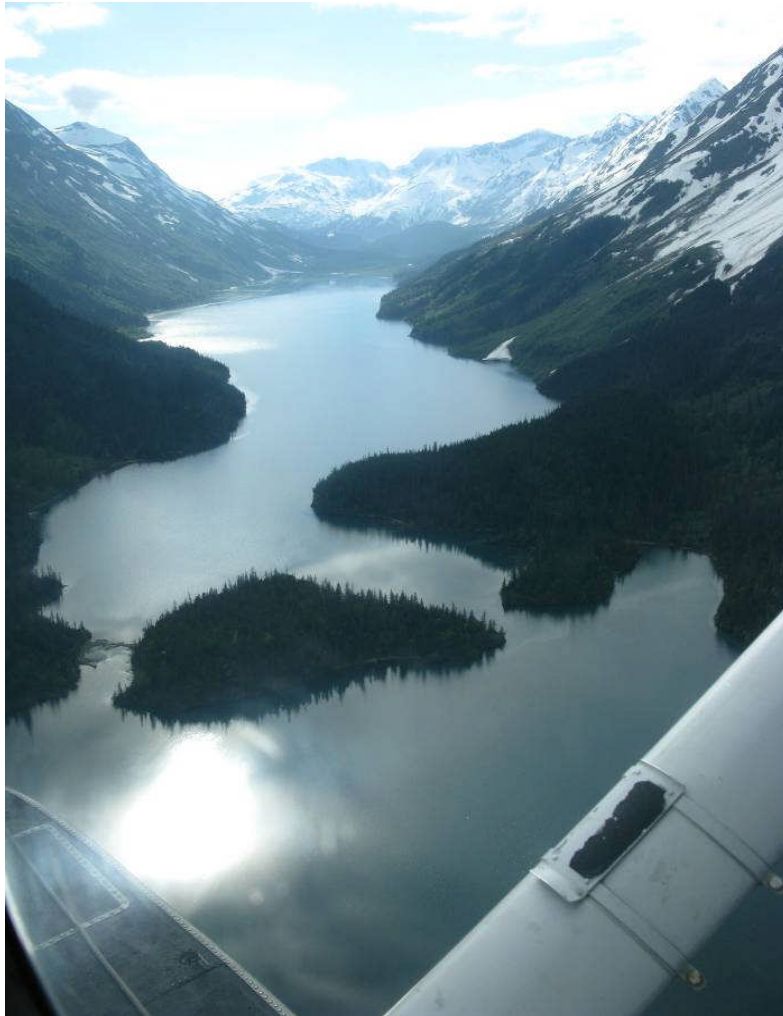




GRANT LAKE PROJECT OVERVIEW & HISTORY



Kenai Hydro, LLC
Natural Resources Studies Meeting
December 12, 2012
Mike Salzetti



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



PRESENTATION OVERVIEW



- Introduction to HEA
- Why we are doing this project?
- Project History
- Project Description/Development



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



INTRODUCTION TO HEA



- 150 Employees
- Member-Owned Cooperative
- 32,339 Meter
- 2,373 Mile of Energized Line
- 3,166 Sq. Mile of Service Territory
- Sales of 475 GWh/year
- Governed by an Elected Board of Directors
- Kenai Hydro is a wholly-owned subsidiary of HEA



