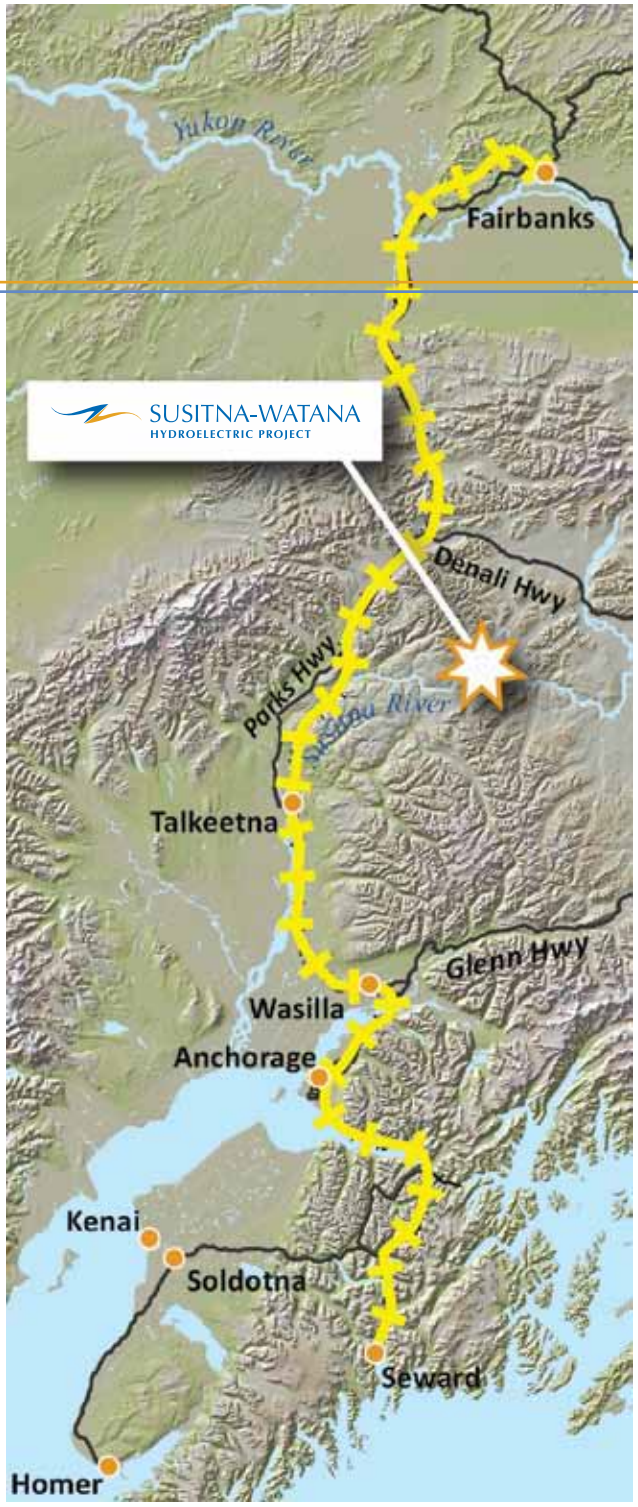
REPORT TO THE LEGISLATURE

SUSITNA-WATANA
HYDROELECTRIC PROJECT



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Susitna-watanahydro.org

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Members of the 27th Alaska Legislature:

Alaska is fortunate to have some of the largest opportunities for energy development in the country. In addition to oil and natural gas, the state has great potential for renewable energy sources. The Alaska Energy Authority (AEA) assists Alaskans in developing alternative energy projects across the state. AEA actively supports and develops viable wind, geothermal, tidal, hydrokinetic, biomass and hydro projects.

Concern about the future cost and supply of fuel and electrical energy generation for Southcentral and Interior Alaska prompted the Alaska State Legislature to task AEA with reevaluating hydropower from the Susitna River and developing a Regional Integrated Resource Plan (RIRP).

The Susitna-Watana Hydroelectric Project will help provide reliable power for future generations of Alaskans, diversify Alaska's energy portfolio and move toward the State Energy Policy goal of having 50 percent renewable electric energy sources by 2025.

We present this 2011 Report to the Legislature, pursuant to AS 44.83.085, to provide a snapshot of where the project is to date. This report summarizes the Susitna-Watana Hydroelectric Project and activities that are moving the Federal Energy Regulatory Commission (FERC) licensing process forward.

The AEA Board of Directors and staff are committed to an open, honest and transparent development process. We are in the initial stages and welcome the opportunity for input from Alaskans about one of the state's largest infrastructure projects in recent memory.

Please contact the project team or me with any additional questions.
Sincerely,

ALASKA ENERGY AUTHORITY

Sara Fisher-Goad
Executive Director

INTRODUCTION

Project History

The hydroelectric potential of the Susitna River has been studied since the early 1950s. The first study was completed by the U.S. Bureau of Reclamation and subsequent reviews were completed by the U.S. Army Corps of Engineers in the 1970s. Many Alaskans remember the efforts of the Alaska Power Authority (APA)—now the Alaska Energy Authority—to develop a two-dam project on the Susitna River in the 1980s. At that time, the APA submitted a license application to FERC in 1983 for the Watana-Devils Canyon Project on the Susitna River.

