

Report of the 2014 Alaska Minerals Commission



Prospecting in the Western Alaska Range. Millrock Resources

The Alaska Minerals Commission serves in an advisory capacity to the governor and the Alaska State Legislature. Its role is to recommend strategies to mitigate constraints on mineral development in Alaska. This report fulfills that mandate.

Commission members are appointed by the governor, the president of the Senate, and the speaker of the House of Representatives. Current members represent placer, hard rock, and coal industries. Created by the legislature in 1986, the commission's authorization continues through 2024.

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Introduction

Since 1986, representatives from all sectors of the minerals industry have made recommendations to the governor and legislature regarding constraints, including governmental constraints, on the development of Alaska's minerals and coal. During the past 27 years, the administration and the legislature have successfully acted on a number of key commission recommendations:

- Funding infrastructure development under the Roads to Resources initiative;
- Reforming state permitting processes to increase timeliness and efficiency;
- Gathering and publishing geological and geophysical data on Alaska's mineral potential;
- Assuming state primacy of the National Pollutant Discharge Elimination System;
- Accelerating state land entitlement conveyances in accordance with the Alaska Statehood Act;
- Reestablishing the Citizens' Advisory Commission on Federal Areas;
- Asserting and defending public access to roads, trails, and navigable waterways; and,
- Funding University of Alaska mineral engineering and geology programs.

These initiatives have sent a clear message to the mineral industry that Alaska wants a sustainable industry that can compete in global economic markets. By signing into law HB 99, an act relating to the membership of the Alaska Minerals Commission and extending the termination date of the commission until 2024, the commission's value in serving the state was reaffirmed. The commission will continue to identify issues that inhibit development, both within the control of the administration and legislature, and those from federal intervention.

The Alaska Minerals Commission commends the governor and legislature on actions taken to improve the exploration and mineral development climate in Alaska. The commission has identified specific action items for 2014.

2014 ACTION ITEMS

1. State support for the coal industry as an integral part of the state's overall energy strategy and for coal's value as an export asset.
2. Continued support for development of energy and transportation infrastructure.
3. Continued support for resource education including K-12 and collegiate.
4. Funding to continue litigation against federal intervention regarding the management of Alaska's land, water, and mineral resources.

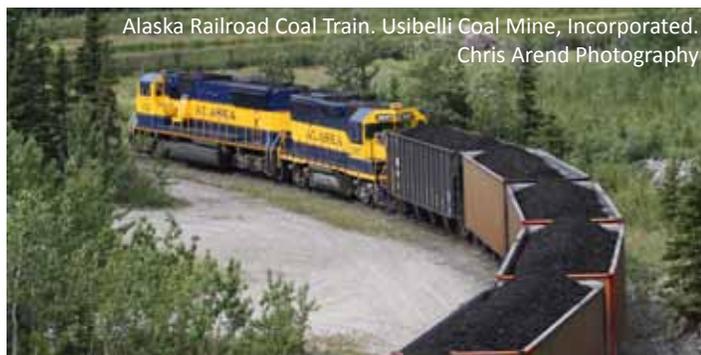


Coal and Alaska's Energy Security

Alaska's coal resources are important to in-state energy security.

- Over half of the nation's known coal resources lie within Alaska.
- Across the nation, the higher the percentage of coal used in the energy mix, the lower overall price of electricity.
- Coal is the most affordable source of power generation in Alaska other than hydro-power.
- During 2012, diesel-generated electricity cost Interior Alaskans about \$0.30/kWh, naphtha-fired power averaged \$0.17/kWh, natural gas-fired electricity produced in Southcentral Alaska and transmitted over the intertie averaged \$0.11/kWh, while coal-fired electricity was the most economical with a cost between \$0.05-\$0.07/kWh.
- Interior Alaska benefits by having more than 30 percent of its power generated from low cost coal, but more cost savings could be realized by the Railbelt and other portions of Alaska from higher utilization of Alaska's coal resources.
- Power plants being built today emit 90 percent less pollutants (i.e., SO₂, NO_x, particulates, and mercury) than the plants they are replacing from the 1970s. In total, coal-based electricity generation emissions have decreased by nearly 40 percent since the 1970s, while coal use has tripled.
- Local coal-fired co-generation facilities are some of the most highly efficient technologies available in providing economical space heat and electricity, both of which are crucial to the sustainability of northern communities.
- Technology for coal gasification and coal-to-liquids has significantly evolved in recent years. These advances are now emerging within the energy market.

