

Optimizing Federal Policies to Find New Clean Energy Project Opportunities



What's in the IRA?



- *Solar and Storage Tax Credits**
- Standalone storage added to ITC
 - ITC extended through 2032+
 - ITC rate ranges from 6% - 70% depending on project timing, size, and eligible adders
 - Solar can take PTC in lieu of ITC
 - Tax-exempt entities are eligible for Direct Pay

*Non-residential, Or Commercial+Industrial, Utility Scale, Non-Profit, Municipal



- EV Charging**
- Tax credits through 2032 for commercial EV procurement and charging infrastructure
 - Billions in financing and grants for commercial / heavy duty EV procurement and charging infrastructure



- Other Clean Energy Provisions**
- Over \$300B allocated to DOE, EPA, and USDA for clean energy financing programs
 - Up to 30% tax credit for investments in domestic manufacturing or recycling of advanced energy equipment

Prevailing Wage & Apprenticeship Standard (Labor Multiplier)

Eligible projects receive a 5x multiplier on the ITC rate by meeting the Prevailing Wage & Apprenticeship Standard

- Prevailing wage rates must be paid during project construction and for
- 5 years post construction if taking ITC
 - 10 years post construction if taking PTC

and

- Registered apprentices must be used during project construction
- Contractors / subcontractors with 4 or more employees must employ at least 1 apprentice
 - Comply with apprentice-to-journey-worker ratio requirements from Dept of Labor or state apprenticeship agency
 - Meet required apprentice hours as a percentage of total construction labor hours

Construction Start Date	Before 2023	2023	2024+
Apprentice hours as a percentage of total construction labor hours	10%	12.5%	15%

Low Income Adder

Eligibility and Categories

- 10-20% ITC adders will be allocated to 1.8 GW of renewable projects per year
- Projects must be less than 5 MWac
- Projects must apply for the allocation; adder is not automatically granted
- Storage must be paired with new solar or wind. Standalone or retrofit storage projects are not eligible

Category	Allocated Capacity	ITC Adder
Low Income Communities	700 MW	10%
Indian Lands	200 MW	10%
Low-Income Residential Buildings	200 MW	20%
Low-Income Benefit Projects	700 MW	10%

Definitions

Low Income Community includes projects installed in a census tract with a poverty rate of at least 20 percent; or any census tract with a median family income that is 80 percent or less than the statewide median family income.

Indian Land means any project located within the boundaries of an Indian reservation; lands held by a tribe; or land in a census tract in which a majority of residents are Alaskan Natives or enrolled members of a federally recognized tribe or village

Low-Income Residential Buildings includes projects that are installed on residential buildings which participate in affordable housing programs listed in the IRA

Low-Income Benefit Projects includes projects that distribute at least 50% of the financial benefits from electricity production to households with income of less than 200% of the poverty line or less than 80% of area median gross income

