Electric Transmission Intertie

Juneau
Greens Creek Mine
Hoonah
Phase 1 of the intertie, from Juneau to Greens Creek Mine, was completed in 2006.

The cost of phase 1 was approximately $20 million - $15 Federal and $5 private funds.
Hoonah’s electric energy is currently produced by diesel generation

- With current electric loads nearly 400,000 gallons of diesel is burned annually at a cost of $994,794 in 2007.

- As of July 2008, the fuel component of IPEC’s electric rate is $.252 per kWh – nearly half of the $.5275 year-to-date cost per kWh sold (the fuel cost will likely approach $.30/kWh this year).

- Hoonah’s diesel generation produces approximately 4,400 tons of CO2 emissions annually.

- In contrast, hydro power through the intertie will result in:
  - No fuel cost (IPEC would purchase hydropower instead)
  - No CO2 emission
Cost Estimate

- Design, Permitting & Management - $1,697,000
- Access Road Hoonah to Spasski Bay - $100,000
- Hawk Inlet to Spasski Bay - $25,674,118
- Termination Yards - $3,000,000
- Spasski Bay to Hoonah - $4,047,400
- Contingency 10% - $2,941,852
- Total (2007 $) - $37,460,370
Construction sequence with 5% annual inflation (already exceeded this estimate)

- 2009 – Complete design and permitting, order submarine cable, construct cable termination yards, construct access road to Hoonah - $6,797,000
- 2010 – Construct overhead line Spasski to Hoonah - $4,047,400
- 2011 – Install submarine cable - $26,615,970
# Funding Plan

<table>
<thead>
<tr>
<th>Source</th>
<th>Funding to Date</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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<td>$250,000</td>
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<td>Hoonah (road)</td>
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<td>AEL&amp;P</td>
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<td><strong>TOTALS</strong></td>
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<td><strong>$4,047,400</strong></td>
<td><strong>$26,615,970</strong></td>
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</table>
Juneau Load Forecast

Hydro Energy Outlook with Lake Dorothy Phase 1

- Existing resource (50% chance)
- Existing resource (25% chance)
- Total area load (0.6%)
- Total area load w/ trend to electric heat (1.3%)
Lake Dorothy Phase 2 will be constructed at some undetermined time in the future.
Cost Comparison
Diesel / Hydro Intertie

Cost of Hydro vs Diesel per kWh sold at Hoonah assuming 10% annual increase in Diesel Price

Year


Cost of Fuel/kWh Sold
Estimated Hydro Power Cost w/Line Loss
Summary

- The Juneau-Greens Creek-Hoonah Intertie is a public/private partnership
- Phase 1 of the intertie is in operation
- Phase 1 represents the 1st operating segment of the overall SE intertie system
- Phase 2 could be in operation by late 2011
- The intertie will save Hoonah 400,000 gallons of diesel annually
- Rate reductions will benefit all IPEC communities – Hoonah, Angoon, Kake, Klukwan and the Chilkat Valley
- At $3.99/gal diesel prices, rates would be reduced by $.08 system-wide, or $.17 per kWh for Hoonah alone (estimated)
- The intertie will also provide fiber-optic telecomm services