Case study

Improving PPA Competitiveness by 4.55% With Changing ITC and Module Tariff

terrasmart™

The Challenge

The construction date for a project in New Hampshire was flexible, but the priority was for it to be optimized for the lowest PPA. Two product combinations were evaluated, and the impact of decreasing ITC and PV Tariffs were explored.

The site has no nameplate capacity or interconnection limit. A common rule of thumb is to set DC:AC where inverter clipping is 1.0-1.5%.

The Solution

The client used SIFT (Solar Instant Feasibility Tool) to leverage data against assumptions to find the optimal cost and benefit of each variable. In a traditional site feasibility study, the impact of decreasing ITC and PV Tariffs are hard to gauge due to the complexity of variables that needed to be considered—land constraints, topography, mechanical limits, electrical layouts, time of use, and more.

The Result

The client was able to identify the optimal designs that can help deliver maximum value to project pipelines.

ID	Products	MWac	MWp	DC:AC	GCR	Yield	PPA ($/kWh)
C1	**Combo 1: SAT 2019**	10.50	13.15	1.252	0.47	1692	.065846
C2	**Combo 2: GFT 2019**	13.50	17.18	1.272	0.53	1488	.072432

By using SIFT to analyze the PPAs against the changing module prices and ITC values over time, the client developed a deeper understanding of the project. Overall, **PPA competitiveness increased by 4.55% and NPV increased by $250k.**

Year (COD)	Module $/W	Tariff	Module $/W	ITC	C1 GFT, PPA	C2 SAT, PPA
2019	.31	25%	.3875	30%	.065846	.072432
2020	.31	20%	.372	26%	.067524	.074298
2021	.31	15%	.3565	21%	.069714	.076737
2022	.31	0%	.31	10%	.073642	.081102