Reducing USCG Carbon Footprint

Green Ranking Assessment Standardization System (GRASS)

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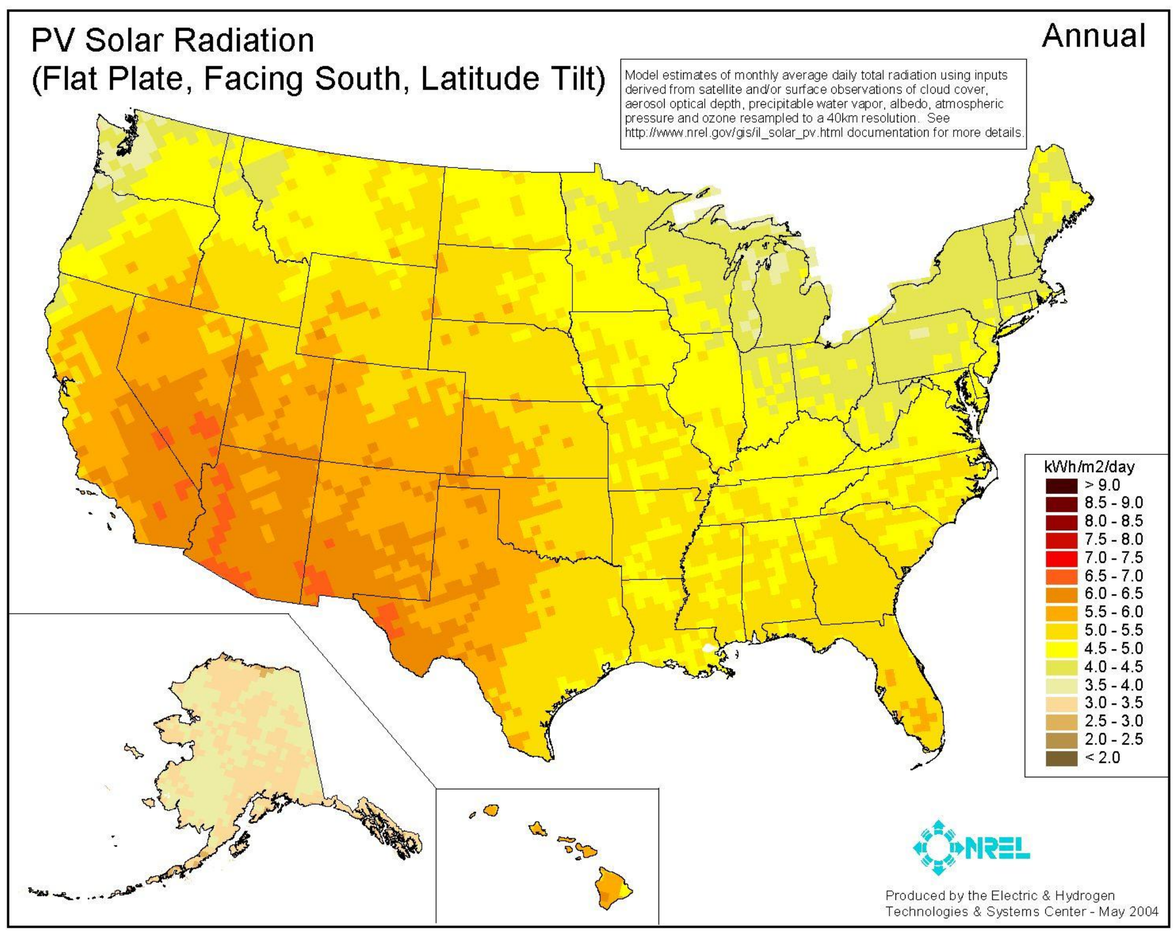
Problem Statement:

- The Coast Guard lacks an objective system for deciding the most effective locations for implementing renewable power projects.
- There is no Coast Guard wide system for prioritizing projects to conserve energy.

