

S E A P A



Southeast Alaska Power Agency

SEIRP TECHNICAL CONFERENCE

Sitka, Alaska

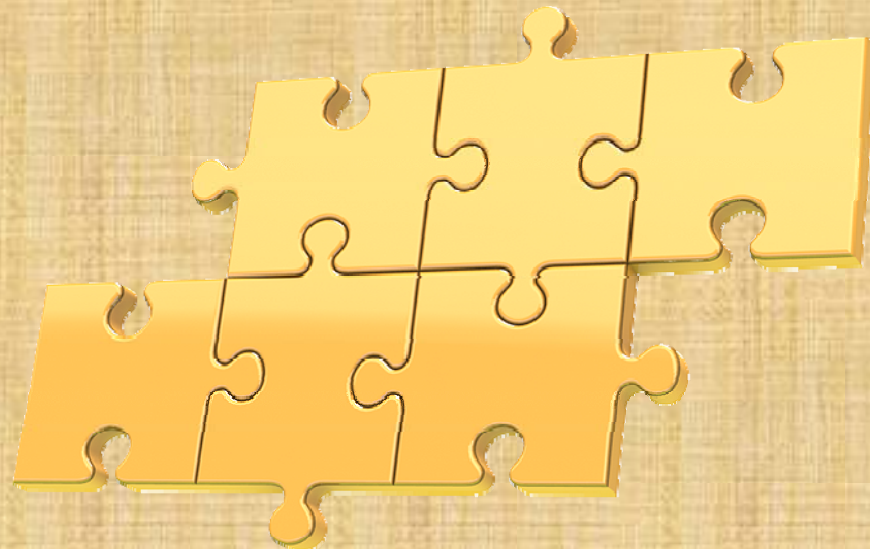
April 22, 2011

Because this Technical Conference is 'all about Planning', I thought it would be appropriate to include some quotes about what 'planning' is all about.....

“A lack of planning on your part does not constitute an emergency on my part.”

“A plan is a list of actions arranged in whatever sequence is thought likely to achieve an objective.”

- John Argenti, author and founder of the Strategic Planning Society

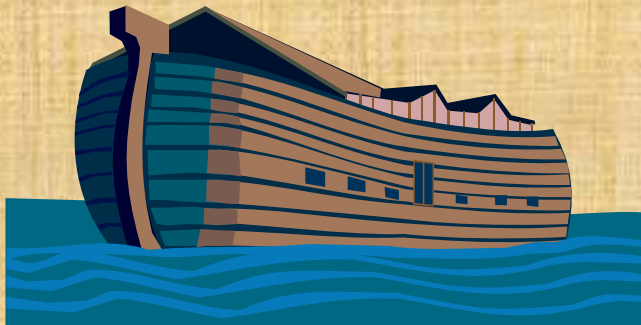


“Most plans are just inaccurate predictions.”

- Ben Bayol, television producer and writer



“Always plan ahead. It wasn't raining when Noah built the ark.”



- Richard Cushing, novelist

“A good plan today is better than a perfect plan tomorrow.”

- George S. Patton



“You got to be careful if you don't know where you're going, because you might not get there.”

“Prediction is difficult, especially about the future.”



- Yogi Berra, baseball catcher (1925-present)

“If you are in the electric utility business and you aren’t looking out at least 20 years, you’re not doing your job!”



