Southeast Conference
September 20, 2006

The Four Dam Pool,
&
The Swan-Tyee Intertie
Four Dam Pool By the Numbers

- **3** - Number of Dams (Terror, Swan & Solomon Gulch).
- **4** - Number of Hydro Projects (above 3 & Tyee Lake which is not a dam but a ‘Lake Tap’).
- **5** - Number of utilities served (Ketchikan, Wrangell, Petersburg, Kodiak Electric Assoc & Copper Valley Electric Assoc).
- **57** - Length (miles) of the Swan/Tyee Intertie.
- **77.5** Megawatts of Installed Capacity (all 4 projects).
- **250** – Miles of existing transmission lines owned by FDPPA.
- **19,000,000** - Gallons of diesel displaced annually.
- **60,000,000 to 80,000,000** – Surplus kilowatt hours available from the Tyee Lake project.
Four Dam Pool - Projects/Utilities

The FOUR DAM POOL Power Agency

HYDROELECTRIC PROJECTS in Alaska

Terror Lake
- Communities Served: Kodiak and Port Lions
- Provider: Kodiak Electric Association
- Facilities: Two-unit 22.5 MW plant, 1-17.4 mile 138 kV line, 1-14 mile 14.4/24.9 kV line, 2,200 foot tailrace discharges into Kizhuyak River

Solomon Gulch
- Communities Served: Glennallen & Valdez
- Provider: Copper Valley Electric Assoc.
- Facilities: Two-unit 12 MW plant, 106 mile transmission line

Tyee Lake
- Communities Served: Wrangell and Petersburg
- Provider: Thomas Bay Power Authority
- Facilities: Two-unit 22.5 MW plant, 88 mile transmission line

Swan Lake
- Communities Served: Ketchikan Area
- Provider: Ketchikan Public Utilities
- Facilities: Two-unit 22.5 MW plant, 90 mile transmission line

Planned Swan-Tyee Intertie
- Communities To Be Served: Wrangell, Petersburg, Ketchikan with excess 80,000,000 kWh unutilized capacity
- Facilities: Planned 57-mile intertie connecting Swan Lake & Lake Tyee projects
Four Dam Pool History & Facts

- Projects built in early 80’s by the State of Alaska
- Power Sales Agreement signed and Four Dam Pool created in 1985
- Projects purchased from State in 2002
- Four Dam Pool Power Agency created
- AIDEA originally provided financing. Refinancing completed in 2004.

- ‘Postage Stamp’ rate – all utilities pay same price for power. Current rate – 6.8 cents/kwh
- Four Dam Pool utilities’ rates vary from 10 – 20 cents/kwh

On an average year, the Four Dam Pool Projects displace approximately 19,000,000 gallons of diesel generation
Swan Lake
Tyee Lake
Four Dam Pool – Wholesale Power Rate

Four Dam Pool Wholesale Power Rate

- Cents per kWh


- Four Dam Pool Wholesale Power Rate
Potential Interconnection to British Columbia & North American Grid

FIGURE 1-2
Southeast Alaska
Kake-Petersburg Transmission Line Study
Existing and Proposed Transmission Lines
Swan-Tyee Intertie

- 57 miles in length
- Almost all of ROW cleared
- Approx. 50% of foundations installed
- $50 million needed to complete project
- Funding to date has been Federal funds and ‘Programmed Receipts’
- Will complete a major transmission link in Southern SE Alaska
- Will deliver Tyee surplus to Ketchikan

- Updated Economic Analysis completed in March, 2006.
Swan – Tyee Intertie

YTD FY 2003 - FEBRUARY 2003
TOTAL GROSS GENERATING CAPACITY
USED AND AVAILABLE FOR THE FY YEAR

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<th>PETERSBURG</th>
<th>SYM MET</th>
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Why the Intertie is needed
Swan - Tyee
Swan - Tyee
Swan - Tyee
Swan – Tyee
Conclusion – It’s Gonna Rain!

- One constant we can count on in Southeast Alaska is rain and lots of it.
- Varies from 200” a year in Southern Southeast to less than 50” in the northern panhandle
- Rain is the fuel that runs the turbines
- It’s free!!

Spill at the Lake Tyee Project