2023 HOUSE FINANCE AND TAXATION

HB 1511

2023 HOUSE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Room JW327E, State Capitol

HB 1511
2/8/2023

A bill relating to a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

Chairman Headland opened the hearing at 9:06AM.

Members present: Chairman Headland, Vice Chairman Hagert, Representative Anderson, Representative Bosch, Representative Dockter, Representative Fisher, Representative Grueneich, Representative Hatlestad, Representative Motschenbacher, Representative Olson, Representative Steiner, Representative Toman, Representative Finley-DeVille, and Representative Ista. No members absent.

Discussion Topics:

- Production and processing of critical minerals
- Rare earth elements
- Tax exemptions
- Construction of processing facilities
- Proposed amendment 23.0961.01002

Representative Novak introduced the bill in support (#19774, 19778) and distributed a proposed amendment 23.0961.01002 (#19781).

Josh Teigen, Commissioner for the North Dakota Department of Commerce and Chair of EmPower North Dakota Commission, testified in support (#19567).

Jason Bohrer, President and Chief Executive Officer with Lignite Energy Council, testified in support (#19701).

David Straley, Director of Government and Public Affairs with North American Coal Corporation, testified verbally in support and explained a proposed amendment handed out by Representative Novak, 23.0961.01002.

Brian Kalk, Assistant Vice President for Strategic Partnerships with Energy and Environmental Research Center, testified in support (#19749). Mr. Kalk proposed a verbal amendment to strike “natural” and just say “graphite” on page two, line three.

Geoff Simon, Executive Director with Western Dakota Energy Association, testified in support (#19690).

Charles Dendy, Legal Counsel with the North Dakota Tax Department, answered questions from the committee.

Chairman Headland closed the hearing at 10:08AM.

Mary Brucker, Committee Clerk

2023 HOUSE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Room JW327E, State Capitol

HB 1511
2/15/2023

A bill relating to a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

Chairman Headland opened the meeting at 11:05AM.

Members present: Chairman Headland, Vice Chairman Hagert, Representative Anderson, Representative Bosch, Representative Dockter, Representative Fisher, Representative Grueneich, Representative Hatlestad, Representative Motschenbacher, Representative Olson, Representative Steiner, Representative Toman, Representative Finley-DeVille, and Representative Ista. No members absent.

Discussion Topics:

- Proposed amendment 23.0961.01003
- Committee vote

Chairman Headland distributed proposed amendments 23.0961.01003 (#20892, 20893).

Charles Dendy, Legal Counsel with the North Dakota Tax Department, explained the proposed amendment.

Representative Toman moved to adopt amendment 23.0961.01003.

Representative D. Anderson seconded the motion.

Roll call vote:

Representatives	Vote
Representative Craig Headland	Y
Representative Jared Hagert	Y
Representative Dick Anderson	Y
Representative Glenn Bosch	Y
Representative Jason Dockter	Y
Representative Lisa Finley-DeVille	Y
Representative Jay Fisher	Y
Representative Jim Grueneich	Y
Representative Patrick Hatlestad	Y
Representative Zachary Ista	Y
Representative Mike Motschenbacher	Y
Representative Jeremy Olson	Y
Representative Vicky Steiner	Y
Representative Nathan Toman	Y

Motion carried 14-0-0

Representative Motschenbacher moved a Do Pass as Amended.

Representative Fisher seconded the motion.

Roll call vote:

Representatives	Vote
Representative Craig Headland	Y
Representative Jared Hagert	Y
Representative Dick Anderson	Y
Representative Glenn Bosch	Y
Representative Jason Dockter	Y
Representative Lisa Finley-DeVille	Y
Representative Jay Fisher	Y
Representative Jim Grueneich	Y
Representative Patrick Hatlestad	Y
Representative Zachary Ista	Y
Representative Mike Motschenbacher	Y
Representative Jeremy Olson	Y
Representative Vicky Steiner	Y
Representative Nathan Toman	Y

Motion carried 14-0-0

Representative D. Anderson is the bill carrier.

Chairman Headland adjourned at 11:15AM.

Mary Brucker, Committee Clerk

Prepared by the Legislative Council staff for
Representative Headland
February 15, 2023

2-15-23

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1511

Page 1, line 1, replace the second "and" with a comma

Page 1, line 2, after "57-40.2-03.3" insert ", and a new section to chapter 57-61"

Page 1, line 4, after "feedstock" insert "and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock"

Page 1, line 18, after "property" insert "other than electricity, water, gas, or steam"

Page 1, line 18, after the underscored comma insert "including"

Page 1, line 18, replace "containing" with "from which"

Page 1, line 19, remove ", or critical minerals or rare earth"

Page 1, line 20, replace "elements" with "have been extracted"

Page 2, line 1, remove "natural"

Page 2, remove line 8

Page 2, after line 15, insert:

"**SECTION 3.** A new section to chapter 57-61 of the North Dakota Century Code is created and enacted as follows:

Severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

1. Severance tax may not be imposed on the first one million tons [907,184.74 metric tons] of coal per year used as a feedstock by a coal processing facility that utilizes coal as a feedstock in this state as defined in section 1 of this Act.

2. The owner or operator of a coal processing facility that utilizes coal as a feedstock shall certify to the coal mine owner or operator the amount of coal measured in tons:

   a. Purchased for use as a feedstock by the facility.

   b. Used as a feedstock by the facility for extraction of critical minerals or rare earth elements from lignite coal.

   c. Used as a feedstock by the facility to create tangible personal property other than electricity, water, gas, or steam from lignite coal, including lignite coal from which critical minerals or rare earth elements have been extracted.

   d. Resold or used in any manner other than as a feedstock at the facility, including use in an electrical generating plant or coal gasification facility.

3. The coal mine owner or operator shall report the amounts certified under subsection 2. The amount of coal certified under subdivision d of subsection 2 is not eligible for the exemption in this section. The coal mine owner or operator shall report the amount of coal certified under subdivision d of subsection 2 on its return for the month following the month of certification and shall remit the severance tax due with the return. The tax commissioner shall waive penalty and interest under section 57-61-05 for severance tax remitted in accordance with this subsection."

Renumber accordingly

REPORT OF STANDING COMMITTEE

HB 1511: Finance and Taxation Committee (Rep. Headland, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (14 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). HB 1511 was placed on the Sixth order on the calendar.

Page 1, line 1, replace the second "and" with a comma

Page 1, line 2, after "57-40.2-03.3" insert ", and a new section to chapter 57-61"

Page 1, line 4, after "feedstock" insert "and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock"

Page 1, line 18, after "property" insert "other than electricity, water, gas, or steam"

Page 1, line 18, after the underscored comma insert "including"

Page 1, line 18, replace "containing" with "from which"

Page 1, line 19, remove ", or critical minerals or rare earth"

Page 1, line 20, replace "elements" with "have been extracted"

Page 2, line 1, remove "natural"

Page 2, remove line 8

Page 2, after line 15, insert:

"**SECTION 3.** A new section to chapter 57-61 of the North Dakota Century Code is created and enacted as follows:

Severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

1. Severance tax may not be imposed on the first one million tons [907,184.74 metric tons] of coal per year used as a feedstock by a coal processing facility that utilizes coal as a feedstock in this state as defined in section 1 of this Act.

2. The owner or operator of a coal processing facility that utilizes coal as a feedstock shall certify to the coal mine owner or operator the amount of coal measured in tons:

   a. Purchased for use as a feedstock by the facility.

   b. Used as a feedstock by the facility for extraction of critical minerals or rare earth elements from lignite coal.

   c. Used as a feedstock by the facility to create tangible personal property other than electricity, water, gas, or steam from lignite coal, including lignite coal from which critical minerals or rare earth elements have been extracted.

   d. Resold or used in any manner other than as a feedstock at the facility, including use in an electrical generating plant or coal gasification facility.

3. The coal mine owner or operator shall report the amounts certified under subsection 2. The amount of coal certified under subdivision d of subsection 2 is not eligible for the exemption in this section. The coal

mine owner or operator shall report the amount of coal certified under subdivision d of subsection 2 on its return for the month following the month of certification and shall remit the severance tax due with the return. The tax commissioner shall waive penalty and interest under section 57-61-05 for severance tax remitted in accordance with this subsection."

Renumber accordingly

2023 SENATE FINANCE AND TAXATION

HB 1511

2023 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1511
3/21/2023

Relating to a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

9:00 AM Chairman Kannianen opens hearing.
Senator Present: **Kannianen, Weber, Patten, Rummel, Piepkorn, Magrum.**

Discussion Topics:

- Coal facilities
- Investment opportunity
- Rare earth metals
- Lignite Coal

9:03 AM Representative Novak introduced bill. #26077

9:08 AM David Straley, Director of Government and Public Affairs for the North American Coal Corporation, verbally testified in favor.

9:40 AM Brian Kalk, Assistant VP for Strategic Partnerships for EERC, testified in favor. #25756

9:59 AM Geoff Simon, Executive Director for Western ND Energy Association, verbally testified in favor.

10:03 AM Charles Dendy, ND Tax Department Legal Counsel, verbally testified neutral.

10:04 AM Jason Bohrer, President, and CEO for Lignite Energy Council, testified in favor. #26020, #26191

10:12 AM Chairman Kannianen adjourned hearing.

Nathan Liesen, Committee Clerk

2023 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1511
3/21/2023

Relating to evaluation of economic development tax incentives, a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock, and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date.

2:36 PM Chairman Kannianen opened the meeting.

Senators present: **Kannianen, Weber, Patten, Rummel, Piepkorn, Magrum.**

Discussion Topics:

- Feedstock
- Critical Minerals
- Rare Earth Minerals

2:40 PM Senator Weber moved Do Pass.

2:40 PM Senator Patten seconded.

2:42 PM Charles Dendy, Legal counsel for the ND Tax Department, answered questions.

2:56 PM Motion is tabled.

2:57 PM Chairman Kannianen closed the meeting.

Nathan Liesen, Committee Clerk

2023 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1511
3/22/2023

Relating to evaluation of economic development tax incentives, a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock, and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date.

9:47 AM Chairman Kannianen opened the meeting.

Senators present: **Kannianen, Weber, Patten, Rummel, Piepkorn, Magrum.**

Discussion Topics:

- Coal Development Trust Fund
- School Loans
- Investment Fund
- Incentives

10:00 AM Charles Dendy, ND Tax Department answered questions.

10:20 AM Dee Wald, ND Tax Department answered questions.

10:27 AM Senator Kannianen closed the meeting.
Nathan Liesen, Committee Clerk

2023 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1511
3/27/2023

Relating to evaluation of economic development tax incentives, a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock, and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date.

10:49 AM Chairman Kannianen opened the meeting.
Senators present: **Kannianen, Weber, Patten, Piepkorn, Magrum.**
Senators absent: **Rummel**

Discussion Topics:

- Committee action

10:50 AM Senator Patten moved to adopt amendment LC 23.0961.02001.
10:51 AM Senator Magrum seconded.

Senators	Vote
Senator Jordan Kannianen	Y
Senator Mark F. Weber	Y
Senator Jeffery J. Magrum	Y
Senator Dale Patten	Y
Senator Merrill Piepkorn	Y
Senator Dean Rummel	AB

Motion passed 5-0-1

10:51 AM Senator Magrum moved a Do Pass as amended.
10:51 AM Senator Patten seconded.

Senators	Vote
Senator Jordan Kannianen	Y
Senator Mark F. Weber	Y
Senator Jeffery J. Magrum	Y
Senator Dale Patten	Y
Senator Merrill Piepkorn	Y
Senator Dean Rummel	AB

10:52 AM Senator Kannianen held the vote open for Senator Rummel, who voted on March 27, 2023 at 11:20AM.

10:53 AM Senator Kannianen closed the meeting.

Nathan Liesen, Committee Clerk

23.0961.02001
Title.03000

Prepared by the Legislative Council staff for
the Senate Finance and Taxation Committee
March 24, 2023

3-27-23

PROPOSED AMENDMENTS TO ENGROSSED HOUSE BILL NO. 1511

Page 1, line 1, after "enact" insert "a new subdivision to subsection 3 of section 54-35-26,"

Page 1, line 3, after the first "to" insert "evaluation of economic development tax incentives,"

Page 1, line 4, after "feedstock" insert a comma

Page 1, after line 7, insert:

"**SECTION 1.** A new subdivision to subsection 3 of section 54-35-26 of the North Dakota Century Code is created and enacted as follows:

Sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock."

Page 2, line 16, replace "1" with "2"

Page 2, line 23, replace "1" with "2"

Page 3, line 10, replace "This" with "Sections 2, 3, and 4 of this"

Page 3, line 10, replace "is" with "are"

Renumber accordingly

2023 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

HB 1511
3/27/2023

Relating to evaluation of economic development tax incentives, a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock, and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date."Click here to type Bill or Resolution title"

11:19 AM Chairman Kannianen opened the meeting.

Senators present: **Kannianen, Weber, Patten, Piepkorn, Magrum.**

Discussion Topics:

- Committee action

11:19 AM On March 27, 2023 at 10:51AM, **Senator Magrum** moved Do Pass as Amended, Senator Patten seconded. The vote was held open for **Senator Rummel**, who was absent. At this time, **Chairman Kannianen** resumed roll call vote.

Final roll call vote.

Senators	Vote
Senator Jordan Kannianen	Y
Senator Mark F. Weber	Y
Senator Jeffery J. Magrum	Y
Senator Dale Patten	Y
Senator Merrill Piepkorn	Y
Senator Dean Rummel	Y

Motion passed 6-0-0

Senator Magrum will carry the bill.

11:22 AM Chairman Kannianen closed the meeting.

Nathan Liesen, Committee Clerk

REPORT OF STANDING COMMITTEE

HB 1511, as engrossed: Finance and Taxation Committee (Sen. Kannianen, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (6 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). Engrossed HB 1511 was placed on the Sixth order on the calendar. This bill affects workforce development.

Page 1, line 1, after "enact" insert "a new subdivision to subsection 3 of section 54-35-26,"

Page 1, line 3, after the first "to" insert "evaluation of economic development tax incentives,"

Page 1, line 4, after "feedstock" insert a comma

Page 1, after line 7, insert:

"**SECTION 1.** A new subdivision to subsection 3 of section 54-35-26 of the North Dakota Century Code is created and enacted as follows:

Sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock."

Page 2, line 16, replace "1" with "2"

Page 2, line 23, replace "1" with "2"

Page 3, line 10, replace "This" with "Sections 2, 3, and 4 of this"

Page 3, line 10, replace "is" with "are"

Renumber accordingly

TESTIMONY

HB 1511

NORTH Dakota | Commerce
Be Legendary.

Testimony in Support of
House Bill No. 1511
House Finance and Taxation Committee
February 8, 2023

TESTIMONY OF
Josh Teigen, Commissioner, ND Department of Commerce

Mr. Chairman and members of the committee. My name is Josh Teigen and I have the privilege of serving as the Commissioner for the ND Department of Commerce and by statute also the chair of the EmPower ND Commission.

I am here today in support of 1511 both as the Commissioner of Commerce and on behalf of the EmPower ND Commission as its chairman.

ND prides itself on being a business-friendly state. A state with a favorable regulatory environment, low taxes, and an approach that innovation trumps regulation. This bill supports these principles that we have used to build our state as a great place to invest and do business.

This proposed tax exemption is for new facilities, therefore not decreasing current state revenues.

These facilities will diversify the North Dakota lignite industry by linking it to the production of rare earth elements and critical minerals. North Dakota is well-versed in adding value to its abundant commodities. We strive to stimulate growth in industries via value-added agriculture, value-added manufacturing, value-added energy and now to value-added lignite.

Lignite processing facilities that target rare earth elements or critical minerals will supplement multiple other industries to include advanced manufacturing facilities specializing in building materials, battery manufacturers, and other industries that require access to the very valuable rare earth elements and critical minerals. These facilities could also play a vital role in the development of the next generation of fuel with the establishment of hydrogen hubs. These factors will allow lignite to play a vital role in the next generation of options to provide the world with alternative energy.

Sourcing these rare earth elements and critical minerals in North Dakota will help alleviate the foreign supply chain issues we are currently experiencing. This local sourcing will also support the “Made in America” requirements of many federal contracts.

Both Commerce and EmPower ND believe this bill to be beneficial to the future of our economy. There is so much opportunity on the horizon and by enacting policies such as this, we signal to the world that ND is changing course and taking a stance of regulation over innovation. The passage of this bill will allow us to maintain critical investments that will contribute to a quality of life and economic opportunity for all citizens of ND.

