

Campus Plan UW Solar Project



Overview

UW Solar is proposing a phased-in plan for solar deployment at UW Seattle. This aims to maximize solar capacity for net zero carbon buildings. The group has assessed numerous viable buildings on campus, including capital projects in the pipeline for the UW Campus Master Plan as of 2018.

Goals

UW Solar and UW Sustainability are working to meet the GHG reduction goals of the UW Climate Action Plan, to be carbon neutral by 2050. Approximately 30 high value buildings have a capacity of >100kW, and the intention of this project is to utilize this potential.

Affiliations

- Institutional Frameworks
 - UW Campus Master Plan
 - UW Climate Action Plan
 - UW Campus Sustainability Plan
- Stakeholders
 - Public Sector: PNW NPPL, WSU
 - Private Sector: Solar & Storage
- Public Private Partnerships
 - Align UW priorities with City, State, Federal agencies and funding opportunities

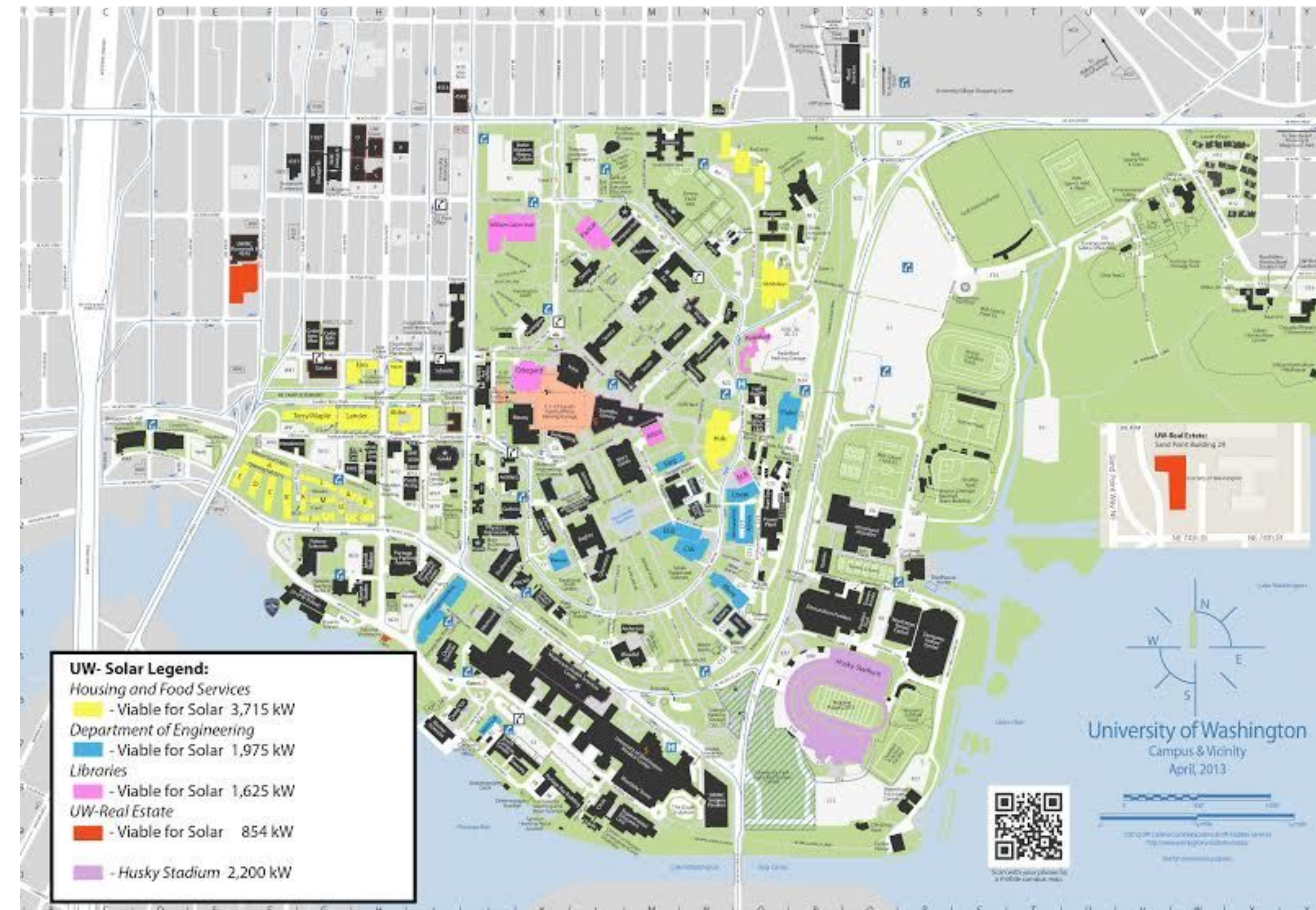


Figure 1. Initial brainstorming on buildings with the potential to house solar arrays.

Steps	Description of the Task Accomplished per Worksheet
Step 1 - Identify Criteria	Criteria for selecting alternatives and ranking projects
Step 2 - Weight Criteria	Relative weight of criteria determined by thirty participants
Step 3 - Identify Project Indicators	Table standardizing cost, carbon and resilience information.
Step 4 - Apply Standardized Scores	Objective project scores based on project technical data.
Step 5 - Weight Scores	Weights are automatically applied to the average scores for each project, ready for ranking
Step 6 - Rank Projects	Tables summarize the rank order of projects as prioritized, and as would have been with alternative criteria

Figure 2. Building ranking criteria steps (to complete in Phase 1 by UW Solar).



