

Written Testimony of

Darron Scott, President/CEO

Kodiak Electric Association, Inc.

Before the

House Committee of Natural Resources

Subcommittee on Water, Power and Oceans

Testimony in Support of H.R. 220

April 4, 2017

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Good morning Chairman Lamborn, Ranking Member Huffman, and members of the Subcommittee on Water, Power and Oceans. Thank you for the opportunity to appear before you today as the Subcommittee considers H.R.B 220, a bill that would authorize Kodiak Electric Association, Inc. (KEA) in Alaska to occupy up to 20 additional acres of federal land within Kodiak National Wildlife Refuge (KNWR) to facilitate the expansion of the Terror Lake Hydroelectric Project, a vital, existing renewable energy project within KNWR. I also want to thank Congressman Don Young, Chairman Emeritus of the Natural Resources Committee, the sponsor of H.R. 220, and a tireless advocate for small, remote communities like Kodiak, Alaska.

My name is Darron Scott, and I am here in my capacity as President/CEO of KEA. KEA is the local not-for-profit electric utility serving the citizens and businesses of Kodiak, Alaska, the local U.S. Coast Guard (USCG) base, and the surrounding area. Each member that receives KEA's electricity is part owner of our local cooperative, including the USCG.

It is an honor to provide testimony to this Subcommittee regarding the importance of H.R. 220 and the reasons why approval of this bill is both necessary and time sensitive.

Introduction

The expansion of the Terror Lake Hydroelectric Project facilitated by this bill will provide the community of Kodiak with reliable and affordable electricity, sustain the economic vitality of our local fishing fleet, and ensure that the largest USCG base in the United States remains energy independent and energy secure.

This bill also ensures that the expansion of the Terror Lake Hydroelectric Project will be subject to all appropriate environmental terms and conditions included within a license amendment to be issued by the Federal Energy Regulatory Commission (FERC) pursuant to the Federal Power Act (FPA), including mandatory license conditions to protect KNWR already submitted to FERC by the U.S. Fish and Wildlife Service (USFWS), pursuant to section 4(e) of that Act (16 U.S.C. § 797(e)). The project also will be subject to full environmental review under the National Environment Policy Act (NEPA).

Timely passage of this legislation will save money for the residents of our community, our fishing fleet, and the Federal Government. Unfortunately, if this bill cannot be passed by the Congress before late summer this year, construction will need to be delayed by at least one year, and all of KEA's members—including the USCG—will bear the estimated \$11 million cost of delay.

Purpose and Need for H.R. 220

H.R. 220 is a common-sense approach for meeting Kodiak's projected energy growth by maximizing existing infrastructure and meeting our community's commitment to clean, affordable, and reliable energy. The bill would simply authorize KEA to occupy up to 20 acres of federal land located within KNWR and immediately adjacent to the existing Terror Lake Hydroelectric Project. When Congress passed the Alaska National Interest Lands Conservation Act (ANILCA) in 1980, it recognized the possibility that the Terror Lake Project would eventually be built, and authorized the Secretary in section 1325 of the Act (16 U.S.C. § 3212) to issue a permit for the Project. Following the passage of ANILCA, the State of Alaska obtained the required land use authorization from the Secretary, together with a license from FERC to construct and operate the Project. The Terror Lake Project (FERC Project No. 2743) was then constructed and began commercial operation in 1985.

The electric service needs of the citizens, businesses and essential government functions on Kodiak Island have grown tremendously since 1985. As discussed in more detail below, KEA has responded to these needs through a strong commitment to affordable, domestic renewable resources that has nearly eliminated our reliance on expensive diesel generation. A major component of meeting our goals and meeting our needs is an expansion of the Terror Lake Project—an expansion that was identified and studied over 40 years ago when the Project was initially proposed. This expansion involves the connection of a new source of water from the Upper Hidden Basin watershed to KEA's existing Terror Lake Project, located in the adjacent watershed.

The majority of this proposed Upper Hidden Basin expansion is located on lands owned by the State of Alaska, in the basin immediately adjacent to the existing Terror Lake Project. However, a tunnel is needed to convey waters diverted within the Upper Hidden Basin to Terror Lake. And because Terror Lake is located within KNWR, a portion of the tunnel (about 0.5 mile), together with a small footprint of lands needed for construction access and remediation of the rocks removed for tunnel construction, are located within the KNWR on federal lands that are just beyond KEA's current special use authorization issued by the Secretary in the 1980's.

