



Embracing Birch-Bark Basketry

How can Deg Het'an cultural knowledge of birch-bark basketry persuade Doyon, Limited into implementing renewable energy?

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Who is Doyon, Limited?

Congress passed the Alaska Native Claims Settlement Act (ANCSA) in 1971 to settle aboriginal land claims creating twelve Alaska Native Regional Corporations in distinct geographic areas like Doyon, Limited ("Regional Organizations — Alaska Federation of Natives" 2018; Ganapathy 2011, pg. 119). ANCSA preserves ownership of regional corporation stocks for Alaskan Natives for profit making endeavors and facilitates natural resource development (Ganapathy, 2011, pg. 118). The act allocated 12.5 million acres of Alaskan Interior land to Doyon, Limited making them the largest private landowner in the state and one of the largest in the nation, see fig. 1 ("Doyon Limited" 2018). Doyon, Limited prides themselves to be the top-tier Alaska Native Regional Corporation that is a powerful economic driver providing for 19,800 shareholders ("Doyon Limited" 2018). Management of these lands is focused on the protection of traditional shareholder uses, and responsible economic development of natural resources to operate natural gas and coal to provide for their shareholders ("Alatna"2018).

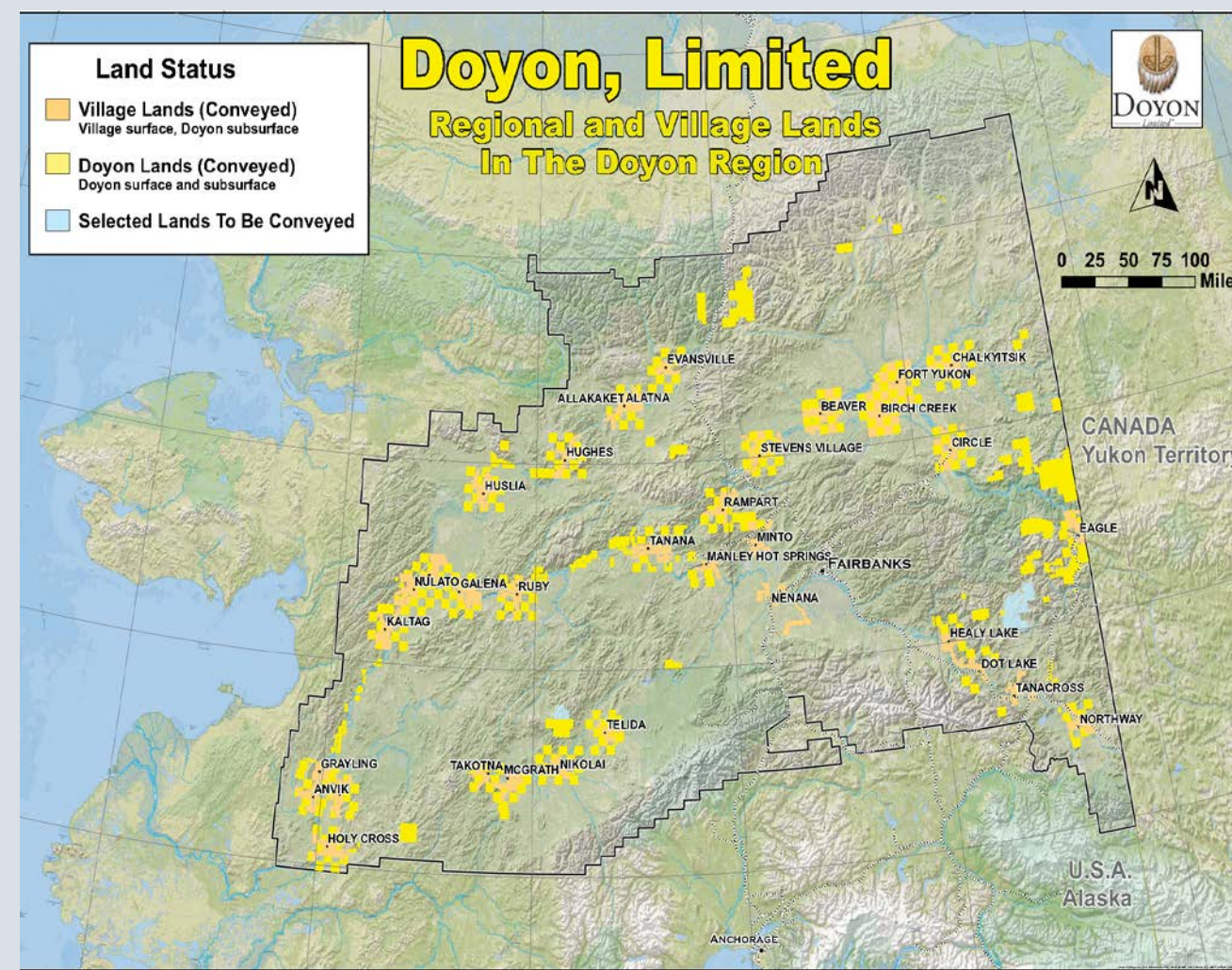


Figure 1. Doyon, Limited Land Ownership

Who are Deg Hit'an Athabascan people?

