*You were presented with two options to supply City Hall and the Depot with the annual energy needs. You will make a data-based recommendation to the City for either placing solar panels on carports; or for placing solar panels in the open grassy field - with or without solar tracking ground mounts.*

*You are going to type up the following. Include your question in the answer, then erase the question. Your recommendation will be in paragraph form and in the order outlined below. Type font will be Arial, black, point 12. Once you have finished, please erase the directions (everything blue and italicized) and submit into Google Classroom.*

*Name:*

*Date:*

**Introduction:**

1. How much energy is currently required for the Depot and City Hall?
2. What were the three alternatives? Describe each.
3. Should all three options be considered? Why or why not?

**Option A:**

4) Are all parking spaces covered? If not, which area(s) is excluded and why?

5) What tilt and azimuths did you use in PVWatts to calculate the kWh output and annual value?

6) How did you modify those numbers? And why did you modify those numbers?

7) What is the total amount of adjusted kWh that can be generated on the carports?

8) What will the cost be for covering the parking with parking structures?

9) What is the adjusted annual value for the solar panels?

10) The return on investment for the parking structure option is

11) The benefits of covering the parking include:

12) The drawbacks of covering the parking include:

**Option B:**

13) Will the solar panels be placed on fixed ground mounts or on tracking ground mounts? Why?

14) How much will it cost to place the solar panels in the field?

15) What is the return on investment for placing the solar panels in the field option?

16) What are the benefits of placing the solar panels in the open field?

17) What are the drawbacks of placing the solar panels in the open field?

**Conclusion:**

18) Based on the above considerations, what would you recommend to the City and why? *(The why is a summary of the most important benefits)*

**Grading Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A (100% - 90%) | B (89% - 80%) | C (79% - 70%) | D (69% - 60%) | F (> 50%) |
| All information is there and only minor revisions to formatting might be necessary. All technical information is precisely presented.  | Only minor revisions to both content and formatting necessary. All required information is present. | The assignment is starting to read like a paper. Transitions between questions necessary. Significant edits still required but the content is mostly there. | The paper is still in question form and needs major revisions for both content and formatting. | The paper is started.  |