Energy Communities

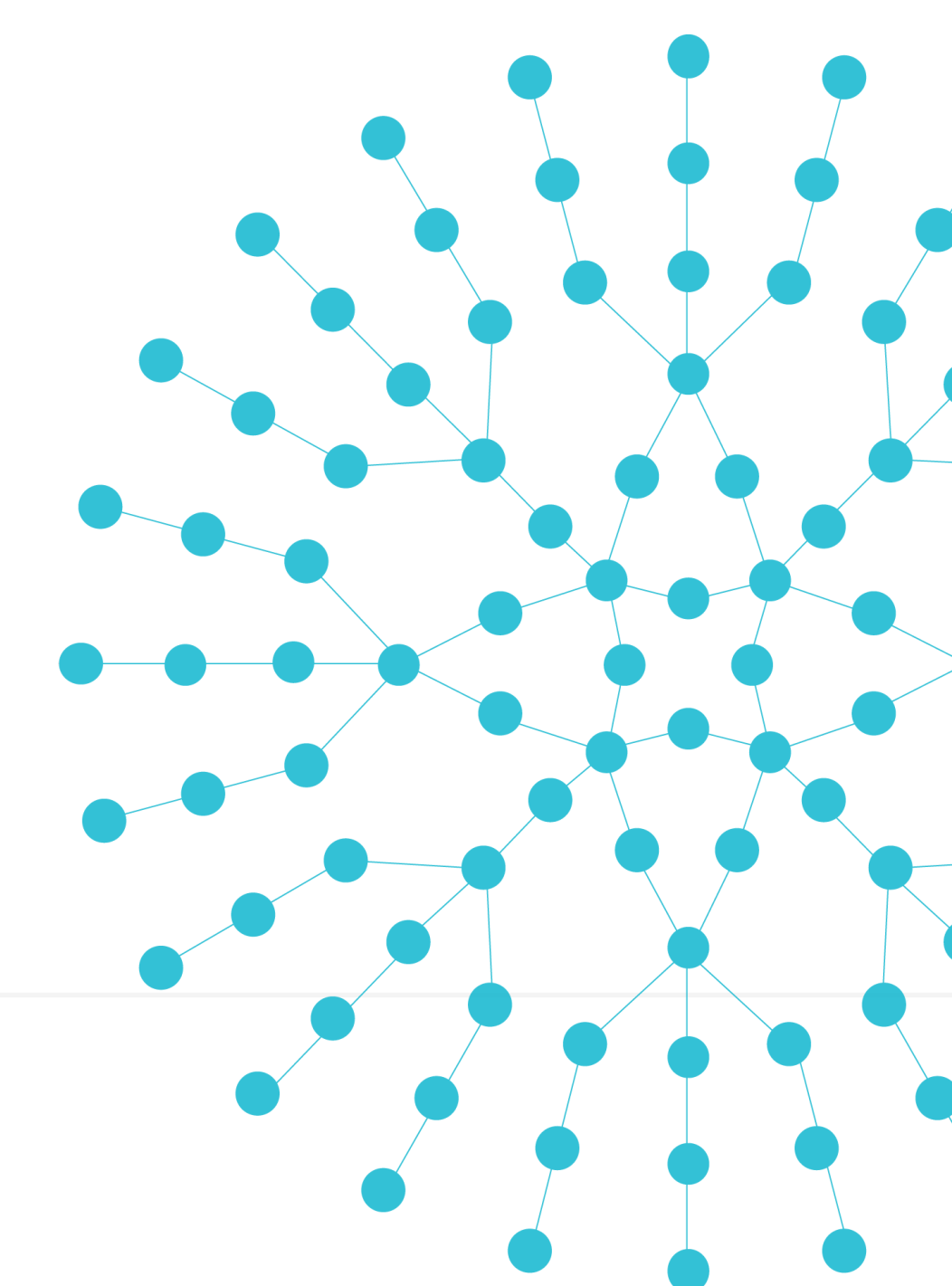
Energy Communities

- A 10% adder is available for projects under 1MW or that satisfy the labor requirements. Otherwise the adder 2%.
- There is no size limit or capacity allotment for the Energy Communities Adder
- Storage in ECs does not need to be coupled with solar to receive the adder.

Energy Communities are defined as:

- Brownfield sites (polluted or contaminated sites)
- Census tracts adjacent to a coal mine that closed after 1999 or a coal-fired power plant that retired after 2009
- Statistical areas with 1) unemployment rates at or above the national average and 2) at least 0.17% of employment or 25% of local tax revenues related to fossil fuels

All Standalone, retrofit, and S+S projects are eligible for Energy Community bonuses



Investment Tax Credit (ITC) and Production Tax Credit (PTC)

Solar and storage projects are eligible for the 30% Investment Tax Credit (ITC) included in the Inflation Reduction Act. Solar projects can elect to take advantage of the Production Tax Credit (PTC) in lieu of the ITC. A breakdown of those differences and incentives below:

Project In-Service Year	ITC Rate		Eligible Technologies
	For Projects <1 MWac	For Projects >1 MWac	
2023 - 2032+	30% Base 10% Domestic Content 10% Energy Community 10-20% Low Income	6% Base 2% Domestic Content 2% Energy Community 5x Labor Multiplier 10-20% Low Income (<5MW)	Solar Solar+Storage Standalone Storage

Project In-Service Year	PTC Rate	
	For Projects <1 MWac	For Projects >1 MWac
2022*	100% Base (\$26/MWh in 2022)	100% Base (\$26/MWh in 2022)
2023 - 2032+	100% Base 10% Domestic Content 10% Energy Community	20% Base 2% Domestic Content 2% Energy Community 5x Labor Multiplier

Example Calculation (Applies to projects over 1MWac):

Example	Base Credit 6%	Domestic Content 2%	Energy Community 2%	Labor Multiplier X 5	Total ITC
Example 1	✓	✗	✗	✓	6% x 5 = 30%
Example 2	✓	✓	✓	✓	6% + 2% + 2% = 10%
Example 3	✓	✓	✓	✗	(6% + 2% + 2%) x 5 = 50%

Example Calculations: Solar Production Tax Credit + Storage ITC

Example	Base Credit 6%	Domestic Content 2%	Energy Community 2%	Solar PTC	
				Labor Multiplier X 5	Total PTC %
Example 1	✓	✗	✗	✓	20% x 5 = 100%
Example 2	✓	✓	✓	✗	20% + 2% + 2% = 24%
Example 3	✓	✓	✓	✓	(20% + 2% + 2%) x 5 = 120%

*Based on PTC value of \$26/MWh in 2022. Inflation adjustment will increase value of PTC for projects placed in service in 2023 or later.