The shareholders of Doyon, Limited are primarily Athabascan people who have a variety of different dialects segregated into language territories as seen in figure 2. Off the Lower Yukon River, there are two Athabascan dialect regions, Deg Xinag and Doogh Qinaq (Holikachuk) that are spoken in two villages of Grayling and Shageluk, Alaska ("Alaska Native Languages | Deg Xinag" 2018). Deg Xinag is the traditional language of Deg Hit'an Athabascan people originally from Shageluk, Alaska ("Alaska Native Languages | Deg Xinag" 2018). Doogh Qinaq is the traditional language of Holikachuk Athabascan people from Holikachuk, Alaska off of the Innoko River that connects to the lower Yukon River, see figure 5 ("Alaska Native Languages | Holikachuk" 2018). In figure 4, Wilson "Tiny" Deacon was the last fluent speaker of Holikachuk who lived from Sept. 25, 1925 to March 17, 2012 ("Alaska Native Language Loses Last Fluent Speaker" 2018). Tiny was born in now-abandoned village of Holikachuk in the interior of Alaska ("Alaska Native Language Loses Last Fluent Speaker" 2018). Tiny spent his life hunting and trapping in the forests of the Innoko River region and possessed an almost unimaginable wealth of traditional knowledge about the land and its inhabitants including the rich history, language, and the culture of his people ("Alaska Native Language Loses Last Fluent Speaker" 2018). Tiny's wife, Edna Deacon (see figure 3), alive and residing in Grayling, Alaska is a fluent speaker of Deg Xinag Athabascan and works with both Deg Hit'an and Holikachuk elders on stories and cultural projects in the community (Juneau et al. n.d). Stories in the old language reveal rich ecological knowledge, in the Deg Xinag region where Edna and her family live off the land, she recorded various events in her life regarding Traditional Ecological Knowledge (TEK) involving the boreal forest and birch bark basketry (Juneau et al. 2018). Traditional knowledge is rich, enabling better communication in expressing observations in survival techniques to accommodate adaptation planning for landscape restoration and management, traditional technologies for adaptation, and local knowledge to complement the scientific knowledge base (Williams and Hardison 2013, pg. 532). Doyon, Limited is the economic driver to provide for their shareholders best interest would be embracing that traditional knowledge like birch bark basketry. Figure 8 is an example of what Deg Hit'an Birch Bark Baskets look like.