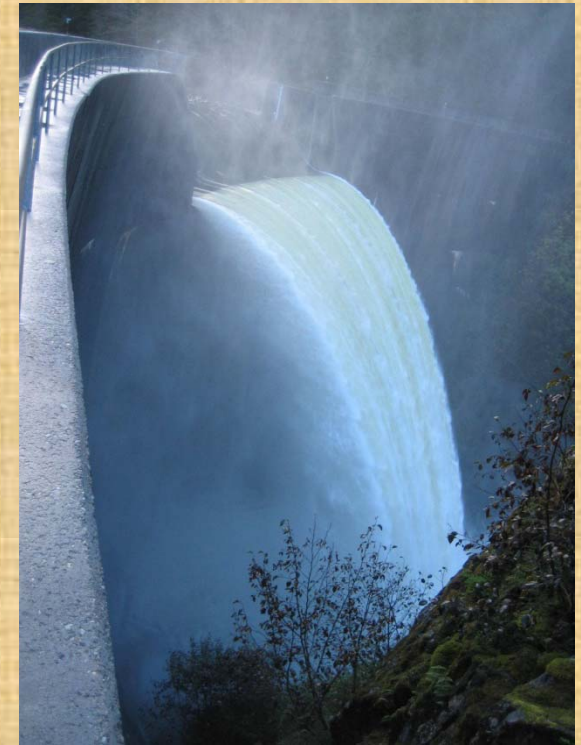
**NOW THAT WE'VE FOUND THE
'RIGHT' PROJECT, HOW DO WE
GET IT FINANCED?**



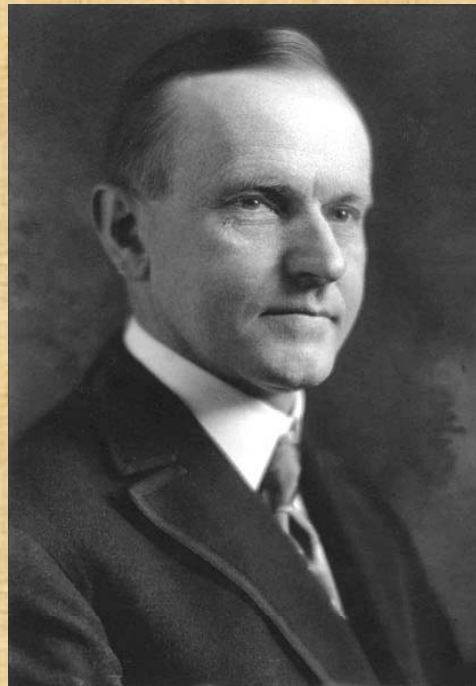
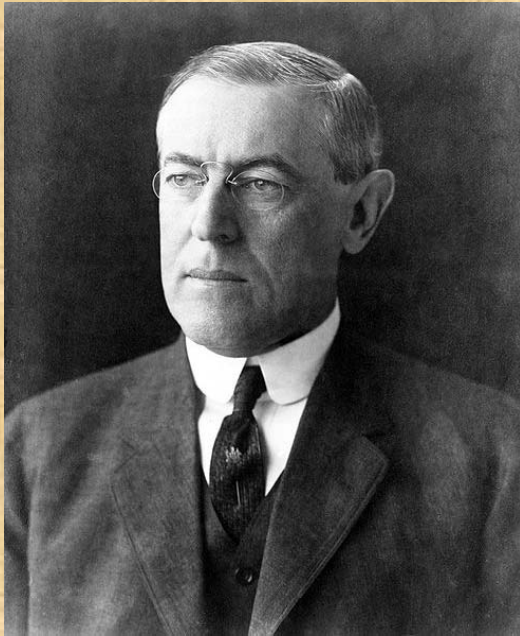
Who is SEAPA?

(Southeast Alaska Power Agency)

- We own the Tyee and Swan Lake projects and provide wholesale power to the utilities in Ketchikan, Wrangell and Petersburg
- Also own the transmission lines linking those communities together – around 175 miles including 14 miles of submarine cable
- Hydro Projects were built by the State in the early 1980's



Who are these gentlemen?



They were Presidents of the US when the first SE hydro projects were built



- Woodrow Wilson was elected President in 1912 – the year Ketchikan Lakes Hydro was constructed and was President when the Gold Creek Hydro Project in Juneau was built in 1914. These projects are still in operation.



- Calvin Coolidge was President in 1924, the year the Blind Slough Hydro (Crystal Lake) project in Petersburg was constructed. This project is still in operation.



- John F. Kennedy was President in 1961, the year Blue Lake Hydro in Sitka was constructed. This project is still operational and Sitka is raising the dam as their next generation project.

So...What's the Point?