The license application was withdrawn in March 1986, largely due to the relatively low cost of gas-fired electricity in the Railbelt and the declining price of oil throughout the 1980s and its impact on the State budget. The APA concluded that the project's environmental impacts could be mitigated, but the project was not financially feasible at that time.

Project Need

As the cost of energy continues to increase statewide, long-term, stable sources of energy are important. Further, much of the generation and transmission infrastructure of the Railbelt is aging and in need of replacement. The retiring of the older generation will create a substantial new demand for Railbelt generation 10 to 20 years from now, regardless of electricity demand increases.

2011 Progress

AEA was authorized to advance the Susitna-Watana Hydroelectric Project in Senate Bill 42, which became effective on July 14, 2011. From that date, AEA focus has been to hire an experienced team, engage stakeholders, complete data gap analyses to build on the quality data from the 1980s Susitna Project and to begin the licensing process with FERC.

Staffing

AEA opened a project office in October 2011 and added staff in October and November. Wayne Dyok was selected as project manager, based on more than 35 years of experience in FERC licensing, engineering design, environmental studies and energy planning on hydroelectric projects. Dyok also served as chief hydraulic engineer and assistant manager, and worked on the APA Susitna Hydroelectric Project in the 1980s.

Other project-specific staff added in 2011 include the engineering and environmental managers, public outreach liaison and administrative assistant. Several AEA staff play a support role in procurement, Alaska Native issues and technology.

2011 Highlights

- **Opened project office and hired staff**
- **Developed website and communications tools**
- **Prepared data gap analyses**
- **Filed preliminary permit application with FERC Oct. 25, 2011**
- **Filed Pre-Application Document (PAD) with FERC Dec. 29, 2011**
- **Investigated dam types and sizes and assessed energy generation potential**
- **Initiated stakeholder consultation to develop study plans**
- **Conducted public outreach**

Engaging Stakeholders

A more detailed description of public outreach is outlined later in this report. Key components of the public outreach efforts were developed in 2011, including the project website (Susitna-watanahydro.org), a list of stakeholders who receive up-to-date information, a site visit for FERC staff, agencies and interested parties and an agreement with the Alaska Resource Library and Information Services to host historical documents online.

Building on Quality Data

The Susitna Basin was extensively studied during the licensing process of the 1980s Susitna Hydroelectric Project, including more than 3,500 individual study reports on the river system, wildlife and resources in the region. Data gap analyses were performed in 2011 in the areas of aquatics, wildlife, hydrology, water quality, subsistence, socioeconomics, transportation,

recreation and cultural resources identifying what we know about the project area and what data gaps may require additional studies.

Engineering contractor MWH Americas, Inc., was selected as the engineering and licensing contractor for the FERC licensing process. Four environmental consulting firms were selected in a competitive process.

Beginning Licensing Process

AEA filed the Preliminary Permit Application with FERC on Oct. 27, 2011, and the PAD was filed with FERC on Dec. 29, 2011, beginning the formal licensing process. While the entire project is still being evaluated and developed, the PAD provides detailed descriptions of the envisioned project facilities and operations and information about environmental and socioeconomic conditions that may be affected by the project. The PAD sets a series of project deadlines in motion and begins an estimated six-year licensing and design process. The full PAD is available at Susitna-watanahydro.org.

SUMMARY OF PROJECT DESIGN AND OPERATION

The proposed Susitna-Watana Hydroelectric Project dam would be located at river mile 184, which is roughly 90 river miles northeast of Talkeetna. Different dam type and height configurations are still under consideration, but the Watana Dam height is expected to be about 700 feet above bedrock. The project would also have a 39-mile-long reservoir, with a maximum width of about two miles.

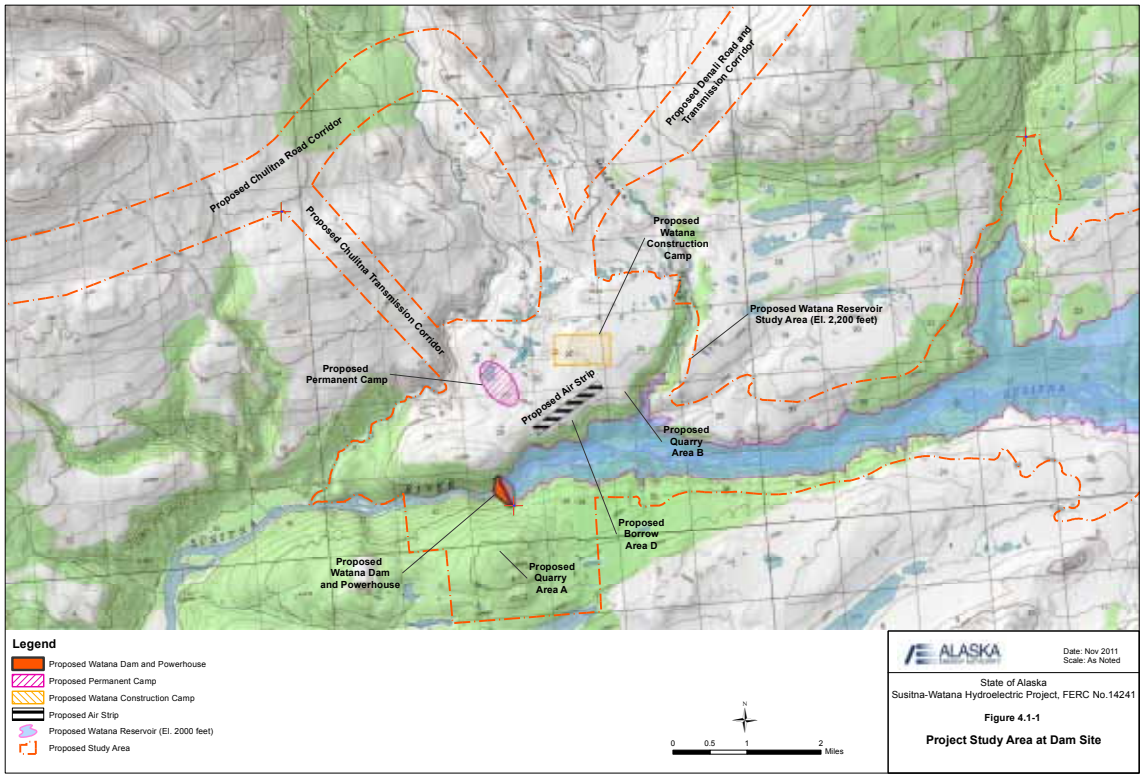
Preliminary studies indicate that the surface powerhouse should have a nominal installed capacity of about 600 megawatts (MW). However, optimization studies are ongoing. For purposes of the PAD, three 200 MW units were selected, but the unit sizes may be reduced to better accommodate the Railbelt transmission infrastructure system. Recent studies have placed the annual generation of the plant at 2.5 million megawatt hours. This amount is nearly 50 percent of the Railbelt's current annual generation.