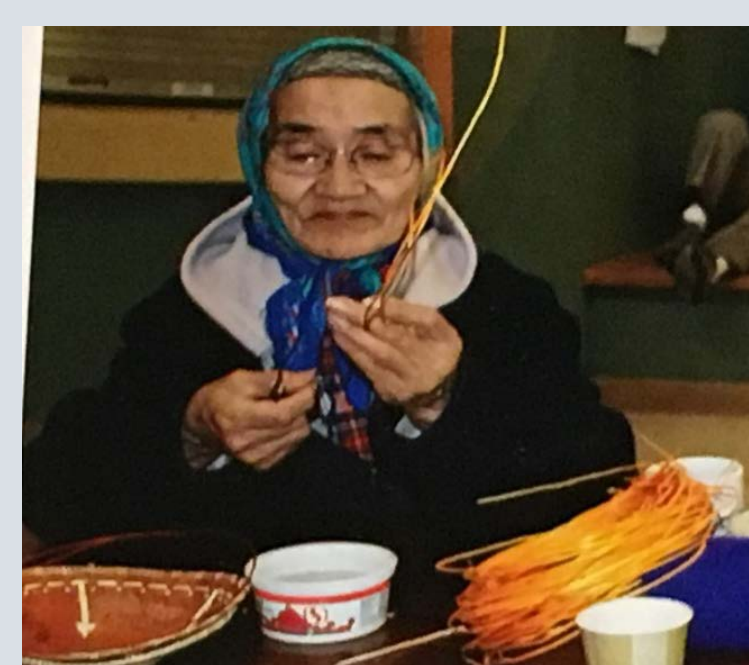


Figure 3. Deg Hit'an elder making a basket

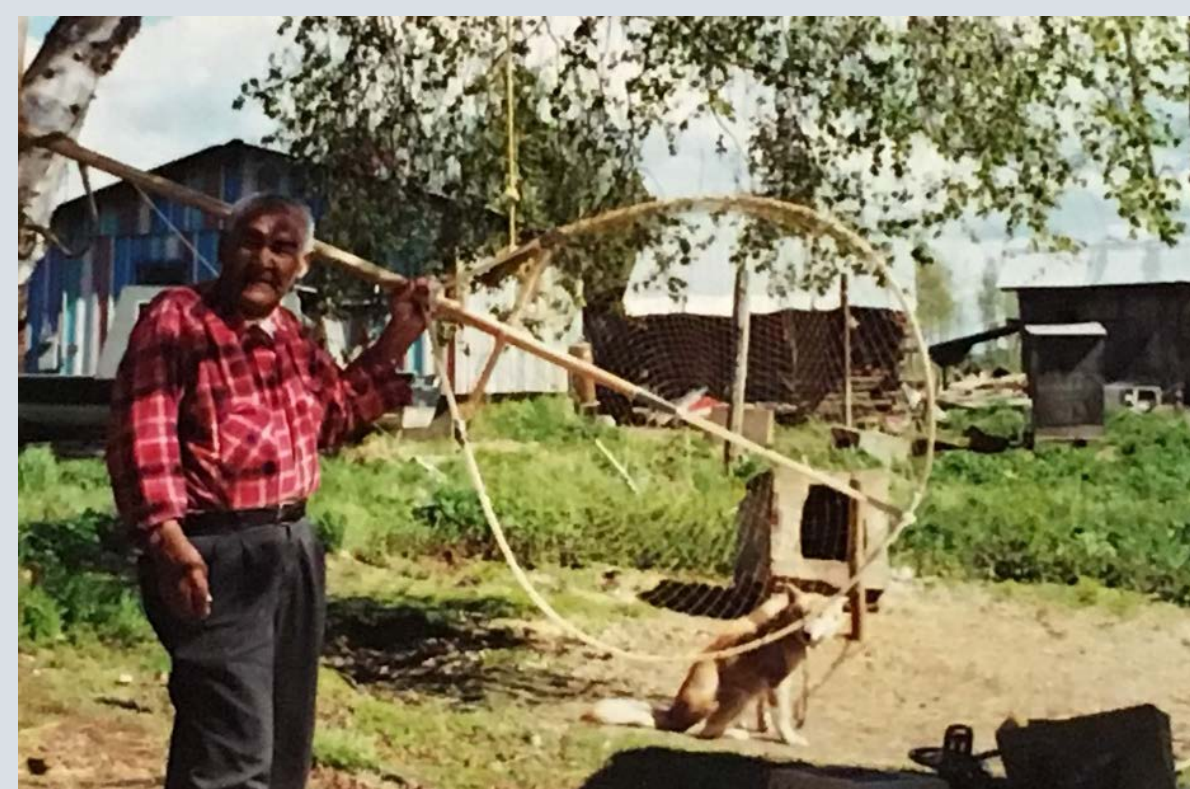


Figure 4. Holikachuk elder holding his handmade birch wood fish net

Doyon Embracing Traditional Ecological Knowledge

Embracing traditional knowledge in an Athabascan Regional Corporation like Doyon, Limited gives them a reason to care about what happens to the land, language, and cultural knowledge. Doyon's mission is to protect traditional shareholders use of land while attempting to expand their shareholder dividends, shareholder hire and training ("Doyon Supports Drilling Exploration in ANWR" 2018). The Doyon board supports maintaining and increasing state revenues, jobs, and activities derived from oil production ("Doyon Supports Drilling Exploration in ANWR" 2018). Doyon is confident that oil and gas drilling gives them their capable source for building Doyon's portfolio of services within the Doyon Family of Companies because of their strong grasp of operational safety and their support of new technologies ("Doyon Supports Drilling Exploration in ANWR" 2018). Doyon keeps the majority of their shareholders up to date on exploring more drilling opportunities like ANWR Section 1002 ("Doyon Supports Drilling Exploration in ANWR" 2018). Instead of Doyon exploring further drilling opportunities, they should think about how to protect traditional shareholder use of land with renewable energy. This Athabascan regional corporation has the power and sources to implement renewable energy, but have invested solely only in natural resources that have been a threat to traditional shareholder use of land. Figure 7 and 8 are examples of what are culturally significant to Deg Hit'an people.