Mr. Chairman and members of the committee, on behalf of EmPower ND and Commerce, I strongly urge you to vote yes on this bill and I will be happy to stand for any questions you may have.

WESTERN DAKOTA ENERGY ASSOCIATION

February 8, 2023

Testimony of:
Geoff Simon, Lobbyist #144
in support of HB 1511 – Incentives for Mineral Extraction from Coal
House Finance and Taxation Committee

Chairman Headland and Committee members:

On behalf of the city, county and school district members of the Western Dakota Energy Association (WDEA), we wish to express our support for HB 1511 which creates a tax incentive for the extraction of valuable minerals from North Dakota lignite deposits.

I'm certain the committee will hear from other witnesses, from the Department of Mineral Resources and/or the Energy and Environmental Research Center, that there are relatively high concentrations of rare earth elements in western North Dakota coal seams. However, bringing the extraction of these elements to commercialization is a tall task, but HB 1511 would give the prospect a boost by providing a sales tax exemption on the components used in the construction of a coal-processing facility.

Again, other witnesses can offer further details, but we know these valuable minerals are essential to the production of modern electronic devices and electric vehicles. The downside is that manufacturers of these cutting-edge materials are currently heavily reliant on foreign countries, predominantly China, for the supply of these materials. As noted, developing technology to extract rare earth elements from North Dakota lignite is a heavy lift, but given the status of geopolitical events (national security interests), it's a venture we must pursue.

WDEA (the Coal Conversion Counties Association is a subset of our association) understands that an amendment will be offered to provide a severance tax exemption for the first million tons of lignite coal mined for mineral extraction. We further understand if the coal remnants of any extraction process are later combusted for electric generation, that the severance tax will be applied to the differential. WDEA and the CCCA are supportive of this amendment as well as the body of the original bill. The math is simple: nothing from nothing leaves nothing, so we support any effort, including tax incentives, to extract additional value from lignite.

Thank you for the opportunity to testify on this important topic.

Western Dakota Energy Association
1661 Capitol Way, Bismarck ND 58501
www.ndenergy.org • 701-527-1832

Lignite Energy Council
LEADING THROUGH ADVOCACY AND INNOVATION

February 8, 2023

Chairman Headland and House Finance and Taxation Committee Members,

On behalf of the members of the Lignite Energy Council, I am submitting testimony today in support of House Bill 1511. The Lignite Energy Council consists of over 250 members representing lignite mines, electric utilities, independent power producers and contractor suppliers in the Upper Midwest. The lignite industry accounts for over 13,000 direct and indirect jobs, over $5.4 billion in economic development and millions in state, county and local tax revenue.

House Bill 1511 positions our state to be a leader in domestic rare earth and critical mineral production. North Dakota's geology is abundantly blessed with rich mineral deposits that include an 800-year supply of lignite coal which produces around 30 million tons on an annual basis. In addition to its current uses in producing electricity, synthetic natural gas and fertilizer products, North Dakota lignite offers numerous additional value-added opportunities including the key mechanisms that are used in national defense systems such as aircrafts and satellite communications, battery fuel cells, computer hard drives and medical imaging equipment. In addition, there are other uses that are being developed using lignite in home construction materials and aggregates for public roads.

Over the past few years, the Industrial Commission and the Lignite Research Council has been funding multiple projects to develop the extraction processes that result in the production of rare earth and critical minerals. This is a significant opportunity to diversify and expand the production of one of North Dakota's most valuable natural resource commodities. This bill helps bring this important research closer to the commercialization phase by adding tax incentives and to bring global companies who are looking for the right business opportunities in mineral processing to invest in North Dakota's economy.

For these reasons, the Lignite Energy Council supports House Bill 1511 and we respectfully ask that the committee move to give this legislation a "Do Pass" recommendation.

Thank you for your consideration,

Jason Bohrer
President and CEO

1016 E. Owens Ave. | PO Box 2277 | Bismarck, ND 58502
701.258.7117 www.lignite.com LEC@lignite.com

Energy & Environmental Research Center
15 North 23rd Street, Stop 9018 • Grand Forks, ND 58202-9018 • P. 701.777.5000 • F. 701.777.5181
www.undeerc.org

House Bill 1511

Testimony of Brian Kalk, Assistant Vice President for Strategic Partnerships

University of North Dakota Energy & Environmental Research Center

House Finance and Taxation Committee

February 8, 2023

Mr. Chairman and members of the committee, thank you for the opportunity to provide testimony concerning House Bill 1511. My name is Brian Kalk, and I am an Assistant Vice President for Strategic Partnerships at the University of North Dakota's (UND's) Energy & Environmental Research Center (EERC).

The EERC has a long history of working closely with North Dakota's lignite coal industry for the benefit of the industry and the citizens of North Dakota. We have more than 70 years of experience providing solutions for clean, efficient coal combustion. Additionally, we have extensive research and expertise in advanced materials, including critical minerals (CMs), rare-earth elements (REEs), and high-value carbon products. These advanced materials could have diverse applications in energy technologies, lithium-ion battery materials, and consumer technologies that can greatly enhance the national security of the United States. I would like to highlight that over 99% of the REEs and CMs used by the United States today are produced from outside of our borders. Currently, the EERC is involved in numerous projects with the Department of Energy and regional companies dedicated to creating an REE and CM industry in North Dakota to provide a domestic supply of REEs and CMs. The main tasks of this work include the characterization of the resources; development and demonstration of environmentally friendly technologies; and creation of the supporting strategies for infrastructure, industries, and business. The path to establishing an REE and CM value chain is onerous, but not impossible, so early leadership is crucial to sustain North Dakota's prospective role as a leading supplier of these important materials. Risk mitigation, such as that provided by this legislation, sends a strong signal to those contemplating investment.

#19774

North Dakota House of Representatives

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360

Representative Anna S. Novak
District 33
1139 Elbowoods Drive
Hazen, ND 58545-4923
anovak@ndlegis.gov

COMMITTEES:
Education
Energy and Natural Resources

February 7, 2023

Mr. Chairman, members of the committee - for the record, my name is Anna Novak, representative from District 33, proudly serving Coal Country. You have before you HB1511. This bill incentivizes companies to come to North Dakota and use our resources for the production and processing of critical minerals and rare earth elements by offering up-front tax breaks for new businesses. I believe HBISll position's North Dakota to be a leader in the domestic production of rare earth elements and critical minerals found in our state's natural resources.

Critical minerals and rare earth elements are needed for basically anything in the technology sector. From our cell phones, the computer chips in laptops, vehicles and military aircraft, critical minerals and rare earth elements are a major component used in the devices that keep us connected. Nearly 100% of these materials are secured from China so right now, we are completely reliant upon them for these items. Obviously, it's not good to be reliant on another country for anything, but for that country to be communist China is a very big problem. It's actually a national security risk. It's also estimated that they will run out of these materials in the next 5-10 years so regardless of the desire to halt business with China, it's a necessity to find these materials elsewhere.

I've included some information I obtained when I visited the EERC last fall and I've included it with your packet. I'd like you to take a look at the Periodic Table section on the front. On the left, it shows an iPhone and lists some of the elements needed to create some of the different components within it. If you look to the right, you'll see the Periodic Table. The elements with a blue box around them are elements that have been located within North Dakota's lignite coal seams. As you can see, there are high concentrations of extremely important and valuable materials right here in North Dakota.

Combine that, the fact that the coal mines here in North Dakota are not just already permitted but are already operating, our state's business-friendly environment and the favorable tax policy in this bill, I whole-heartedly believe that North Dakota will stand out from other states when a company is choosing where they want to do business.

I have Jason Bohrer from the Lignite Research Council, David Straley from NACCO industries, Lynn Helms from the Department of Minerals and Brian Kalk from the EERC planning to testify in favor of this bill. Technical questions would probably be best directed to them but I would be happy to answer any questions on what this bill means to my district specifically.

We have an incredible opportunity to develop these extremely valuable and lucrative materials right here. It's truly a "plus one" for our state and my district specifically because the materials have to be processed on site. After the supply chain issues we all experienced the last three years, I believe there is an awareness of how important it is for America to focus on keeping our supply chains right here in our country. We can do that right here in North Dakota and the time is now. With that, I'll answer any questions you have.

EERC | UND UNIVERSITY OF NORTH DAKOTA

Rare-Earth Elements

WHY ARE RARE-EARTH ELEMENTS IMPORTANT?

Rare-earth elements (REEs) are elements with special properties that make them useful in high-technology products, such as smart phones, catalysts, hard drives, hybrid electric vehicle engines, lasers, magnets, medical devices, and televisions.

NEW SOURCES OF REEs ARE NEEDED

Currently, the United States is 100% reliant on imports of REEs. China dominates the global market, with over 80% of REE production in 2017. Major growth market, sectors such as wind turbines, hybrid/electric vehicles, and electronics are dependent on REEs. The lack of domestic resources of REEs could be considered a risk to national security and economic prosperity. Coal and coal by-products have been identified as promising domestic sources of REEs.

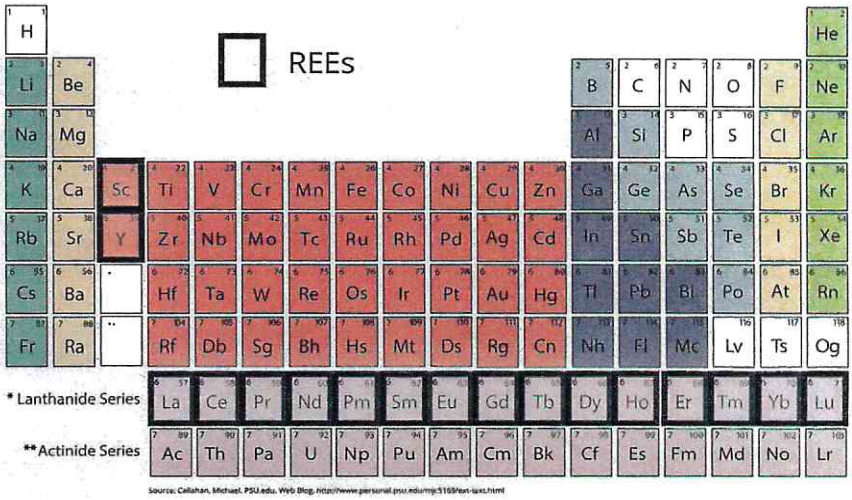
It is estimated that China's high REE resources will be gone by 2025. The most critical REEs are those deemed as having a supply risk and being highly important to U.S. national security and clean energy technologies going forward.

iPhone

Color Screen	**Y, La, Pr, Eu, Gd, Tb, Dy**
Phone Circuitry	**La, Pr, Nd, Eu, Gd**
Speakers	**Pr, Nd, Gd, Dy**
Vibration unit	**Nd, Tb, Dy**

Hybrid Electric Vehicle

Motor	**Nd, Pr, Tb,Dy**
Batteries	**La, Ce, Pr, Nd**
Operating System	**Nd, Pr, Tb,Dy**



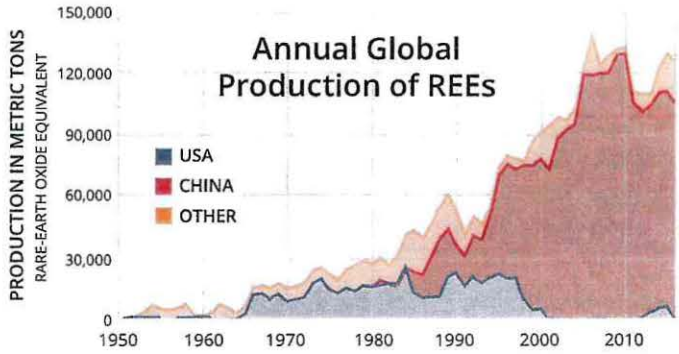
lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu) and transition elements scandium (Sc) and yttrium (Y)

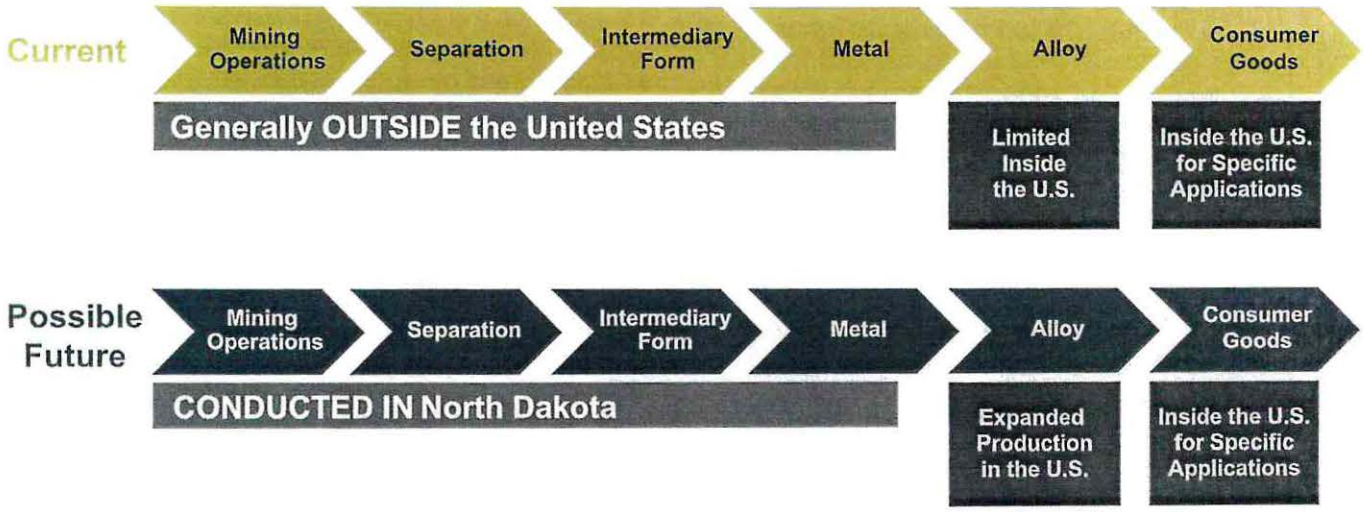
ADVANCING NEW SOURCES OF REEs

The Energy & Environmental Research Center (EERC) is leading several research projects on REEs. We are targeting resources that are associated with the lignite industry in North Dakota for REE recovery. This provides a unique opportunity for leveraging an existing industry that has taken the time and expense to develop the coal mines and utilization infrastructure, reducing the time line to begin an operation for extracting and producing REEs. Value-added usage of low-cost materials associated with the lignite industry also provides unique opportunities to be economically and environmentally responsible.

Despite their name, REEs are not actually rare but are highly distributed. This results in ores where REE content is measured in parts per million (ppm).

Our work has identified coal seams in North Dakota with REE concentrations as high as anything ever measured in coal in the United States. North Dakota is home to the world's largest lignite deposit – 350 billion tons, or enough to provide electricity for the next 800 years. In just one identified coal seam in North Dakota, the potential REE reserves could be 2 million tons. The United States currently uses approximately 16,000 tons of REEs a year.





We are leading the way in REE research and in identifying domestic resources.

For more information on our work with REEs, contact:

Bruce Folkedahl, Ph.D.
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Senior Research Manager
(701) 777-5243
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Brian P. Kalk
Director of Energy Systems Development
(701) 777-5276, bkalk@undeerc.org

John A. Harju
Vice President for Strategic Partnerships
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EERC
UND UNIVERSITY OF NORTH DAKOTA

23.0961.01002

Sixty-eighth
Legislative Assembly
of North Dakota

HOUSE BILL NO. 1511

Introduced by

Representatives Novak, Bosch, Hagert, Headland, Ista, Mock, Porter

Senators Kannianen, Kreun, Patten

A BILL for an Act to create and enact a new section to chapter 57-39.2 ~~and~~, a new subdivision to subsection 3 of section 57-40.2-03.3, and a new section to chapter 57-61 of the North Dakota Century Code, relating to a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. A new section to chapter 57-39.2 of the North Dakota Century Code is created and enacted as follows:

Sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

1. Gross receipts from sales of tangible personal property used to construct or expand a coal processing facility that utilizes coal as a feedstock in this state are exempt from taxes under this chapter. To be exempt, the tangible personal property must be incorporated in the structure of the facility or used in the construction process to the point of having no residual economic value.
2. For purposes of this section:
   a. "Coal processing facility that utilizes coal as a feedstock" means a facility that:
      (1) Extracts critical minerals or rare earth elements from lignite coal; or
      (2) Creates tangible personal property from lignite coal, lignite coal containing critical minerals or rare earth elements, or critical minerals or rare earth elements.
   b. "Critical mineral" means a nonfuel mineral or mineral material essential to the economic or national security of the United States and which has a supply chain

vulnerable to disruption. The term includes aluminum, antimony, arsenic, barite, bauxite, beryllium, bismuth, cesium, chromium, cobalt, fluorspar, gallium, germanium, natural graphite, hafnium, helium, indium, lithium, magnesium, manganese, niobium, platinum group metals, potash, the rare earth elements group, rhenium, rubidium, scandium, strontium, tantalum, tellurium, tin, titanium, tungsten, uranium, vanadium, and zirconium.

c. "Rare earth elements" means any of a series of metallic elements of which the oxides are classed as rare earths and which include the elements of the lanthanide series, yttrium and scandium.

d. "Tangible personal property" does not include electricity, water, gas, and steam.