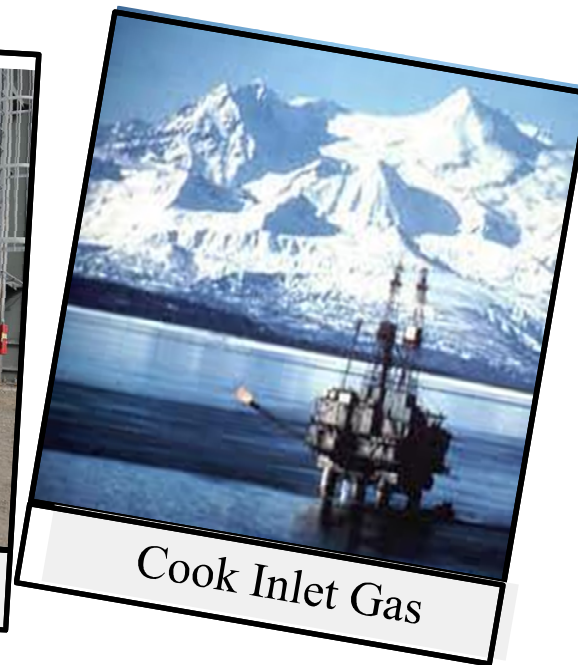
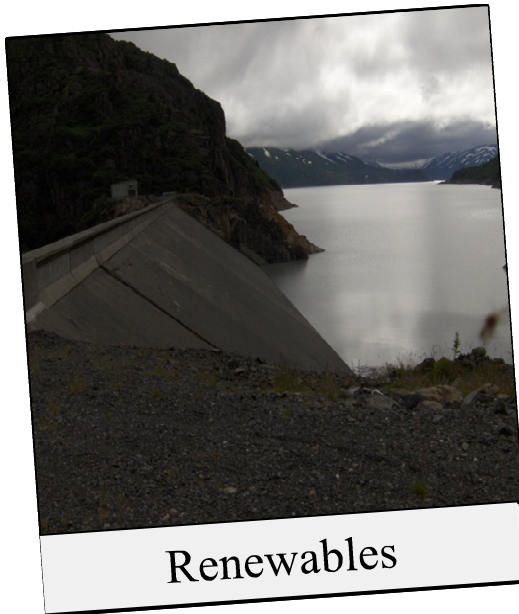
Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



WHY



- Board of Directors Goal for Renewable Energy
- Independent Light
- Cook Inlet Gas Situation



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



RENEWABLE ENERGY



2011 HEA Demand 475,000 MWh

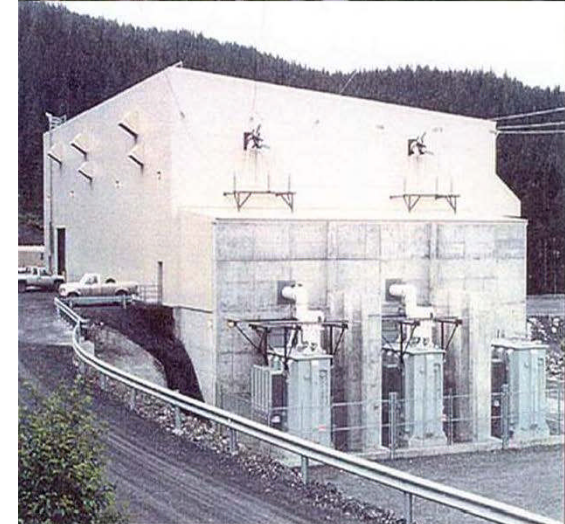
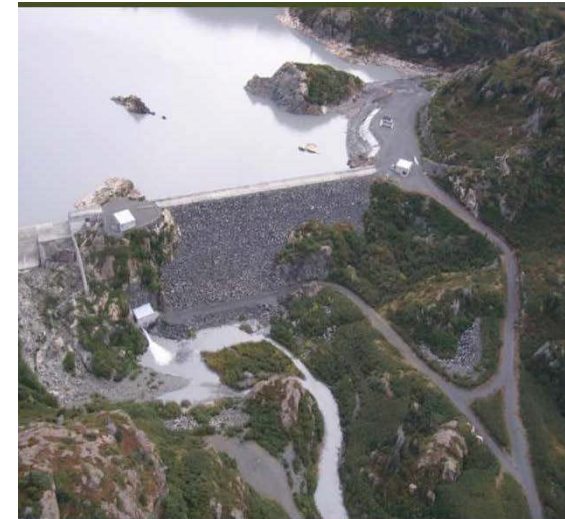
Grant Lake 19,700 MWh