For this reason, KEA has initiated two separate, but highly duplicative federal processes to receive approval for the Upper Hidden Basin expansion project. First, for the past three years, KEA has been preparing an application to amend its FERC license for the Terror Lake Project. This process has involved extensive consultation with federal and state resource agencies, interested members of our community, and other stakeholders. Officials from the USFWS, including regional staff and staff of KNWR, have been intimately involved at every stage of the amendment process. KEA has conducted environmental and engineering studies to ascertain the feasibility of this expansion project and understand its effects. KEA submitted its application to FERC in May 2016, and we understand that FERC is poised to issue its Environmental Assessment (EA) as required by NEPA by May of this year. In the amendment proceeding before FERC, USFWS has already submitted its "mandatory conditions" to FERC pursuant to section 4(e) of the FPA. As members of this committee are aware, these mandatory conditions are imposed to protect the KNWR, and FERC has no authority to reject or modify these conditions. They will be included as conditions of FERC's license amendment, exactly as they

have been submitted by USFWS. KEA appreciates the time and effort of all stakeholders, particularly FERC and USFWS, for working with us through the amendment process.

Separate from the FERC amendment process, KEA also must obtain a right-of-way permit from the USFWS under Title XI of ANILCA, as the proposed tunnel that would convey waters from Upper Hidden Basin to Terror Lake constitutes a “transportation and utility system” under that Title. Similar to the FERC amendment procedures, USFWS’s regulations require consultation and NEPA review. Fortunately, to address some of the duplication between their two approval processes, FERC and USFWS recently entered into a Memorandum of Understanding (MOU) for their cooperation in issuing a single EA for the NEPA required for both of their approvals. While KEA is appreciative of the efforts of these agencies to avoid duplication of effort, the negotiations that led to the MOU took many months to complete and delayed both processes. KEA is also concerned about over-burdening USFWS staff that have many responsibilities—all in an effort that would review the same issues that FERC is required to review in its license amendment process, and to evaluate the same environmental resources as NEPA requires of FERC.

Because of the extreme time-sensitivity of KEA’s Upper Hidden Basin expansion project—a project that, due to lengthy regulatory processes, has already been delayed for over a year—KEA believes that a single federal approval process is warranted. The FERC amendment process under the FPA is already underway and well advanced. Because of USFWS’s mandatory conditioning authority under FPA section 4(e), which USFWS has already fulfilled, we can all be assured that the FERC amendment process ensures that KNWR will be protected and mitigated through conditions placed in KEA’s FERC license for the Terror Lake Project.

H.R. 220 would accomplish this objective by extending a direct Congressional authorization to KEA to occupy a few additional acres of federal land with KNWR without the need to obtain any further approvals from USFWS. It would remove unnecessary and duplicative “red tape” and allow this project to proceed in a timely manner—a project that, except for this single impediment, is shovel-ready. Otherwise, KEA’s customers, including a major federal installation, risk bearing the cost of an estimated \$11 million due to a single year of delay.

Description of the Upper Hidden Basin Diversion Project

When the Terror Lake Hydroelectric Project was built in the 1980’s, it was built with three additional watershed diversions that add water to the project for increased energy production capability. A fourth watershed diversion was also thoroughly investigated during the original development of the project: the Upper Hidden Basin Diversion. This fourth diversion was not built at the time due to the added expense and because the community did not need that power resource then, but it was recommended as the most cost effective way to add future power to the Terror Lake facility and to the community grid when the growth in power demand in Kodiak justified it. With the load growth in Kodiak over the past few decades, the time has come for KEA to expand the Terror Lake Hydroelectric Project by adding the Upper Hidden Basin Diversion.

The Upper Hidden Basin Diversion project consists of adding two small diversion dams to two small upland streams to divert the stream flows into a new 1.2 mile, gravity fed tunnel to flow directly into Terror Lake. Once the additional water from the Upper Hidden Basin area reaches Terror Lake, additional power can be produced with existing equipment already in operation at the Terror Lake Hydroelectric Project. No changes are needed to the existing dam, penstock, powerhouse, or transmission line. No new turbines or other equipment will be needed. The Upper Hidden Basin Diversion will simply optimize this existing infrastructure, resulting in a more enhanced and efficient use of an already critical facility.