3. The owner of the facility must receive from the tax commissioner a certificate that the tangible personal property used to construct or expand a facility qualifying under this section which the owner intends to purchase qualifies for the exemption.

SECTION 2. A new subdivision to subsection 3 of section 57-40.2-03.3 of the North Dakota Century Code is created and enacted as follows:

Tangible personal property as authorized or approved for exemption by the tax commissioner as provided in section 1 of this Act.

SECTION 3. A new section to chapter 57-61 of the North Dakota Century Code is created and enacted as follows:

Severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

1. Severance tax may not be imposed on the first one million tons [907,184.7 metric tons] of coal per year used as a feedstock by a coal processing facility that utilizes coal as a feedstock in this state as defined in section 1 of this Act.
2. The owner or operator of a coal processing facility that utilizes coal as a feedstock shall certify to the coal mine owner or operator the amount of coal measured in tons:
   a. Purchased for use as a feedstock by the facility.
   b. Used as a feedstock by the facility.
   c. Resold or used in any manner other than as a feedstock at the facility.
3. The coal mine owner or operator shall report the amounts certified under subsection 2. The amount of coal certified under subdivision c of subsection 2 is not eligible for the

exemption in this section. The coal mine owner or operator shall report the amount of coal certified under subdivision c of subsection 2 on its return for the month following the month of certification and shall remit the severance tax due with the return. The tax commissioner shall waive penalty and interest under section 57-61-05 for severance tax remitted in accordance with this subsection.

SECTION 4. EFFECTIVE DATE. This Act is effective for taxable events occurring after June 30, 2023.

23.0961.01003
Title.

Prepared by the Legislative Council staff for
Representative Headland
February 15, 2023

PROPOSED AMENDMENTS TO HOUSE BILL NO. 1511

Page 1, line 1, replace the second "and" with a comma

Page 1, line 2, after "57-40.2-03.3" insert ", and a new section to chapter 57-61"

Page 1, line 4, after "feedstock" insert "and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock"

Page 1, line 18, after "property" insert "other than electricity, water, gas, or steam"

Page 1, line 18, after the underscored comma insert "including"

Page 1, line 18, replace "containing" with "from which"

Page 1, line 19, remove ", or critical minerals or rare earth"

Page 1, line 20, replace "elements" with "have been extracted"

Page 2, line 1, remove "natural"

Page 2, remove line 8

Page 2, after line 15, insert:

"**SECTION 3.** A new section to chapter 57-61 of the North Dakota Century Code is created and enacted as follows:

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1. Severance tax may not be imposed on the first one million tons [907,184.74 metric tons] of coal per year used as a feedstock by a coal processing facility that utilizes coal as a feedstock in this state as defined in section 1 of this Act.

2. The owner or operator of a coal processing facility that utilizes coal as a feedstock shall certify to the coal mine owner or operator the amount of coal measured in tons:

   a. Purchased for use as a feedstock by the facility.

   b. Used as a feedstock by the facility for extraction of critical minerals or rare earth elements from lignite coal.

   c. Used as a feedstock by the facility to create tangible personal property other than electricity, water, gas, or steam from lignite coal, including lignite coal from which critical minerals or rare earth elements have been extracted.

   d. Resold or used in any manner other than as a feedstock at the facility, including use in an electrical generating plant or coal gasification facility.

3. The coal mine owner or operator shall report the amounts certified under subsection 2. The amount of coal certified under subdivision d of subsection 2 is not eligible for the exemption in this section. The coal mine owner or operator shall report the amount of coal certified under subdivision d of subsection 2 on its return for the month following the month of certification and shall remit the severance tax due with the return. The tax commissioner shall waive penalty and interest under section 57-61-05 for severance tax remitted in accordance with this subsection."

Renumber accordingly

23.0961.01003

Sixty-eighth
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c. "Rare earth elements" means any of a series of metallic elements of which the oxides are classed as rare earths and which include the elements of the lanthanide series, yttrium and scandium.

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Energy & Environmental Research Center
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House Bill 1511

Testimony of Brian Kalk, Assistant Vice President for Strategic Partnerships

University of North Dakota Energy & Environmental Research Center

Senate Finance and Taxation Committee

March 21, 2023

Mr. Chairman and members of the committee, thank you for the opportunity to provide testimony concerning House Bill 1511. My name is Brian Kalk, and I am an Assistant Vice President for Strategic Partnerships at the University of North Dakota's (UND's) Energy & Environmental Research Center (EERC).

The EERC has a long history of working closely with North Dakota's lignite coal industry for the benefit of the industry and the citizens of North Dakota. We have more than 70 years of experience providing solutions for clean, efficient coal combustion. Additionally, we have extensive research and expertise in advanced materials, including critical minerals (CMs), rare-earth elements (REEs), and high-value carbon products. These advanced materials could have diverse applications in energy technologies, lithium-ion battery materials, and consumer technologies that can greatly enhance the national security of the United States. I would like to highlight that over 99% of the REEs and CMs currently used by the United States today, are produced from outside of our borders. Currently, the EERC is involved in numerous projects with the Department of Energy and regional companies dedicated to creating an REE and CM industry in North Dakota to provide a domestic supply of REEs and CMs. The main tasks of this work include the characterization of the resources, development and demonstration of environmentally friendly technologies, and creation of the supporting strategies for infrastructure, industries, and business. The path to establishing a REE and CM value chain is onerous, and early leadership is critical to sustain North Dakota's prospective role as a leading supplier of these important materials. Risk mitigation, such as that provided by this legislation, sends a strong signal to those contemplating investment.

Lignite Energy Council
LEADING THROUGH ADVOCACY AND INNOVATION

March 21, 2023

Chairman Kannianen and Senate Finance and Taxation Committee Members,

Over the past few years, the Industrial Commission and the Lignite Research Council has been funding multiple projects to develop the extraction processes that result in the production of rare earth and critical minerals in North Dakota. This is a significant opportunity to diversify and expand the production of one of our most valuable natural resource commodities. This bill helps bring this important research closer to the commercialization phase by adding tax incentives to bring global companies who are looking for the right business opportunities in mineral processing to invest in North Dakota's economy.

House Bill 1511 positions our state to be a leader in domestic rare earth and critical mineral production. North Dakota's geology has an 800-year supply of lignite coal which produces around 30 million tons on an annual basis. In addition to its current uses in producing electricity, synthetic natural gas and fertilizer products, North Dakota lignite offers numerous additional value-added opportunities including the key mechanisms that are used in national defense systems such as aircrafts and satellite communications, battery fuel cells, computer hard drives and medical imaging equipment. In addition, there are other uses that are being developed using lignite to make plastics, home building materials and aggregates for road construction.

For these reasons, the Lignite Energy Council supports House Bill 1511 and we respectfully ask that the committee move to give this legislation a "Do Pass" recommendation.

Thank you for your consideration,

Jason Bohrer
President and CEO

1016 E. Owens Ave. | PO Box 2277 | Bismarck, ND 58502

701.258.7117 www.lignite.com LEC@lignite.com

Legislative Assembly

North Dakota House of Representatives

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360

Representative Anna S. Novak
District 33
1139 Elbowoods Drive
Hazen, ND 58545-4923
anovak@ndlegis.gov

COMMITTEES:
Education
Energy and Natural Resources

March 21, 2023

Mr. Chairman, members of the committee – for the record, my name is Anna Novak, representative from District 33, proudly serving Coal Country. You have before you HB1511. This bill incentivizes new companies, that are interested in using coal as a feedstock for their end-products, to come to North Dakota by offering them up-front tax breaks. Specifically, this bill does two things:

1. Provides a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

2. Provides severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

Possibilities for businesses that might take advantage of these incentives would be those for the extraction of rare earth elements or high-tech building materials made by coal.

Critical minerals and rare earth elements are needed for basically anything in the technology sector. From our cell phones, the computer chips in laptops, vehicles and military aircraft, critical minerals and rare earth elements are a major component used in the devices that keep us connected. Nearly 100% of these materials are secured from China so at this time, we are completely reliant upon them for these items. Obviously, it's not good to be reliant on another country for anything, but for that country to be communist China is a very big problem. It's a national security risk. It's also estimated that China will run out of these materials in the next 10 years, so regardless of the desire to halt business with them, it's a necessity to find these materials elsewhere. I've included some information I obtained when I visited the EERC last fall. Please pull out the first handout, titled "Rare Earth Elements". I'd like you to look at the Periodic Table section on the front. On the left, it shows an iPhone and lists some of the elements needed to create a few of the different components within it. If you look to the right, you'll see the Periodic Table. The elements with a blue box around them are elements that have been located within North Dakota's lignite coal seams. As you can see, there are high concentrations of extremely important and valuable materials right here in North Dakota.

Lignite coal is also used in high-grade building materials. From siding, deck materials or even cement production, there are many different uses for coal. And oftentimes, the products made by using coal as a feedstock are lighter, more durable and are much stronger than their traditional counterparts. I've included a second handout from the EERC, titled "Economic Development in Coal Regions of North Dakota". This one gives some great examples of different building materials made by using coal.

The coal mines here in North Dakota are not just already permitted but are already operating. Between that and our state's business-friendly environment and the favorable tax policy in HB1511, I whole-heartedly believe North Dakota will stand out from other states when a company is choosing where they want to do business. There are many parts of

the country that have large deposits of coal and are looking to diversify their uses of coal beyond what coal is typically used for – electricity generation.

Just last week, I had the opportunity to meet with a company that is interested in using our lignite coal for rare earth elements extraction. This business builds lighting devices and needs a domestic supply chain. During our conversation, they told me that the landscape for coal mining in the US has shifted dramatically. Ten years ago, there were many new coal mines projected to open; however, that has since changed and makes it so much more important to utilize the mines that are open, especially considering that the federal government is making the permitting process more difficult. The company representatives also discussed the business-friendly environment here in North Dakota, and this bill only sweetens the pot for companies like theirs. No deals have been solidified but I'm very optimistic! I have to give a shout-out to the EERC on connecting this company to our state, and for all of the incredible research they do for North Dakota's energy industries. We are so fortunate to have the EERC within the borders of our state!

We have an incredible opportunity to develop extremely valuable coal byproducts right here in North Dakota. It's truly a "plus one" for our state and for my district specifically because the materials must be processed on site. After the supply chain issues, we all experienced the last three years, I believe there is an awareness of how important it is for America to focus on keeping our supply chains here. We can do that in North Dakota and the time is now. David Straley from NACCO industries has been incredibly helpful in crafting this bill and his here to testify, in addition to several other people, including Brian Kalk from the EERC and Jonathan Fortner with the Lignite Energy Council. Technical questions would probably be best directed to them, but I would be happy to answer any questions you might have for me. Thank you.

Rare-Earth Elements

EERC | UNIVERSITY OF NORTH DAKOTA

WHY ARE RARE-EARTH ELEMENTS IMPORTANT?

Rare-earth elements (REEs) are elements with special properties that make them useful in high-technology products, such as smart phones, catalysts, hard drives, hybrid electric vehicle engines, lasers, magnets, medical devices, and televisions.

NEW SOURCES OF REEs ARE NEEDED

Currently, the United States is 100% reliant on imports of REEs. China dominates the global market, with over 80% of REE production in 2017. Major growth market, sectors such as wind turbines, hybrid/electric vehicles, and electronics are dependent on REEs. The lack of domestic resources of REEs could be considered a risk to national security and economic prosperity. Coal and coal by-products have been identified as promising domestic sources of REEs.

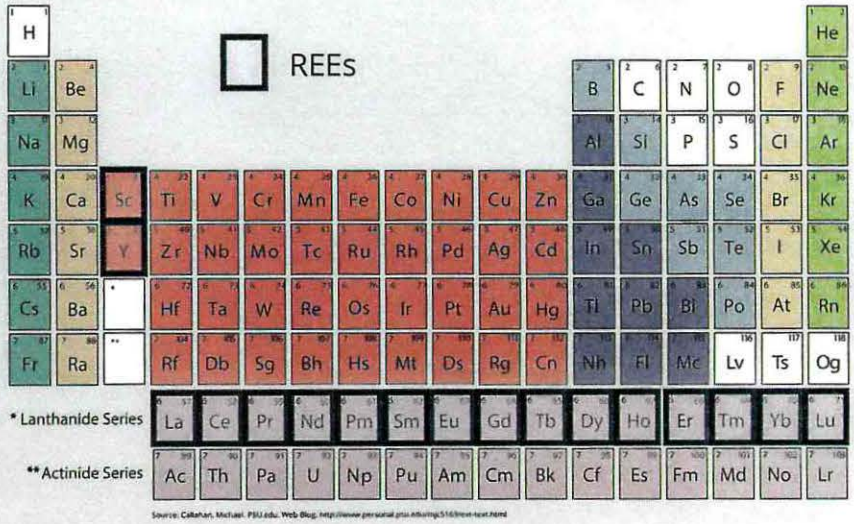
It is estimated that China's high REE resources will be gone by 2025. The most critical REEs are those deemed as having a supply risk and being highly important to U.S. national security and clean energy technologies going forward.

iPhone

Color Screen	Y, La, Pr, Eu, Gd, Tb, Dy
Phone Circuitry	La, Pr, Nd, Eu, Gd
Speakers	Pr, Nd, Gd, Dy
Vibration unit	Nd, Tb, Dy

Hybrid Electric Vehicle

Motor	Nd, Pr, Tb,Dy
Batteries	La, Ce, Pr, Nd
Operating System	Nd, Pr, Tb,Dy



lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu) and transition elements scandium (Sc) and yttrium (Y)

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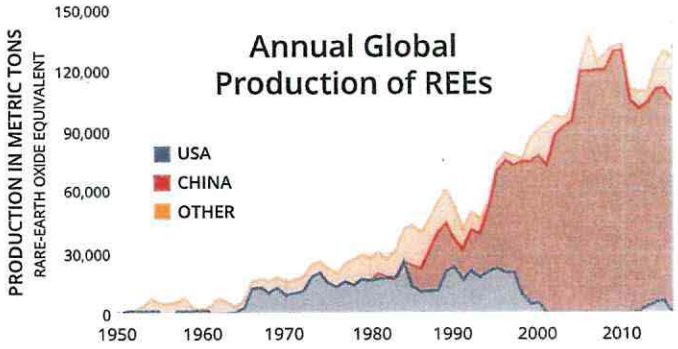

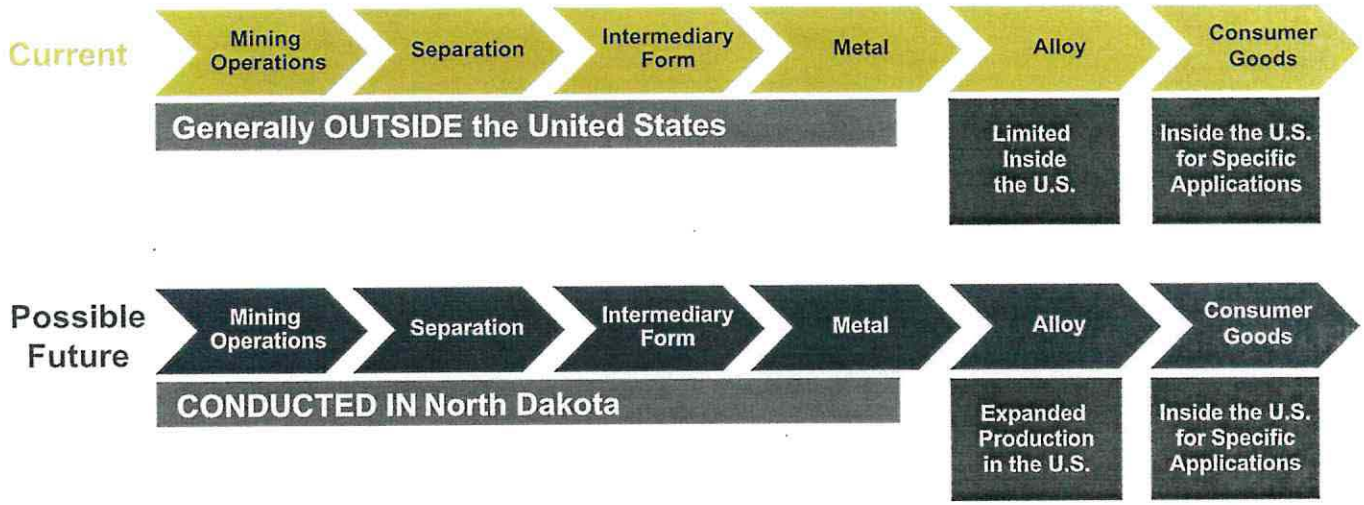

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For more information on our work with REEs, contact:

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EERC
UND UNIVERSITY OF NORTH DAKOTA

Economic Development in Coal Regions of North Dakota

EERC
UND UNIVERSITY OF NORTH DAKOTA

THE ENERGY & ENVIRONMENTAL RESEARCH CENTER (EERC) HAS BEEN BUILDING on fundamental and applied research work to develop technologies to take advantage of the existing large deposits of lignite carbon ore in the state. These technologies range in technology readiness levels from benchtop laboratory success to large pilot-scale development processes that will be "shovel-ready" for the commercial demonstration phase. The EERC vision is to develop current in-house and commercial partner technologies to bring about the required economic development in the region by clustering industries near existing coal production and utilization operations. The following near-commercial-ready projects are examples from a portfolio of possibilities.

