

Suggestions for Applicant:

1. Read full document before beginning.
2. If you are unsure on something, make an assumption such that we can see full suite of capabilities, rather than lose significant time on one variable or question.
3. Please build a high-level financial model in annual format that addresses as many of these tasks/questions as possible. Do not attempt to make the formulas overly complex – we are looking to assess your understanding of solar modeling, project financing, and financial concepts rather than knowledge of excel, although we will evaluate your presentation, logic, and use of formulas to assess your excel skills.

Case Study:

The company has a 20MWac solar project in California with a 20-year power purchase agreement (PPA) with an investment-grade utility off-take initially priced at \$60/MWh with a 1% annual escalator. It is currently in the process of seeking financing to build the project. At Final Notice to Proceed (FNTP), the equity interests will be sold to a private equity investment company. The project is currently under development and is expected to achieve FNTP on January 1, 2025. The construction cycle is expected to last exactly one year. Below are further technical and financial details of the project.

Technical and Financial Details:

- The company intends to design the system with an DC:AC overbuild ratio of 1.30.
- The gross annual year-1 generation of the plant prior to any availability or degradation deductions is expected to be 58,250 MWh
- The independent engineer has estimated the plant availability will be 99%.
- Market data indicates the buyer will underwrite a 35-year economic useful life
- The PPA states that there will be 50 hours (1,000 MWh) of uncompensated curtailment per year.
- Output Degradation – 0.50% per year.
- O&M costs - \$6.50/KWp, escalating at 2% per year.
- Inverter replacement reserve – Total of \$0.06/Wp spread evenly in years 10 through year 19 (assume that replacements are incurred in the same period and the same amount as the reserve provisions).
- The acreage needed for this project is 6 acres/MWdc. Each acre leases out for \$1,500, escalating at 2% annually.
- Other operating expenses – \$375,000 escalating at 2% annually.

- The project is required to post security with the PPA counterparty for \$4 million through the term of the PPA.
 - Assume a letter of credit, at a cost of 2% on posted security value.
- Merchant price post PPA pricing – assume \$40/MWh.
- Project development and capital costs:
 - Panels and Balance of System - \$0.85/Wdc
 - Project high voltage interconnection equipment - \$0.10/Wdc
 - Project development costs - \$0.07/Wdc
- For purposes of the model, assume the project basis is 95% eligible for MACRS and ITC and 5% ITC ineligible and receives 15-year straight line depreciation
 - MACRS schedule: 20% / 32% / 19.2% / 11.52% / 11.52% / 5.76%
- 30% Investment Tax Credit taken in Year 1.
 - Depreciable Basis Reduction in the amount of ½ of the ITC.
- 21% Effective income tax rate.
- Buyer will make an investment that yields an after-tax IRR of 8%.
- Assume the buyer is a tax efficient entity that can monetize tax losses as allocated.
- Assume a transaction cost budget of \$1.0 million is born by the buyer.

Instructions/Questions:

1. What is the annual economic profile and profitability of the project?
2. Model a monthly construction schedule (including sources and uses) – assume that the project incurs all development and transaction costs at closing and all other capital costs evenly through the construction period.
3. Based on the project economics and the equity investor’s target investment criteria, how much can the equity investor afford to invest in the Project? Include the impact of monthly construction spend (as per part 2 above) in this calculation.
4. Based on the total investment amount and pre-development fee uses of funds, what is the development fee that the buyer could afford to pay Avantus at final notice to proceed?
5. Run 3 sensitivities of your choice, showing the most important factors that impact development fee.
6. Assuming the company owns 10 development assets of this type, which specific outputs from this analysis (and/or beyond information provided) would be required to produce a holistic corporate cash forecast?

Bonus Questions:

1. What is the cost of construction financing for the project, assuming the following terms:
 - a. Assume the monthly construction schedule as per Question 2
 - b. Total Loan to Value ratio of 95%, with equity invested before debt
 - c. Interest rate of 2%, commitment fee of 0.5%
 - d. Origination fee of 1%
 - e. Make any other assumptions required and state them clearly
 - f. How does the use of construction financing impact the purchase price, assuming the buyer IRR remains constant?
2. If construction financing is assumed as per 1, what is the uplift to the equity investor's IRR, and how much more in purchase price can the equity investor pay to keep their IRR at 8%?