The Upper Hidden Basin Diversion Project will add 33 million additional kilowatt-hours of renewable energy to KEA's electric grid. The only other alternative for KEA to make this power is to return to diesel power because we have maxed out our wind power due to integration issues. The Upper Hidden Basin Diversion project equates to about 2.32 million gallons per year of diesel equivalent power. With diesel-generation costing over four times that of hydropower, reverting back to that much diesel generation comes at an incredible cost to our community, and would add over 540 tons of nitrogen oxide and 25,500 tons of greenhouse gas pollution annually as well. The Upper Hidden Basin Diversion project is pivotal to meeting our community's future energy needs as our loads continue to grow.

As depicted on the map included in the attachments to this testimony (Figure 2), the Terror Lake reservoir is located inside KNWR, and as explained above KEA has an existing FERC license to operate the hydropower project on federal land. The Upper Hidden Basin Diversion will involve a new tunnel that needs to connect the diverted water originating on state land over to the Terror Lake reservoir. A portion of this tunnel, its outlet and construction area occurs on federal land within KNWR that is not currently included in the existing FERC license, and beyond KEA's existing special use authorization issued by the U.S. Department of the Interior. KNWR lands that will be required for the Upper Hidden Basin Diversion project appear in the attachments (Figure 3).

For the last several years, KEA has been working through the FERC license amendment process to obtain approval for the Upper Hidden Basin Diversion project. After numerous consultation meetings, environmental studies and other investigations, and public comment periods, no party has raised any objection of this project. USFWS has already established, through its mandatory FPA section 4(e) conditions, the environmental requirements that will protect and manage KNWR lands disturbed by this project. These were submitted to FERC in letters from the USFWS dated August 22, 2016, and November 30, 2016. Nonetheless, as explained above, current legal requirements mandate that KEA not only obtain a license amendment from FERC, but a right-of-way approval from USFWS as well, under ANILCA Title XI. The duplication and redundancies in these requirements impose additional costs imposed upon Kodiak electric customers, as well as significant risk of project delays.

Because of federal permitting requirements, the Upper Hidden Basin Diversion project has already experienced significant delay, and any further delays will lead to considerable cost increases to KEA's ratepayers, particularly KEA's largest customer, USCG Base Kodiak. Construction in Alaska is difficult, especially in high altitude, remote locations—such as the Upper Hidden Basin. The timing of construction is absolutely critical. Summer access is short.

If KEA does not secure the necessary land use authorization by summer 2017, we will not be able to complete the required contractor bidding preparation work when the site is available for potential bidders to access and inspect. If that does not occur on schedule, we will lose the summer 2018 summer construction season, thereby adding an entire year to the length of this project and delaying its benefits. Due to climbing interest rates, inflation on the project and lost production, it is estimated that a one-year delay will cost our cooperative and community approximately \$11 million. This is a very challenging cost increase for any small community like Kodiak to bear. Considering that approximately 20 percent of KEA's power serves federal facilities associated with USCG Base Kodiak, a substantial portion of the additional cost resulting from a permitting delay would be borne by U.S. taxpayers.

The common sense solution envisioned in H.R. 220 would allow this vitally important project to move forward, on schedule—and without evading any environmental review and protections. Through its mandatory conditioning authority under FPA section 4(e), USFWS has already identified environmental requirements needed to protect and manage KNWR with regard to the Upper Hidden Basin Diversion project, and has submitted those mandatory conditions to FERC. FERC is poised to issue its EA under NEPA by May 2017—well within the timeframe needed for KEA to move this project forward in a timely manner.

Thus, no environmental protections will be lost through H.R. 220, but there is much to be gained by this legislation: a savings of \$11 million to the ratepayers on Kodiak, including the federal government; greater efficiency and timeliness in federal permitting requirements; elimination of redundancy and uncertainty in project development requirements and timelines; and a reduction in USFWS's administrative burden at a time when agencies' limited resources must be prioritized.