COAL-DERIVED BUILDING COMPONENTS (CDBC) PRELIMINARY BUILDING DESIGN STUDIES

CDBC of the future requires the manufacture of high-performance, strong, lightweight, fire- and heat-resistant interlocking X-TILES™, X-PANELS™, X-BLOX™, X-BRIX™, and X-MATRIX™ and X-MORTAR™ composite aggregates.

CDBCs utilize a significant amount of low-cost, abundant coal and coal waste and create a new market for innovative coal-derived products vital to a modern and growing construction industry.

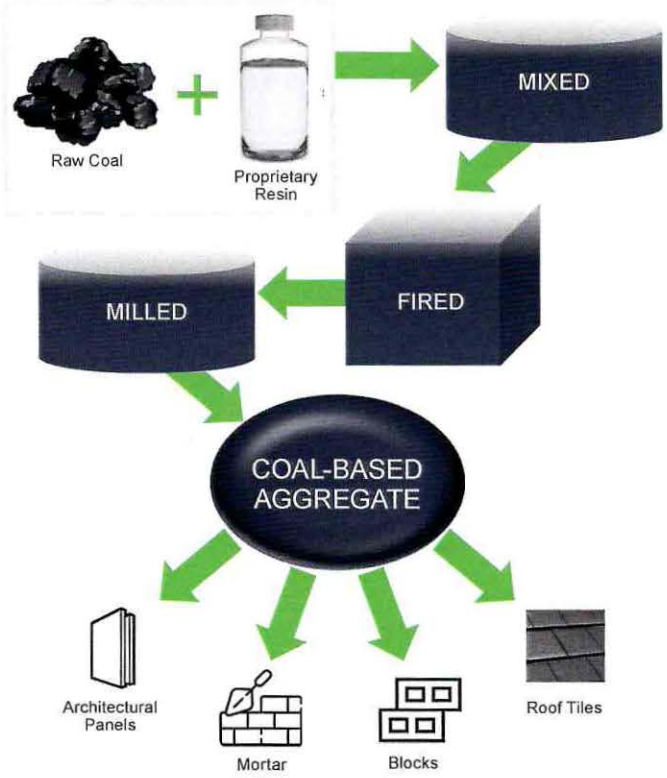
COAL-BASED ENGINEERED AGGREGATE

Coal-based engineered aggregate is coal powder or coal waste mixed with proprietary inorganic polymers.

Roof Tiles

Architectural Panels

Lightweight Coal-Based Ceramic Aggregate (the darker features)



Semplastics

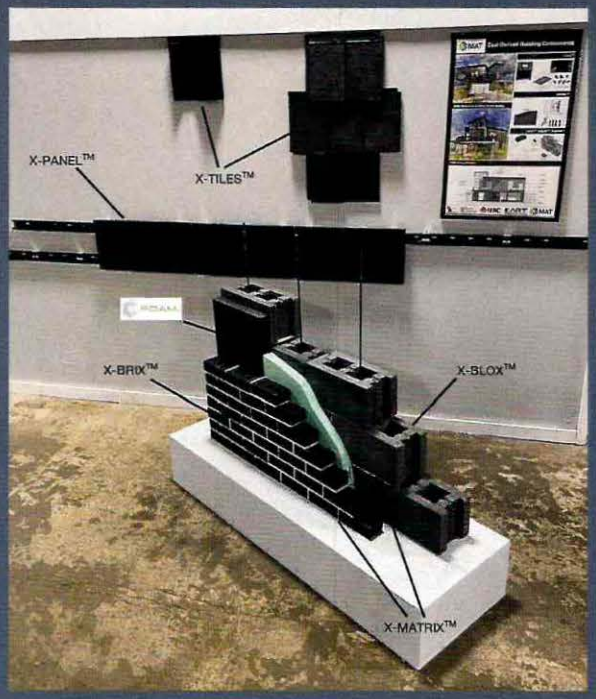
CRITICAL CHALLENGES | **PRACTICAL SOLUTIONS**

PROTOTYPE WALL SECTION

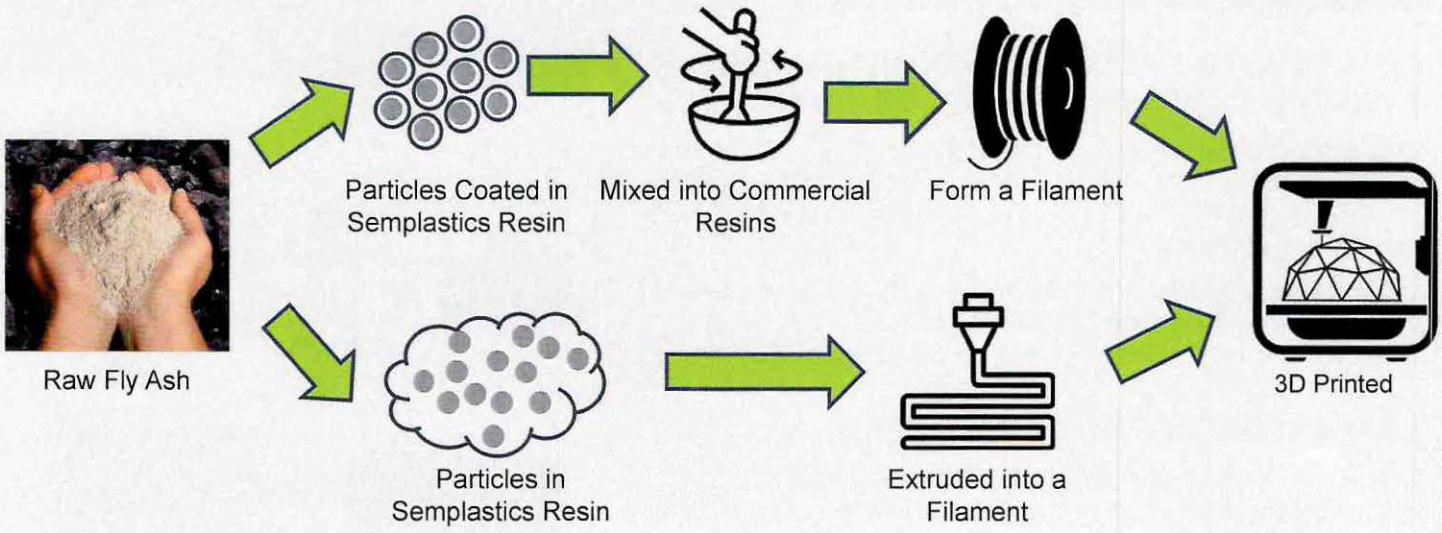
Blocks and bricks made with coal-based engineered aggregate compared to traditional building materials have:

- Superior mechanical strength and lower weight.
- Greater hardness and improved toughness.
- Greater abrasion resistance.
- Greater chemical resistance than concrete.

When coal particles are encapsulated and bonded with polymer-derived ceramic (PDC), the lignite coal used in the building materials becomes nontoxic and fire-resistant, making them safer than traditional options.



3D PRINTING COAL WASTE



These new industries will succeed in **creating sustainable jobs** for tomorrow's market through:

- Synergy: natural resources, energy systems, and **innovative technologies**.
- Expansion of **North Dakota lignite**.
- Production, utilization, and export of **environmentally sound** carbon products.
- Manufacture of new **technology innovations**.

For more information, contact:

Brian Kalk
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EERC
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EERC | Rare-Earth Elements

WHY ARE RARE-EARTH ELEMENTS IMPORTANT?

Rare-earth elements (REEs) are elements with special properties that make them useful in high-technology products, such as smart phones, catalysts, hard drives, hybrid electric vehicle engines, lasers, magnets, medical devices, and televisions.

NEW SOURCES OF REEs ARE NEEDED

Currently, the United States is 100% reliant on imports of REEs. China dominates the global market, with over 80% of REE production in 2017. Major growth market, sectors such as wind turbines, hybrid/electric vehicles, and electronics are dependent on REEs. The lack of domestic resources of REEs could be considered a risk to national security and economic prosperity. Coal and coal by-products have been identified as promising domestic sources of REEs.

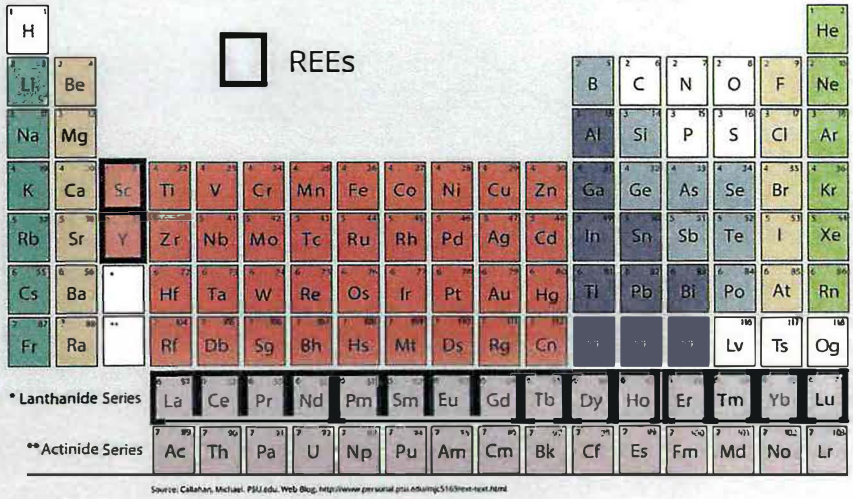
It is estimated that China's high REE resources will be gone by 2025. The most critical REEs are those deemed as having a supply risk and being highly important to U.S. national security and clean energy technologies going forward.

iPhone

Color Screen	Y, La, Pr, Eu, Gd, Tb, Dy
Phone Circuitry	La, Pr, Nd, Eu, Gd
Speakers	Pr, Nd, Gd, Dy
Vibration unit	Nd, Tb, Dy

Hybrid Electric Vehicle

Motor	Nd, Pr, Tb,Dy
Batteries	La, Ce, Pr, Nd
Operating System	Nd, Pr, Tb,Dy



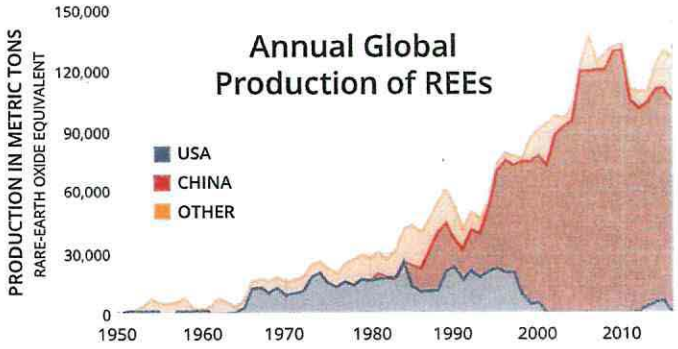
lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu) and transition elements scandium (Sc) and yttrium (Y)

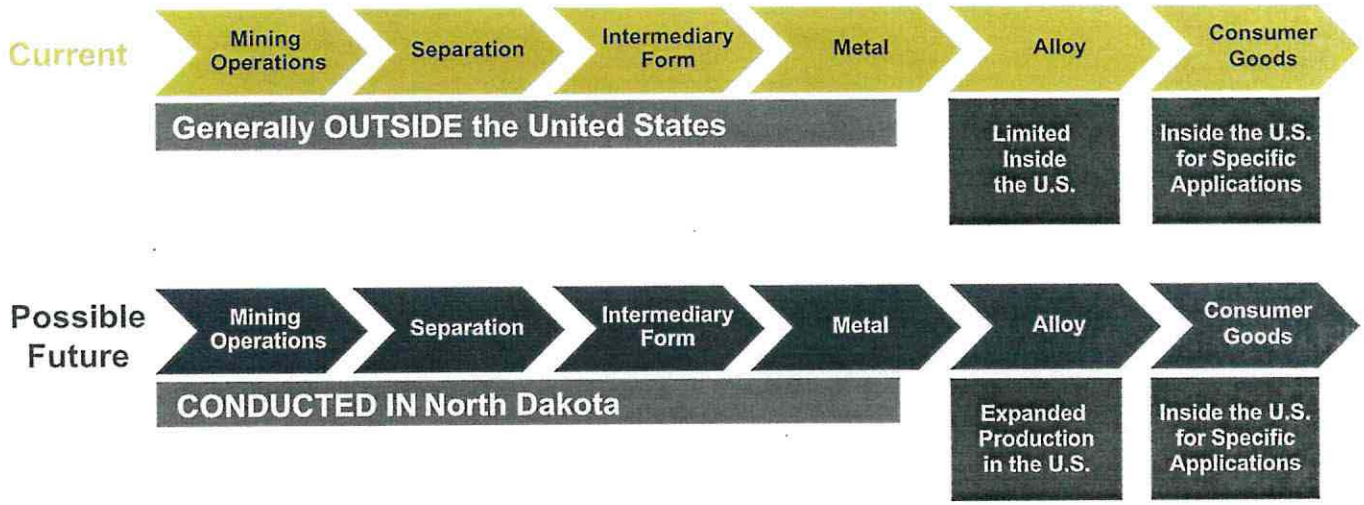
ADVANCING NEW SOURCES OF REEs

The Energy & Environmental Research Center (EERC) is leading several research projects on REEs. We are targeting resources that are associated with the lignite industry in North Dakota for REE recovery. This provides a unique opportunity for leveraging an existing industry that has taken the time and expense to develop the coal mines and utilization infrastructure, reducing the time line to begin an operation for extracting and producing REEs. Value-added usage of low-cost materials associated with the lignite industry also provides unique opportunities to be economically and environmentally responsible.

Despite their name, REEs are not actually rare but are highly distributed. This results in ores where REE content is measured in parts per million (ppm).

Our work has identified coal seams in North Dakota with REE concentrations as high as anything ever measured in coal in the United States. North Dakota is home to the world's largest lignite deposit – 350 billion tons, or enough to provide electricity for the next 800 years. In just one identified coal seam in North Dakota, the potential REE reserves could be 2 million tons. The United States currently uses approximately 16,000 tons of REEs a year.





We are leading the way in REE research and in identifying domestic resources.

For more information on our work with REEs, contact:

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Economic Development in Coal Regions of North Dakota

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THE ENERGY & ENVIRONMENTAL RESEARCH CENTER (EERC) HAS BEEN BUILDING on fundamental and applied research work to develop technologies to take advantage of the existing large deposits of lignite carbon ore in the state. These technologies range in technology readiness levels from benchtop laboratory success to large pilot-scale development processes that will be "shovel-ready" for the commercial demonstration phase. The EERC vision is to develop current in-house and commercial partner technologies to bring about the required economic development in the region by clustering industries near existing coal production and utilization operations. The following near-commercial-ready projects are examples from a portfolio of possibilities.

COAL-DERIVED BUILDING COMPONENTS (CDBC) PRELIMINARY BUILDING DESIGN STUDIES

CDBC of the future requires the manufacture of high-performance, strong, lightweight, fire- and heat-resistant interlocking X-TILES™, X-PANELS™, X-BLOX™, X-BRIX™, and X-MATRIX™ and X-MORTAR™ composite aggregates.

