RUFF SOLAR POWER PLANT

Project Highlights

- Project Name: Ruff Solar Power Plant
- Project Type: Utility Scale Solar
- Project Location: Ellenboro, Rutherford County, North Carolina, USA
- Project Size: 32 MW DC
- Project Operation Date: July 27, 2020
- PV Module Supplier: Boviet Solar
- Project Developer: Cypress Creek Renewables (CCR)
- Project Owner: Helios Infrastructure (Nationwide + Sol Systems JV)

Project Overview

Ruff Solar is a 32 MWdc utility-scale PV facility in Ellenboro, North Carolina. Developed by Cypress Creek Renewables with Boviet Solar's top-performing PV modules and placed into service on July 27, 2020, the project delivers power into the Duke Energy Carolinas network. At COD, ownership transferred to Helios Infrastructure (the Nationwide + Sol Systems JV), with CCR continuing in an O&M role.

The Ruff solar power plant offers many economic, social and environmental benefits. Economically, Ruff Solar creates local skilled-trade jobs and stable property-tax revenue; the plant generates about ~48 GWh of electricity per year, enough to power ~3,700 North Carolina homes, providing cost-stable, in-state energy. Socially, the project advanced through transparent county and utility coordination, supports workforce pipelines (apprenticeships and O&M upskilling), and serves as a visible platform for community energy-literacy and STEM engagement. Environmentally (estimated), annual output avoids roughly ~23,000 metric tons of CO_2, comparable to removing ~5,000 cars or planting ~820,000 trees each year; it also saves ~24 million gallons of water annually versus thermoelectric generation and displaces ~24,000 tons of coal per year on an energy-equivalent basis.

Economic Benefits

Ruff Solar stimulated local construction employment across civil, electrical, and mechanical trades, with additional spending on regional suppliers, transport, lodging, and services. In operation, the facility contributes predictable property tax revenues and cost-stable energy to the region. Metered history compiled by Sol Systems indicates ~48 GWh/year of generation, which equates to powering ~3,700 homes using standard household-consumption assumptions.

Social Benefits

The project followed county siting review and utility interconnection processes typical for North Carolina's utility-scale fleet, enabling a community-friendly deployment. Ruff Solar supports workforce development, from electrician apprenticeships to solar O&M careers, and provides a practical venue for education and outreach on renewable energy, grid reliability, and land stewardship in the Ellenboro area.

Environmental Benefits (Estimated)

Based on ~48 GWh of zero-emission generation annually, Ruff Solar is estimated to avoid ~23,000 metric tons of CO_2 each year, roughly equivalent to removing ~5,000 gasoline cars from the road or planting ~820,000 trees, while saving ~24 million gallons of water per year compared with thermoelectric generation and displacing ~24,000 tons of coal annually on an energy-equivalent basis; vegetation management with native/pollinator-friendly species further supports soil health, habitat value, and overall biodiversity.

BOVIET SOLAR

Boviet Solar is a leading solar technology company founded in 2013 in Vietnam, specializing in the manufacturing of high-performance monocrystalline PV cells and premium Gamma Series™ monofacial

and Vega Series™ bifacial PV modules. Our top-performing modules are engineered for a wide range of applications, including residential, commercial, industrial, community, and utility-scale solar projects.

Boviet Solar combines business acumen, financial strength, technological expertise, and manufacturing excellence to deliver reliable, high-efficiency solar solutions to industry clients worldwide. The company is deeply committed to sustainability, supply chain traceability, and compliance with international trade standards, while fostering long-term, trust-based partnerships across the global energy sector. Boviet Solar has earned industry-wide recognition for quality and reliability. The company has maintained a Tier 1 PV Module Manufacturer ranking by Bloomberg New Energy Finance (BNEF) since 2017, has been recognized as one of the Top 10 Most Bankable Global PV Module Manufacturers by Wood Mackenzie, and is ranked among the Top 10 Most Financially Reliable PV Module Manufacturers by Sinovoltaics. Boviet Solar's modules have also been consistently rated as Top Performers in Kiwa PVEL's PV Module Reliability Scorecard since 2019.

Headquartered in Vietnam, Boviet Solar operates manufacturing facilities in both Vietnam and the United States. The company also maintains regional operations in the United States, Germany, and other key international markets. To learn more, visit www.bovietsolar.com.