The current plan is to maximize firm energy of the Susitna-Watana Project during the critical winter months of November through April. During this time, approximately 44 percent of the energy output, or 1.1 million MWh, would be delivered to meet electrical load demands when Railbelt electricity needs are at their highest levels. The project would operate in a load-following mode, meaning that the amount of electric power generated would adjust as the demand for Railbelt energy fluctuates throughout a day. Load-following would be used to the extent permitted based on the environmental constraints established during the licensing process.

The reservoir would be drafted (i.e. water level fluctuation) annually by an average of 120 feet. Minimum required instream flow releases from the project have yet to be determined, but are essential to protecting sensitive aquatic and riparian habitat and recreation flow requirements. The project would maintain these minimum flows by releasing water through the powerhouse or low-level outlet works during an emergency outage of the powerhouse. High flows, during times of maximum power generation, would be about 14,500 cubic feet per second (cfs).

Flow levels would vary throughout a 24-hour period. Initial models have been made using the flow criteria developed during the 1980s project studies and specified a minimum wintertime flow release of 2,000 cfs and a minimum summertime flow release of varying amounts at or above 9,000 cfs.

There are three possible alternatives for road and transmission lines. The Chulitna Corridor runs west from the project site along the north side of the Susitna River, connecting to the Alaska Intertie and the Alaska Railroad near the Chulitna station. The second possibility is the Gold Creek Corridor, which runs west from the project site along the south side of the Susitna River, connecting to the Alaska Intertie and the Alaska Railroad near the Gold Creek station. A third corridor, the Denali Corridor, runs north and would connect the dam site to the Denali Highway by road over about 44 miles. If transmission lines are run north up the Denali Corridor, they would need to also run west along the existing Denali Highway to connect to the Alaska Intertie near Cantwell.



The proposed project is on land owned partly by Alaska Native Claims Settlement Act (ANCSA) regional and village corporations, the Bureau of Land Management (BLM) and State-selected lands.

AEA determined it would follow the FERC Integrated Licensing Process (ILP) as the most appropriate licensing process for the Susitna-Watana Hydroelectric Project. The ILP is the FERC default process and an applicant cannot use any other licensing process without FERC approval.

The ILP provides a defined structure for the licensing process, including timeframes for licensing activities, formal study plan determination and early National Environmental Protection Act (NEPA) scoping. As part of its commitment to provide ample opportunities for public and agency input throughout the process, AEA initiated informal consultation with resource agencies, Alaska Native entities and the public before filing the PAD with FERC.

KEY RESOURCE ISSUES AND POTENTIAL IMPACTS

The Susitna-Watana Hydroelectric Project will be located in a remote region of Alaska on the Upper Susitna River and will impact the natural resources in positive and adverse ways during construction and long-term operations.

AEA has attempted to identify potential natural resource issues for the licensing process and has reviewed existing information, performed data gap analyses and held preliminary discussions with agencies, Alaska Native entities and other stakeholders. These efforts have identified preliminary resource issue topics that will continue to be developed and refined through the ILP and preparation of the study plan.

The Project Study Plan will be filed with FERC in June 2012 and AEA intends on holding advance resource workgroup meetings to facilitate consultation with licensing participants on the development of the study designs and subsequently the Revised Study Plan. As studies are completed, some potential issues may be identified as not having impacts on the project area.