Figure 6. Alaska's Ecological sectors

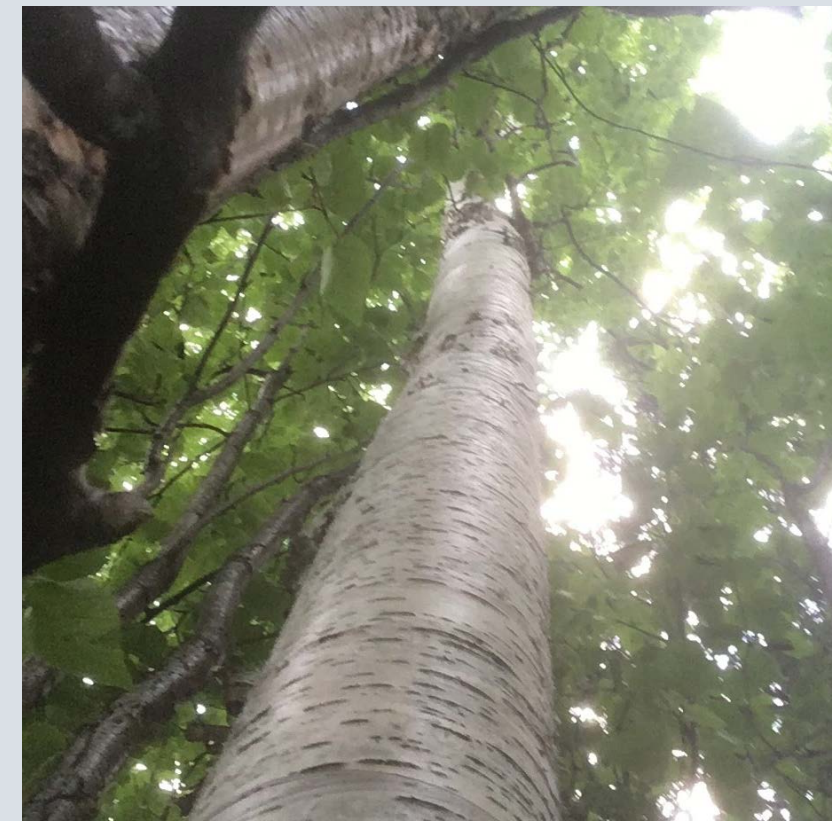


Figure 7. Birch Bark Tree



Figure 8. Side View of Edna's Birch Bark Basket

Alaska's Ever Growing Dependence of Oil

Doyon, Limited property perimeter as seen in figure 1 compared to figure 6 shows where the Boreal forest inhabits the interior. The boreal forest is important to Deg Hit'an and Holikachuk people for cultural use, indigenous subsistence living, and for heating homes. The Boreal forest is home to black spruce, white spruce, balsam poplar, paper birch, and aspen (ADF&G 2018). Figure 7 shows Paper birch (Betula neoalaska), otherwise known as birch trees are used heavily in the making of birch bark baskets. Not only is birch trees important to Deg Hit'an people but so are spruce trees.

Edna Deacon uses spruce wood for her wood stove as her primary heating source. Oil stoves are used as a secondary heating source in the winter. The oil stove is connected to a water heater to avoid water pipes from freezing and bursting because it is common to be below sixty degrees Fahrenheit (ADF&G 2018). Alaska's extreme temperatures have made a growing dependence of natural gas for basic needs of survival and everyday commodities. Alaska ranks second only to Hawai'i in the share of its electricity that is generated from petroleum liquids ("Alaska - State Energy Profile Overview - U.S. Energy Information Administration (EIA)" 2018). In figure 9, shows a visual representation of Alaska's growing dependence of natural gas found on Energy Information Administration (EIA) under their State Energy Data System. If Doyon, Limited are capable of drilling in extreme temperatures of the arctic, they are capable of implementing renewable energy into the interior.