$$\frac{19,700 \text{ MWh}}{475,000 \text{ MWh}} = 4.15\%$$

Bradley Lake

$$\frac{44,000 \text{ MWh}}{475,000 \text{ MWh}} = 9.26\%$$

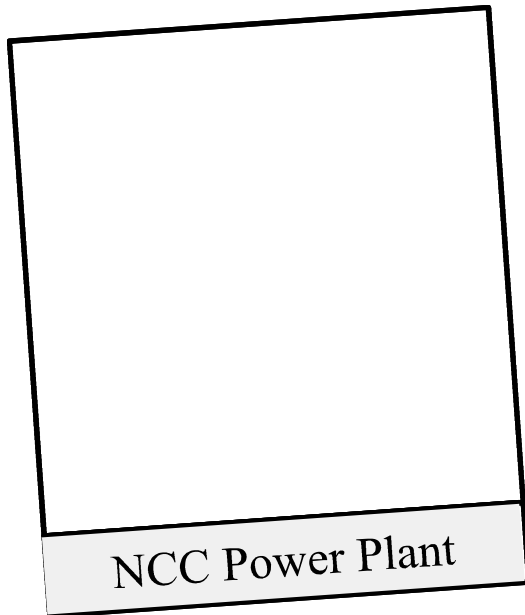
Renewable Energy Increase 45



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



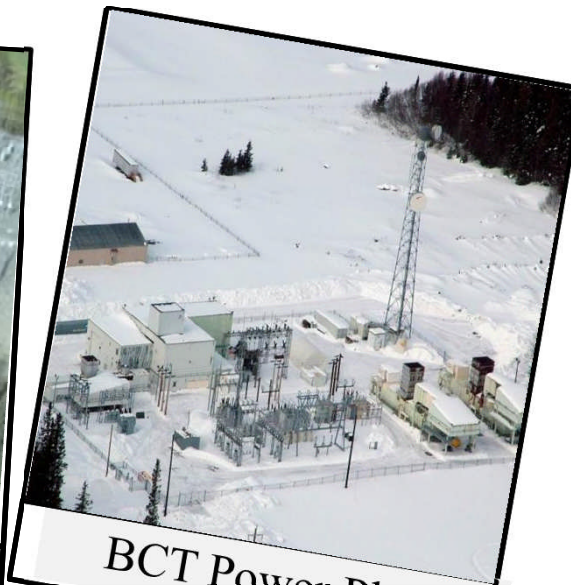
INDEPENDENT LIGHT



NCC Power Plant



SCT Power Plant



BCT Power Plant



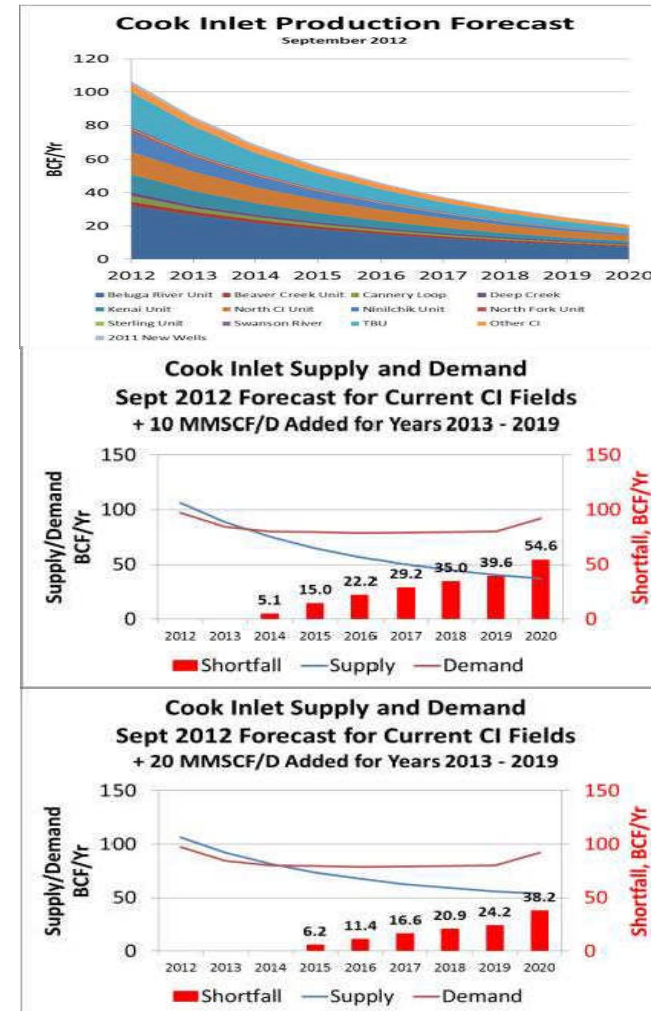
Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



COOK INLET GAS



- Surplus gas since 1960s
- Demand expected to exceed supply 2014 / 2015
- Economic Consequences