CDBCs utilize a significant amount of low-cost, abundant coal and coal waste and create a new market for innovative coal-derived products vital to a modern and growing construction industry.

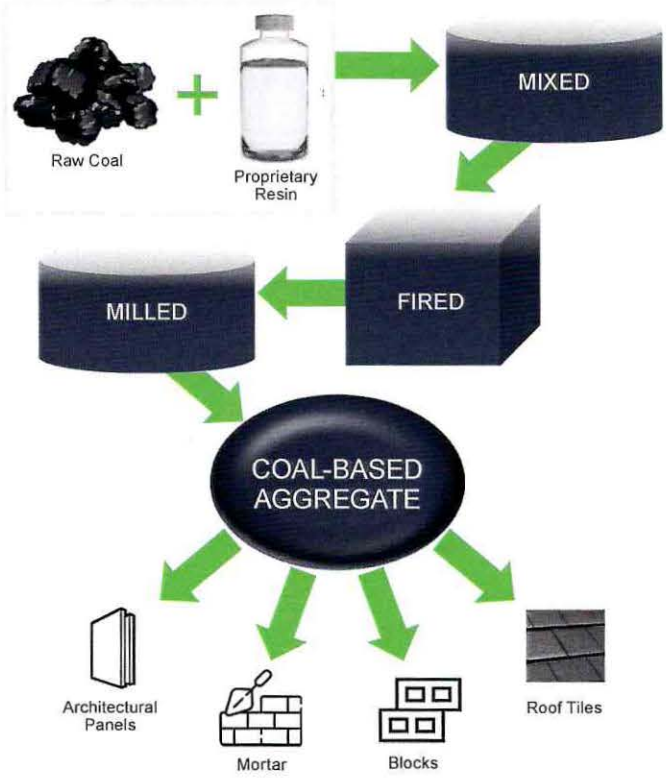
COAL-BASED ENGINEERED AGGREGATE

Coal-based engineered aggregate is coal powder or coal waste mixed with proprietary inorganic polymers.

Roof Tiles

Architectural Panels

Lightweight Coal-Based Ceramic Aggregate (the darker features)



Semplastics

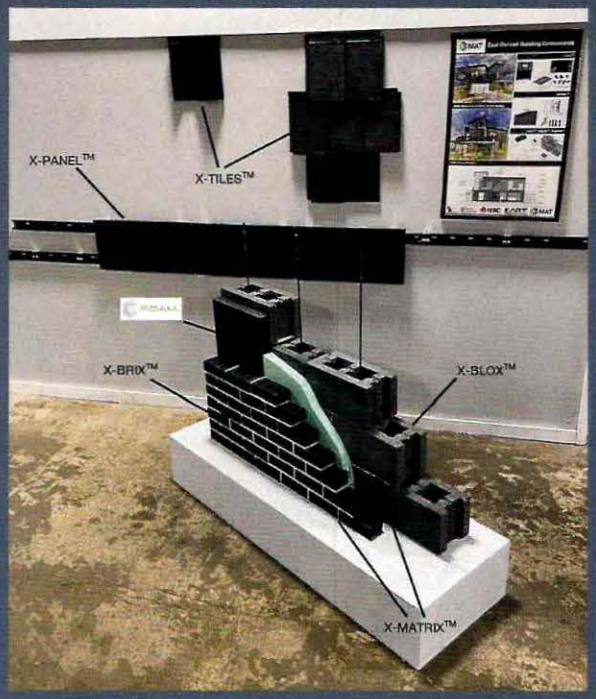
CRITICAL CHALLENGES | **PRACTICAL SOLUTIONS**

PROTOTYPE WALL SECTION

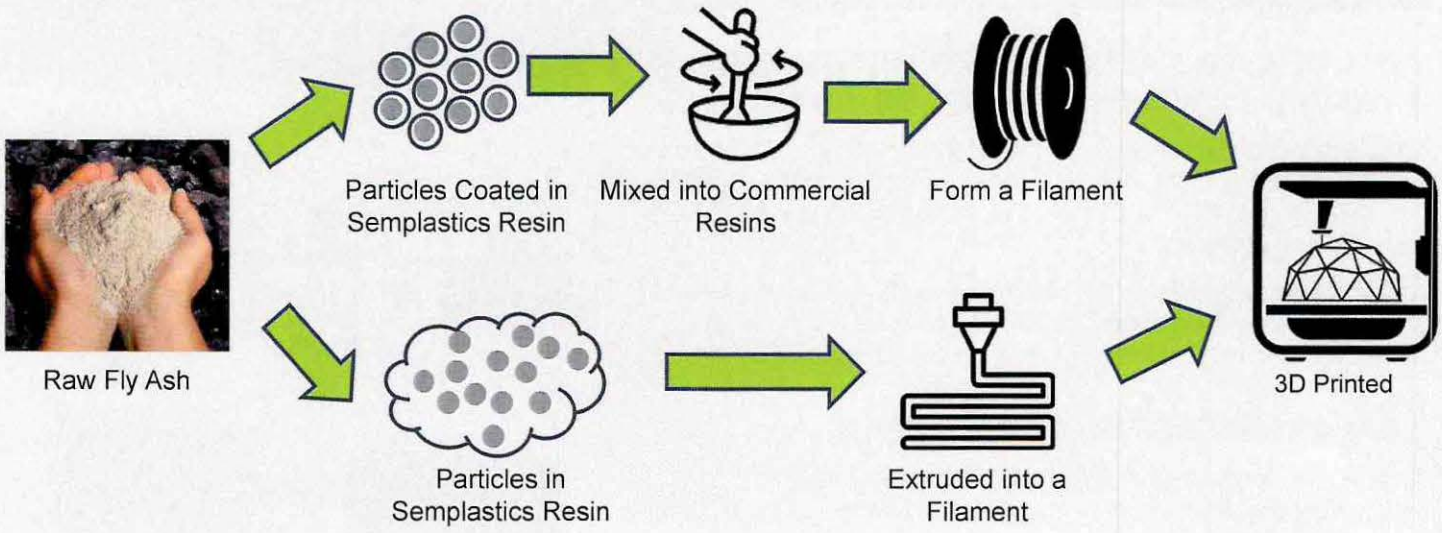
Blocks and bricks made with coal-based engineered aggregate compared to traditional building materials have:

- Superior mechanical strength and lower weight.
- Greater hardness and improved toughness.
- Greater abrasion resistance.
- Greater chemical resistance than concrete.

When coal particles are encapsulated and bonded with polymer-derived ceramic (PDC), the lignite coal used in the building materials becomes nontoxic and fire-resistant, making them safer than traditional options.



3D PRINTING COAL WASTE



These new industries will succeed in **creating sustainable jobs** for tomorrow's market through:

- Synergy: natural resources, energy systems, and **innovative technologies**.
- Expansion of **North Dakota lignite**.
- Production, utilization, and export of **environmentally sound** carbon products.
- Manufacture of new **technology innovations**.

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VALUE-ADDED OPPORTUNITIES FOR NORTH DAKOTA LIGNITE

Lignite Energy Council

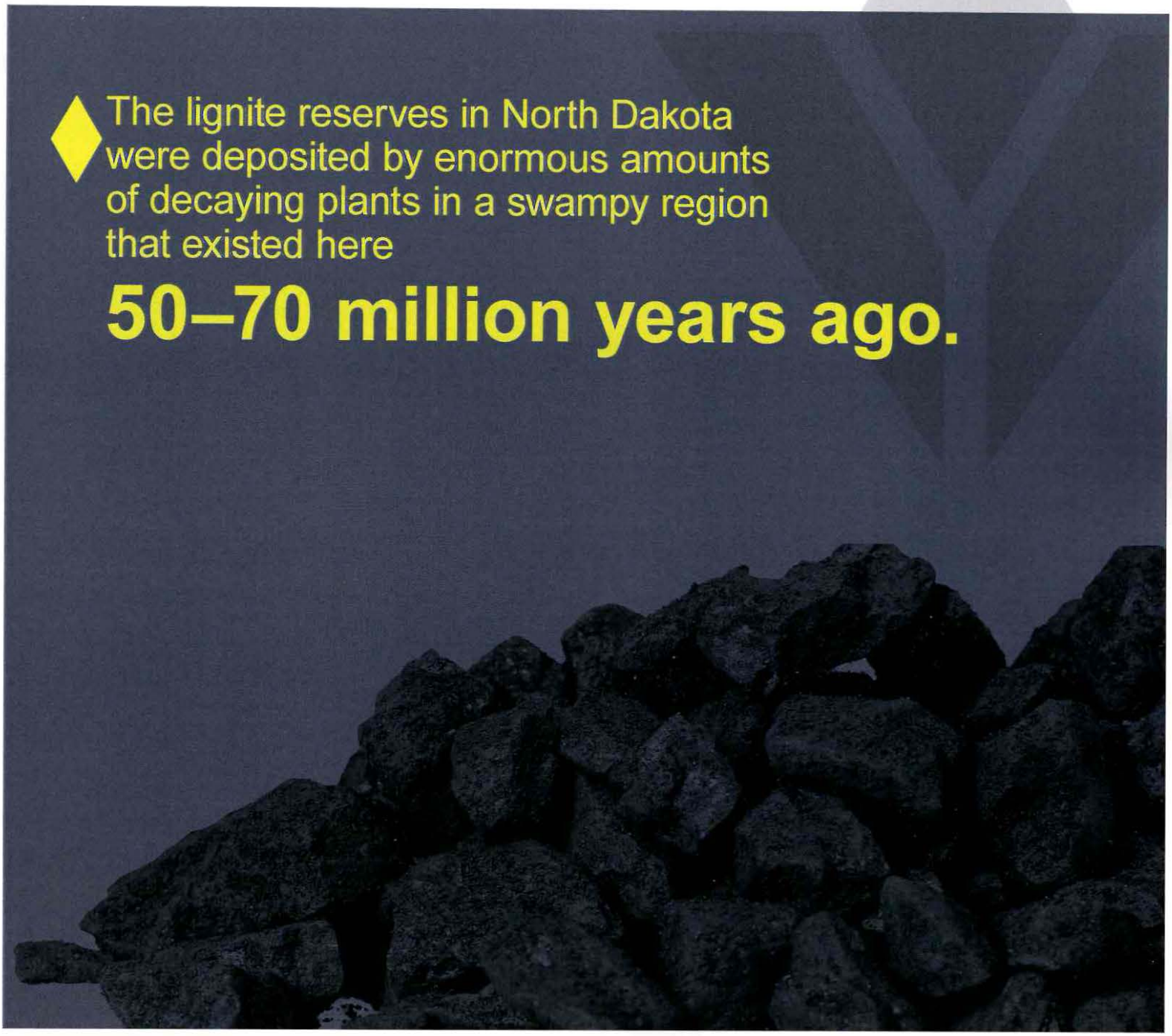
HELPING DEVELOP AFFORDABLE, RELIABLE, AND CLEAN LIGNITE-GENERATED ELECTRICITY FOR YOU

VALUE-ADDED OPPORTUNITIES FOR NORTH DAKOTA LIGNITE

This document was prepared by the Energy & Environmental Research Center (EERC) for the Lignite Energy Council.

INTRODUCTION

Lignite is a dark brown combustible material formed over millions of years by the partial decomposition of plant matter. Lignite is, essentially, a younger form of the same coal materials found in Wyoming, Kentucky, Pennsylvania, and other areas.



VALUE-ADDED PRODUCTS FROM LIGNITE

Nearly 80% of lignite mined in North Dakota is used in generating electricity.

However, lignite as a raw material is also used in many other products, and research will expand the suite of value-added products from lignite.

How Lignite is Used

- 79% Electricity Generation
- 13% Synthetic Natural Gas Generation
- 7% Fertilizer Products
- 1% Home Heating and Oil Well Drilling Mud

2 MILLION

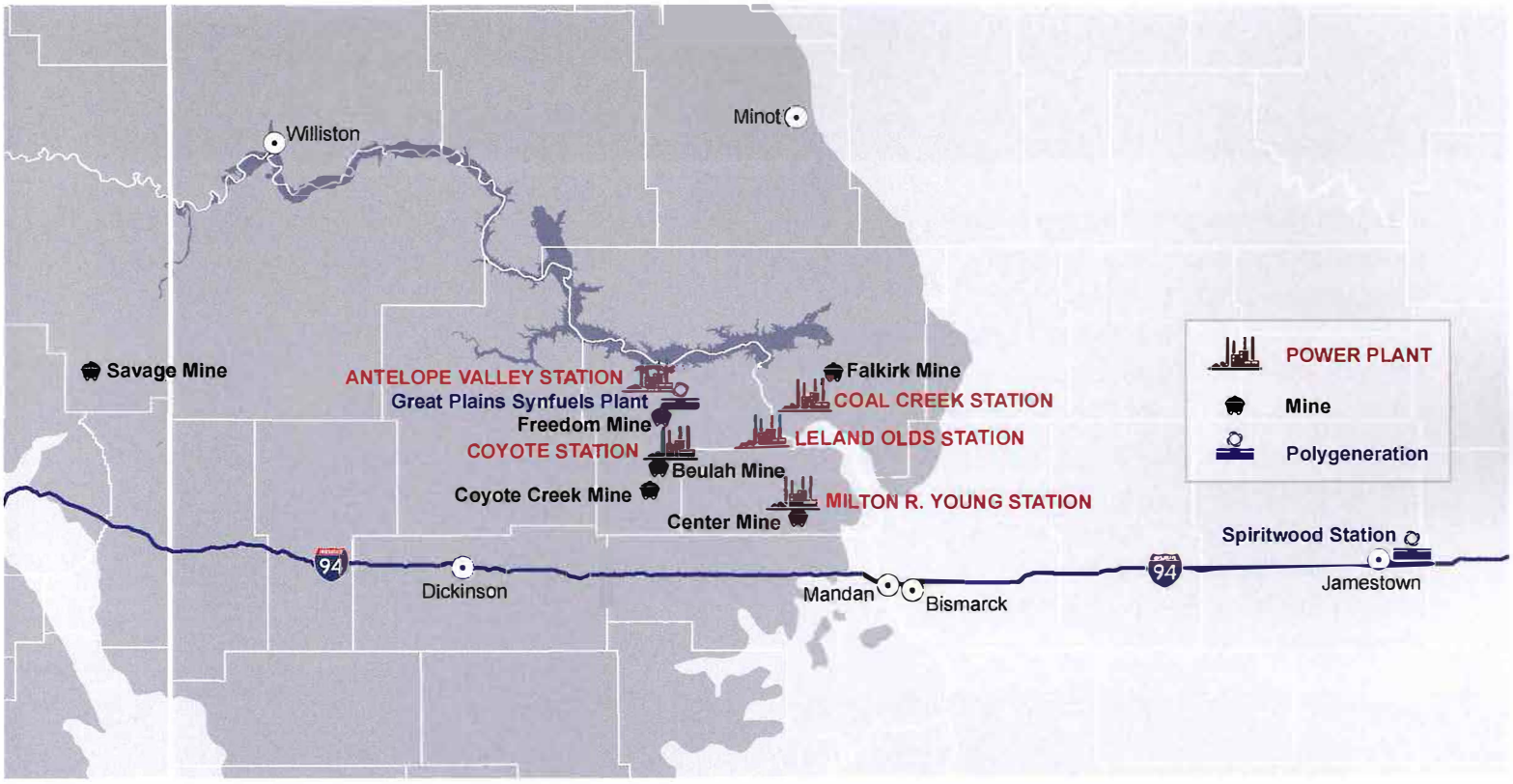
Consumers and Businesses in the Upper Midwest Use Lignite-Generated Energy

