# **Assignment 2:** **Solar Availability and System Analysis Lab**

# Objectives

Perform a Solar Pathfinder and Pyranometer analysis on the building selected for the Group Project.

Answer the following questions:

1. What is the annual percentage of available solar for the site?
2. Identify shading factors and capture a photo of the dome.
3. Draw shading factors using the template for your latitude, and photograph results to include in your assessment.
4. Record Pyranometer results. Are they good?
5. Set up the solar panel, charge controller and battery at the site.
6. Record conditions and output.
7. Record the initial battery state and end state after charging
8. Add load to the system to extend charge time and reduce curtailment.
9. List influencing factors on charge time.
10. Compare technical specifications to your results. Do they match? Why or why not?

# Deliverables

A digital or written technical report, or slide presentation that includes the following:

* Table of Contents
* Summary of Solar Pathfinder and Pyranometer results
* Answers to questions 1-10
* Appendix items where appropriate
* Use this data as part of your final Group Project for designing an Advanced Energy System in your campus building