Homer Electric
Association, Inc.
A Touchstone Energy Cooperative



HISTORY



Feasibility Studies

- Grant Lake
- Falls Creek
- Ptarmigan Lake
- Crescent Lake



**Homer Electric
Association, Inc.**
A Touchstone Energy® Cooperative





HISTORY



- 2010 Study Season
- FERC Scoping Process
- Preliminary Permit Expiration (Oct 2011)
- 2nd Preliminary Permit (March 2012)
- RFP Process
- Securing McMillen as Natural Resources Study Consultant



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



KEY PROJECT PARAMETERS



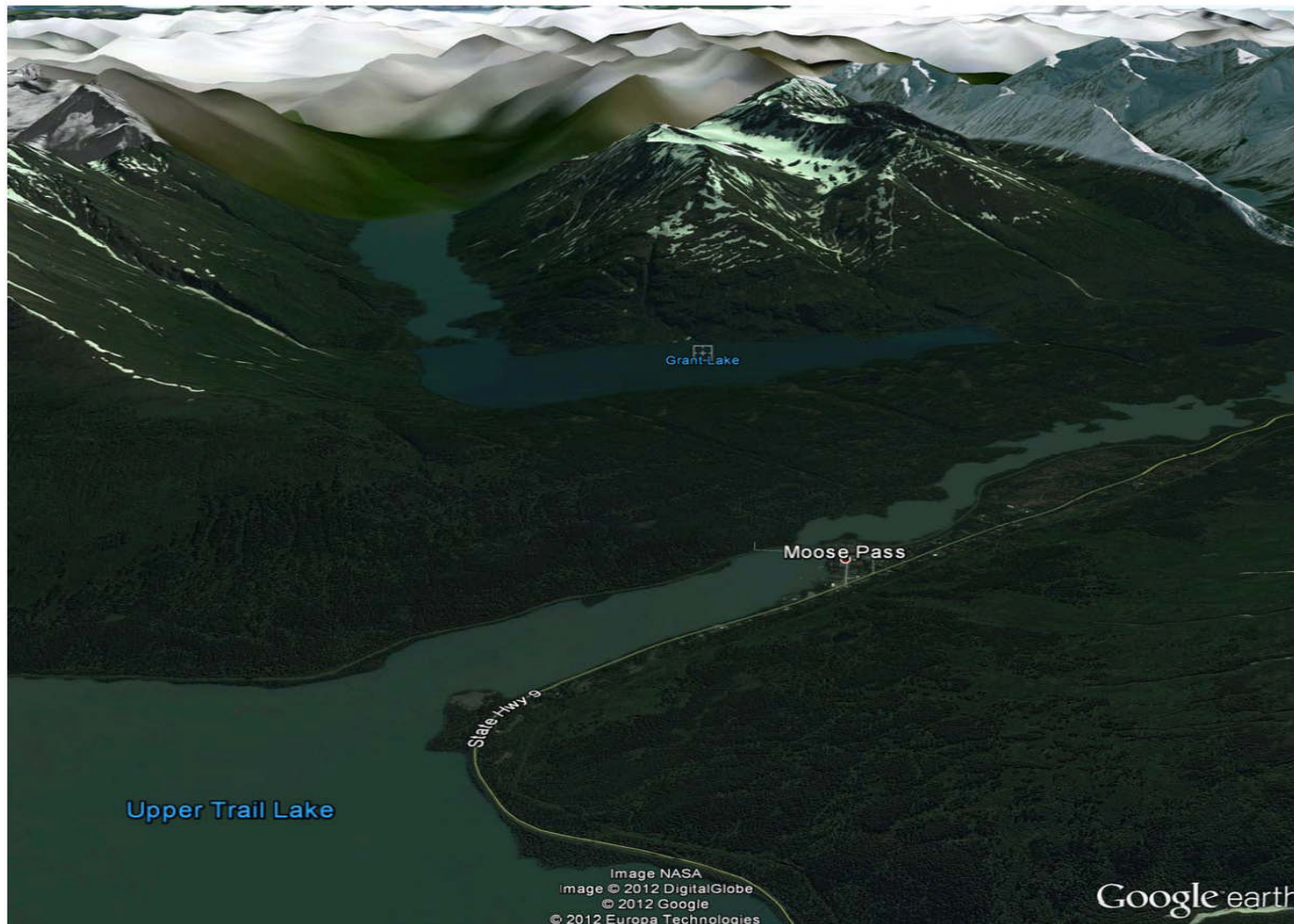
Rated Generator Output Unit 1 – 1 MW Unit 2 – 4 MW	5 MW	
Average Annual Energy	19,700 MWh	20,500 MWh
Diversion	None	2 ft x 120 ft (H) (L)
Reservoir Max Elevation	698 fmsl* (natural)	700 fmsl*
Reservoir Min Elevation	687 (-11)	687 (-13)
Tunnel Length	3200 ft	
Access Road Length	4 miles	2 miles
Transmission Line	3.5 miles	1 mile
*fmsl – feet above mean sea level		