Despite these important facts, negative information continues to circulate throughout the public regarding coal as an energy source.



Alaska Railroad Coal Train. Usibelli Coal Mine, Incorporated.
Chris Arend Photography

Recommendations

The commission recommends the State of Alaska, via the Department of Commerce, Community, and Economic Development (DCCED), dedicate the necessary resources to work closely with industry to further educate the public regarding the benefits of using coal. In addition to public outreach, a strong and coordinated partnership between government and coal-producing, transporting, and consuming industries should focus efforts on the following actions and policies:

- Enhance coal-fueled electric generating capacity using a suite of advanced clean coal technologies.
- Support emerging coal gasification and coal-to-liquids industries.
- Increase coal-hauling capacity of railroads, river systems, and coastal waterways where appropriate.
- Provide access to right-of-ways for expansion of electric transmission systems.
- Develop regulatory policies and permitting procedures that ensure coordination among federal and state agencies to facilitate the expeditious review of permit applications and resolve anticipated conflicts.
- Support expansion of existing coal mine production as well as the development of new "greenfield" mines.
- Establish environmental policies that balance the need for expanded and affordable energy supplies with reasonable and sensible environmental protection requirements while providing the long-term certainty needed for major investment including:
 1. Retention of United States Army Corps of Engineers Nationwide Permitting 21 provisions and resolution of related Section 404 issues at coal mines;
 2. Resolution of particulate matter regulations to ensure coal production is not constrained by requirements not supported by scientific and economic evidence and sometimes inappropriately applied to coal mines; and,
 3. Finalization of Air Quality New Source Performance Standards and mercury requirements for existing and new power plants.

Energy and Transportation Infrastructure Development

The State of Alaska should invest in infrastructure for natural gas transportation, high voltage electrical transmission, ports, and road transportation to lower energy and transportation costs and improve the sustainability of Alaska's communities. Lower costs will help attract private capital for development of Alaska's mineral resources.

State participation via the Alaska Industrial Development and Export Authority (AIDEA) in the DeLong Mountain Transportation System was a key factor in developing the Red Dog Mine. Further use of this type of private-public partnership can help advance mine projects and provide benefits to rural regions negatively impacted by the high cost of energy.

The increase in exploration and commercial activity in the Arctic (i.e., shipping, energy, and mineral development) necessitates additional supporting infrastructure and increased presence by the United States Coast Guard. Increased activity in the Arctic requires deep water port development and also provides opportunities to coordinate roads to potential ports with mineral development projects.

Additional investments that can unlock the stranded gas assets on the North Slope, first via trucking of liquefied natural gas (LNG) and ultimately via pipeline to Southcentral Alaska, are needed to break the trend of crippling energy costs throughout Interior Alaska.

Improvements to the electrical transmission grid are required throughout the Railbelt to take advantage of opportunities for cost savings that are available, either through hydropower from Bradley Lake, reducing system losses, or allowing lower-cost generation to be transmitted into areas with higher generation costs.

Recommendations

- Continue public outreach, environmental studies, and engineering studies for roads in Northwest Alaska (i.e., the Ambler Mining District Access) through the *Roads to Resources* initiative.
- Support economic incentives to unlock the stranded natural gas on the North Slope via trucking LNG.
- Support improvements to the high voltage transmission grid.

K-12 and Postsecondary Resource Education

Science and engineering education during K-12 and at the university level is vitally important in preparing students for careers in the mining industry. The *Report of the 2013 Alaska Minerals Commission* recommended increased funding for Alaska Resource Education (ARE) programs and the creation of a University of Alaska initiative to address mining industry needs. The commission recommends additional investments in these areas for 2014.

Alaska Resource Education

Since 1982, Alaska Resource Education (ARE) has been instrumental in igniting young minds and inspiring students and teachers to learn about the importance of natural resources in their everyday lives. As a 501(c)(3) organization based in Alaska, ARE is a partnership between private industry and the Alaska Department of Education and Early Development (DEED) – a relationship that is ideally suited to bridge the gap between natural resource employment opportunities, Alaska's resource economy, and the teachers who are educating tomorrow's workforce. Dedicated to the sustainable future of Alaska, ARE uses Science, Technology, Engineering, and Math (STEM) focused curriculum to teach principles and concepts that have local and tangible applications.