Kodiak's Commitment to Renewable Energy

Kodiak, Alaska, is a very unique community situated on Kodiak Island in the Gulf of Alaska, about 250 air miles southwest of Anchorage. (Please see Figure 1 in the attachments.) Kodiak is home to the world's largest bear, the nation's largest USCG facility, and the nation's third most productive and valuable commercial fishing port. Kodiak has a diverse population of about 14,000 with most people living near the town's center or on the USCG Base. KEA is proud to serve such a diverse and wonderful community. Our sustainable fisheries are renowned worldwide, and the USCG honorably and diligently ensures the safety and control of our nation's arctic waters in the Gulf of Alaska and Bering Sea. Through its operations at its Base Kodiak, the USCG protects and serves this expansive and valuable territory that provides resources throughout the entire U.S., such as oil and gas resources, fisheries, and tourism. A majority of KEA's electricity is generated to power the commercial fishing industry as it feeds our world, and to power the USCG Base Kodiak as it secures U.S. security interests in the arctic. A series of photographs depicting our community appears in the attachments to this testimony (Figure 4).

KEA generates and distributes power to the Kodiak area as the only electric service provider. KEA operates an islanded electric grid, which is highly unusual relative to the Lower 48. We are not connected to any other utility. So, we can only rely on ourselves to maintain the electric grid, which can be especially hard due to our extreme weather, remoteness and very distinct

renewable grid that we operate. KEA has about 6,000 electric consumers, and our peak electric load is about 28 megawatts (MW).

Like many Alaskan communities, Kodiak was once completely dependent on diesel oil as our only available energy source for power and heat. The Terror Lake Hydroelectric Project came online in the 1980's, but KEA remained heavily dependent on diesel power to meet our community's power needs. In the early 2000's KEA began investigations into how our hydropower system could integrate with wind energy as the long-term solution for our power generation needs instead of being heavily dependent on diesel power.

In 2007, a year when KEA consumed 3.8 million gallons of diesel oil to supply electricity, our locally elected Board of Directors declared a vision for KEA: "Endeavor to produce 95% of energy sales with cost effective renewable power solutions by the year 2020." This vision gave utility staff direction to move toward a renewable and energy independent future by reducing KEA's costly reliance on barged-in diesel fuel as a source of primary power. By 2009, KEA installed the first megawatt class wind turbines in Alaska with three 1.5 MW wind turbines on a ridge near town, the Pillar Mountain Wind Project. The project was so successful that KEA moved toward expanding the amount of wind energy even further. The goal to double the size of the wind project, moving it to 9 MW, was much more of a difficult endeavor because it pushed our instant wind penetration rate to very high levels. This was an incredibly complicated engineering challenge for an isolated electric microgrid, but the benefits of water storage and grid stability—provided by the Terror Lake Hydroelectric Project—allowed KEA to move forward. KEA took a multipronged approach by integrating a 3 MW Battery Energy Storage System, a 2 MW Flywheel Energy Storage System, and installing an additional hydroelectric generator to the Terror Lake Hydroelectric Project and three more 1.5 MW wind turbines. This hard work over the past decade has pushed KEA to over 99% renewably powered since 2014, with approximately 80% from hydropower and 20% from wind. The diesel engines are tuned off, and standing by for emergencies, just as diesel engines are best intended. A few photographs of our renewable generation system appear in the attachments to this testimony (Figure 5).

The transition to a locally sourced and renewably powered electric grid has been outstanding for our community. Electric rates are lower than rates 15 years ago, and can remain more stable over time without dependence on fossil fuel. The Pillar Mountain Wind Project, made possible by the integration with hydropower, has saved over 11 million gallons of diesel since startup. KEA's cost effective renewable power solutions are a source of pride in our community, and as a result we have seen economic and industrial expansion throughout the community. One of Kodiak's seafood processors has doubled its processing capacity and invested millions of dollars doing it. Our residents' living costs, of which heat can be a substantial portion of monthly bills, are being reduced and stabilized with KEA's renewable energy portfolio. People are converting their older diesel-fired heating systems to newer electric-powered heat with energy efficient and cost effective heat pumps.

KEA is now a world leader in the integration of variable wind power on electric microgrids. We have proved the success of hydroelectric power combined with wind energy and energy storage on an isolated grid. This story has been shared worldwide. Among places where KEA has

shared this information is with the U.S. Department of Energy's National Renewable Energy Lab in Saipan and with the U.S. State Department in Greenland. KEA's lessons learned are also widely shared throughout Alaska, as many communities in remote Alaska strive to get off of expensive diesel power.

With this success, KEA's Board of Directors in January 2017 updated its vision to "Endeavor to maintain 98% of energy sales with cost effective renewable power solutions for the future of our members and the community." KEA will continue to serve as our community's energy solution as our industries and residents continue to convert their energy usage from diesel oil to renewable electricity. That shift from diesel to electricity is increasing KEA's load demand.

