; they want to continue supporting the project and note it’s the third time the grantee has come back and asked for support. This is the reason the amount awarded is significantly less than what was requested.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neseet, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-E:

A motion was made by Ms. Kathy Neseet and seconded by Mr. Jim Arthaud not to fund the Blue Ammonia Facility. Discussion included it is a worthy project but it’s too early in the work the grantee is doing. The Advisory Board would like to see more planning done in the funding model.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neseet, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-G:

A motion was made by Mr. (inaudible) and seconded by Mr. Al Christianson to recommend funding a \$3.3 million grant for the Dickinson Renewable Fuel Facility Expansion. No discussion was offered.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-H:

A motion was made by Mr. Chris Friez and seconded by Mr. Mac McLennan to recommend funding a \$2 million grant for Energy Storage Technology for Lithium-Ion Batteries. Discussion included Mr. Friez said this project helps solve a significant problem of reliance on foreign supply and provides CSEA funding to an area we haven't funded before.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-I:

A motion was made by Mr. Al Christianson and seconded by Mr. Chris Friez to recommend funding a \$17 million loan and \$0 in a grant for Grand Power North Dakota Battery Manufacturing Plant. No discussion was offered.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-K:

A motion was made by Mr. (inaudible) and seconded by Mr. Joel Brown to recommend funding a \$9.5 million grant and an \$8.5 million loan to Cerilon GTL with the caveat that the funds need to be matched by private funds. Discussion included Sen. Dale Patten noting the loan amount is a policy exception.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

C-05-L:

A motion was made by Mr. (inaudible) and seconded by Mr. (inaudible) to recommend not funding either a loan or grant for the NDeV Flare Gas Mitigation Project. Discussion focused on the recommendation of the Technical Review Committee, who did not believe the project was technically feasible.

On a roll call vote Rep. Glenn Bosch, Sen. Dale Patten, Al Christianson, Chris Friez, Jim Arthaud, Joel Brown, Kathy Neset, Mac McLennan, and Terry Goerger voted aye. The motion carried unanimously.

Mr. Jim Arthaud asked if the applicants were aware of how much was available in the form of loans and grants. Rep. Glenn Bosch said yes.

Sen. Dale Patten thanked the Technical Review committee and the CSEA Advisory Board. He said it was a difficult process, with tremendous projects and hard decisions. He said he appreciates what has been done during the meetings, and that he is proud of the thoroughness and integrity offered to the program, and the depth they go into. He said they have the ability to make a difference, and that the work is warranted for continued funding. He also thanked the staff at Bank of North Dakota and the Industrial Commission for preparing for the meetings. Rep. Glenn Bosch agreed.

Other Business

- None

With no further business, Rep. Bosch adjourned the meeting.

Rep. Glenn Bosch, Co-Chairman

Sen. Dale Patten, Co-Chairman