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Regulated Utilities AFUDC and the Other Side of Competitive Generation

Can Competitive Generation Grow

Utilities are spending money again, and increasing expenditures raise the profile of non-cash bookkeeping entries unique to regulated utilities - "Allowance for Funds Used during Construction" (AFUDC).

The principle behind AFUDC entries is that regulated utilities are entitled to the opportunity to earn returns on prudently incurred investment. Financing costs incurred during the construction cycle, like brick and mortar, are recoverable from rate payers. The preferred method is to include Construction Work in Progress (CWIP) in rate base, in effect paying on an "as you go" basis. The argument against CWIP in rate base is that current consumers are paying for investment that benefits future consumers, thus creating a conflict with accrual accounting and mismatching of revenues with expenses. Instead, AFUDC accounting adds financing costs incurred during the construction process to the cost of investment. Once the project is completed, those costs are amortized over the life of the investment via depreciation charges.

The non-cash AFUDC component to total investment depends on 1) whether it's completed on schedule, and 2) the implied return on equity. As a guideline, AFUDC should add about 20%-25% to the cost of the plant. Southern Co. (SO-\$35-Hold) for example, estimates its 45.7% share of a planned 2,300 megawatt nuclear plant, including AFUDC, at an all-in cost of \$6,089 a megawatt. SCANA Corp.'s (SCG-\$37-Buy) all-in cost forecast for its 55% share of a 2,234 megawatt plant, excluding AFUDC, is \$4,949 a megawatt.

Both the Southern Co. and SCANA Corp. projects exclude Federal subsidies such as Production Tax Credits, Loan Guarantees and Government-Backed Insurance. Yet there's little concern in the investment community that both companies should be able to raise capital during a construction cycle that may last 10-years. Not so with competitive generation.

Competitive generation lacks a defined customer(s) and its returns are determined by market forces. Unlike utilities who are granted returns commensurate with lower risks in a regulated business, competitive generation profits are limited solely by market forces. To date, several generators have experienced only the upside of market forces. Non-regulated Exelon Generation (Parent-EXC-\$89-Hold), for example, earned \$2,029 million in 2007 on an average equity of \$4,926 million, or 41%. Don't forget too that non-regulated nuclear generators enjoyed fairly good "kick starts" to a quasi competitive environment: 1) generation was purchased at sharply discounted prices, in many cases fire sale prices, with long-term purchase contracts from the seller, and the opportunity to sell excess capacity in a rising fossil fuel cost climate; 2) companies in Texas were able to sell nuclear (and coal) output based on natural gas prices; and 3) Exelon Corporation, coincident with the merger of Unicom and PECO, wrote down Commonwealth Edison's nuclear investment by \$2.4 billion.

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What do non-regulated generators do for an encore? Investment bankers, if there are any left, are certain to come up with financing plans but successful implementation is another matter. What investor, even with government subsidies, is willing to put capital in a long-term capital intensive project with no visible revenue stream and fraught with risks during the construction cycle, i.e., time delays or an accident somewhere, domestic or international? What would be a compensatory return for that exposure? If interest is capitalized, where's the cash to meet repayment schedules? What about earnings dilution and dividend payments associated with any equity financings? Assuming a merchant generator lines up purchase power contracts, the purchaser, presumably a regulated utility, could command a dominant role in negotiating rates, basing those rates on costs similar to returns on rate base. After all, buyers markets are different than sellers markets.

Cost of Capital & Revenue Requirement

Table 1 is a theoretical cost of capital presentation. Capitalization consists of debt-45%, preferred-5%, common equity-35% and deferred income taxes-15%. Most regulatory jurisdictions treat accumulated deferred income taxes as either interest-free loans or deduct the item from rate base. (Deferred Investment Tax Credits earn at the overall cost of capital.) Column 2 assigns cost to the capital components; debt-6.5% pre-tax, preferred stock-5.0%, - common equity 12.5%, deferred Taxes 0%. Column 3 is the weighted cost of capital (column 1 multiplied by column 2), in this instance 7.6%. Column 4 is the after-tax cost of capital after reducing the debt component from 2.9% to 1.9% to reflect a 35% rate. Column 5 is the 10.1% revenue needed to meet interest expense and pre-tax equity costs.

Table 1
CWIP-AFUDC-Revenue Requirement

Column	(1)	(2)	(3)	(4)	(5)
	Cap. %	Cost %	Weighted %	AFC* %	Rev* %
Debt	45%	6.5%	2.9%	1.9%	2.9%
Preferred	5%	5.0%	0.3%	0.3%	0.4%
Common	35%	12.5%	4.4%	4.4%	6.7%
Deferred Taxes	15%	0.0%	0.0%	0.0%	0.0%
Total	100%		7.6%	6.5%	10.1%

*Assumes 35% Tax Rate

CWIP in Rate Base

Construction Work in Progress (CWIP) when in rate base requires no unusual journal entries. Cost of investment remains unchanged. Assuming \$100 million CWIP, rates are increased \$10.1 million, assets (cash) on the balance sheet and revenues in the income statement increase \$10.1 million.

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\$100 million CWIP in Rate Base

	Debit \$-Mil	Credit \$-Mil
CWIP in Rate Base		
Cash	10.1	
Revenues		10.1

Allowance for Funds Used During Construction Entries

For some reason known only to the accounting gods, companies began to identify only the debt or equity component in the income statement. It's the total AFUDC Debt & Equity that contributes to earnings, not only debt or equity. To do otherwise understates the AFUDC contribution.

In our experience, Allowance for Funds Used during Construction (AFUDC) has been recorded under 2 methods: 1) Gross, where the interest component is reported on a pre-tax basis; and 2) Net, where the interest component is reported net of taxes.