Thankfully, KEA has a shovel-ready project readily available to meet this growing need while honoring our Board's renewable energy vision—the Upper Hidden Basin Diversion project to expand the Terror Lake Project.

Conclusion

On behalf of all of the customers and members of KEA, we appreciate the Subcommittee's consideration of H.R. 220 and request your approval. KEA is energized by all the recent attention given to potential infrastructure development across the U.S.; the Upper Hidden Basin Diversion is an ideal, shovel-ready project that will be tremendously beneficial not only to our community, but with national implications as well. We are ready to proceed with getting contractors on the ground to solicit bids for building this project. The environmental effects of this undertaking have been studied and analyzed, and USFWS has already determined the conditions needed to protect KNWR. All that is needed at this point to move this project forward on schedule is for H.R. 220 to be enacted, which would authorize KEA to occupy a mere 20 acres of federal land.

I appreciate the opportunity to testify on this critical issue. Thank you for your time and consideration of this important legislation.

ATTACHMENTS TO

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Figure 1. Location of Kodiak, Alaska.



Figure 2. Terror Lake and Proposed Upper Hidden Basin Diversion Project.

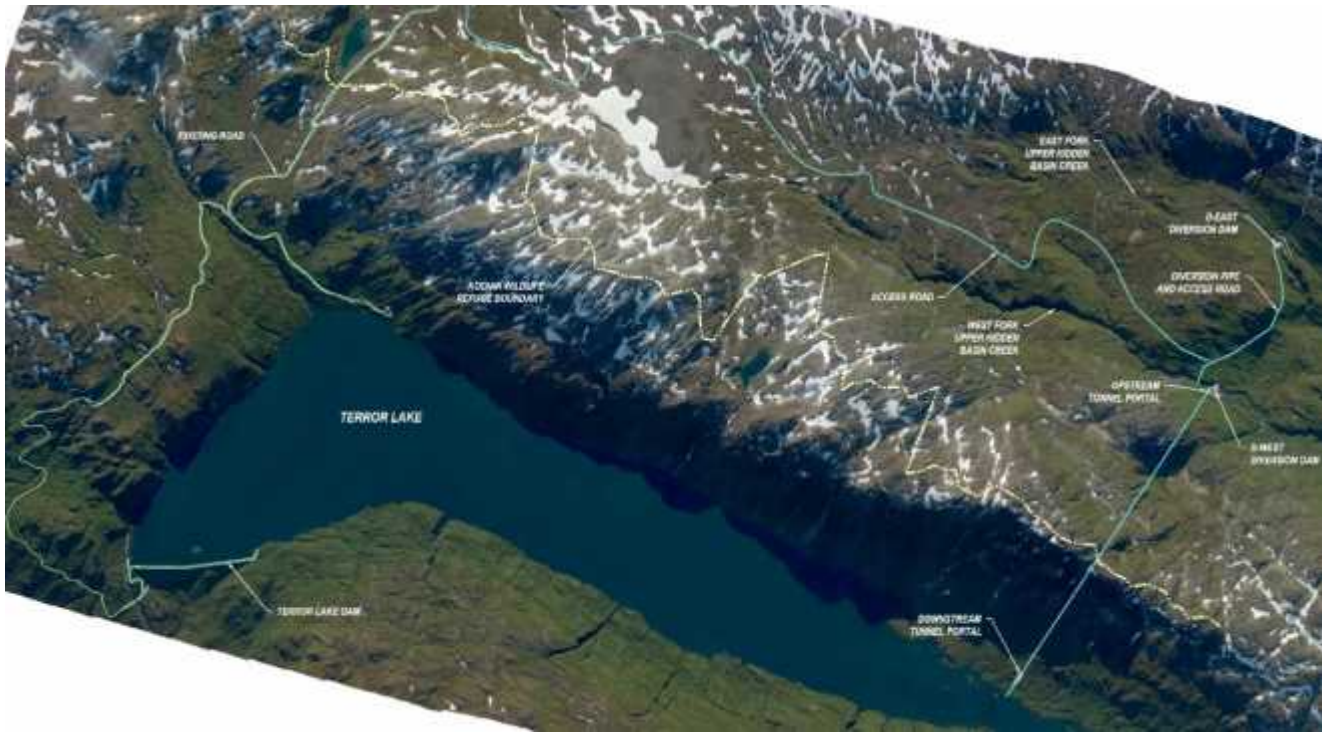


Figure 3. KNWR Lands Needed for Upper Hidden Basin Diversion Project.