Figure 5. Innoko River

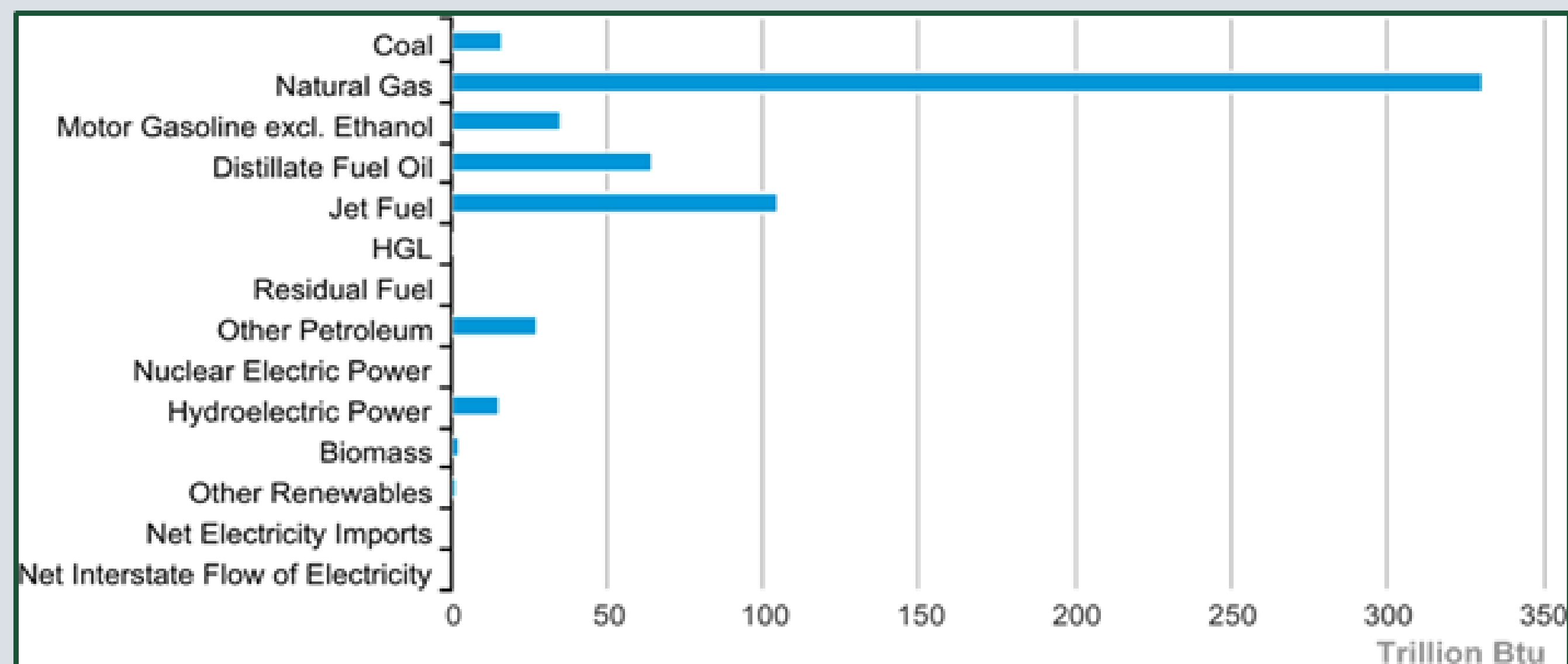


Figure 9. Alaska Energy Consumption Estimates 2016

Why Wind Turbines?

Wind turbine generator technologies have an economic impact on the costs of generating and integrating power into utility systems in rural/remote Alaska affecting the cost of a shareholder's utility bill (Konkel 2013, pg. 5). The set of challenges in implementing renewable energy projects are rather benign compared to the effects of other energy technologies that impact air quality, generate hazardous materials with possible exposure routes affecting human health, or produce radioactive waste streams (Konkel 2013, pg. 6). The challenges renewable energy have are due to the intermittent nature of the wind resources, storage options/costs of integration/regulation to use the wind project output, and wind generation projects or wind farms compete with other renewable energy projects for funding (Konkel 2013, pg. 5). Doyon, Limited investing in renewable energy will internalize the external costs of energy development and maximize community benefits enhancing both investors and the sustainability of the community (Konkel 2013, pg. 7). Figure 10, shows an example of what Alaska's interior will look like if Doyon implements renewable energy.

Realistic Benefits of Renewable Energy to Shareholders

The harsh and unforgiving conditions of the interior have much to gain by adopting energy policies that favor conservation first, renewable energy sources integrated into the mix, and favoring technologies and planning in protecting the Boreal Forest (Konkel 2013, pg. 7). Lowering the total diesel fuel bill in rural Alaska is not going to totally reconfigure Alaska's overall energy picture; however, renewable energy can lower costs of basic utilities like water, sanitation, and electricity by saving expenditures on expensive diesel fuel (Konkel 2013, pg. 7). Improving energy efficiency and preventing catastrophic failures due to freezing water systems could improve the resilience of systems in places like Grayling, Alaska (Konkel 2013, Pg. 7).

