Southeastern Federal Power Alliance

Incremental Decay in Energy

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Incremental Decay in Energy

- Hydropower customers observations from our review of the
  - Buford Original Project Data, 1996 Rehab Study and the 11th Circuit Report
  - Allatoona Water Control Manual (March 2013) versus Rehab Study v3

Incremental Decay in Energy

- Hydropower customers observation
  - Variations in energy values from Study A to Study B for each project
- Each study -
  - Starts from a new set of energy values;
  - Defines these new values as baseline; and,
  - Then calculates changes from this new baseline reference to the alternative rather than the original project baseline.

Incremental Decay in Energy

- Examples – Using Buford Data
  - Original Project Data – 199,970 MWh defined as average annual energy (from Page xiii of the 1996 Rehab Study)
  - 1996 Rehab Study: No Action Alternative – Somewhere between 140,505 (Table 5-5 Rehab Study Base Condition) and 148,000 MWh (Rehab Study Page 5, para. 2.3)
  - What are the reasons for these differences?
  - Incremental decay from 199,970 to 148,000 to 140,505 MWh

Incremental Decay in Energy

- Proposed Action Alternative for the 1996 Rehab Study
  - Study identifies 160,494 MWh as the new energy available after the Rehab project
  - 2012 Report to the 11th Circuit Court – 122,500 MWh is the baseline
  - Incremental decay from 160,494 to 122,500 MWh
  - Further incremental decay comparing the difference between 199,970 and 122,500 MWh

Incremental Decay in Energy

- Dependable Capacity versus Marketed Capacity
- Dependable Capacity – Original Project Data
  - Installed Capacity at –
    - Unity Power Factor – 110 MW
    - At 90% Power Factor – 99 MW
    - At Rated Net Head – 86 MW

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- Dependable Capacity – 1996 Rehab Study
  - No Action Alternative – 99.27 MW
  - Proposed Alternative – 123.53 MW
  - What are the drivers for these differences?
- Marketed Capacity – 11th Circuit Hydropower Report
  - Marketed – 105 MW
  - Installed – 125 MW
  - No change from “Current Operations” to Proposed Alternative

Incremental Decay in Energy

- Hydropower Customer's Perspective
  - Uncertain whether these variations have be studied or defined properly;
  - Possible lack of proper analysis being conducted for each incremental change compared to Original Project Data during alternate analysis;
  - Storage was not removed as a result of storage being transferred to water supply in any of the calculations; and,
  - Assumption that the total Conservation Storage is available for hydropower when it is not.
    - The storage transferred to water supply is not available at any time for use by any purpose other than water supply.