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SEPA Rate Determination

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Topics to be Covered

- Rates & Repayment Methodology
  - Flood Control Act of 1944
  - DOE Order RA 6120.2
- Revenue Requirement
- Rate Design
- Average Energy
- Capacity reductions (Credits)
- Spilled Water / Revenues lost

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Flood Control Act

- ". . . lowest possible rates to consumers consistent with sound business principles, . . ."

- ". . . recovery . . . of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years."

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Priority of Cost Recovery, DOE Order RA6120.2

- Pay Annual Costs First
  - Operations and Maintenance Expense(CORPS Specific & Joint)
  - SEPA Marketing Expense
  - Transmission Expense
  - Purchased Power Expense
  - Interest on the Federal Investment
- Pay Investment Costs Over Reasonable Number of Years
  - 50 years on original project
  - Service life up to 50 years on replacements
- Highest Interest-Bearing Investment is Paid First to the Extent Possible

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Revenue Requirement and Rate Design

- Repayment studies establish revenue requirements ($63.5 million as of October 1, 2015).
- SEPA assumes average energy. Anything that reduces energy output may lead to future rate adjustments.
- SEPA uses a 5 year cost evaluation period for estimated future costs.
- Estimated capital cost of replacements is added in the year estimated to go into service.

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Rate Design

- Revenue Requirements are annual amounts needed to recover operating and interest expenses while meeting the required payments each year of the study.

- Rate Design establishes how this Revenue Requirement is recovered. Generally, a portion is expected to be recovered from energy and a portion from capacity.

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Concept

- IOU: Revenue Requirement =
  (Rate Base * Rate of Return) + Annual Expenses
- PMA: Minimum annual revenue necessary to meet repayment requirements.
- Similar to: (Remaining Investment * Annuity Factor) + Annual Expenses
- Rate Design: Revenue Requirement / Available Resources

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Year Due	Cumberland System	Georgia-Alabama-South Carolina System	Jim Woodruff System	Kerr-Philpott System	Grand Total
2016	$ 15,469,611				$ 15,469,611
2020		$ 29,274,332			$ 29,274,332
2021			$ 446,820		$ 446,820
2024	$ 38,125,697			$ 72,427	$ 38,198,124
2025		$ 32,040,509	$ 1,307,559		$ 33,348,068
2026		$ 97,418,837			$ 97,418,837
2027		$ 54,437,618	$ 258,501	$ 237,107	$ 54,933,226
2028	$ 22,445,257	$ 1,833,889			$ 24,279,146
2030	$ 9,906	$ 3,905,039		$ 215,045	$ 4,129,990
2031			$ 162,744	$ 671,179	$ 833,923
2032		$ 697,250			$ 697,250
2033		$ 1,665,889			$ 1,665,889
2034	$ 15,426				$ 15,426
2035	$ 903,988	$ 251,129,111	$ 692,945		$ 252,726,043
2036		$ 83,750,000			$ 83,750,000
2037		$ 2,106,161	$ 3,567,792		$ 5,673,953
2038		$ 366,797			$ 366,797
2039		$ 647,204			$ 647,204
2040			$ 331,481		$ 331,481
2041		$ 425,984			$ 425,984
2042		$ 922,766	$ 3,292,654	$ 1,132,288	$ 5,347,708
2043		$ 414,981		$ 20,772,166	$ 21,187,147
2044	$ 54,304,473	$ 2,168,719		$ 22,992,201	$ 79,465,393
2045	$ 18,140,421		$ 1,578,549	$ 12,234,754	$ 31,953,724
2046				$ 15,069,367	$ 15,069,367
2047		$ 1,595,073		$ 2,485,451	$ 4,080,524
2048		$ 1,105,109			$ 1,105,109
2049		$ 20,761,559			$ 20,761,559
2050		$ 37,819,062	$ 4,886,327	$ 156,864	$ 42,862,253
2051			$ 2,218,623		$ 2,218,623
2052	$ 3,128,052	$ 310,612,574	$ 10,320,945	$ 47,597	$ 324,109,168
2053	$ 583,818	$ 9,514,521	$ 110,751	$ 5,386,156	$ 15,595,246
2054		$ 63,803,828	$ 315,497	$ 6,537,895	$ 70,657,219
2055		$ 36,494,296	$ 2,429,783	$ 3,638,341	$ 42,562,419
2056		$ 11,095,779	$ 638,677	$ 2,171,366	$ 13,905,822
2057		$ 33,537,320	$ 519,451	$ 11,066,946	$ 45,123,717
2058		$ 98,715,850		$ 618,103	$ 99,333,953
2059		$ 21,303,999		$ 566,736	$ 21,870,735
2060	$ 3,706,425	$ 4,410,872	$ 1,545,458	$ 370,842	$ 10,033,597
2061	$ 4,809,545	$ 29,565,562	$ 769,673	$ 8,032,689	$ 43,177,469
2062	$ 2,695,303	$ 23,151,200	$ 2,752,511	$ 11,089,159	$ 39,688,173
2063	$ 12,193,342	$ 40,502,018	$ 2,954,722	$ 2,217,555	$ 57,867,637
2064	$ 15,428,902	$ 7,624,389		$ 151,197	$ 23,204,488
2065	$ 7,761,971	$ 5,564,981		$ 2,813,046	$ 16,139,998
(blank)				$ 471,311	$ 471,311
Grand Total	$ 199,722,137	$ 1,320,383,077	$ 41,101,463	$ 131,217,786	$ 1,692,424,461

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Current Power Rates (RIOP):

- Capacity: $1.908 /kW/Month
- Energy: 12.47 mills/kWh
- Customers pay pass-through for transmission and purchased power.
- Effective weighted-average rate of 17.20 mills/kWh at bus-bar.

