



ALASKA TECHNOLOGY INNOVATION CENTER (TIC) PLANS

Speaker Brandon Briggs
Date 18 January 2022



BUILDING THE INDUSTRY OF THE FUTURE

- Industry needs
 - Processing and production technologies
 - Infrastructure
 - Workforce
- Engagement of public-private partnerships



VISION

- Perform R&D that enables deployment of commercial processing technologies and production of REE-CMs
- Couple CM processing with the production of high-value, nonfuel, coal products
- Develop public-private partnerships and educating the next generation workforce



MISSION

- Collaborate with miners, manufacturers, equipment suppliers, financial institutions, academics, national laboratories, and the general public to establish carbon ore recovery, manufacturing and processing science that enables a new sustainable industry in Alaska.



GOALS

- Collaborative platform
 - Engage public, private, and other stakeholder groups to identify opportunities for developing CORE-CM resources and facilitating deployment of new and innovative technology for new local production.
- Accelerate research
 - To accelerate research that will enable commercial deployment of advanced processing and production of REE, CM and high-value, nonfuel, coal products by working with our strong team of partners.
- Education and training
 - Advancing and developing opportunities for the education and training of the next generation of technicians, skilled workers, and STEM professionals.



SHORT TERM GOALS

- Find innovative technologies
 - Seek innovative and technology to economically concentrate REEs and CMs at remote deposits so that they may be shipped to refineries for product production.
- Adapt current technologies
 - Bring in existing, yet new to the industry, technical innovations (TRL3-5) that can be further adapted/developed and deployed in the REE/coal mining industries. Approaches to be considered for acceleration of the R&D include integration of modular approaches to technology evaluation and development



LONG TERM GOALS

- New technologies
 - Researching and developing robust new technologies (TRLs 1-3) for economic REE and CM concentration, separation, and metal making processes that can be developed and deployed.
- Workforce development
 - Based upon successful technical innovations we will foster workforce and economic development for the Alaskan coal, REE and CM industries.
- Be adaptable
 - Based upon our efforts to build out innovative technologies that have successful economic and workforce expansion, we expect that a longer-term program focused on broader and deeper CORE-CM topics will result.



TIC PLAN

- Create a collaborative environment to:
 - Establish carbon ore recovery, manufacturing and processing science
 - Develop technologies to identify and efficiently separate valuable materials for a range of carbon ore-based and other ore streams
 - Build strategies and technologies to enable greater recovery of materials from carbon-based ores
 - Create and design new tools and design principles that facilitate material recovery from a variety of ores and potentially from recyclates
 - Extend and demonstrate and leverage the research and development (R&D) already underway at other federally-funded facilities
 - Create carbon ore processing and manufacturing jobs
 - Train the current and future workforce
 - Communicate the AK-TIC's activities to all interested parties



APPROACH

