**THIS IS NOT AN ASSIGNMENT**

Solar Development in South Carolina (S.C.)

You have been approached by a developer with a S.C. solar project. I want to understand how attractive the S.C. market could be and whether or not the particular opportunity is feasible and meets nstar investment criteria.

As a starting point for the analysis you should look at the following:

a. Does the state have any incentives for solar energy/renewable energy (tax abatements, production incentives)?

b. Does the state have policies that support solar (such as a Renewable Portfolio Standard or expedited permitting for renewables)? Similarly,

c. How many operating solar projects are currently in the state? How many MW is that? (ideally list the projects and who owns them)

d. How many solar projects are under development in the state (you likely won’t be able to find all of them, but perhaps you can give some examples or state which companies seem to be developing the most projects)? i. Who are the large players developing projects?

e. How do solar projects sell their energy? Under long term contracts (Power Purchase Agreements (PPAs) in S.C. or do they export to other states or do they sell merchant (as price takers, selling into a power pool in S.C.?).

f. What is the energy mix like in the state? Mostly hydro? natural gas? etc…. see if you can find out what the breakdown is like. Do you expect this to change over the next ten years?

g. Any other question(s) you think would be interesting to ask in regards to ascertaining whether this would be an attractive market.

h. Is the project feasible given a required internal rate of return of 7 % p.a. over the life of the project?

Please, write an essay (minimum 500 words, single spaced) about the attractiveness of the S.C. solar market, you can use notes. You need basically to answer every single question in essay form. \*The state policies and operating projects should be obtainable information.

In order to support your analysis, use the attached excel file and the following set of assumptions to determine the feasibility of the project:

General Assumptions:

Investment Date: 2014 COD (Commercial Operation Date): 2015 Life of Plant: 20 Years Size of Plant (Installed Capacity): 20 MW Capacity Factor (CF%): The capacity factor in VT is ~13.5% The capacity factor in NC ~16% Hours in a Year: 8760 Production per year (MWh)= CF \* Size of Plant \* Hours in A Year PPA (Power Purchase Agreement- the price you get paid for each MWh you deliver): assume $150/MWh. Capex: $2.0M/MW incurred in full immediately prior to COD O&M: 25% of EBITDA for year 1 of operation escalating each year at CPI CPI: 2.5% Tax Assumptions: 35% federal (ignore state taxes) Tax Credits: Any tax credits (Production Tax Credits, Investment Tax Credits) can be assumed as cash received on an after-tax basis

Depreciation assumptions: Assume 5-Year straight line full depreciation (20% per annum)

Assume no Terminal Value

Please calculate the IRR and NPV based on the after-tax cash flows (ATCF) and a discount rate of 8%

ATCF should include tax credits, taxes paid or tax shield\* for each year as well as cash: = Cash from operations + PTC + Taxes (Taxable Income \* Tax Rate)

\*For tax shielding purposes assume that any negative taxable income becomes positive after-tax income