Issues to be evaluated and potential project-related impacts will likely include the following:

- **Geology and soil** issues covering direct short-term effects of construction activities on the landscape as well as long-term effects of project operation, including altered river flows and reservoir fluctuations. Potential impacts to be analyzed may include reservoir-induced seismicity, reservoir bank instability, sediment transport blockage and surface soil erosion.
- **Water resource** issues covering flow timing and quantity changes, river ice formation and changes in downstream flows and water levels.
- **Water quality** issues including effects of construction and long-term operation on key water quality parameters such as turbidity, temperature, dissolved solids, nutrients and dissolved gas. Potential impacts might involve changes in water temperature affecting aquatic species and overall water quality changes impacting aquatic and terrestrial habitats. It is possible a reduction in turbidity downstream of the dam could benefit some fishery resources.
- **Geomorphology** issues covering sediment transport, changes in upstream and downstream river channel morphology and shoreline erosion. Potential impacts may involve changes in aquatic habitat in the Middle and Lower Susitna River, changes in spawning due to altered river morphology and reduced sediment loading and woody debris as a result of dam construction blocking transport.
- **Fisheries resource** issues including changes to aquatic habitats, evaluation of fish distribution, composition, and migration considerations, instream flow requirements, and impacts to special status species. Potential changes might include enhanced quality of downstream habitat through moderation of natural high flows. There may also be changes to riverine habitat, varying access to spawning sloughs and impediments to salmon migration.
- **Wildlife resource** issues including alteration and/or loss of habitat, effects of the reservoir, roads and transmission lines on wildlife movement and migration patterns, potential increased mortality and impacts to

special status species. Potential impacts may include loss of habitats, habitat degradation, hazards and barriers to animal movements and migration and effects of an expected gradual increase in human use of the area.

- **Botanical resource** issues including changes to vegetation, wetlands and riparian assemblages, and potential impacts to special status species. Potential impacts may include loss of wetlands, vegetation and riparian habitats from construction of the reservoir and other project features and from changes in the natural, historic river flow patterns.
- **Recreation, land use and aesthetic** issues including direct short-term effects of construction activities as well as the long-term effects of operation, including altered river flows and reservoir fluctuations. Potential impacts might include changes in river access and downstream navigation during certain periods, winter use of the river corridor, effects on fishing, hunting and trapping opportunities, changes in future land use and ownership due to increased access to the area, visibility of the dam, powerhouse, road and transmission lines from important viewpoints and visual effects of fluctuating reservoir elevations throughout the year.
- **Cultural resource** issues covering construction and operation effects on cultural resource sites, including prehistoric, protohistoric or historic properties. Potential impacts may include inadvertent site damage or alteration during construction, vandalism, inundation of known sites by the reservoir and adverse effects of increased human use on traditional spiritual areas. Aesthetic changes to a surrounding historic landscape may also affect the historic and cultural significance of a property.
- **Subsistence resource** issues covering changes in subsistence fishing and hunting opportunities due to effects on fish and wildlife populations. Subsistence activities would be affected if there was a change in animal populations, or distribution of animals, if access to subsistence resources were changed, or if it disrupted traditional subsistence activities.
- **Socioeconomic and transportation resource** issues including those related to construction activities and long-term operation. Potential impacts may include demands on resources and local economic effects of a large construction workforce rapidly being mobilized and then demobilized when construction is completed, increased visitation to the area both during construction and as a result of the project's presence and secondary land

development impacts on the area's economy. Potential beneficial effects include creation of jobs, increased economic activity and long-term lower cost electricity.

Fish and Wildlife

Greater potential impacts on aquatic habitats downstream from the dam site are expected more within the Middle Susitna River reach than in other areas. The Middle Susitna River encompasses the 86-mile section between the proposed dam site and Chulitna River confluence. The river flows from Watana Canyon into Devils Canyon, the narrowest and steepest reach on the Susitna River. Devils Canyon rapids form a barrier to the migration of pink, chum, coho and sockeye salmon. Only a few Chinook salmon have been documented migrating above Devils Canyon.

Downstream from Talkeetna, the inflow from the Talkeetna and Chulitna Rivers reduce the magnitude of impact that could be caused by project operations. Previous studies focused on the Middle Susitna River. The study area will be expanded to include assessment during the licensing studies of potential impacts downstream of the Talkeetna River, including possible impacts on the Cook Inlet Beluga Whale, which has recently been listed as endangered under the Endangered Species Act.

At least 38 species of terrestrial mammals occur in the Susitna River Basin. The bulk of studies completed to this point have focused on mammals—especially big game—because of its ecological importance and management concerns for human use including subsistence, sport hunting and wildlife viewing. This includes moose, caribou, Dall's sheep, brown bear, black bear, wolf and wolverine.

At least 142 bird species are known or are likely to occur in the Susitna Basin. All migratory species of birds are protected under the federgal Migratory Bird Treaty Act and several migratory bird conventions. Eagles are also protected under the federal Bald and Golden Eagle Protection Act.

Alaska Native Resources

The Susitna River Basin has been used for subsistence hunting, fishing and gathering,

travel to other areas and settlement. It is an area with a long traditional history and cultural importance to Alaska Natives.

Alaska Native interests encompass fish and aquatic resources, wildlife and botanical resources, subsistence resources, cultural resources and recreation and land use resources.

Of the more than 229 Alaska Native groups federally recognized as Indian tribes in Alaska, 22 are located within, or in close proximity to, the Susitna-Watana Hydroelectric Project areas that may be affected by project operations. There are also three regional corporations, 14 village corporations, five group corporations, and one urban corporation with land or other resource interests that may be affected by the project. These Alaska Native entities are identified in detail in the PAD found at Susitna-watanahydro.org.

