NautilusSolar®

CASE STUDY

FROM SUPERFUND TO SOLAR: CONVERTING AN ENVIRONMENTAL LIABILITY INTO AN ASSET

BACKGROUND

The Beacon Community Solar Project, a collaborative effort by Nautilus Solar Energy® and Endurance Clean Energy, marks a significant achievement in renewable energy development by transforming a remediated EPA superfund site in Cranston, Rhode Island, into a 3.43MW community solar farm. This innovative project turned an environmental burden into a valuable resource, offering clean, cost-effective energy to over 500 local households.

CHALLENGES

- ☑ **Environmental Liability:** A former EPA superfund site required a careful approach to ensure that the transformation not only prevented further environmental harm but also contributed positively to the locality's ecological balance.
- ☑ **Technological Integration:** It was crucial to install a large-scale solar infrastructure without compromising the integrity and safety of the landfill cap.
- ☑ **Community and Stakeholder Engagement:** Gaining the support and trust of the local community and stakeholders was essential to address various concerns, including environmental safety, aesthetics, and the economic impact on the local community.

BEACON COMMUNITY SOLAR PROJECT

FACTS

3.43
TOTAL MW

4.3M
ANNUAL KWH PRODUCTION

IMPACT

3,073
CO2 EMISSIONS AVOIDED
(METRIC TONS)

684
CARS OFF THE ROAD

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STRATEGIES AND SOLUTIONS

- ☑ **Innovative Use of ClosureTurf®:** A patented closure system designed by Watershed Geo to protect the landfill cap while supporting the solar infrastructure addressed critical concerns such as soil erosion, slope integrity, gas emission, and EPA regulation compliance, ensuring the project's environmental sustainability.
- ☑ **Advanced Solar Infrastructure:** 9,000 solar panels, meticulously installed on a racking system secured with over 60,000 ballast blocks ensured the structural integrity of the solar installation while maintaining the safety standards required for a remediated site.
- ☑ **Economic and Community Benefits:** Generated over 7,000 hours and 124 worker-days of construction jobs, in addition to supporting 20-25 full-time positions for ongoing maintenance. Boosted local tax revenue and contributed to the local economy through the Rhode Island Commerce Renewable Energy Fund (REF) Brownfield Grant.

The Cranston Community Solar Project represents a successful model of the potential of transforming unusable land into valuable renewable energy resources. It highlights the feasibility of repurposing remediated sites while addressing environmental, economic, and social objectives and the role of innovative technology.