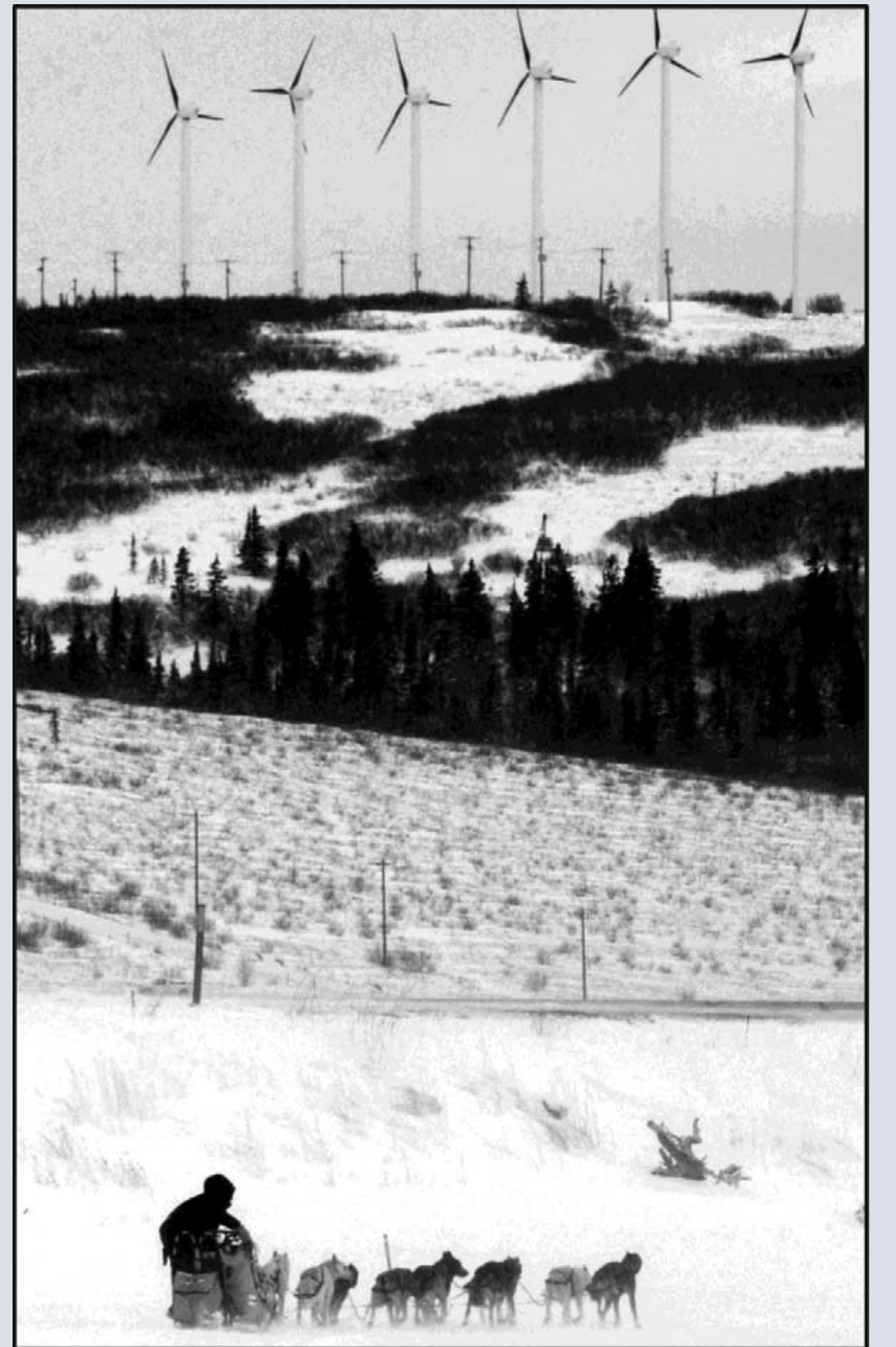


Figure 10. Photo Credit: Bill Roth, Anchorage Daily News, 3\13\13.

To move away from the ever growing dependency on oil, Doyon should be investing in renewable energy and that will allow their shareholders to live more sustainably (Konkel 2013, pg. 7). Doyon has both culturally rich knowledge and western technology available to them giving them the advantage to change the way indigenous people affect the earth.

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