To understand the specific nature of their respective interests and land ownership, it will be important to effectively communicate and engage in further consultation with these Alaska Native entities, in a manner consistent with not only government-to-government policies, but within the public involvement framework.

Environmental Commitments

AEA is committed to mitigating adverse impacts and enhancing environmental resources when possible in developing the Susitna-Watana Hydroelectric Project. As part of its FERC licensing proposal, AEA will work toward developing a comprehensive resource management plan for protection and enhancement of environmental resources. This may include control plans for sediment and erosion and revegetation; instream flow release plans; historic properties management; road and access management; avoiding and/or minimizing impacts associated with construction activities; restoring disturbed river areas to provide fish habitat and reestablishing fish in restored areas; addressing aesthetic concerns; developing cultural resource protection measures; and avoiding negative traffic and population impacts on nearby communities.

Early Start 2012 Studies

AEA intends to initiate certain studies early to jumpstart the licensing process. Under the formal FERC licensing process, it takes almost a year from the issuance of the PAD to when FERC will approve the Susitna-Watana Hydroelectric Project Study Plan. Field work and formal studies will be conducted in 2013 and 2014.

To avoid losing a year of potential environmental data collection, AEA will begin collecting data in 2012. Some of this early data may be critical for other studies, particularly if 2013 or 2014 have abnormal weather, runoff or other environmental factors. As a result, AEA is planning on conducting studies on fisheries, water quantity and quality, sediment transport and geomorphology, wildlife and botanical studies, cultural resources and recreation in 2012. The complete list of planned studies is included in the PAD at Susitna-watanahydro.org.

DESIGN

The proposed dam site is to be located on the Susitna River at river mile 184 above the river mouth, in a broad U-shaped valley, approximately halfway between Anchorage and Fairbanks.

The Watana Dam will be a concrete gravity structure, most likely constructed by roller compacted concrete (RCC). Different dam type and height configurations are still under consideration, but the dam height is expected to be about 700 feet above bedrock. Optimization studies of the project during licensing may result in a proposal for a nominal curve in the dam resulting in an arch-gravity structure that would benefit the stability of the dam. The project would also have a 39-mile-long reservoir, with a maximum width of about two miles.

To the extent possible, construction materials for the dam and appurtenant structures will consist of rock from the structure excavations in an effort to minimize quarry development. Stable excavations and rock cuts will be designed with suitable rock reinforcement and berms.

During construction, the Susitna River will be diverted through an approximately 1,800-foot concrete-lined diversion tunnel on the north side of the river, together with a sluice through the base of the concrete dam.

Support Facilities

Construction of the Watana Dam site development will require various temporary and permanent facilities relating to the operation and maintenance of the Susitna-Watana Hydroelectric Project.

The most significant item among the temporary site facilities will be a construction camp, which will largely be a self-sufficient community. It will normally house about 800 workers during the construction of the project, but with a peak capacity of up to 1,000 people.

After construction, it is planned to remove most of the construction camp facility. Permanent facilities will be retained to support the small number of permanent operation and maintenance staff, including community facilities for staff and family members, maintenance buildings and an airstrip.

Power

Studies to determine the optimum size of the project are ongoing. The capacity of the Susitna-Watana Hydroelectric Project eventually proposed for licensing is expected to be 600- to 800 MW. The actual proposed size will depend on results of studies on future electrical demand needs and environmental considerations.

The primary operating objectives of the Susitna-Watana Hydroelectric Project include:

- Maximize firm power generation from November through April.
- Generate power while meeting minimum flow requirements at Gold Creek (determined during the licensing process and based primarily on environmental considerations).
- Maximize power generation from May through October without reducing the firm power generation November through April.
- Generate power according to Railbelt-area power requirements, within restrictions arising from the other operating objectives to the extent possible.

The powerhouse will be located immediately downstream of the dam. With a 600 MW installed capacity, the powerhouse would initially contain three 200 MW turbine-generator sets and would be constructed with an additional bay to accommodate a potential capacity increase. The exact number and size of the generating units to be installed will be determined during the feasibility studies conducted prior to submitting the license application.

The firm energy of the project during the critical November through April time frame is anticipated to be 1.1 million MWh. As currently envisioned, up to three 230-kilovolt (kV) primary transmission lines will be constructed. They will travel westward to a point of interconnection with the Alaska Intertie near Chulitna or Gold Creek, or northward to a point of interconnection with the Railbelt Intertie near Cantwell to deliver project output to the existing Railbelt electrical system.

There would be two outlet works facility structures, used only during emergencies and high-flow events, and four power intake structures. The outlet works facility, in conjunction with the three powerhouse units, will be sized to allow for the discharge of a 50-year flood before flow would be discharged over the spillway.

Site Access and Transmission Facilities

The primary objective of both temporary and permanent site access facilities is to provide a transportation system to support construction, operation and maintenance activities of the Susitna-Watana Hydroelectric Project. Another goal is to co-locate access roads and transmission facilities in the same corridor to minimize environmental impacts and reduce current and future costs. *(See map on page 8 for reference.)*

AEA proposes studying three corridor options, all evaluated in 2011 by the Alaska Department of Transportation and Public Facilities (ADOT&PF):

1. The Denali Corridor: A new 44-mile road includes a railhead facility at Cantwell and would start at milepost 113.7 of the Denali Highway. It is assumed that there would be improvements to approximately 30 miles of

the Denali Highway near Cantwell to support the increased traffic during construction. This route was selected as the preferred route during the 1980s Susitna Project.

