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California Energy Commission

Lowering the Effective Cost of Capital for Generation Projects

Q&A

Moderator: Steve Zaminski, SVP

Starwood Energy Group

June 27, 2006



Observations about Renewable Projects

- ◆ Meeting the CA RPS is difficult
 - ◆ Smaller projects
 - ◆ Credit implications for entrepreneurial developers
 - ◆ Other costs / obstacles
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Non-quantitative Impact of Credit

- ◆ Double down - Material increase in risk for developers
 - ◆ Effect on competition
 - ◆ Controllable risk?
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Credit Cost: Renewables

- ◆ Wind project
 - Adds $\sim 6\%$ ⁽¹⁾ to the capital cost⁽²⁾

Source: KEMA Inc. / Black & Veatch draft report, June 2006, Starwood Energy Group estimates.

- (1) Assumes pre-bid security (\$3/kw), 6 months to resolve short-list before cash is posted for development security (\$20/kw) at PPA execution and 24 months of development/construction to reach COD before a letter of credit is obtained at a cost of 3% per annum for operating collateral. Assumes carrying cost of cash is 12% and a discount rate of 10%. Foregone debt (8% interest on fully-amortizing debt over life of PPA) capacity is estimated by assuming the 3% annual fee on the letter of credit for operating collateral reduces the total available cash flow for debt service.
 - (2) Assumes a developer bids into PG&E's 2006 Renewables RFO with a 100 MW wind facility with a capacity factor of 35% and a 20 year contract price of \$60/MWh.
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Credit Cost: Peaker

- ◆ Peaker (supports renewables)
 - Adds $\sim 9\%$ ⁽¹⁾ to cost⁽²⁾
- ◆ Requires $\sim 8\%$ higher capacity payment⁽¹⁾
 - Carrying cost
 - Reduced debt capacity

Source: KEMA Inc. / Black & Veatch draft report, June 2006, Starwood Energy Group estimates.

(1) Assumes pre-bid security (\$5/kw), 6 months to resolve short-list before cash is posted for development security (\$10/kw) at PPA execution and submission to CPUC for approval, 12 months for CPUC approval before cash is posted for increased development security (\$60/kw) and 24 months of development/construction to reach COD before a letter of credit is obtained at a cost of 3% per annum for operating collateral. Assumes carrying cost of cash is 12% and a discount rate of 10%. Foregone debt (8% interest on fully-amortizing debt over life of PPA) capacity is estimated by assuming the 3% annual fee on the letter of credit for operating collateral reduces the total available cash flow for debt service.

(2) Assumes a developer bids into PG&E's 2005 All-source RFO with a 100 MW range peaker facility.



PPA Interconnection Issues

Additional obstacles / risk

- ◆ Process and timing to determine cost
- ◆ Developer risks from interconnection

Tom French – CA ISO



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