During 2013, ARE trained 55 teachers from five regions across Alaska through *Rock and Roll Around Alaska*, a 500-level course certified through the University of Alaska that educates teachers about Alaska's natural resources and provides classroom-ready materials.

University of Alaska

The University of Alaska (UA) has established a university-wide Consolidated Alaska Mining Initiative (CAMI) in response to commission and mineral industry recommendations to further align its mining-related programs. CAMI is designed to facilitate cooperation between science and engineering programs that support the industry across the university's three primary campuses – Anchorage, Fairbanks, and Southeast. In order for the university to fulfill its commitment to the mineral industry, further investment is needed in targeted programs.



Red Dog Port and Concentrate Barge. NANA/Lance Miller

While not associated with a budget request, the commission recommends the university examine methods to integrate its successful GeoFORCE Alaska outreach initiative program into the CAMI. The commission recommends the legislature and administration fully support CAMI components featured in the Board of Regents-approved fiscal year 2014 budget including:

1. *University of Alaska Southeast (UAS) – Center for Mine Training.* The director of the University of Alaska Southeast Center for Mine Training and assistant professor of Mine Training position was created after receiving a \$300,000 donation from Hecla Greens Creek in June 2011. The director works in cooperation with University of Alaska Mining and Petroleum Training Service (MAPTS) to provide Mine Safety and Health Administration (MSHA) trainings and entry-level miner trainings. In 2013, the legislature appropriated one-time funding totaling \$117,800 to support the mine training program during fiscal year 2014. The commission recommends establishing a regular budget line item to provide ongoing support for UAS' mine training program.
2. *University of Alaska Fairbanks (UAF) – Alaska Critical and Strategic Minerals, Fossil Fuels, and Energy.* Alaska ranks within the top ten locations globally for important rare earth and strategic minerals. During 2011, mineral exploration investment in Alaska totaled \$365 million, about one-third of the total spent in the US, but still the state remains largely unexplored. The commission recommends two geology faculty positions in imaging spectroscopy and geochemistry, to train students and conduct research in mineral exploration and related technologies. The Institute of Northern Engineering has requested three new faculty positions to conduct research in energy and power, fossil fuel development, and critical and strategic minerals.

3. *University of Alaska Anchorage (UAA) – Response to Mineral Industry Geology Training Needs.* UAA's geology program has partnered with the mineral industry to produce graduates who are well-trained to meet the growing needs of Alaska's resource extraction economy. However, a recent assessment of industry needs facilitated by the Department of Geology's Community Advisory Board highlighted two remaining UAA geology program gaps: 1) more emphasis is needed on economic geology; and, 2) curriculum should be more thoroughly grounded in environmental geology. To meet these needs, the commission recommends two tenure-track geology faculty positions including: 1) an economic geology position to replace industry temporary funding; and 2) an environmental geology position to meet the additional need for trained geologists. Geology is a relatively new degree at UAA and has grown to a program of over a hundred students, with 100 percent job placement upon graduation.

Recommendations

- Preserve ARE's current funding at a state level of \$100,000 and appropriate an additional \$100,000 for new curriculum (i.e., a Google Earth-based geospatial Alaska minerals curriculum for grades 7-12).
- Fully-fund three CAMI budget item requests within the approved University of Alaska Board of Regents fiscal year 2014 budget including:
 - o UAS - \$117,800
 - o UAF - \$310,000
 - o UAA - \$220,000
- Request the University of Alaska integrate and expand the successful GeoFORCE Alaska program at UAF to other UA campuses as part of the CAMI.



Alaska Resource Education Program, Minor Miners, Alaska Miners Association Fall 2013 Convention. ARE/Alexandra Becker



Two Miners at Sunset. Pebble Partnership

Litigation against Federal Intervention – “The One Great Constraint”

In a global context, Alaska is a great destination for mineral exploration investment and mine development. Alaska is politically stable, the geology is highly attractive, and there has been relatively little exploration. The potential to discover more highly-valuable ore deposits is high.

The State of Alaska has made tremendous strides to nurture a growing mineral industry including:

- Recognizing the importance of the industry and welcoming responsible developers;
- Developing a stringent, efficient, and coordinated permitting process;
- Supporting electrical power and transportation infrastructure development;
- Implementing reasonable and stable taxation with exploration incentives;
- Developing clear land ownership patterns;
- Building a geological database; and,
- Establishing and enforcing strong regulations for environmental protection.