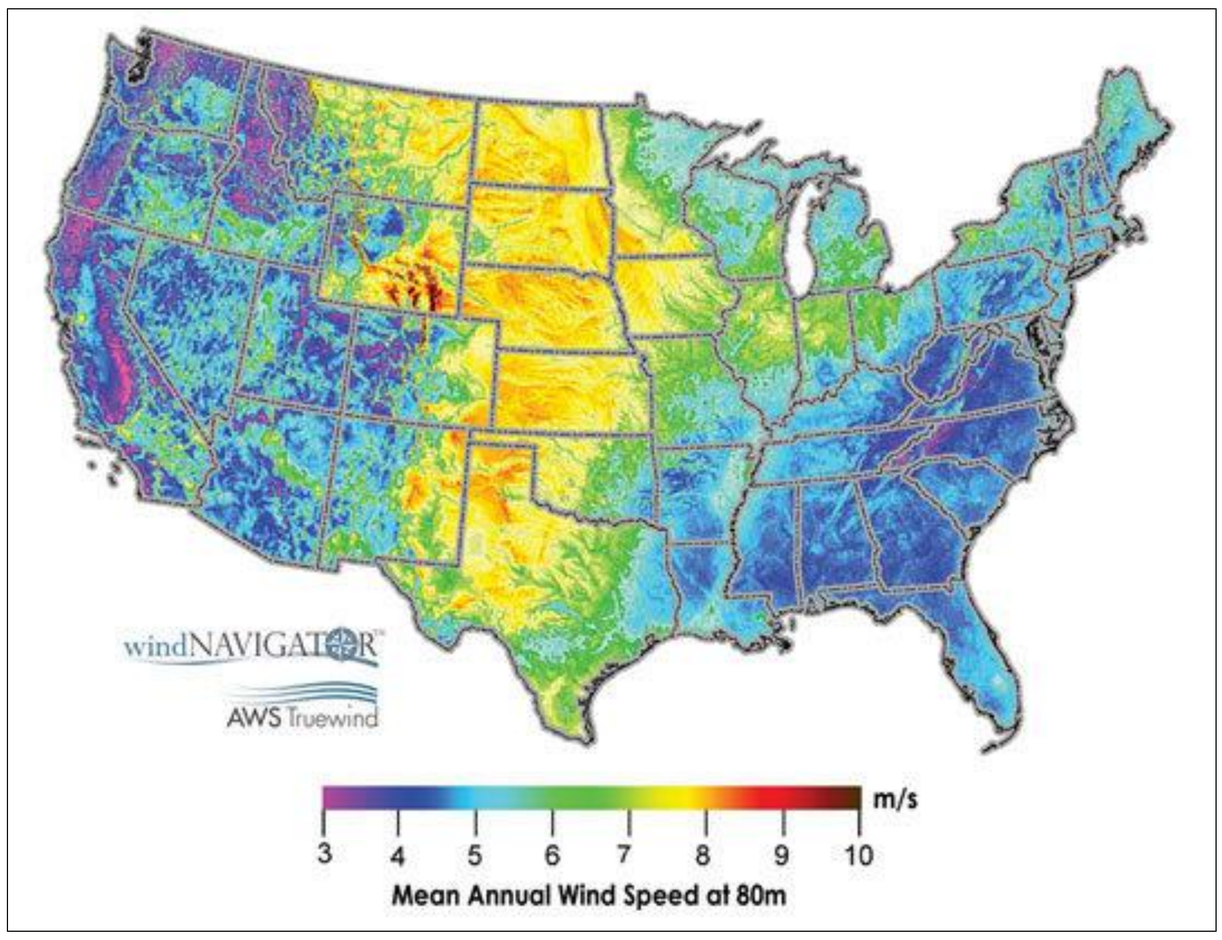
Goal of Project:

Create a ranking system for Coast Guard sectors and stations for renewable power projects and energy conservation projects.

Photovoltaic Solar Radiation Map



Wind Speed Map



How GRASS Works:

Phase I

Renewable Power: Unit's location is used to grade the ability to implement wind/solar energy technology resulting in a score.

Energy Consumption: USCG FINCEN's database is used to access Coast Guard unit's energy/fuel bills to compile a ranking grade for consumption.

Phase II

Site visit to Coast Guard units for three specific purposes:
1) Verification of Phase I data
2) Identification of easy and cost effective energy reduction projects
3) Education in possible energy reduction techniques

Final Grade

Renewable Power: A (signifies excellent potential site) through F (signifies poor site)

Energy Consumption: F (needs much improvement) through A (uses energy very efficiently)

Timeline of Events:

Initial energy audit conducted at Sector Long Island Sound	January 26
Secondary site visits to units in Michigan and North Carolina	February 5-9
Preliminary Grading Rubric (Phase 1)	April 22
Site Visit Assessment Checklist (Phase 2)	April 26
Final Ranking System Completed	April 27

Bottom left: Coast Guard Training Center Petaluma, CA photovoltaic solar panel farm, Bottom right: wind turbines