Gross: Gross entries book AFUDC at the weighted cost of capital or 7.6% (column 3, Table 1). CWIP is increased by \$7.6 million, AFC-Debt is recorded as a \$2.9 million credit to interest expense and AFC-Equity, a \$4.7 million addition to other income. In most instances, the effect of gross interest is reduced by an offsetting increase in deferred income taxes that lowers the net interest contribution by the net of tax amount. (In this instance, \$2.9 million less \$1.0 million, for a net \$1.9 million.) The total AFUDC earnings benefit is \$6.5 million.

**Gross – \$100 million CWIP
Deferred Tax Offset**

Gross Typical	Debit \$-Mil	Credit \$-Mil
CWIP (BS)	7.6	
AFC-Debt (IS)		2.9
AFC Equity & Other (IS)		4.7
Deferred Taxes (IS)	1.0	
Accumulated Deferred Taxes (BS)		1.0

BS-Balance Sheet, IS-Income Statement

In the past (though we're not sure if the practice continues), there have been companies that recorded AFUDC on a gross basis but without a tax offset, increasing earnings by the full \$7.6 million.

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**Gross – \$100 million CWIP
No Deferred Tax Offset**

Gross Flow-thru	Debit \$-Mil	Credit \$-Mil
CWIP (BS)	7.6	
AFC-Debt (IS)		2.9
AFC-Equity & Other (IS)		4.7

BS-Balance Sheet, IS-Income Statement

Net: The net method for recording AFUDC books the debt component at its' after tax cost (column 4 Table 1). CWIP in increased by \$6.5 million, AFC-Debt reduces interest expense by \$1.9 million and AFC-Equity increases other income by \$4.7 million. Earnings benefit by \$6.5 million.

Net #1 - \$100 million CWIP

Net #1	Debit \$-Mil	Credit \$-Mil
CWIP (BS)	6.5	
AFC-Debt (IS)		1.9
AFC-Equity & Other (IS)		4.7

BS-Balance Sheet, IS-Income Statement

Another variant to recording AFUDC on a net basis isn't strictly an accounting entry. Under traditional regulation, return on rate base is calculated by dividing net operating income by rate base. However, if AFUDC is booked under the net method, income taxes above the line in operating income are lower due to interest associated with CWIP. Current consumers are in effect benefiting from tax reductions that should be allocated to future consumers. This mismatch of revenues with expenses is corrected by transferring the tax benefit of CWIP interest expense from above the line in operating income to below the line as a credit to other income.

**Net #2 - \$100 million CWIP
Tax allocated Below the Line**

Net #2 Tax Allocation	Debit \$-Mil	Credit \$-Mil
CWIP (BS)	6.5	
AFC-Debt (IS)		1.9
AFC-Equity & Other (IS)		4.7
Income Taxes Operating Inc. (IS)	1.0	
Income Taxes Other Income (IS)		1.0

BS-Balance Sheet, IS-Income Statement

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Recap of AFUDC

Table 2 highlights the balance sheet, income statement and return components of AFUDC accounting: column 1 is stand-alone without CWIP; column 2 assumes \$100 million CWIP and associated financing costs; column 3 is pro forma income and returns assuming no CWIP in rate base and no AFUDC; column 4 assumes CWIP in rate base with rate offsets; columns 5&6 are AFUDC Gross entries with deferred taxes (5) and flow thru of tax savings (6); and columns 7& 8 are AFUDC net without tax reallocation (7) and with tax reallocation (8).

Table 2
CWIP & AFUDC Comparisons

Column	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Inv \$-Mil	CWIP \$-Mil	Pro Forma \$-Mil	CWIP In Rates \$-Mil	Gross Dfd Tx \$-Mil	Gross Flo-thru \$-Mil	AFUDC Net #1 \$-Mil	AFUDC Net #2 \$-Mil
Investment	1,000	100	1,100	1,100	1,100	1,100	1,100	1,100
Rate Base	1,000		1,000	1,100	1,000	1,000	1,000	1,000
Year-End CWIP			100	100	107.6	107.6	106.5	106.5
Common Equity	350	35	385	385	385	385	385	385
Oper. Inc. Pre-tax	100.4		100.4	100.4	100.4	100.4	100.4	100.4
Rate Increase				10.1				
Adj. Oper. Inc.	100.4		100.4	110.5	100.4	100.4	100.4	100.4
Income Taxes @35%								
Payable	24.9	(1.0)	23.9	27.4	23.9	23.9	23.9	24.9
Deferred					1.0			(1.0)
Total Taxes	24.9	(1.0)	23.9	27.4	24.9	23.9	23.9	23.9
Net Oper. Inc.	75.5		76.5	83.1	75.5	76.5	76.5	75.5
Interest Expense	29.3	2.9	32.2	32.2	32.2	32.2	32.2	32.2
AFC-Debt Credit					2.9	2.9	1.9	1.9
Net Interest	29.3	2.9	32.2	32.2	29.3	29.3	30.3	30.3
Other								
AFC - Other					4.7	4.7	4.7	4.7
Tax Credit								1.0
Total Other					4.7	4.7	4.7	5.7
Net Income	46.3		44.3	50.9	50.9	51.9	50.9	50.9
Pref.Div.	2.5	0.3	2.8	2.8	2.8	2.8	2.8	2.8
Balance to Com.	43.8		41.6	48.2	48.2	49.2	48.2	48.2
Return Rate Base	7.6%		7.7%	7.6%	7.5%	7.6%	7.6%	7.5%
Return Common	12.5%		10.8%	12.5%	12.5%	12.8%	12.5%	12.5%

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