Mineral resource developers want to invest in Alaska, but the single greatest impediment to mineral development is uncertainty about federal mine permitting. Alaska is perceived by industry as a difficult place to permit a mining project due to federal regulations. While the commission supports stringent regulation, inconsistent enforcement of regulations and unbalanced judgments are not conducive to investment or economic development.

The commission asserts the following findings:

1. The State of Alaska has the basic right to develop its natural resources;
2. The State of Alaska has demonstrated and will continue to practice responsible development; and,
3. Mineral development strengthens the state and nation.

The State of Alaska has actively challenged several federal actions in recent years such as the listing of endangered species (i.e., polar bears) and land management policies (i.e., national forest roadless rule). The commission applauds these efforts and supports the state’s continued efforts to defend against federal overreach on land and resource management issues vital to the socioeconomic interests of the state and its residents.

The commission supports the state in making every effort to engage federal agencies to align permit criteria and policies with the state in a cooperative manner. The commission also believes the state is justified in taking reasonable action, whether through formal comment or court action, to challenge federal initiatives that infringe on the state’s rights and regulatory responsibilities over lands and resources within Alaska. The commission is appreciative of the additional personnel in the attorney general’s office funded by the legislature during 2013 to help address federal issues.



One Millionth Foot of Core. Pebble Partnership

Recommendations

The commission recommends funding from the legislature for legal costs associated with addressing federal agency overreach. The following are specific examples of federal overreach that the commission recommends be challenged at every reasonable opportunity:

- Environmental Protection Agency (EPA): In an unprecedented and extreme use of the Clean Water Act Section 104 (a) and (b), the EPA authorized preparation of the Bristol Bay Assessment. This report sets the stage for EPA to block development of the Pebble Mine without allowing the project proponent the due process of normal permit development or a project-specific National Environmental Policy Act (NEPA) review. This preemptive action erodes Alaska's control of its own resources. The state should challenge any further preemptions of the permitting process through EPA's interpretation of Section 104 (a) and (b).
- Bureau of Land Management (BLM): Despite historic, methodic, and reasonable support of resource development, BLM's recent approach to resource development appears to be changing. BLM's Washington DC solicitor has determined Alaska APMA permits do not adequately cover BLM's environmental requirements. As a result, BLM is developing terms and conditions for permits and supplemental plans through BLM policies and guidelines. These new requirements are duplicative of state and EPA requirements. Not only is this an additional layer of permitting, but BLM is not able to retain enough qualified personnel to review and process these permits in a timely manner. The state should challenge BLM's determination that APMA permits are inadequate and oppose BLM's decision to impose redundant permit and plan requirements.
- United States Army Corp of Engineers (USACE): Permitting and mitigation requirements for large resource development projects are onerous and inappropriate to Alaskan conditions. The commission appreciates the 2013 legislation authorizing the state to evaluate assuming state primacy from the federal government to administer the regulatory program for managing wetlands, allowing the state to make jurisdictional determinations and process permits in a timely manner. The commission recommends that the state continue to support the multi-department evaluation of assuming state primacy for managing wetlands.
- United States Environmental Protection Agency (EPA), National Marine Fisheries Services (NMFS), and Fish and Wildlife Service (FWS) have designated extensive areas of critical habitat particularly along Alaska's coastline. Via the federal Endangered Species Act (ESA), such designations are extensive in the breadth of their reach, incorporating not just specific important habitats but all habitats throughout entire regions. As a result of excessive permit stipulations, ports and transportation corridors essential for most large-scale mine developments become difficult to construct and operate.
- Additionally, the ESA interpretation has been extended to include species that have thriving populations but are predicted to be at risk from future threats. Speculative listings of this type are difficult to manage. There are no clear criteria to establish these candidates and there are no logical means to comply with ESA regulations such as the development of recovery plans and criteria.
- The commission recommends the state continue to challenge overreaching ESA listings and to challenge determinations for ESA critical habitat that do not differentiate between general habitat and specifically important and critical habitat areas.



Fort Knox Mine Pit. Kinross Gold Corporation/Judy Patrick Photography



The Alaska Department of Commerce, Community, and Economic Development (DCCED) is tasked with providing staff support for the Alaska Minerals Commission. This publication was released by DCCED as required by AS 44.33.431(d). The purpose of this publication is to report the findings and recommendations of the Alaska Minerals Commission to the governor and to the legislature. This publication is required by Chapter 98, Session Laws of Alaska, as amended by Chapter 4, Session Laws of Alaska, 1993. This report does not constitute department official position or opinion.