2. Chulitna: Starting at a new railroad facility at the Chulitna station, the 45-mile road runs east-west along the north side of the Susitna River, crossing Indian River before heading into the Portage Creek Valley, and crossing Devil and Tsusena Creeks before reaching Watana Camp.
3. Gold Creek: This road runs east-west along the south side of the Susitna River, starting at a new railroad facility to be constructed at the Gold Creek station. From Gold Creek, the route follows the Susitna River to the south bank and is approximately 50 miles long.

The two east-west routes would not connect with a public road, but would terminate at the railhead at Chulitna or Gold Creek.

NEED FOR POWER

The Railbelt Region covers a significant area of Alaska and has large population centers. It extends from Homer to Fairbanks and includes Anchorage and the Mat-Su Valley. Demand for electric power in the Railbelt potentially includes military bases, which are currently considering privatizing their utility operations. The Railbelt currently generates about 11 percent of its electric energy needs from renewable sources that come primarily from the Bradley Lake, Cooper Lake and Eklutna Hydroelectric Projects.

The Railbelt Integrated Resources Plan (RIRP) assumed future development of a combination of large hydroelectric, wind and geothermal resources to achieve the State's 50 percent renewable energy target. For development of the RIRP, load forecasts were provided by the Railbelt utilities. Because the RIRP Study has a 50-year planning horizon, load forecast data was extrapolated through 2060.

Projected Annual Railbelt Electrical Energy Load

Year	Load (MWh)
2011	5,377,800
2025	5,636,000
2030	5,806,300
2040	6,157,400
2050	6,523,200
2060	6,905,000

Source: RIRP Table 6-4

Winter Peak Demand Forecast for Combined Railbelt Utilities

Currently, the Railbelt utilities maintain a 30 percent reserve margin above these peak load values.

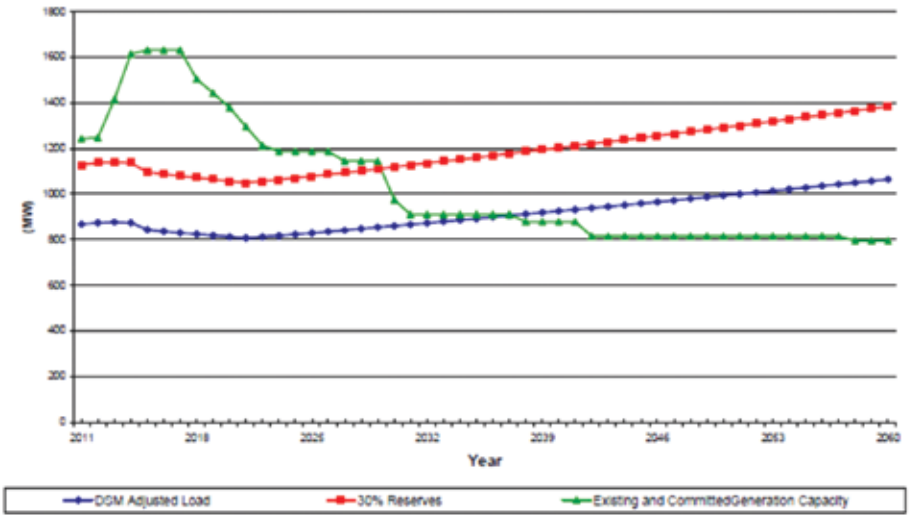
Year	Load (MW)
2011	869.3
2025	927.5
2030	959.0
2040	1,024.1
2050	1,092.0
2060	1,163.0

Source: RIRP Table 6-1

The following load projection from the RIRP illustrates the scenario used to model the various future supply options and compare total system power costs under a wide variety of underlying assumptions.

Capacity Requirements

Capacity Requirements Including Committed Units with Demand Side Management/ Energy Efficiency (DSM/EE)



As indicated, even with DSM/EE reductions, existing resources are only sufficient to meet overall demands, including reserve requirements, until about the year 2029. Without these demand reductions, new generating resources will be needed much sooner. As indicated, with DSM/EE reductions, total capacity requirements, including a 30 percent reserve margin allowance, are estimated to be 1,400 MW by the year 2060. This assumes that DSM/EE measures are implemented to reduce demand over that time frame. Without this level of DSM/EE load reductions, total capacity requirements would be about 130 MW higher, totaling close to 1,530 MW.

The primary operating objective for the Susitna-Watana Hydroelectric Project is to maximize firm power generation during the winter months of November through April. The reservoir would be drafted on a daily and seasonal basis to meet this objective. The average annual total generation is estimated to be 2.5 million MWh, corresponding to an average of 285 MW of continuous power. Firm power (98 percent reliable) output averages 250 MW from November through April and 223 MW for the entire year.

