

# Chugach Project Authorization

**Project Name: EXAMPLE PROJECT**

# DRAFT

**Project Category**

Safety	Incremental Load Growth	New Service	
Agency Mandated	Reliability	X	Operating Efficiency

**Accountabilities & Approvals**

	Signatures	Date
Board of Directors: Pat Jasper, Secretary	_____	_ / _ / _
CEO: Evan J. Griffith, CEO	_____	_ / _ / _
Executive Sponsor: Lee Thibert, Senior V.P. Power Delivery	_____	_ / _ / _
Division Sponsor: Mike Massin, Director, Engineering	_____	_ / _ / _
Project Manager: Dora Gropp, Manager, Transmission	_____	_ / _ / _
Project Engineer: Bill Nagengast, Project Engineer	_____	_ / _ / _

**Purpose and Need**

Under winter loading conditions, Debarr, Baxter, and Boniface Substations supply a load of up to 38.4 MVA. If the 34.5 kV cable circuit from University to Boniface fails, the only remaining supply circuit is an existing overhead line between Anchorage Substation and Debarr Substation that is limited to a transfer capacity of 21 MVA.

**Project Description**

Project consists of double circuiting the existing 115KV transmission line (Eklutna Project) between the Anchorage Substation and Baxter Lake Substation. One circuit is to be used for the Eklutna project and the second circuit is to be used as a 34.5kV circuit that provides a second tie between Baxter Lake Substation and University Substation.

**Cost Estimate Range \$2,250,000 to \$2,750,000 (includes 10% Contingency)**

Project included in 2004/2008 CIP and 2004 Budget @ \$2,500,000

Category	Current Estimate	Actual YTD	Projected	Variance \$	Variance %	Notes
Engineering – Internal	\$100,000	\$89,000	\$89,000	(\$11,000)	(11%)	
Engineering – Contract	\$185,000	\$50,000	\$150,000	(\$35,000)	(19%)	
ROW Costs/Permits	\$90,000	\$100,000	\$100,000	\$10,000	11%	#1
Materials	\$800,000	\$750,000	\$950,000	\$150,000	(19%)	#2
In-House Labor (Const/Commissioning)	\$25,000	\$20,000	\$25,000	0	0	
Contractor Costs	\$980,000	\$895,000	\$895,000	(\$85,000)	(9%)	#3
Overheads	\$300,000	\$200,000	\$300,000	0	0	
<b>Total</b>	<b>\$2,480,000</b>	<b>\$2,104,000</b>	<b>\$2,304,000</b>	<b>(\$176,000)</b>	<b>(7%)</b>	

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**DRAFT**

## Variance Discussion

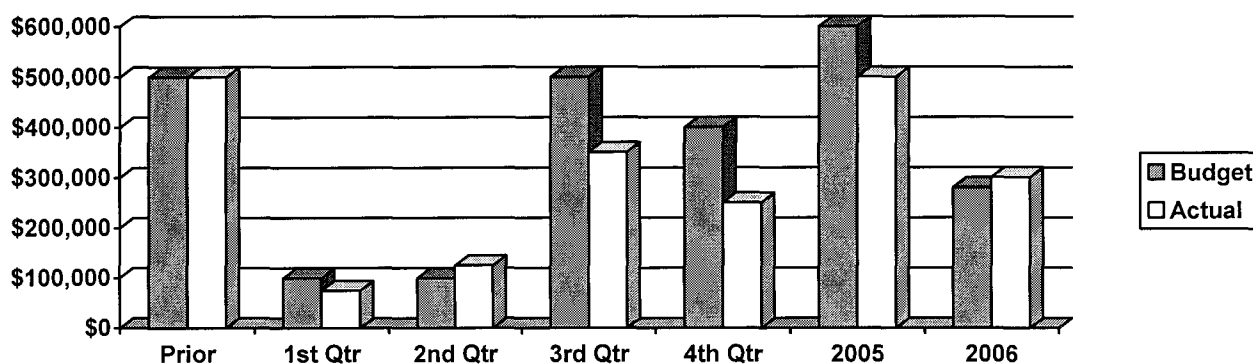
Note #

#1 – ROW Permitting costs were higher due to MOA increasing permit fees.

#2 - Price of steel has risen 10% in the past quarter driving the bids for the steel poles higher than estimated.

#3 – Bid prices were better than anticipated due to a seasonal slowdown in construction.

## Cash Flows



## Economic Analysis

Net Present Value (NPV)		Payback Period (years)	Benefit/Cost Ratio
W/ Reliability Benefits	W/O Reliability Benefits		
\$1,449,000	(\$2,487,000)	11.0	1.6

## Economic Analysis Summary

The NPV calculation was derived by assuming this project would eliminate rotating outages for 8,900 consumers during the failure of the University to Boniface 34.5kV cable. It was assumed there would be two outages during the 26-year life of this facility that would occur during peak winter conditions. The duration of the outages was estimated at 48 hours, but only 6 of every 24 hours would require rotating outages. If the frequency of the avoided outages were assumed to be one during the facilities life, the NPV would drop to (\$432,600). For these NPV values, the benefit due to increased reliability was spread evenly over the 26-year life of the facility.

## Current Project Status    Percent Complete **90%**

All Steel poles are set and the crew finished stringing wire this week. We will be clipping in structures the remaining part of this week and will move to commissioning next week. We anticipate two weeks of commissioning and checkout with energization to take place on August 10<sup>th</sup>.

## Project Schedule (see attached timeline)

# Example Project

ID	Task Name	Duration	Start	Finish	% Complete	Half 2, 2003				Half 1, 2004				Half 2, 2004				Half 1, 2005				Half 2, 2005			
						Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Half 1, Qtr 1	Half 1, Qtr 2
1	Easement Acquisition	180 days	Tue 7/1/03	Mon 3/8/04	100%																				
2	Design & Engineering	90 days	Mon 1/5/04	Fri 5/7/04	100%																				
3	Material Procurement	180 days	Mon 4/5/04	Fri 12/10/04	100%																				
4	Construction	240 days	Mon 11/8/04	Fri 10/7/05	85%																				
5	Commissioning	60 days	Mon 10/10/05	Fri 12/30/05	0%																				
6	Closeout	30 days	Mon 1/2/06	Fri 2/10/06	0%																				

Project: Sample  
Date: Mon 11/10/03

Task		Rolled Up Task		Project Summary	
Split		Rolled Up Split		External Milestone	
Progress		Rolled Up Milestone		Deadline	
Milestone		Rolled Up Progress			
Summary		External Tasks			