- Hydro projects tend to stay in operation for generations
- Once the debt is retired, the remaining costs are O&M and Renewals
- Remember – there is no charge for the ‘fuel’
- Ratepayers today are benefiting from hydro projects that were built almost 100 years ago

But...Hydro Projects are very expensive to build

- Swan Lake (early 1980's) - \$96.2 million (including T-lines)
- Tye Lake (early 1980's) - \$128.5 million (Including T-lines)
- Bradley Lake (1991) - \$357.2 million
- Lake Dorothy (2010) - ~\$75 million
- Blue Lake expansion (current) - ~\$80 million
- Proposed Susitna (Railbelt) - \$3.6 - \$4.5 BILLION



**Building the next hydro project
is not going to be cheap!**



Want to get fired? Build a Hydro Project!

- The project will likely cost more than expected
- The project will probably take more time to completed than anticipated
- There is a good chance there will be change orders
- There could even be a lawsuit or two
- The cost of power from the project will be higher than anyone wants



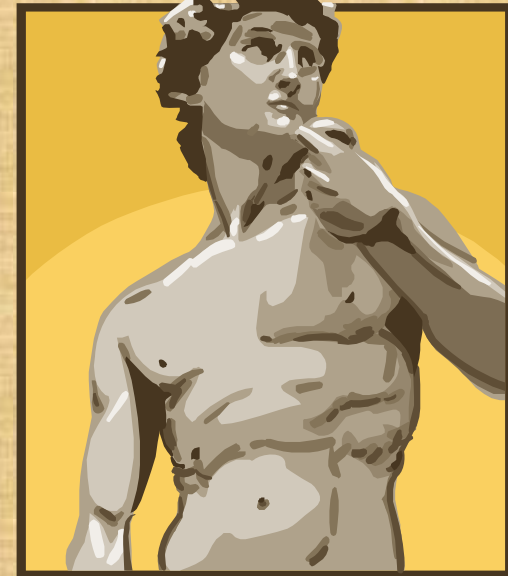
The 'magic' of hydro – 30 to 50 or so years later, you are a Hero!



- Debt service has been retired
- Remaining costs are O&M and Renewals
- Remember – there is no fuel cost – rain is free
- The cost of power from the project drops

Quote from a Sitka resident in 2055:

“Man, that Chris Brewton was a genius. He had the foresight and wisdom to raise the dam on the Blue Lake Hydro project. I’d sure like to get rid of our current utility manager who is trying to build that stupid and expensive Malarkey Lake Hydro.”



Some 'Right' Project Characteristics

- Has the appropriate capacity & energy for the loads in the region (not too big and not too small)
- Has the necessary storage characteristics
- Has acceptable 'Risk' factors
- Can be permitted and licensed
- Has stakeholder support
- The ratepayers can afford it



So how do we get this project financed?

- **Conventional Financing**
 - Bond Sales
 - State Loan programs (limitations)
 - Hurdle – financing usually limited to 30-year amortization
- **Grants (State/Federal)**
 - Federal 'Earmark' is a '4-letter word'
 - State grants can be difficult and cannot be relied upon to meet construction schedules
- **Combination of both grants and bonds**
 - Bradley Lake model (will be used in B&V financing models)
 - This arrangement was used to finance the Bradley Lake hydro project in the Railbelt
 - The State should be a financing 'partner'

Bradley Lake Hydro near Homer



What is the Bradley Lake Model?

Bradley Lake

- State owns the project
- Provides a share of the output to each of 6 Railbelt Utilities
- Power Sales Agreement has a 'take or pay' clause
- 50% bond financing
- 50% 'deferred' State grant/loan
- Amortization spread over 50 years
- Is the method proposed for Susitna Project financing
- Some of the details about this specific financing plan are unclear and have to be determined