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Current Power Rates True-up:

- RIOP True-Up - For each $1,000,000 specific power investment, increase is:
  - $0.001 /kW/Month to Capacity
  - 0.02 mills per kWh to Energy

- Normal True-Up – For each $1,000,000 specific power investment, increase is:
  - $0.003 /kW/Month to Capacity (includes 1500 hours use)
  - 0.012 mills per kWh to Additional Energy

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Current Power Rates:

- Most Recent Capital Projections (Specific Power):

Project	2016	2017	2018	2019	2020	2021
BARKLEY	$ 400,000	$ 7,031,000	$ 7,000,000	$ 9,118,000		$ 6,961,000
CENTER HILL	$ 54,000	$ 11,967,000	$ 47,688,000	$ 6,300,000		
CHEATHAM	$ 600,000	$ 5,595,000	$ 450,000	$ 1,375,000	$ 929,000	$ 929,000
CORDELL HULL	$ 600,000	$ 5,972,000	$ 1,741,000	$ 13,160,000	$ 600,000	
DALE HOLLOW	$ 650,000		$ 733,000	$ 800,000	$ 284,000	
J. PERCY PRIEST			$ 215,000	$ 1,500,000		$ 1,140,000
LAUREL	$ 1,500,000		$ 1,288,000	$ 1,500,000	$ 2,561,000	
OLD HICKORY	$ 1,169,000	$ 7,075,000	$ 17,501,000	$ 25,000,000	$ 16,195,000	
WOLF CREEK	$ 3,375,000	$ 3,247,000		$ 6,087,000	$ 6,087,000	$ 149,000
	$ 8,348,000	$ 40,887,000	$ 76,616,000	$ 64,840,000	$ 26,656,000	$ 9,179,000

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Current Power Rates:

- True-up Applied:

	Current	2017	2018	2019	2020	2021	2022
RIOP Capacity	$ 1.910	$ 1.918	$ 1.959	$ 2.036	$ 2.101	$ 2.128	$ 2.137
RIOP Energy	$ 12.510	$ 12.670	$ 13.490	$ 15.030	$ 16.330	$ 16.870	$ 17.050

Normal Capacity	$ 3.139	$ 3.163	$ 3.286	$ 3.517	$ 3.712	$ 3.793	$ 3.820
Normal Additional Energy	$ 11.708	$ 11.80	$ 12.30	$ 13.22	$ 14.00	$ 14.32	$ 14.43

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Average Energy Variables

- Spill
- Drought/Wet Years
- Unit Outages / Capacity Interruption Credits
- Municipal & Industrial Water Supply

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Average Energy Variables

- Cost Benefit Analysis was based on Average Energy.
- Cost Allocation Study established Joint Cost Allocation was based on Average Energy.
- Rate Studies are based on Average Energy.
- Municipal & Industrial Water Supply Studies are based on Storage.

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Capitalize vs. Expense

- Capital costs recovered over “reasonable” period of years. (lesser of 50 years or service life.)
- Expensed items are to be recovered in the year reported.
- Repay highest interest bearing investments first.

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Corps O&M Expense

- Power customers repay 100 percent of specific power costs (purpose code 11).
- Customers repay portion of Joint costs (purpose code 99).
- Repayment studies recover expenses as annual costs in the year recorded.
- Specific costs, to other than Hydropower purposes, recorded as Joint costs become proportionally recoverable by customers.

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Corps O&M Expense

- Items that have been included in joint:
  - Shoreline management
  - Patrol Boats
  - Fishing Pier
  - Penstocks
  - Spillway gates
  - Environmental stewardship

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Joint Cost Allocation

Project	O&M Allocation	Capital Allocation	Total O&M Allocation	Notes
BARKLEY	5.530%	7.520%		
CENTER HILL	53.390%	42.545%	72.819%	Joint O&M by letter dated 9/3/2003.
CHEATHAM	0.000%	0.000%		
CORDELL HULL	30.810%	25.390%		
DALE HOLLOW	57.418%	46.297%	77.978%	Joint O&M by letter dated 9/3/2003.
J. PERCY PRIEST	6.620%	5.430%		
LAUREL	24.120%	19.840%		
OLD HICKORY	63.110%	45.300%		
WOLF CREEK	44.000%	55.113%	73.098%	Joint O&M by letter dated 9/3/2003.

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Current and Future Actions

- Continue activities of the O&M Committee of the Southeastern Federal Power Customers (SeFPC) to provide interaction with the Corps and opportunities for review and discussion of actual and estimated O&M.
- Work with Corps for accurate and uniform cost classification across all hydropower projects.

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Current and Future Actions

- Wilmington District was unable to reclassify costs as specific Flood Risk Management citing Cost Allocation studies of 1956 state “no significant facilities at the project are designed exclusively for flood control use”.
- SEPA requested South Atlantic Division Commander reassess and revise the Cost Allocation studies for Kerr and Philpott to reflect current project use.
- SEPA has offered cost share funding for such a study.

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Questions