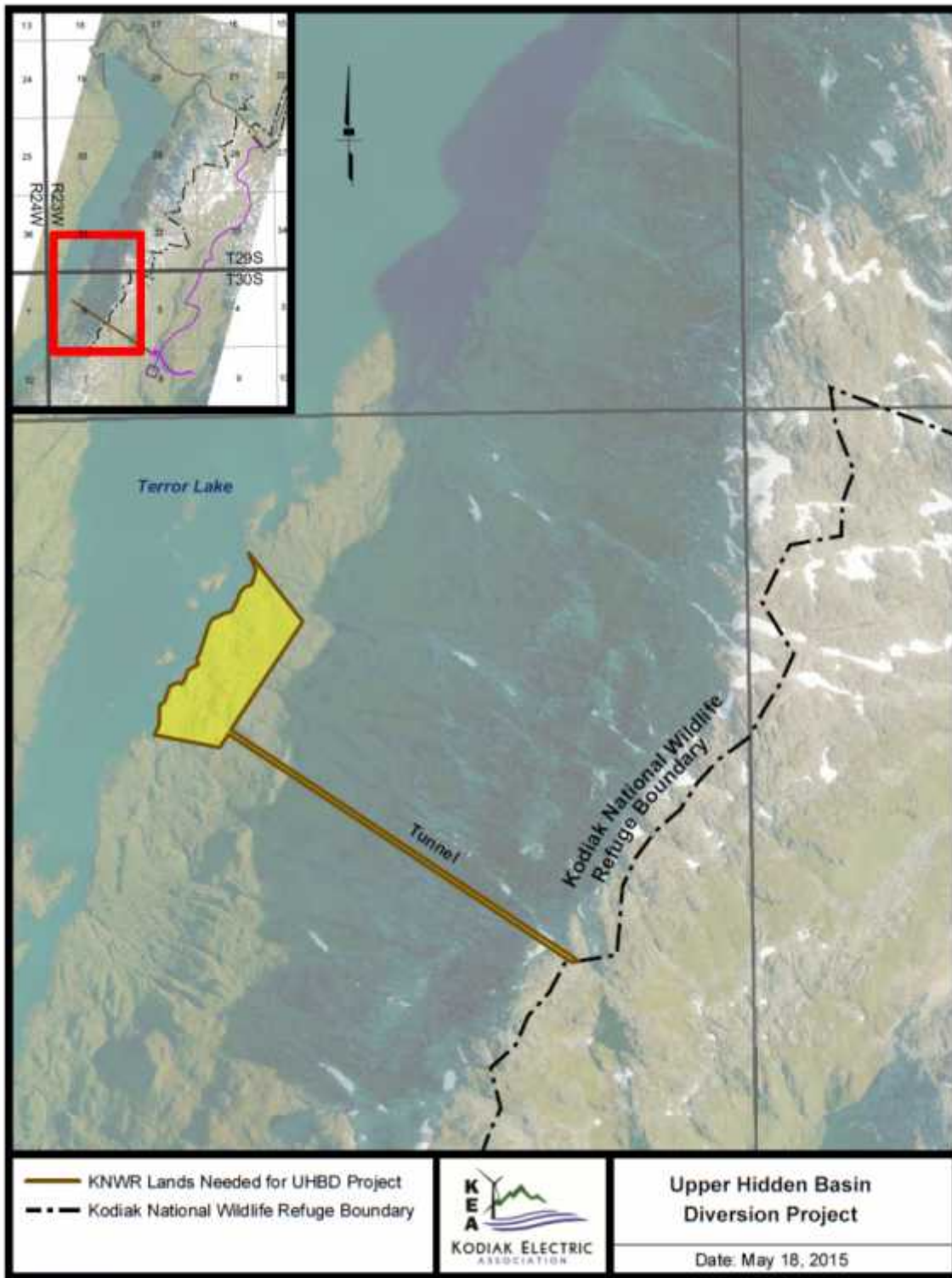


Figure 4. Photos of Kodiak, Alaska.



Figure 5. Photos of Kodiak Electric Association's Renewable Energy Projects.