400,000

Homes and Businesses in the East Use Coal-Derived (synthetic) Natural Gas

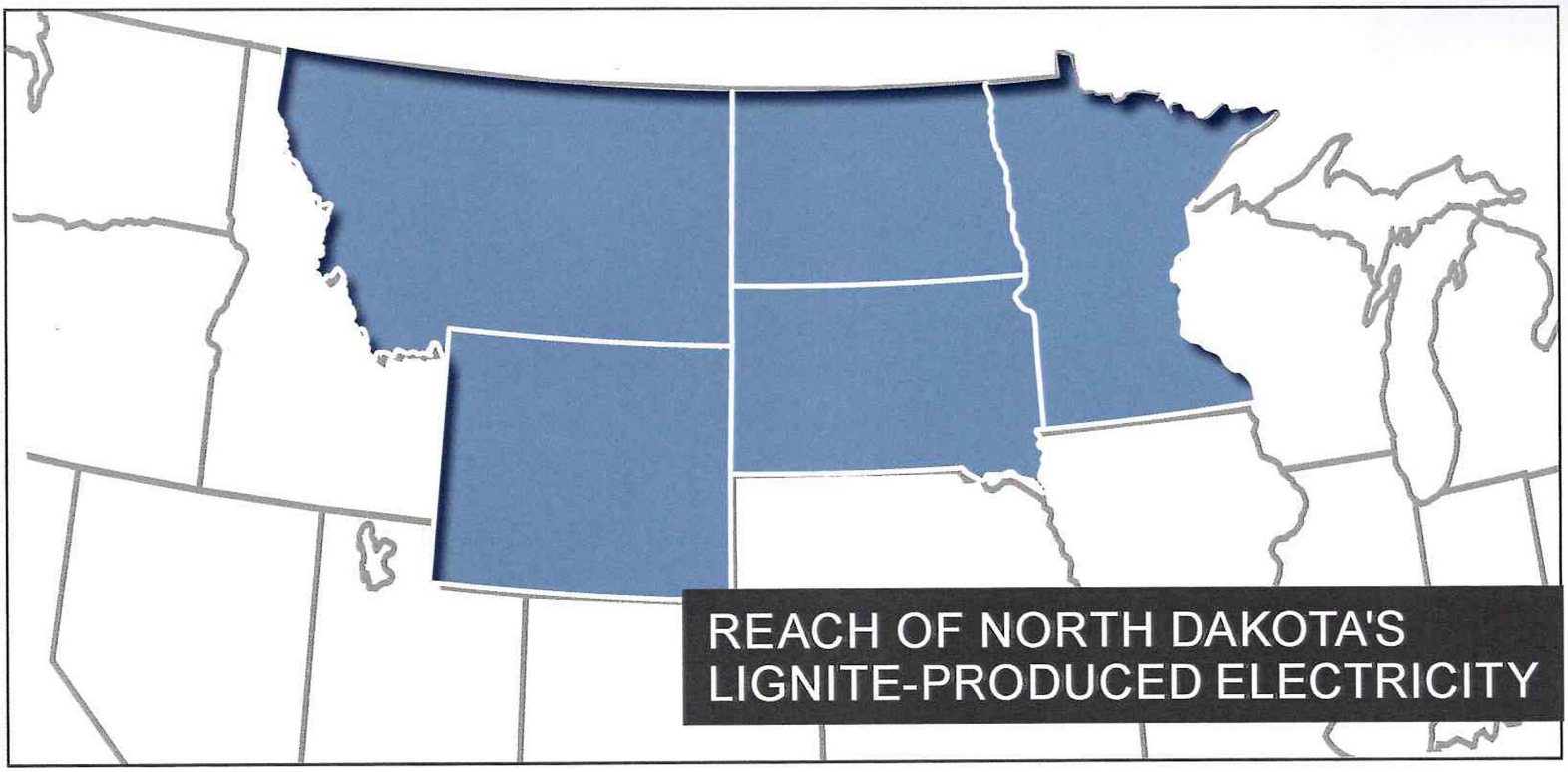
Rare-Earth Elements

Many valuable minerals can be extracted from raw lignite or from the ash recovered after combustion of lignite. A few examples include lithium, various rare-earth elements (REEs) critical to industry and national defense, and pure carbon, one of the building blocks of countless products.



With about 30 million tons of lignite mined annually, North Dakota is a top coal-producing state. At current usage, our economically recoverable lignite reserves constitute an 800-year energy supply. Lignite is primarily used to generate steam at five coal-fired power generation stations and two polygeneration plants. Lignite-generated energy serves over 2,000,000 consumers and businesses in the Upper Midwest.

According to the latest job report, the lignite industry accounts for $5.5 billion of the state's economy, directly employs 3560 people in North Dakota, and indirectly supports 9500 jobs.



ELECTRICITY

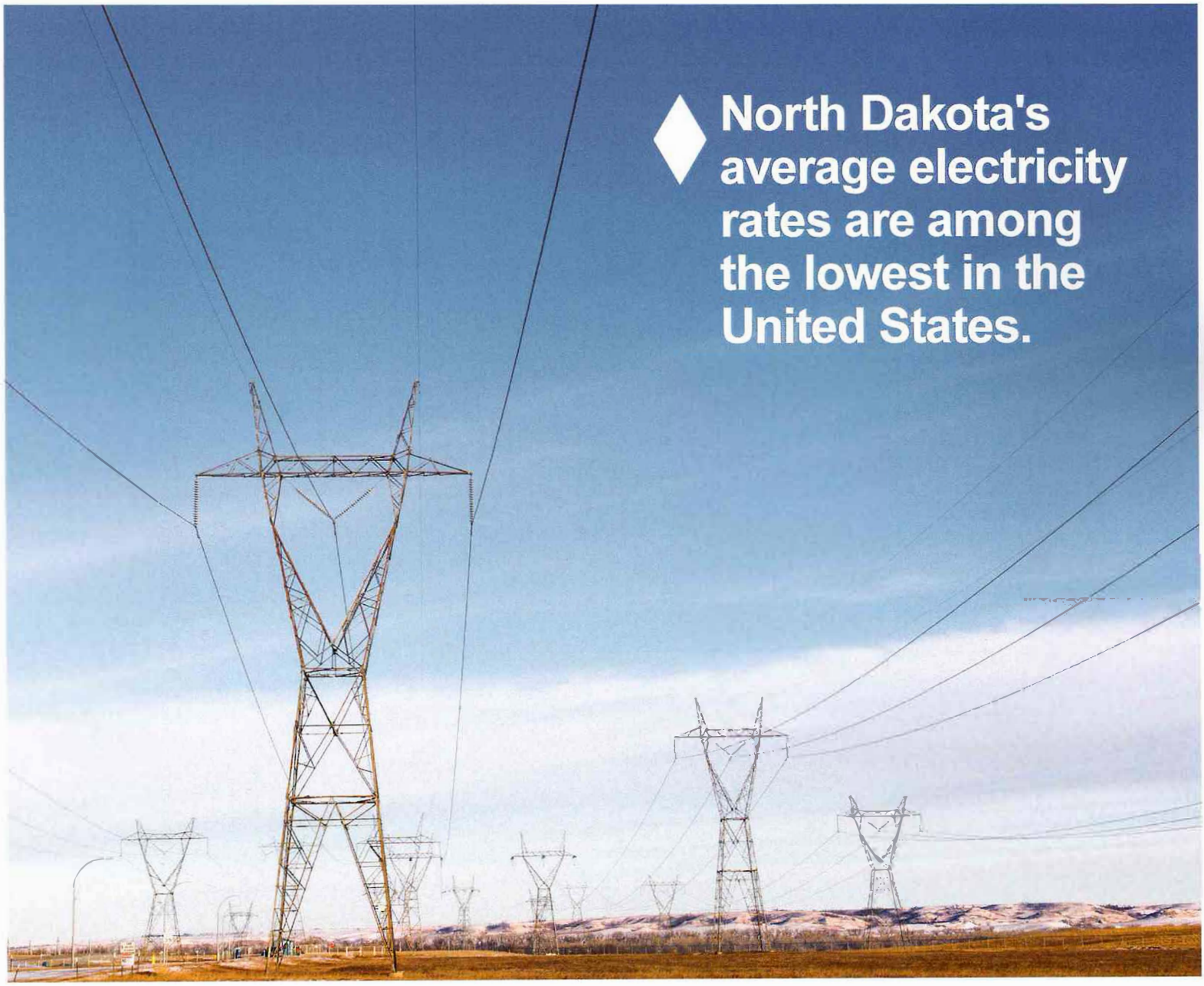
In recent years, coal-based electrical generation has decreased nationally because of economic and regulatory factors. To maintain and expand lignite markets, the North Dakota Industrial Commission and Lignite Energy Council are supporting the efforts to develop and commercially deploy new lignite-based technologies that leverage the unique chemistry of lignite and existing lignite industry infrastructure, partnerships, and agreements.

This document summarizes several current and new lignite value-added scenarios.

Antelope Valley Station near Beulah, North Dakota

NORTH DAKOTANS BENEFIT IN MULTIPLE WAYS FROM AFFORDABLE AND RELIABLE POWER GENERATED AT THE STATE'S LIGNITE-BASED POWER PLANTS.

- Low-cost electricity translates to lower operating expenses for agricultural, manufacturing, and petroleum industries, enabling their commercial competitiveness on an international level. This low cost also attracts new business and helps retain existing companies.
- Low-cost electricity is particularly beneficial to our region. Even though we consume high amounts of energy because of our weather extremes, we enjoy some of the lowest electricity rates in the nation.



VALUE-ADDED PRODUCTS FROM LIGNITE POWER PLANTS

FLY ASH CONCRETE

Fly ash is a particulate by-product of coal combustion. When integrated with cement, fly ash enhances the quality of the finished concrete product by making it stronger, more durable, and easier to finish. Some producers are now replacing 30% or more of their cement with fly ash. Cement production is an energy-intensive process, and more than a ton of carbon dioxide is emitted for each ton of cement produced. However, each ton of fly ash used in place of cement reduces greenhouse gases by at least a ton.

BOTTOM ASH

Another by-product of coal combustion is "bottom ash." These heavier particles collect on the bottom of the furnace. Bottom ash can be used as aggregate in road bases, pavement, and cement. It serves as a good alternative to sand for roads in the winter and is also sold for use in roofing materials.

HEAT FOR ETHANOL PRODUCTION

As coal is combusted to generate electricity, a portion of the heat produced is often unused. New innovative means of using/monetizing this heat are being explored and deployed. One example is the Dakota Spirit ethanol plant at Spiritwood Station. By strategically integrating the power plant excess heat resource with the ethanol plant process heat requirements, the need for an expensive ethanol plant boiler system was eliminated, translating to decreased capital cost, annual multimillion-dollar fuel cost savings, and reduced emissions.

DRYFINE™ BENEFICIATED COAL

DryFining™ is a patented technology for utilizing process heat and mechanical separation to dry and refine lignite coal. Developed by Great River Energy with support from the U.S. Department of Energy and the North Dakota Lignite Research Program, the technology has been in operation at Coal Creek Station in Underwood, North Dakota, since 2009 and improves the efficiency of power production while also reducing emissions. DryFine lignite produced at Coal Creek Station is also transported to Spiritwood Station in Jamestown, North Dakota, by railcar and provides the fuel for power production and process heat for the Dakota Spirit ethanol plant.

COAL GASIFICATION TO FUELS, CHEMICALS, AND HYDROGEN

In simplest terms, coal gasification is essentially coal combustion with insufficient oxygen to sustain a flame. While combustion produces primarily carbon dioxide and water, gasification produces "syngas" (short for synthesis gas, a coal-derived gas that was used for municipal lighting and heating before large-scale production of natural gas became popular). Syngas is a mixture comprising carbon monoxide, hydrogen, carbon dioxide, methane, and water.

Because syngas has a large quantity of hydrogen and methane, its chemistry is supportive of subsequent production of purified hydrogen, synthetic natural gas (SNG), or chemical feedstocks for a wide variety of products, including ammonia, methanol, diesel, gasoline, tar, creosote, and plastics.

NORTH DAKOTA GASIFICATION: GREAT PLAINS SYNFUELS PLANT

The Great Plains Synfuels Plant is the only commercial-scale coal gasification plant in the United States that manufactures natural gas. Great Plains delivers approximately one-half of the carbon dioxide it makes to Saskatchewan via pipeline for use in enhanced oil recovery (EOR) and associated CO_2 storage.

Despite recent technological advances, large capital investment is required for gasification plants. This financial risk presents a barrier to market penetration. New gasification systems may provide cost savings, but another economic driver could come from the dramatic decrease of coal in electrical generation. Geopolitical pressures and environmental concerns could incentivize U.S. gasification efforts in new ways.

Dakota Gasification Company currently produces nitrogen-based fertilizer from syngas (carbon monoxide and hydrogen) generated by gasification of coal and nitrogen extracted from the air. This technology is commercially deployed and is satisfying regional fertilizer demands today in the form of anhydrous ammonia, urea, and ammonium sulfate.

The process of coal gasification produces syngas. From this syngas, many valuable by-products can be made:

- **DEPHENOLIZED CRESYLIC ACID**

  Industrial solvents, industrial resins, antioxidants, pesticides, disinfectants, perfumes, preserving agents

- **CATECHOLS**

  Pharmaceuticals, food flavoring, insecticides

- **NAPHTHA**

  Gasoline, cleaning fluid, shoe polish, oil paints

- **PHENOLS**

  Plywood

- **CARBON DIOXIDE**

  EOR, greenhouse agriculture

- **FERTILIZER**

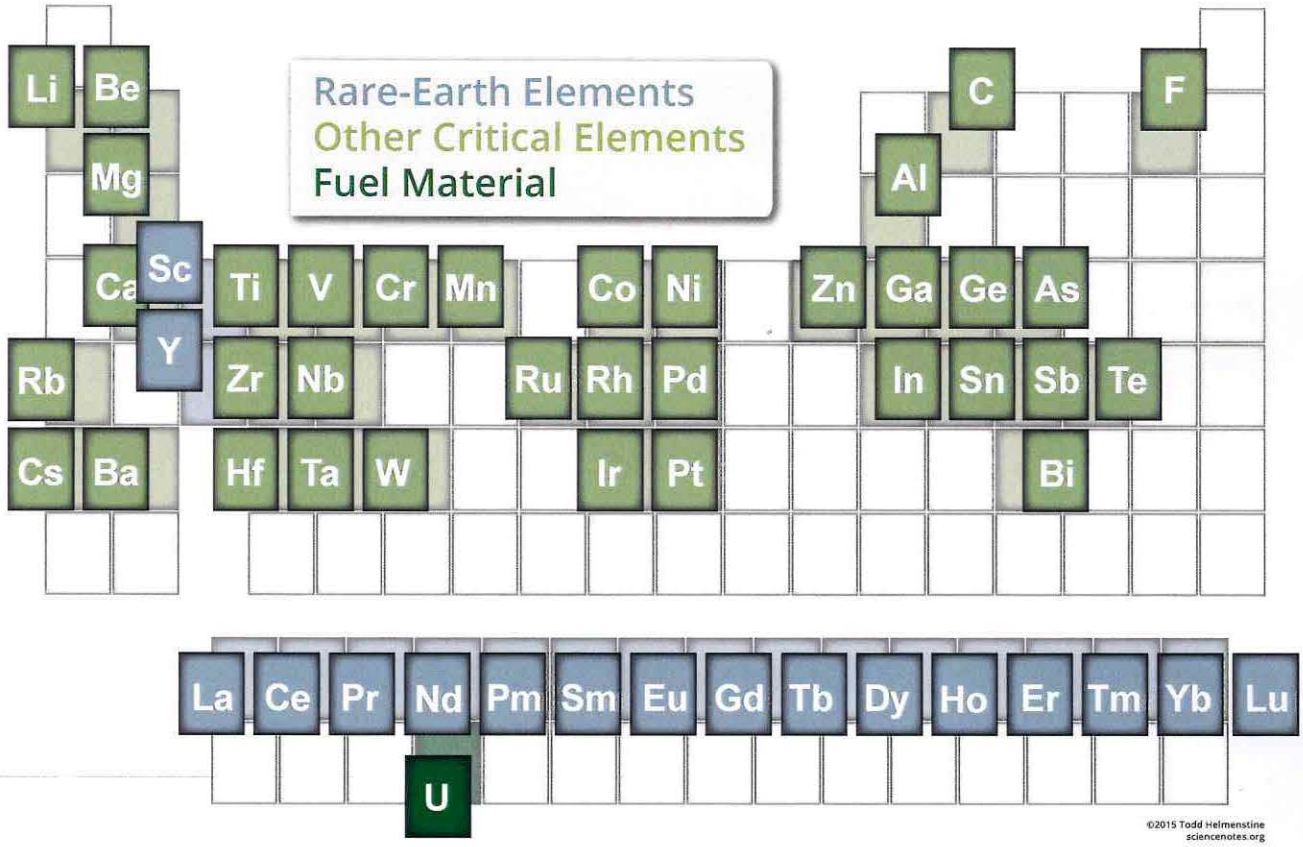
  Urea, ammonia, ammonium sulfate

EMERGING VALUE-ADDED PRODUCTS

In addition to its current uses, North Dakota lignite offers numerous additional value-added opportunities.

NORTH DAKOTA LIGNITE – CARBON ORE

As demand for REEs and other critical metals increases, the North Dakota lignite industry is uniquely positioned to fuel the drive to U.S. self-sufficiency in these economic/national security critical materials. By strategically leveraging permitted and paid-for lignite mining and processing infrastructure, technologies, and expertise, the North Dakota lignite industry could lead development of a new high-value, sustainable, and expandable economy based on lignite as carbon ore.