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



PROJECT OVERVIEW



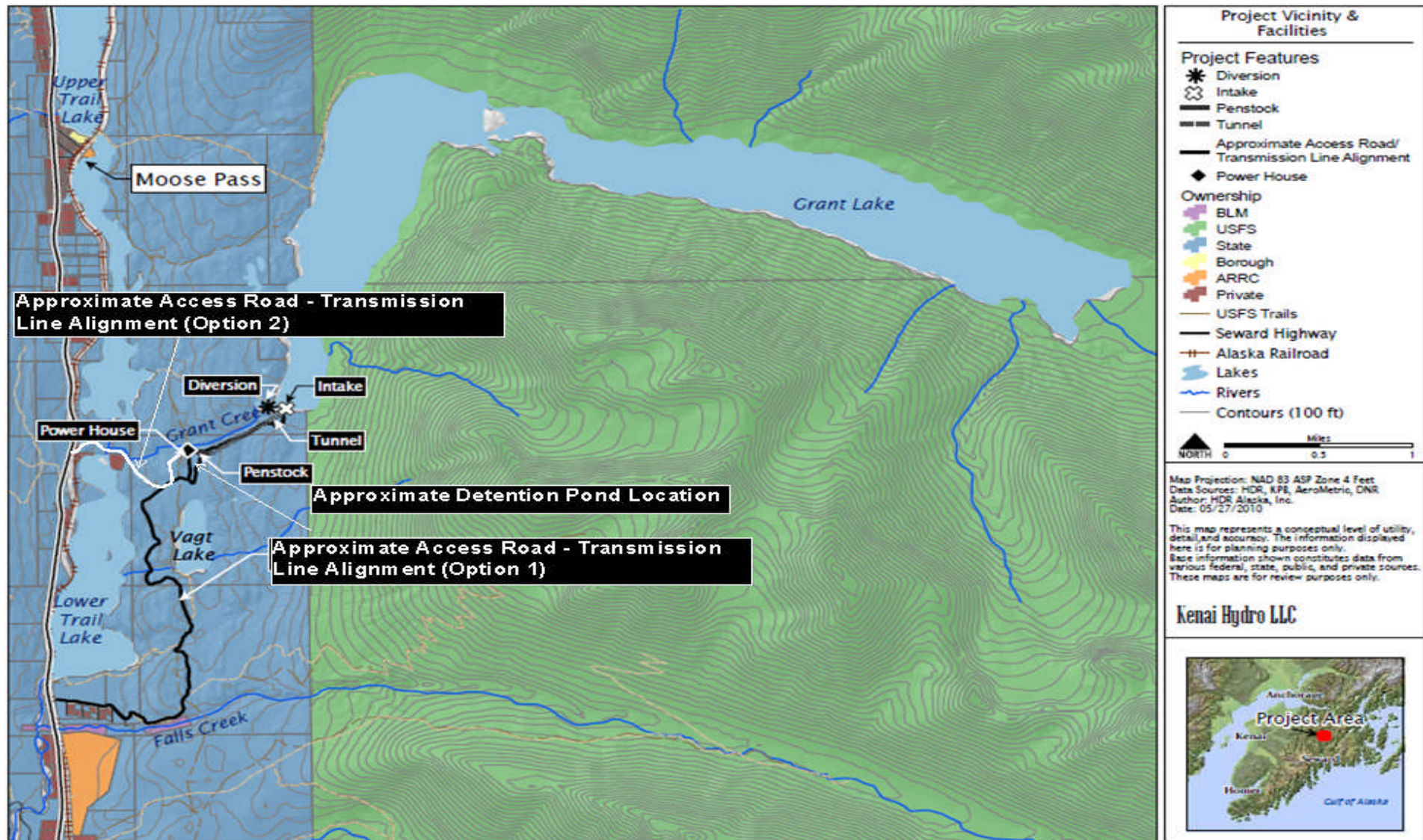
Google Earth Pro

miles
km



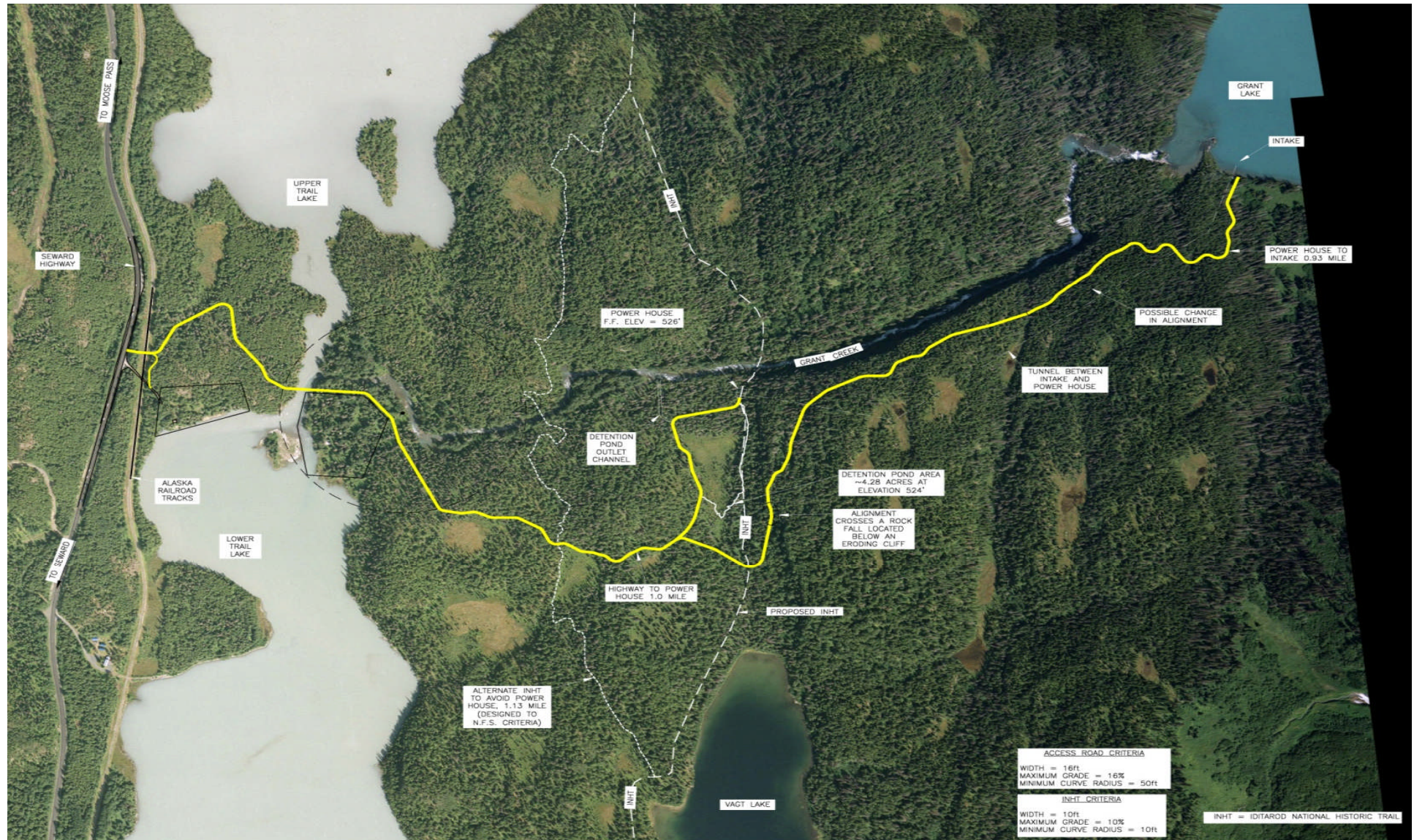


PROJECT OVERVIEW





PROJECT OVERVIEW





PROJECT OVERVIEW



Natural Anadromous Barrier