AEA filed the PAD based on a 700-foot-high Watana Dam with a 600 MW powerhouse, leaving open the possibility of constructing a project with greater powerhouse capacity. The final decision on dam height will need to be made by the time the license application is filed in 2015, preferably sooner to minimize study costs. Key parameters in deciding project size include:

- Projected future Railbelt electrical load
- Annual, daily and hourly project generation relative to system needs to account for energy diversity and reliability
- Utility commitments to other generations
- Project firm energy during the November through April critical energy period
- Required minimum environmental flows, particularly during the summer months
- Incremental project cost
- State of Alaska investment
- Financing costs

Initial project cost data will not be available until early February 2012 and the State investment and financing costs may not be known for several years. The assumption is that the State would make an investment in the project similar to the Bradley Lake financing approach.

The Susitna-Watana energy rates would remain stable over time. The financing rate also could influence the selected project size. Today's bond financing rates are less than 6 percent, but they could be higher in the future. A sensitivity analysis was conducted with capital cost financing at both 6 and 4 percent. With the U.S. Department of Agriculture Rural Utilities Service (RUS) financing at about 3 percent today, an overall rate of 4 percent may be achievable with a blended financing rate of RUS and State-issued bonds. The 6 percent case is a conservative rate in today's market.

Based on the initial project estimates of $4.5 billion and no State investment:

PROJECT SIZING

- 6 percent financing would result in ~$13 cents/kWh
- 4 percent financing (available through RUS) would result in ~$11 cents/kWh

Based on the initial project estimates of $4.5 billion and $2-3 billion in State investment (similar to the Bradley Lake financing model):

- 6 percent financing would result in ~$6 cents/kWh
- 4 percent financing would result in ~$5 cents/kWh

These wholesale costs do not include operations and maintenance, although hydropower statistically has low operations and maintenance costs. This also does not include any necessary upgrades to the transmission system.

EXPENDITURES

Susitna-Watana Hyrdoelectric Project
Status Report as of Dec. 31, 2011

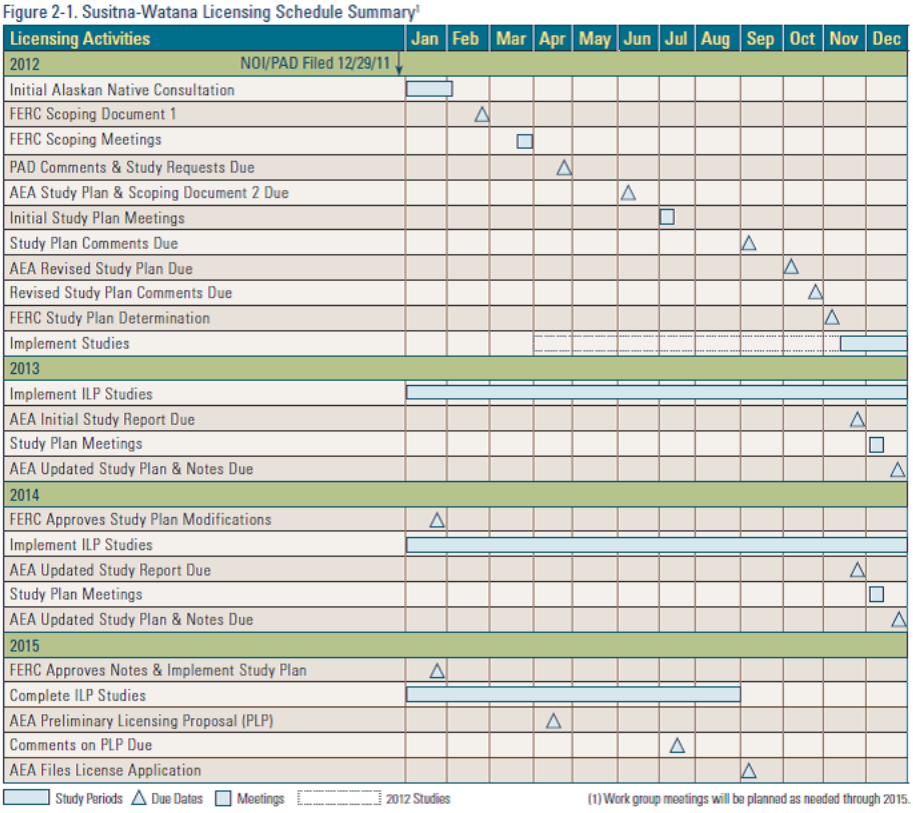
Project Costs (in thousands of dollars)	FY2009/FY2011 ACTUAL	FY2011 ACTUAL	FY2012 To Date	Subtotal Actuals	Encumbrance	Commitment	Total
Travel	11.1	16.0	12.9	40.0	-	-	40.0
Personal Services	69.4	73.7	39.0	182.1	0.0	0.0	182.1
Contractual	1,057.5	1,243.6	3,100.3	5,401.1	4,253.8	561.4	10,216.6
Supplies	0.8	14.9	18.2	33.8	-	-	33.8
Equipment	-	-	62.1	62.1	-	5.7	67.7
Total Project Costs	**1,138.8**	**1,348.2**	**3,232.4**	**5,719.4**	**4,253.8**	**567.0**	**10,540.2**

Funding Sources (in thousands of dollars)	FY2009	FY2011	FY2012	Total
Railbelt Energy Fund	1,500.0	-	-	1,500.0
General Fund	-	5,640.0	3,130.4	8,770.4
Railbelt Energy Fund	-	-	65,700.0	65,700.0
Total Funding Sources	**1,500.0**	**5,640.0**	**68,830.4**	**75,970.4**

STATUS

The filing of the PAD begins the formal design and licensing process that is anticipated to take six years. In order to facilitate the licensing process, AEA will conduct select studies in 2012 and FERC-approved study plans will be executed in 2013 and 2014. The license application will be filed in 2015, with the FERC license anticipated early in 2017. Construction would begin later that year and the project would be commissioned in 2023.

