Sunny Shah

ECEP 480 HW6

1. 10 kWdc PV array installed in Philadelphia (Zip Code 19104)

The peak production at 90% is when the azimuth angle is at 180 degrees. Which produces about 13,024kWdc as can be seen in the graph below. At 25 degrees tile the energy production is at 13,215kWh per year and at 50 degrees title the energy production is at 12,989kWh per year. Peak energy at 25 degrees which is -15 of the tile angle

2. Inverter Input and Output Performance Characteristics

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| Inverter Input and Output Performance Characteristics | | |
| Characteristics | Eltek-Theia 4.4he-t UL | Danfoss Solar: DLX 4.4 UL |
| Rated AC Power (W) | 4400 Wac | 4400 Wac |
| Max array power (W) | 4566.51 Wdc | 4566.51 Wdc |
| Max DC V | 600 Vdc | 600 Vdc |
| Vin MPPT Range (V) | 230 Vdc | 250 Vdc |
| Iin | 21 Adc | 21 Adc |
| V | 369.903 Vdc | 369.903 Vdc |