Options for financing Malarkey Lake



Cost: \$140 million

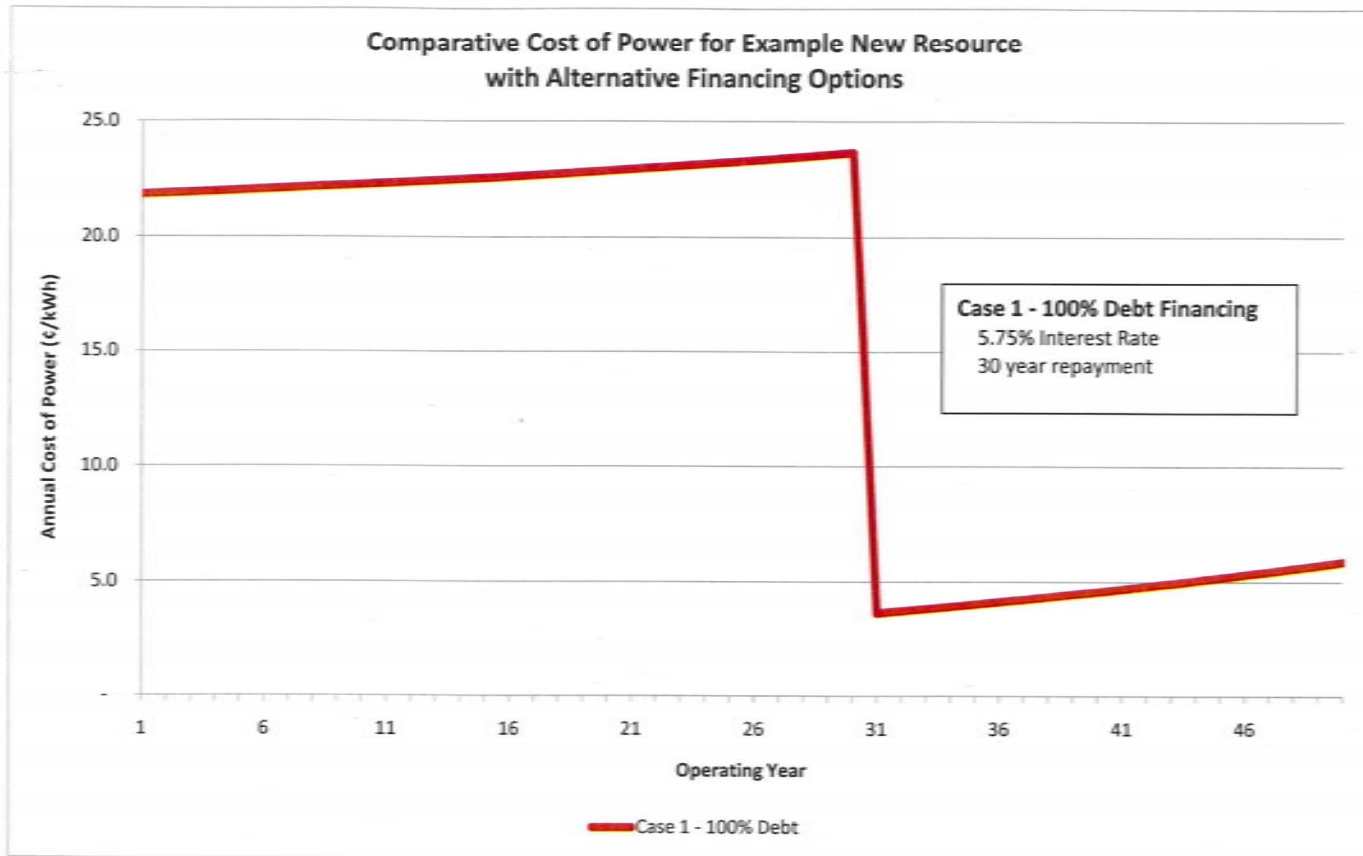
Annual Energy: 50,000 MWh

We will examine the cost of power using 4 different financing models

- Case #1: Conventional Financing – 30 years
- Case #2: 50% Bonds - 30 years and 50% State loan – 30 years (no deferred interest)
- Case #3: 50% Bonds - 30 years and 50% Deferred State Grant – 30 years (pay back principal only)
- Case #4: 50% Debt - 30 years and 50% State Grant