Rare-Earth Elements	$/pound (2017)	Conc., ppm, ND Lignite*	Import Reliance, %
Scandium – Sc	900	41	100
Yttrium – Y	4	213	100
Lanthanum – La	1	163	100
Cerium – Ce	1	314	100
Praseodymium – Pr	25	37	100
Neodymium – Nd	18	145	100
Samarium – Sm	1	32	100
Europium – Eu	93	7	100
Gadolinium – Gd	9	40	100
Terbium – Tb	204	6	100
Dysprosium – Dy	103	39	100
Holmium – Ho	25	7	100
Erbium – Er	32	22	100
Thulium – Tm	454	3	100
Ytterbium – Yb	23	18	100
Lutetium – Lu	499	3	100
		Total – 1089**	

Other Critical/Valuable Metals in ND Lignite	$/pound (2017)	Conc., ppm, ND Lignite*	Import Reliance, %
Cobalt – Co	14	18	76
Gallium – Ga	89	17	100
Germanium – Ge	798	18	50
Vanadium – V	8	137	96
Thorium – Th	115	16	?
Nickel – Ni	5	36	?
Molybdenum – Mo	5	19	?
Copper – Cu	3	67	?
For Comparison: Silver – Ag	204		80

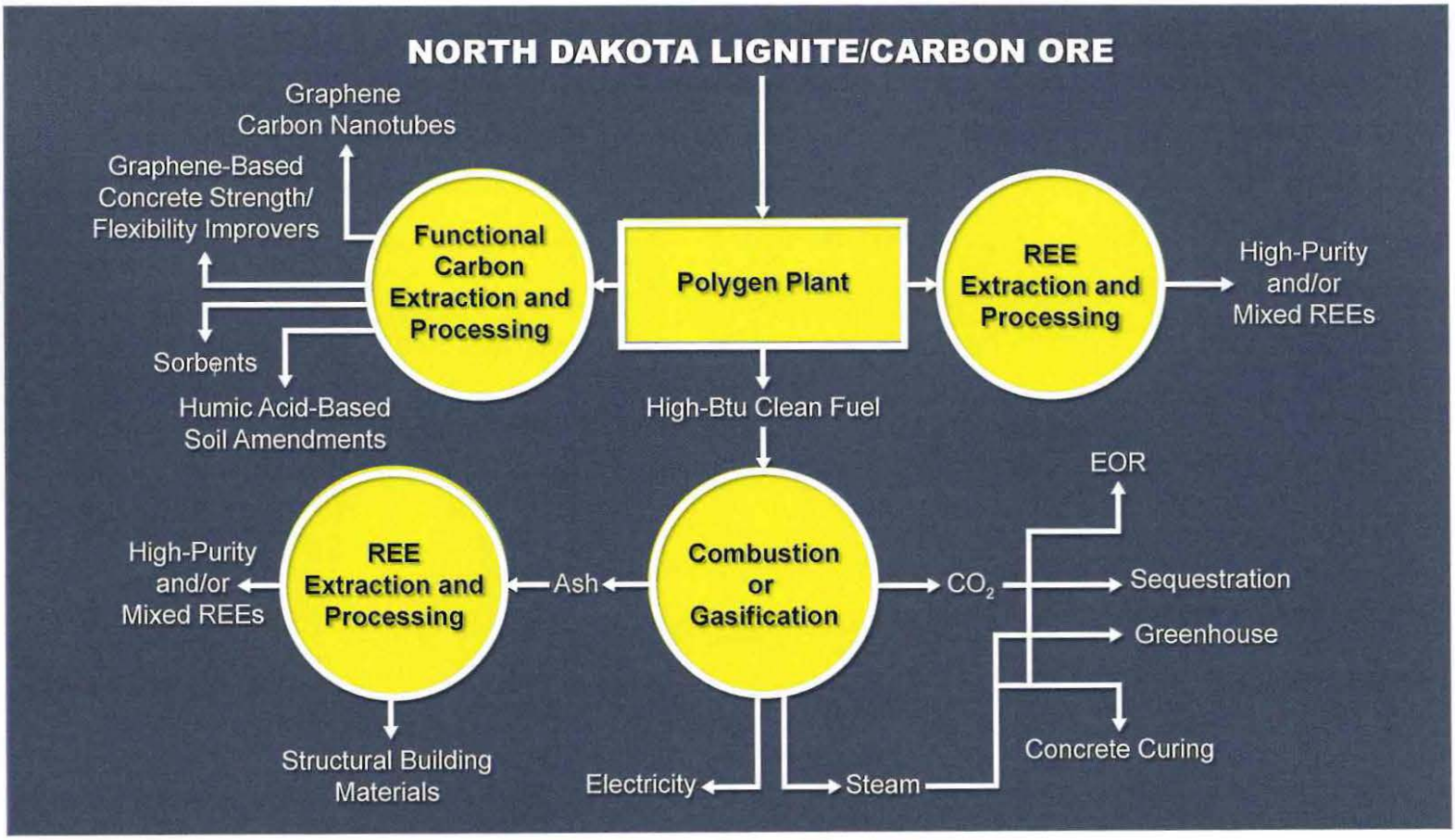
* Harmon–Hanson coal combustion ash.

** According to the U.S. Geological Survey (USGS), total rare-earth concentration of at least 300 ppm is economically significant.

LIGNITE/CARBON ORE POLYGEN PLANT

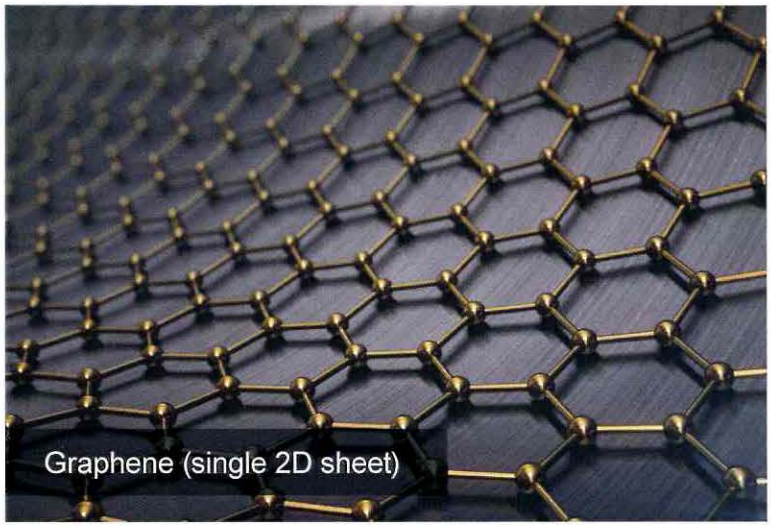
The Oxford Dictionary defines ore as "a naturally occurring solid material containing a precious or useful metal in such quantity and chemical combination as to make its extraction profitable." Unlike traditional ore mining/refining operations that yield small quantities of high-value metals and lots of negative-value waste, lignite carbon ore polygeneration (polygen) plants will yield:

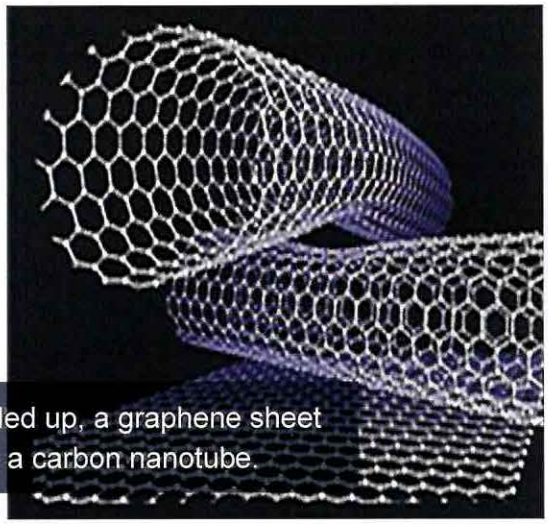
- High-value REEs and other critical minerals identified by the U.S. Interior Department as *"...vital to the Nation's security and economic prosperity."* Many of these critical minerals are present in North Dakota lignite in economically significant concentrations.
- Graphene, carbon nanotubes, and other highly structured "functional carbons" with valuable properties that enable emerging energy, electrical, biotechnology, imaging, laser, and fiber optic technologies.
  - Use of less structured graphene materials to improve concrete strength, flexibility, and durability is increasingly being demonstrated and offers potential as a major market for lignite-derived graphene.
- High-performance carbon-based sorbents and water-conserving soil amendments.
- Electricity from combustion or gasification of high-Btu clean fuel.
- CO_2 for concrete curing, EOR, greenhouses for year-round produce and other ag products, and subsurface sequestration.
- Concrete and composite building materials from coal ash.
- Minimal waste.



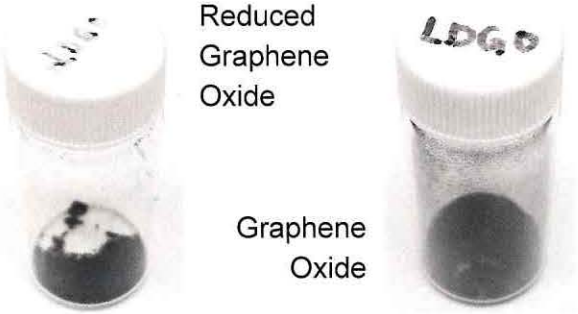
WHAT IS GRAPHENE?

Another value-added product from coal, graphene could open new markets in nonenergy sectors such as electronics, optical devices, lightweight farming tools, military equipment, etc.


Graphene (single 2D sheet)

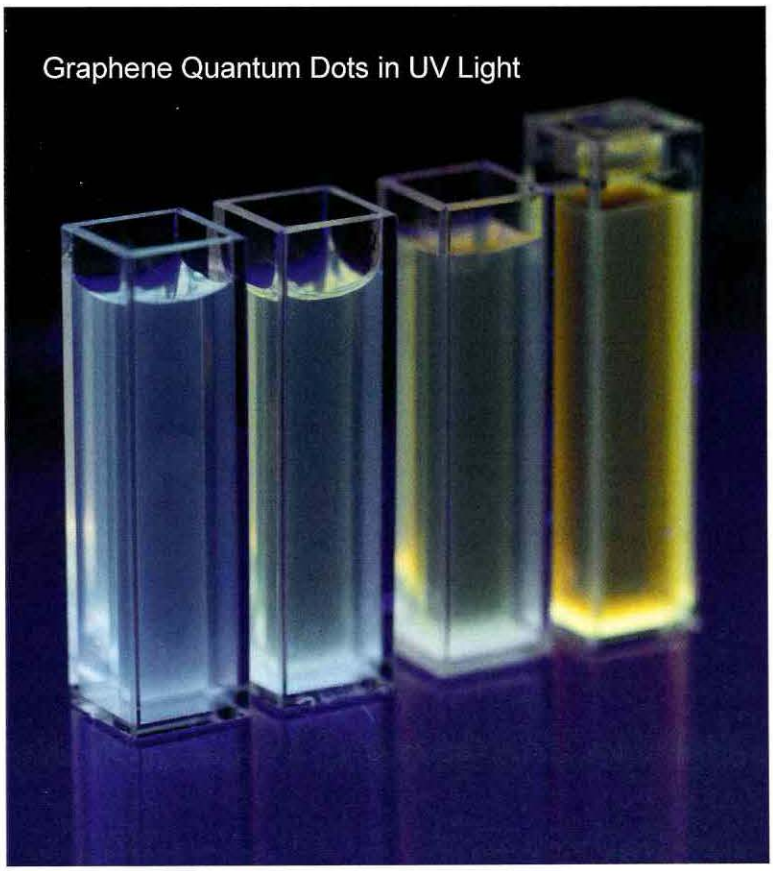

When rolled up, a graphene sheet becomes a carbon nanotube.

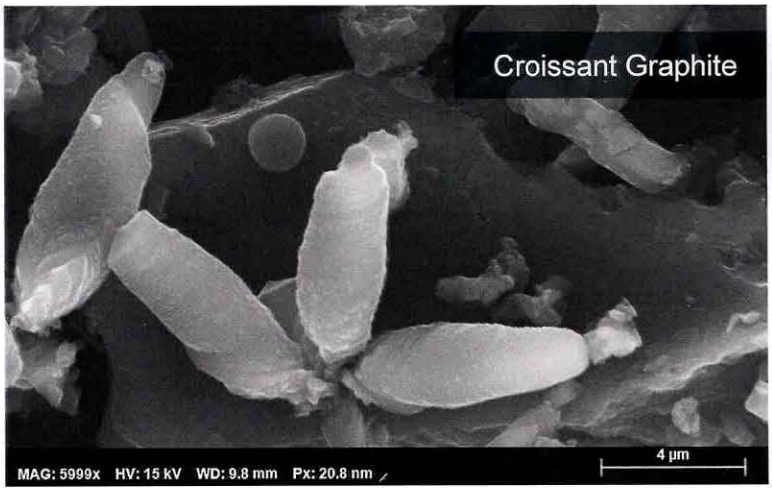
GRAPHENE IS A CARBON-BASED 2D MATERIAL WITH A THICKNESS OF ONE ATOM.



Reduced Graphene Oxide

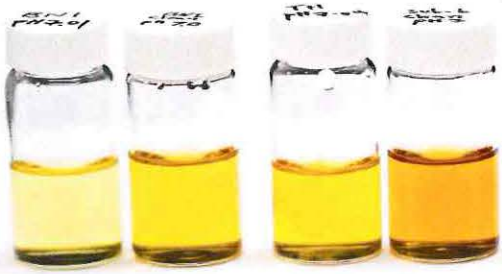
Graphene Oxide


Graphene Quantum Dots in UV Light



Croissant Graphite

Graphene Quantum Dots in White Light



AUTOMOTIVE HYBRID TECHNOLOGY IS TOTALLY DEPENDENT ON PHOSPHORESCENT REEs

The REEs comprise a group of 17 metals with structural–electronic commonalities that translate to valuable magnetic, phosphorescent (light emission without heat emission), and catalytic properties. In November 2020, the U.S. Department of Defense announced contracts and agreements with REE producers to support and strengthen the domestic REE supply chain.

REEs – Key Applications

MAGNETICS

Nd Tb Dy Pr

Computer Hard Drives
Disk Drive Motors
Anti-Lock Brakes
Frictionless Bearings
Microwave Power Tubes
Power Generation
Communication Systems
MRIs
(magnetic resonance imaging)

METAL ALLOYS

Nd Y La Ce Pr Sc

NiMH Batteries
Fuel Cells
Super Alloys
High-Power-Density Rechargeable Batteries

DEFENSE

Nd Eu Tb Dy Y Lu Sm Pr La Sc

Satellite Communications
Guidance Systems
Aircraft Structures
Fly-by-Wire
Smart Missiles

PHOSPHORS

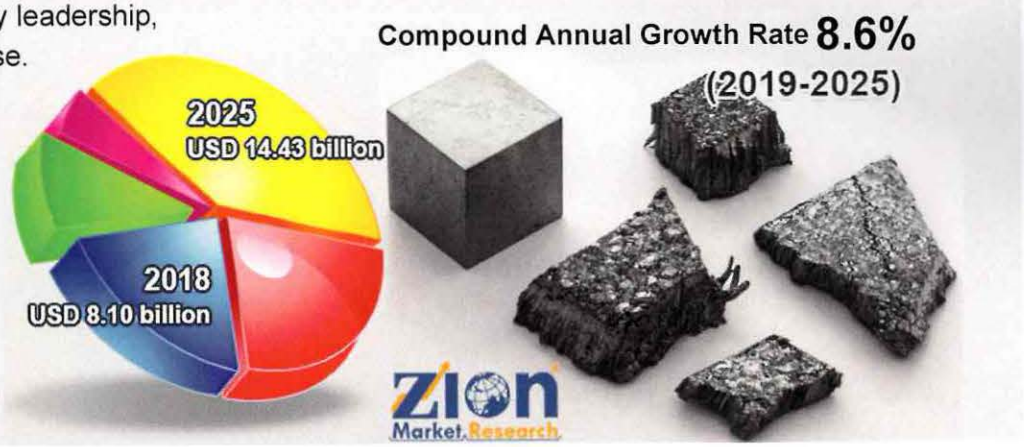
Nd Eu Tb Y Er Gd Ce Pr Sc

Display phosphors – CRT, LPD, LCD
Fluorescent Lighting
Medical Imaging
Lasers
Fiber Optics

GLOBAL RARE-EARTH METAL MARKET

According to the USGS 2021 Mineral Commodity Summary report, the United States is 100% import-reliant on REEs and other critical minerals, with the bulk of imports coming from China. Chinese dominance in the REE market is due, in large part, to possession of a unique minable clay resource that contains high concentrations of REEs in the form of adsorbed ions, making their extraction and refining simple and cheap versus most other REE resources. Because these REE-rich clay reserves are projected to run out in about 15 years, building a domestic REE mining, concentration, and refining industry is critically important to U.S. technology leadership, manufacturing industries, and defense.

