

**CHUGACH ELECTRIC ASSOCIATION, INC.**  
**Anchorage, Alaska**

**OPERATIONS COMMITTEE**  
**AGENDA ITEM SUMMARY**

**April 4, 2007**

**ACTION REQUIRED**

**AGENDA ITEM NO. VII.**

- Information Only
- Motion
- Resolution
- Executive Session
- Other

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**TOPIC**

Beluga Unit 3 Major Inspection – Project Authorization Motion Recommendation

**DISCUSSION**

Hot Gas Path parts within a gas turbine have limited lives due to operating environments involving high speeds, vibration, and temperatures. This outage will replace many of these parts. Additionally, because of the running hours on the unit's rotor, over 208,000 hours, the turbine rotor wheels will be replaced.

The following hot gas path parts will be replaced: Row 1 Buckets & Nozzle, Row 2 Buckets & Nozzles, Row 3 Buckets, Row 1 Shrouds.

**MOTION**

Motion: Move that the Operations Committee recommend to the Chugach Board of Directors that they approve a Motion to authorize project expenditures for the Beluga Unit 3 Major Inspection with an estimated cost of \$ 3,018,963 and an estimated completion date of June 30, 2007.

## Chugach Project Authorization – Budget Year 2007

**Project Name: BELUGA UNIT 3 MAJOR INSPECTION**

**Project Category:**

Safety		Incremental Load Growth		New Service		R&R T&D	
Agency Mandated		Reliability		Operating Efficiency		R&R Generation	X

**Accountabilities & Approvals**

	Signatures	Date
Board of Directors: Jim Nordlund, Secretary	_____	__/__/__
CEO Bill Stewart, Chief Executive Officer	_____	__/__/__
Executive Sponsor: Brad Evans, Senior VP Power Supply	_____	__/__/__
Project Manager: Paul Risse, Director GTS	_____	__/__/__

**Purpose and Need:**

Hot Gas Path parts within a gas turbine have limited lives due to operating environments involving high speeds, vibration, and temperatures. This outage will replace many of these parts. Additionally, because of the running hours on the unit’s rotor, over 208,000 hours, the turbine rotor wheels will be replaced.

The following hot gas path parts will be replaced; Row 1 Buckets & Nozzle, Row 2 Buckets & Nozzles, Row 3 Buckets, Row 1 Shrouds.

**Project Description:**

This project replaces the turbine rotor wheels and numerous hot gas path parts.

**Approval Amount: \$ 3,018,963**

Project included in **2007/2011 CIP** and **2007 Budget** @ \$ 2,874,792

Category	Budget	Actual	Projected	Variance \$	Variance %	Notes
Labor	354,360		545,137	190,777	54%	1.
Transportation	37,500		37,500	0	0%	
Materials	1,956,421		2,255,165	298,744	15%	2.
Professional Services	400,00		49,083	-350,917	-88%	2.
OH	126,511		132,078	5,567	4%	
<b>Total</b>	<b>2,874,792</b>		<b>3,018,963</b>	<b>144,171</b>	<b>5%</b>	

## Chugach Project Authorization – Budget Year 2007

### **Variance Discussion (Note #):**

1. Finalized labor requirements after budget developed.
2. Chugach purchased new rotor wheels to reduce outage time and risk. This increased material costs and reduced the professional services requirement.

### **Cash Flows**

2nd QTR 2007: \$ 2,264,223

3rd QTR 2007: \$ 754,740

### **Economic Analysis**

This is capitalized maintenance.

### **Economic Analysis Summary**

Replacement of capitalized parts.

**Current Project Status:    Percent Complete 1%**

Preparation of tooling for rotor repair work is taking place.

### **Project Schedule: (see attached timeline)**

April - June of 2007