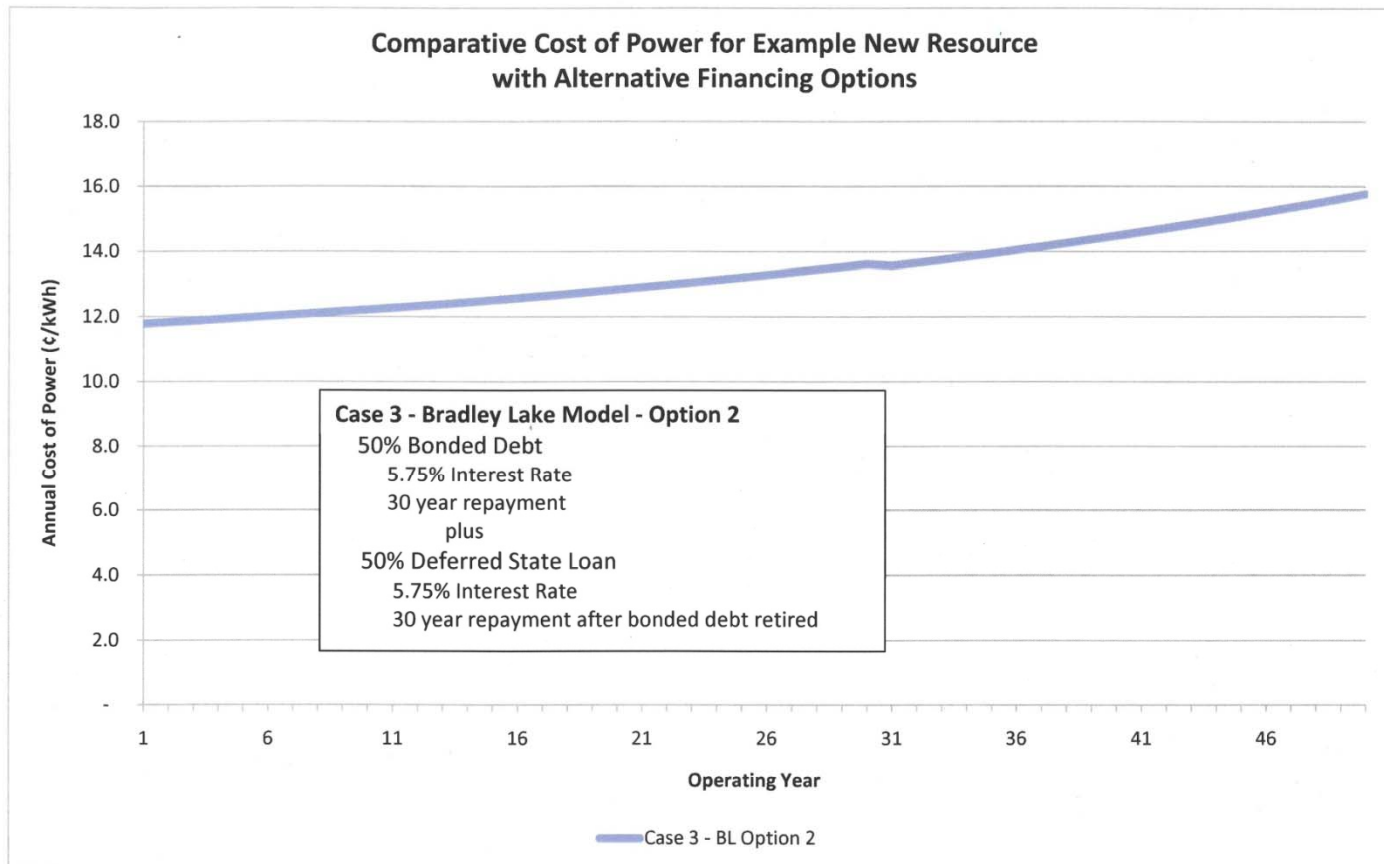
Finance Case #1: 100% Bonds - 30 Years

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