Numerous North Dakota lignite seams contain REEs in concentrations exceeding 300 parts per million (ppm), the USGS-established threshold for an economically significant REE resource. North Dakota lignites also contain economically significant concentrations of other critical minerals, including Ga, Ge, Nb and In. Many lignite-containing REEs and other metals are chemically bound in ways that make their extraction simpler and cheaper than extraction from traditional U.S. ore resources.



REEs from North Dakota Carbon Ore Polygen Plant vs. Traditional Hard Rock Mining Operation

	Carbon Ore Polygen Plant	Hard Rock Mine
Mine Permitting, Regulatory Approvals, Financing	Done	About 8 years $ millions (studies, legal filings) No guarantee of success
Mining Infrastructure	In place, paid for	Design/construction – 2 years
Ore Processing for REE Extraction/Purification – Techno-Economics	Accessible, weaker REE–lignite bonding chemistry translates to simpler/cheaper processing	Complex, stronger REE–ore bonding chemistry means more complex/expensive processing
Mining/Processing Environmental Economics	Lignite chemistry translates to reduced strong acid use, less toxic waste generation, risk, cost	Ore chemistry requires high consumption of strong acids, more toxic waste, risk, cost
Coproduct(s)	Diverse coproduct slate means high economic resiliency	No coproducts means limited responsiveness to market swings
REE Concentration in Ore	1000 ppm[1]	5000–25,000 ppm[2]

[1] *Measured in Slope County lignite seam; with possible exception of single Appalachian coal seam, highest measured REE concentration in U.S. coal resource to date.*

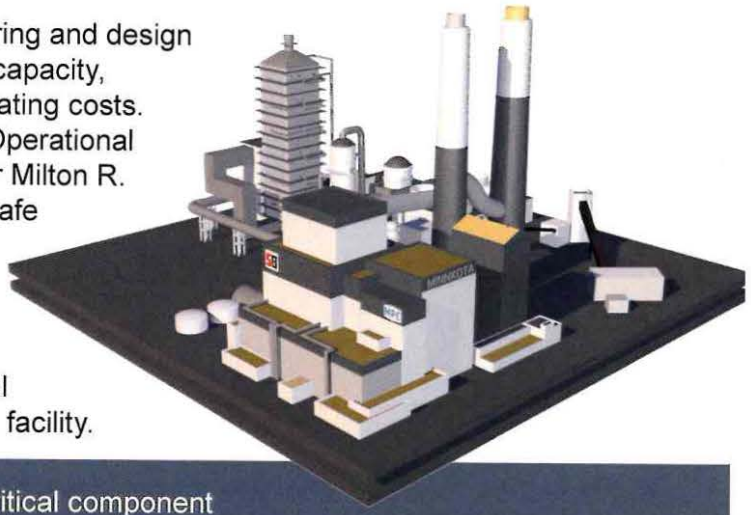
[2] *Reported REE concentrations in operating or under-consideration hard rock mining projects around the world.*

NORTH DAKOTA CARBON MANAGEMENT

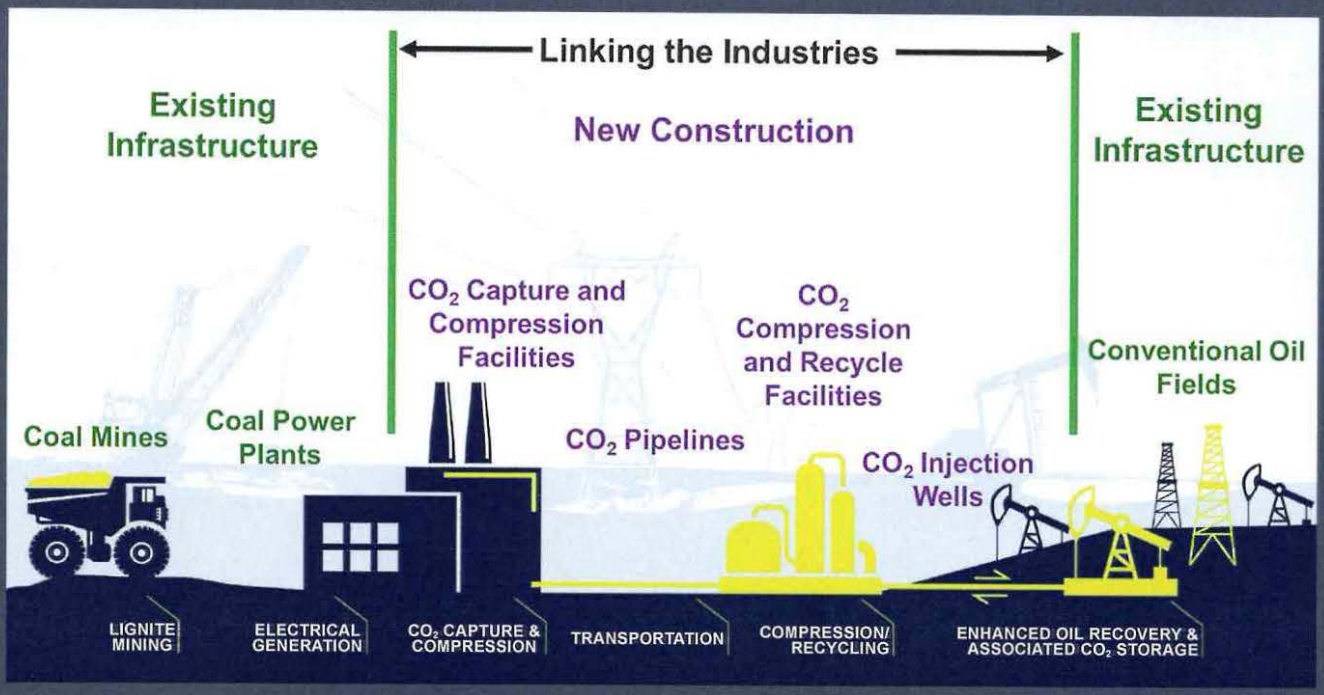
Two large power-generating units in North Dakota are looking to implement CO_2 capture and storage: the 1200-MW Coal Creek Station operated by Rainbow Energy Center (REC) and the Milton R. Young power plant operated by Minnkota Power (known as Project Tundra). The objective of both projects is to build the world's largest carbon capture facility in North Dakota and permanently store CO_2 in mile-deep geologic formations. Combined, the Coal Creek project (9 million tonnes/year) and Project Tundra (4 million tonnes/year) represent storage that would be equivalent to taking greater than 2.8 million gasoline-fueled vehicles off the road every year. North Dakota geology is ideal for safe and permanent geologic storage of carbon dioxide.

The world's largest CO_2 capture facility is in North Dakota.

Currently, Project Tundra has completed front-end engineering and design (FEED) to establish CO_2 capture technology performance, capacity, and integration requirements and estimate capital and operating costs. The Coal Creek FEED will be completed by August 2023. Operational parameters for CO_2 injection and underground storage near Milton R. Young were studied by the Project Tundra team to ensure safe injection of pressurized CO_2, protection of groundwater resources, and accurate monitoring of injected CO_2 to ensure it remains in the storage zone. As a result, the North Dakota Industrial Commission granted underground injection control Class VI permits to store the CO_2. The Coal Creek project is currently planning future work for a storage facility.



Carbon capture, utilization, and storage (CCUS) is a critical component of maintaining, diversifying, and expanding the North Dakota lignite industry. CCUS deployment would link and strengthen two major North Dakota economic drivers: power generation and oil production and enable new industry development.



POWER GENERATION + ENHANCED OIL PRODUCTION

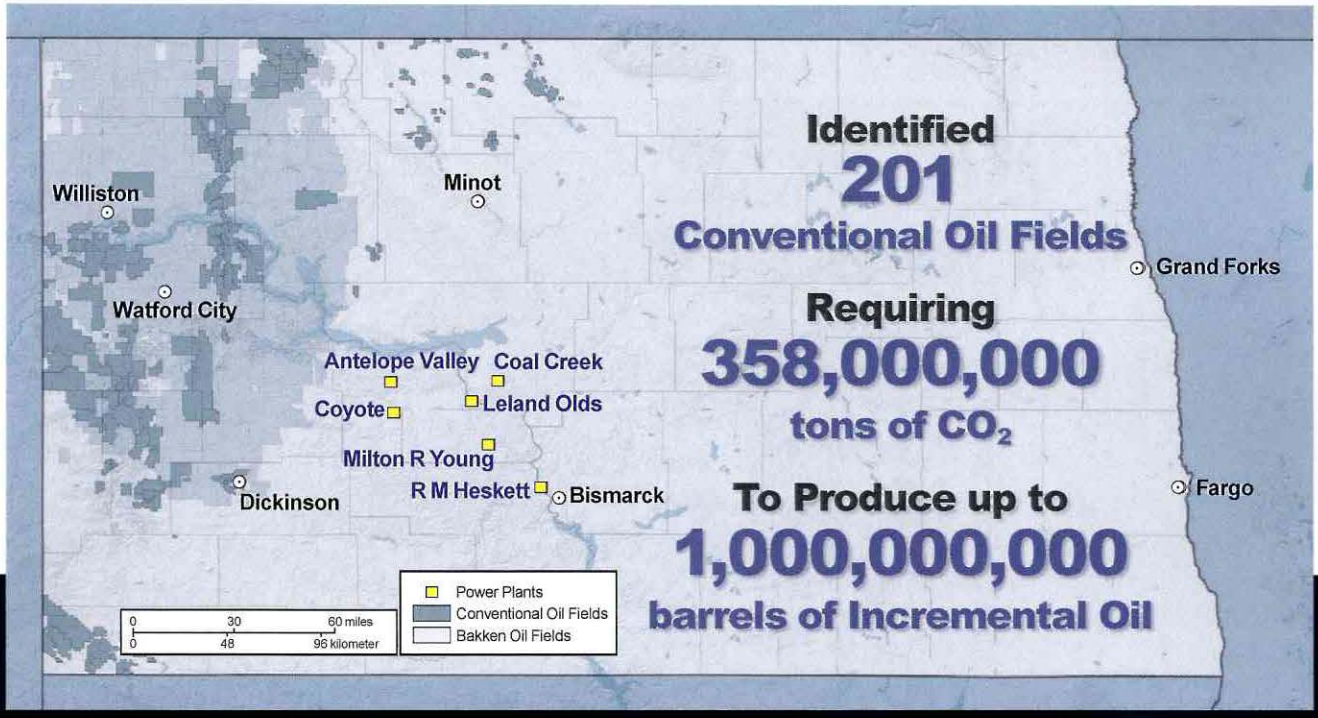
Linking two major North Dakota industries boosts oil production, increases state revenues, and creates jobs.

Under U.S. Internal Revenue Code Section 45Q, captured CO_2 used for EOR or other profit-making purpose is worth a tax credit of $60/metric ton (1000 kilograms or 2200 pounds), while the credit for CO_2 sequestered (permanently stored) in appropriate subsurface geologic formations is $85/metric ton. These federal tax credits are available to CO_2 capture projects that start construction prior to 2026. The fact that Congress passed 45Q with overwhelming bipartisan support indicates good prospects for its extension.

Economic modeling conducted by the EERC and North Dakota State University in 2019 projected that linking the North Dakota power and oil industries through CO_2 capture and conventional oil field EOR could:

- Generate economic activity of $2.5 billion – $3 billion/year.
- Provide $160 million/year in state revenue.
- Create and sustain between 6800 and 8400 direct and secondary jobs.

In terms of CO_2-based EOR, this is just the beginning. Research is under way on how to most efficiently deploy EOR technologies to increase reservoir yields from the unconventional "tight" Bakken formation currently being tapped via fracking.



Access to high-volume, dependable-supply, affordable CO_2 opens up possibilities for new industries, including concrete curing and greenhouse agriculture.

23.0961.02001

Sixty-eighth
Legislative Assembly
of North Dakota

FIRST ENGROSSMENT

ENGROSSED HOUSE BILL NO. 1511

Introduced by

Representatives Novak, Bosch, Hagert, Headland, Ista, Mock, Porter

Senators Kannianen, Kreun, Patten

A BILL for an Act to create and enact a new subdivision to subsection 3 of section 54-35-26, a new section to chapter 57-39.2, a new subdivision to subsection 3 of section 57-40.2-03.3, and a new section to chapter 57-61 of the North Dakota Century Code, relating to evaluation of economic development tax incentives, a sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock, and severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock; and to provide an effective date.

BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:

SECTION 1. A new subdivision to subsection 3 of section 54-35-26 of the North Dakota Century Code is created and enacted as follows:

Sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

SECTION 2. A new section to chapter 57-39.2 of the North Dakota Century Code is created and enacted as follows:

Sales and use tax exemption for materials used to construct or expand a coal processing facility that utilizes coal as a feedstock.

1. Gross receipts from sales of tangible personal property used to construct or expand a coal processing facility that utilizes coal as a feedstock in this state are exempt from taxes under this chapter. To be exempt, the tangible personal property must be incorporated in the structure of the facility or used in the construction process to the point of having no residual economic value.
2. For purposes of this section:
   a. "Coal processing facility that utilizes coal as a feedstock" means a facility that:
      (1) Extracts critical minerals or rare earth elements from lignite coal; or

(2) Creates tangible personal property other than electricity, water, gas, or steam from lignite coal, including lignite coal from which critical minerals or rare earth elements have been extracted.

b. "Critical mineral" means a nonfuel mineral or mineral material essential to the economic or national security of the United States and which has a supply chain vulnerable to disruption. The term includes aluminum, antimony, arsenic, barite, bauxite, beryllium, bismuth, cesium, chromium, cobalt, fluorspar, gallium, germanium, graphite, hafnium, helium, indium, lithium, magnesium, manganese, niobium, platinum group metals, potash, the rare earth elements group, rhenium, rubidium, scandium, strontium, tantalum, tellurium, tin, titanium, tungsten, uranium, vanadium, and zirconium.

c. "Rare earth elements" means any of a series of metallic elements of which the oxides are classed as rare earths and which include the elements of the lanthanide series, yttrium and scandium.

3. The owner of the facility must receive from the tax commissioner a certificate that the tangible personal property used to construct or expand a facility qualifying under this section which the owner intends to purchase qualifies for the exemption.

SECTION 3. A new subdivision to subsection 3 of section 57-40.2-03.3 of the North Dakota Century Code is created and enacted as follows:

Tangible personal property as authorized or approved for exemption by the tax commissioner as provided in section ~~1~~2 of this Act.

SECTION 4. A new section to chapter 57-61 of the North Dakota Century Code is created and enacted as follows:

Severance and sales and use tax exemptions for coal used in a coal processing facility that utilizes coal as a feedstock.

1. Severance tax may not be imposed on the first one million tons [907,184.74 metric tons] of coal per year used as a feedstock by a coal processing facility that utilizes coal as a feedstock in this state as defined in section ~~1~~2 of this Act.

2. The owner or operator of a coal processing facility that utilizes coal as a feedstock shall certify to the coal mine owner or operator the amount of coal measured in tons:

a. Purchased for use as a feedstock by the facility.

b. Used as a feedstock by the facility for extraction of critical minerals or rare earth elements from lignite coal.

c. Used as a feedstock by the facility to create tangible personal property other than electricity, water, gas, or steam from lignite coal, including lignite coal from which critical minerals or rare earth elements have been extracted.

d. Resold or used in any manner other than as a feedstock at the facility, including use in an electrical generating plant or coal gasification facility.

3. The coal mine owner or operator shall report the amounts certified under subsection 2. The amount of coal certified under subdivision d of subsection 2 is not eligible for the exemption in this section. The coal mine owner or operator shall report the amount of coal certified under subdivision d of subsection 2 on its return for the month following the month of certification and shall remit the severance tax due with the return. The tax commissioner shall waive penalty and interest under section 57-61-05 for severance tax remitted in accordance with this subsection.

SECTION 5. EFFECTIVE DATE. ~~This~~Sections 2, 3, and 4 of this Act ~~is~~are effective for taxable events occurring after June 30, 2023.