Figure 2-1. Susitna-Watana Licensing Schedule Summary[1]



PUBLIC OUTREACH

AEA is committed to an open and honest dialogue with multiple opportunities for public contribution. It is essential to engage stakeholders early and often throughout the process and incorporate feedback into the project development.

In 2011, AEA staff and contractors began informal outreach in advance of the FERC licensing process. This outreach included stakeholder meetings with Alaska Native entities, impacted communities, resource agencies, lawmakers and utilities. Presentations were made to trade groups and environmental organizations. Roughly 30 stakeholder meetings and presentations were held during the last quarter of 2011.

The formal public outreach plan and effort was being developed at the time this publication was being printed. As part of the FERC licensing process, consultation records will be maintained for subsequent filing with FERC.

Site Visit

A FERC site visit was conducted on Aug. 29, 2011. This provided interested parties an opportunity to view the project site conditions and surrounding area. The public was noticed and invited to participate at their own expense. That same day and again on Sept. 1, 2011, FERC staff also conducted public meetings to provide information and answer questions about FERC licensing processes and the ILP process. Attendees of the site visit and public meetings included FERC staff, Alaska Legislators, State and federal resource agencies, AEA and the public.

As part of the FERC ILP, the project site visit is normally conducted within 90 days after filing the Notice of Intent and is typically held in conjunction with the scoping visit. AEA informed FERC of its intent to file the PAD and Notice of Intent in late 2011, and filed them on Dec. 29. The site visit was conducted early to accommodate FERC staff who attended a hydropower conference in August and to avoid logistical and safety risks if the site visit had been conducted during winter months or in the early spring.

Alaska Native Entities

As owners of land surrounding the Susitna-Watana Hydroelectric Project, and lands that will be impacted by its construction, collaborative relationships with Alaska Native entities will be key to a successful licensing process. Emphasis has been placed on understanding the complex relationships between tribes, villages and regional

corporations in the project area. In addition to having a full-time public outreach liaison dedicated to the Susitna-Watana Hydroelectric Project, the team is drawing from the expertise of the AEA rural community outreach coordinator and vice president of rural energy.

Between November 1 and December 14, project staff met with representatives from Cook Inlet Region, Inc., Ahtna, Inc., Tyonek, Inc., Knikatnu and the Native Village of Cantwell. Outreach will be ongoing with the goal of developing collaborative relationships.

Impacted Communities

The Susitna-Watana Hydroelectric Project is a Railbelt energy project and as such, impacted communities span from Fairbanks to Homer, up to the Copper River Basin. In 2011, AEA gave presentations about the project in the following communities: Fairbanks, Cantwell, Talkeetna, Chugiak-Eagle River, Anchorage and Kenai. Additional outreach is planned for 2012 including Copper River communities.

In the PAD, AEA has recommended FERC scoping meetings at the following locations:

March 27: Anchorage, Loussac Public Library
March 27: Wasilla, Menard Sports Center
March 28: Talkeetna, Su-Valley Jr/Sr High School
March 29: Fairbanks, Carlson Center
March 30: Glennallen, Bureau of Land Management Office

Agencies

Successful collaboration with State and federal resource agencies is essential, especially recognizing deadlines in the FERC ILP. Two-day agency work sessions were held in October and December with a goal of gathering input from resource agencies to shape future work plans and identify potential needs. AEA has met with federal agencies, including the Department of Interior, to coordinate federal efforts and to ensure effective communication.

Access to Information

A project of this size generates volumes of data and reports, both current and historical. Providing access to this information is important to the resource agencies and members of the public. AEA entered an agreement with Alaska Resources Library and Information Services (ARLIS) to house historical information online at Arlis.org. These documents can be searched by title and topic.

Information is updated frequently at Susitna-watanahydro.org, including meeting schedules, notes, documents and frequently asked questions. Interested parties can also sign up for online email notices.

Vendors Engaged in the Process

- **ABR, Inc. (wildlife data gap analysis and environmental technical assistance)**
- **CardnoEntrix (project management support and study plan development)**
- **DOWL HKM (technical assistance and study plan development)**
- **Electric Power Systems (transmission study)**
- **HDR Alaska, Inc. (coordination and data review, technical assistance, stakeholder engagement, aquatic, air and transportation, social and tribal resources gap analyses)**
- **MWH America's Inc (FERC licensing services, surveying and mapping, geotechnical services, planning and management support)**
- **R&M Consultants, Inc (report and document review, conceptual design and cost estimate, research)**
- **Seattle Northwest Securities (cost of power estimate)**
- **URS Alaska LLC (sediment and water quality data gap analysis)**
- **Prism Helicopters (site visits)**
- **Evergreen Helicopters (site visits)**
- **Last Frontier Air Ventures (site visits)**
- **Van Ness Feldman (counsel)**