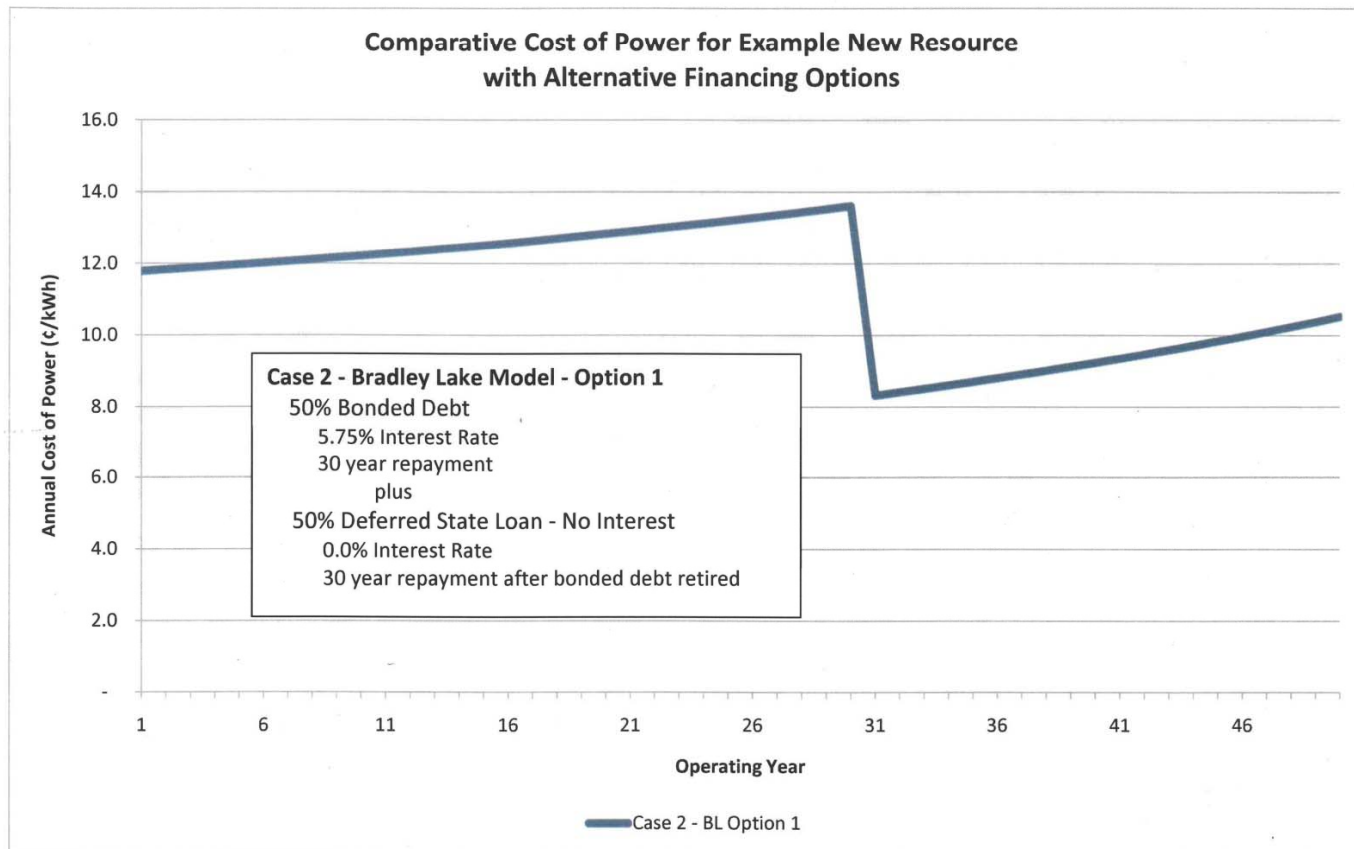
Financing Case #2: 50% Bonds and 50% State Loan