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



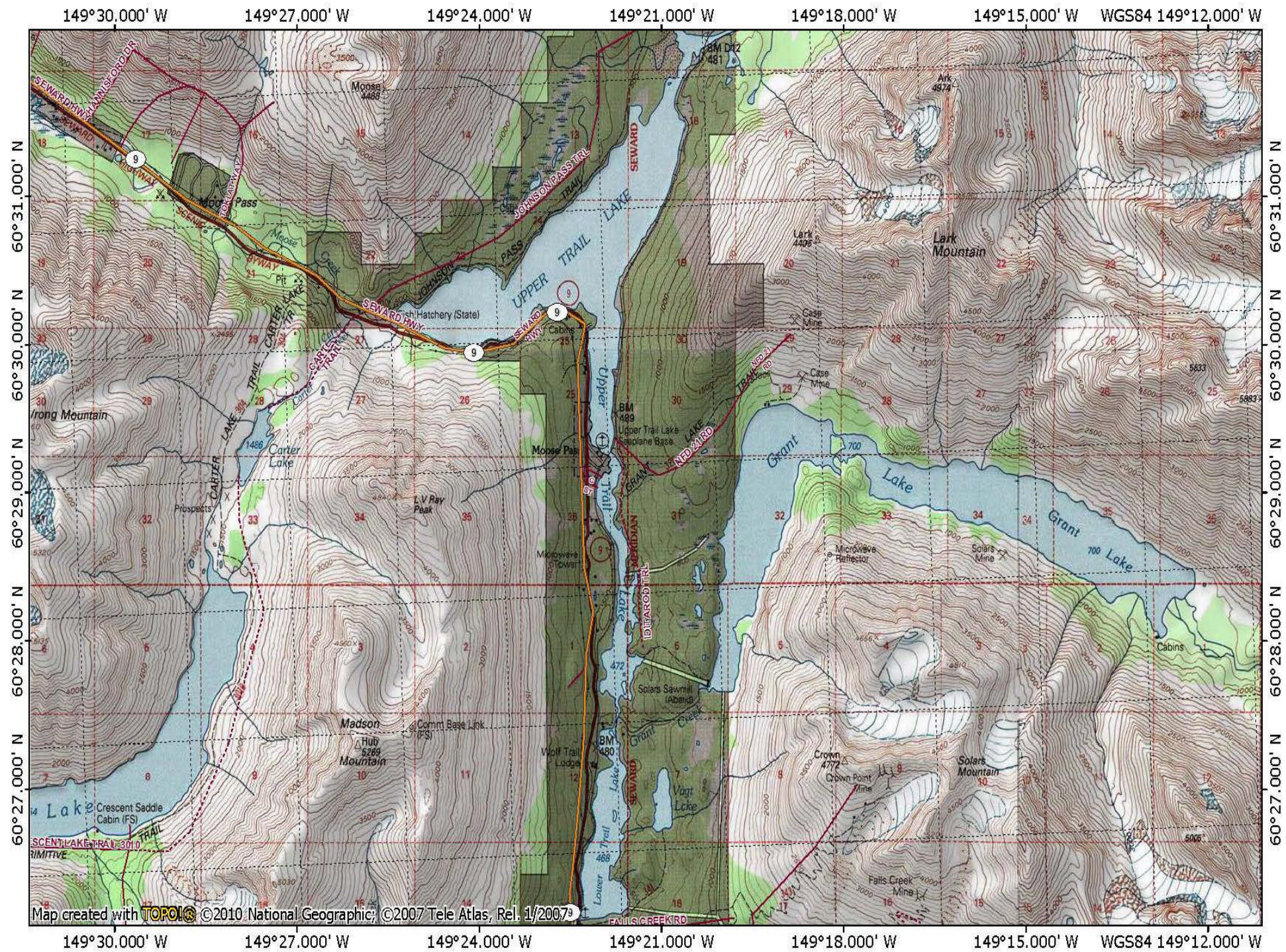
PROJECT OVERVIEW



Minimal Lake Effect with Lake Level Rise



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative





SUMMARY



- Renewable Resource
- Low Cost
 - Bradley Lake ~ ¢4.4/KWh
 - Cooper Lake ~ ¢3/KWh
 - Eklutna < ¢3/KWh
- Long Life Expectancy
 - Alaska Electric Light & Power (Juneau)
 - Gold Creek 1914
 - Annex Creek 1915
 - Salmon Creek 1913
- Investment in the future



Homer Electric
Association, Inc.
A Touchstone Energy® Cooperative



QUESTIONS