Figure 3. (left) Visualization of potential for solar array on the Allen Center for Computer Science

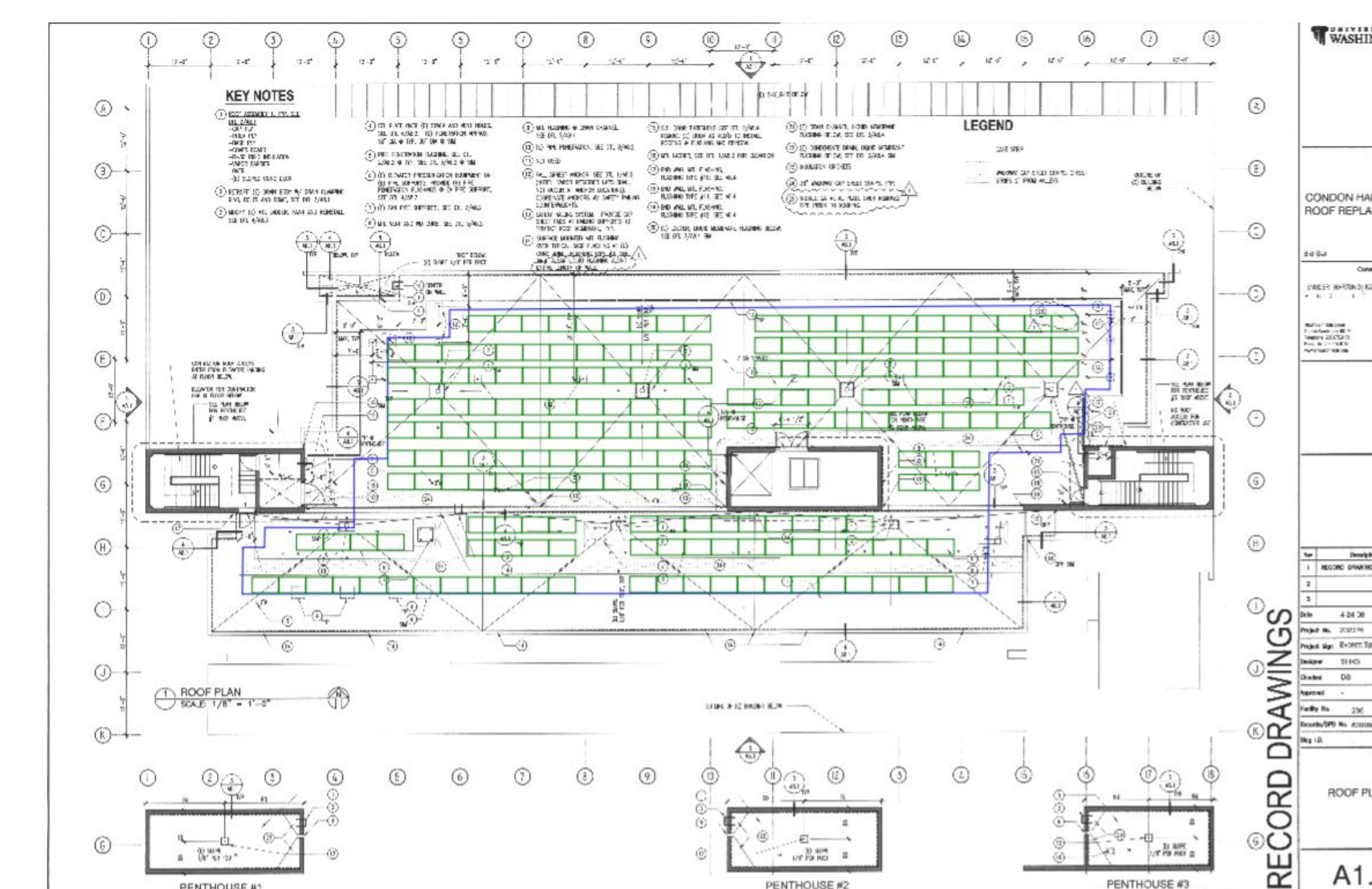


Figure 4. (right) Visualization of potential for solar array on Condon Hall.

Phases

Phase I - Feasibility & Development

- Completion of feasibility study
- Multi Criteria Analysis

Phase II - Design & Permitting

- RFP -Design/Build, Design/Bid/Build
- Contractor selection and ranking.
- Supplier selection and ranking.

Phase III - Construction

- Site Preparation
- Equipment staging
- Construction of Solar arrays

Phase IV - Commissioning

- System Testing and Verification
- Operations and Maintenance

Timeline

If carried out, starting in 2020 one project will be carried out each year, for 30 years, to meet the 2050 Goal

Finance

Analyses:

- Financing PV Projects
- Predicted Energy Yields
- Cost Benefit Analysis
- ROI
- Contingency
- Risk Analysis
- Barriers vs. Benefits
- Estimated Capital Costs: \$14,892,692.59

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