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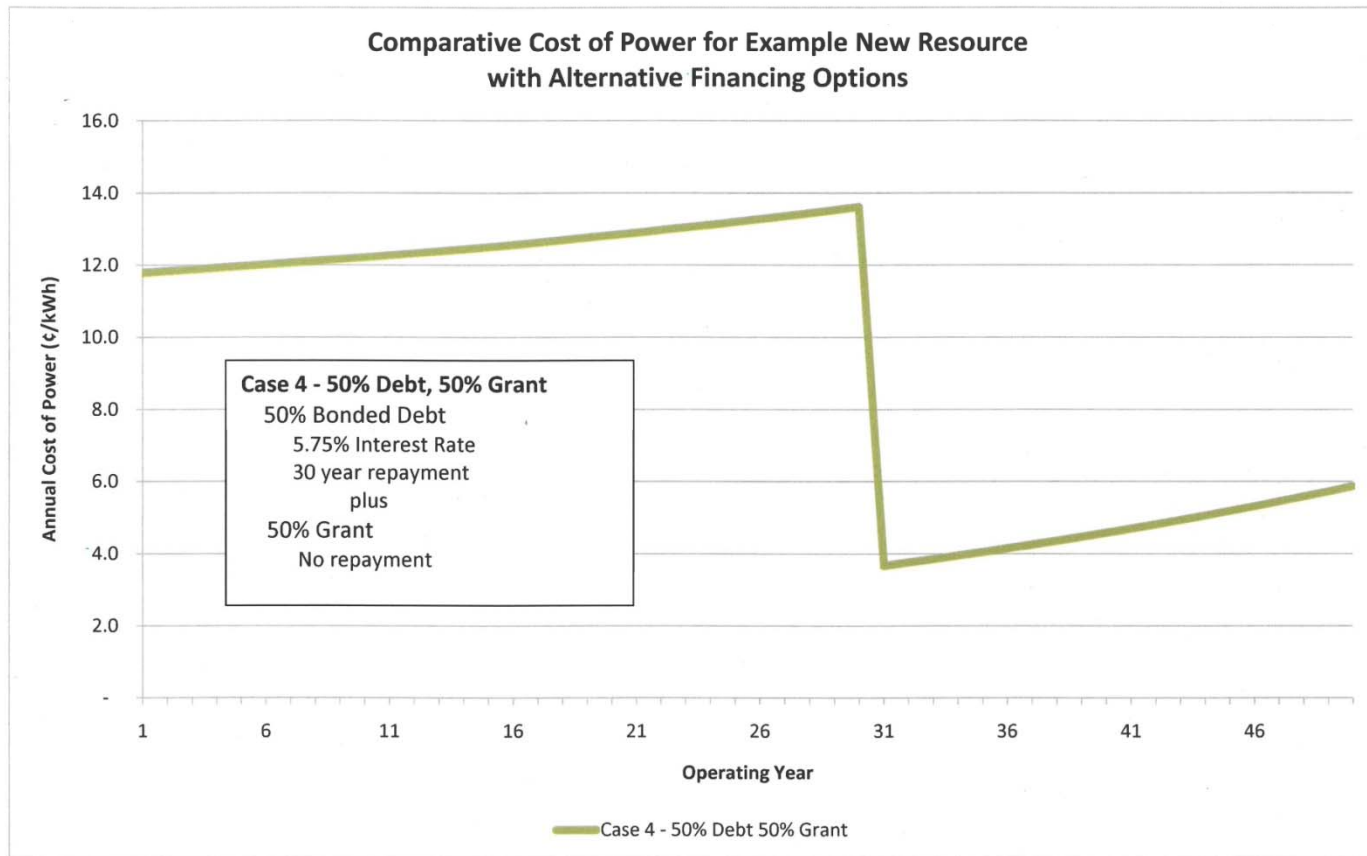
Financing Case #3: 50% Bonds - 50% Deferred State Grant

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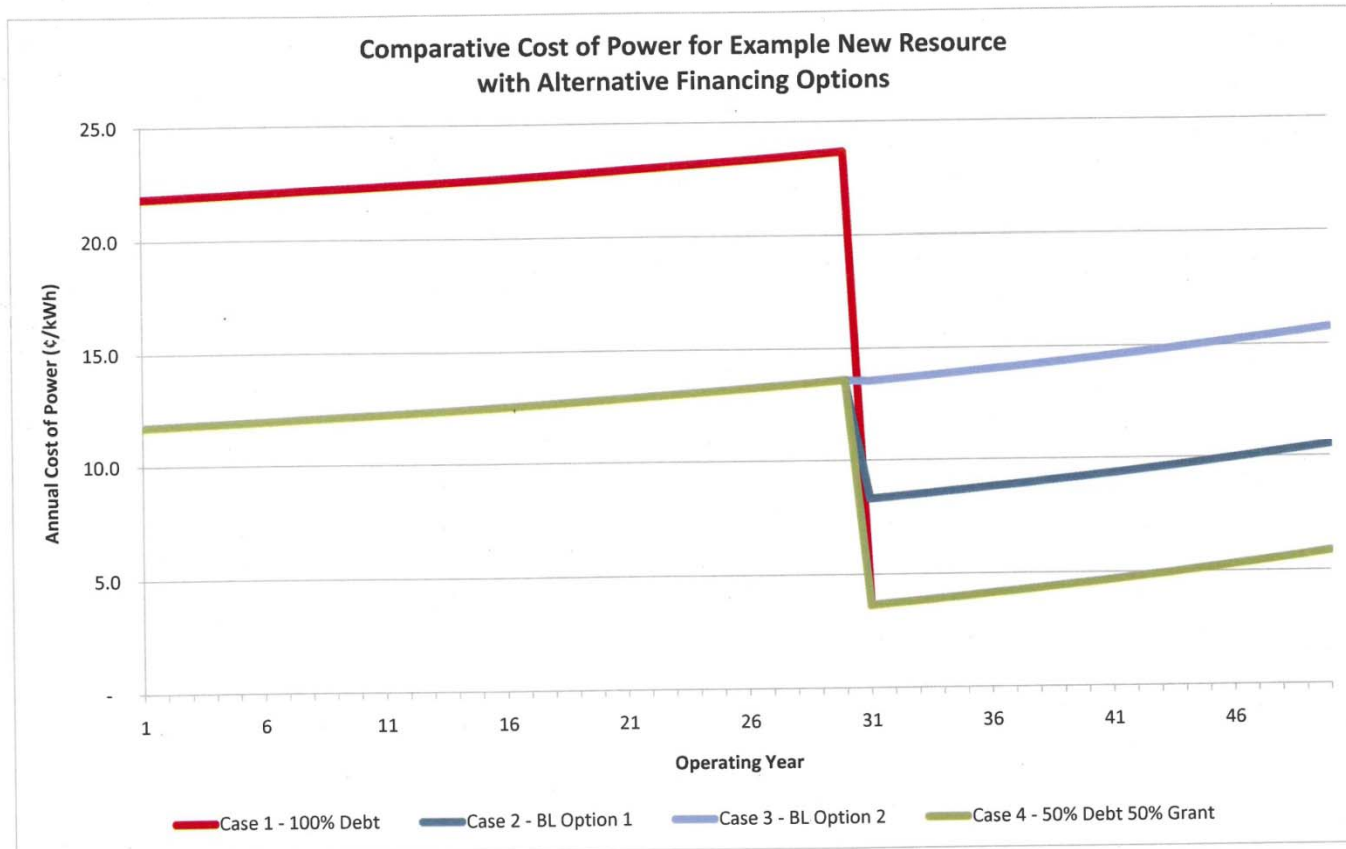
Financing Case #4 - 50% Bonds - 50% State Grant

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Comparison of Financing Models

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Financing Requirements

- Backed by Power Sales Agreement
- Load Forecasts very essential
- Independent Engineers Report (Pro Forma)
- Bond Indenture (lots of requirements)
- Financial Advisor
- Bond Underwriter
- In summary, you can't build a project on speculation unless you have you own funds and/or rely exclusively on State/Federal grants



Summary

- Hydro projects last 100+ years and keep delivering power & energy with no fuel cost
- However, they are extremely expensive to build
- The Cost of Power for the first 30 years can be very high due to the debt service on capital costs
- AEA has directed the IRP contractor, Black & Veatch, to use the Bradley Lake model as a method of financing projects
- This type of financing scheme will help keep the cost of power at a more reasonable level in the 'early' years
- The State needs to develop a policy and assist with the funding and financing of these capital intensive hydro projects

**“Everyone has a plan - until they
get punched in the face”**

- Mike Tyson, Boxer