Example	Base Credit 6%	Domestic Content 2%	Energy Community 2%	Solar ITC		Total ITC
				Labor Multiplier X 5	Low Income Community (>5 MW) 10%	
Example 1	✓	✗	✗	✓	✗	6% x 5 = 30%
Example 2	✓	✓	✓	✗	✗	6% + 2% + 2% = 10%
Example 3	✓	✓	✓	✓	✓	(6% + 2% + 2%) x 5 + 10 = 60%

Additional Tax Credit Provisions

- Interconnection costs eligible for ITC**
- Can be claimed under ITC for projects with a net output of < 5 MWac
 - Cost that a developer pays to a utility for interconnection may be applied to the ITC, as long as the cost is paid or incurred by the taxpayer
- Transferability**
- Companies (for example, developers) may choose to transfer the ITC or PTC to another taxpayer
 - Provisions apply and penalties for excessive transfer

EV Charging Provisions

- Commercial EV tax credit of up to \$40,000 through 2032**
- EV Charging Infrastructure tax credit through 2032**
- 30% tax credit capped at \$100,000 for recharging infrastructure
 - 6% tax credit if Prevailing Wage & Apprenticeship requirements not met
- \$3B for USPS vehicles and charging infrastructure**
- \$1B for procuring EVs and charging infrastructure to replace Class 6 and 7 heavy duty vehicles (school buses, garbage trucks, city transit buses, for example)**

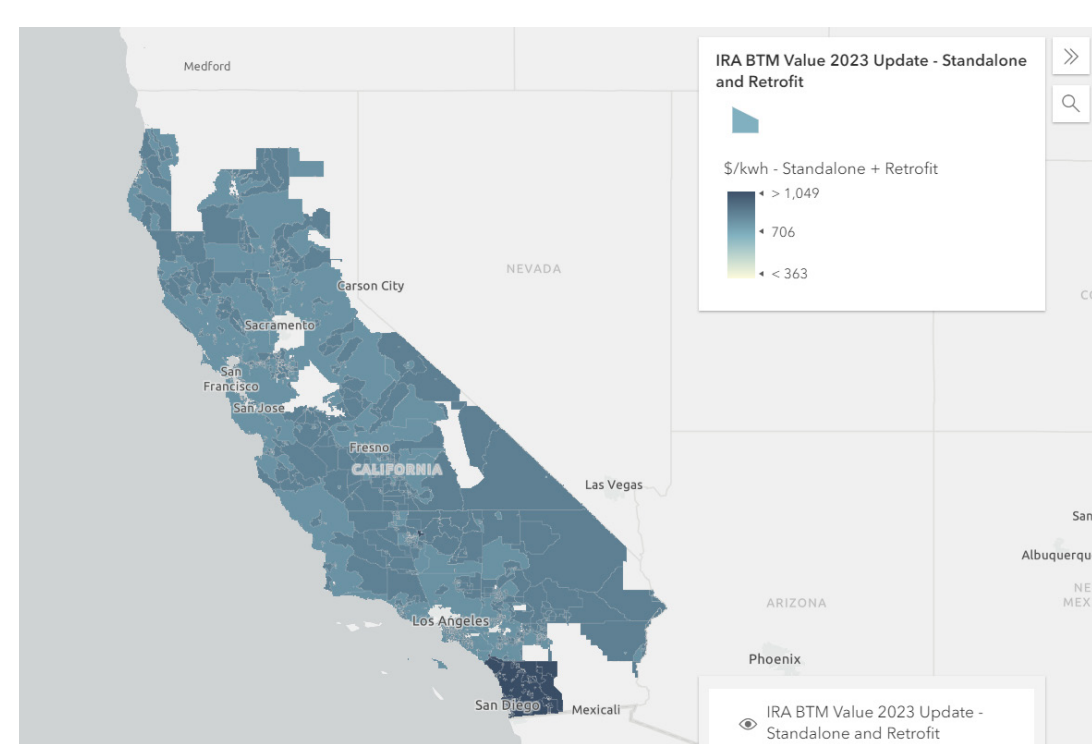
Direct Pay is an Option for Some Entities

- Entities eligible to take Direct Pay for ITC or PTC include:
- Tax-exempt entities, including non-profit cooperative and municipal utilities
 - State governments
 - Indian Tribes and Alaska Native Corporations
 - The Tennessee Valley Authority

For projects >1 MWac that start construction after January 1, 2024, the Direct Pay amount is dependent on domestic content compliance

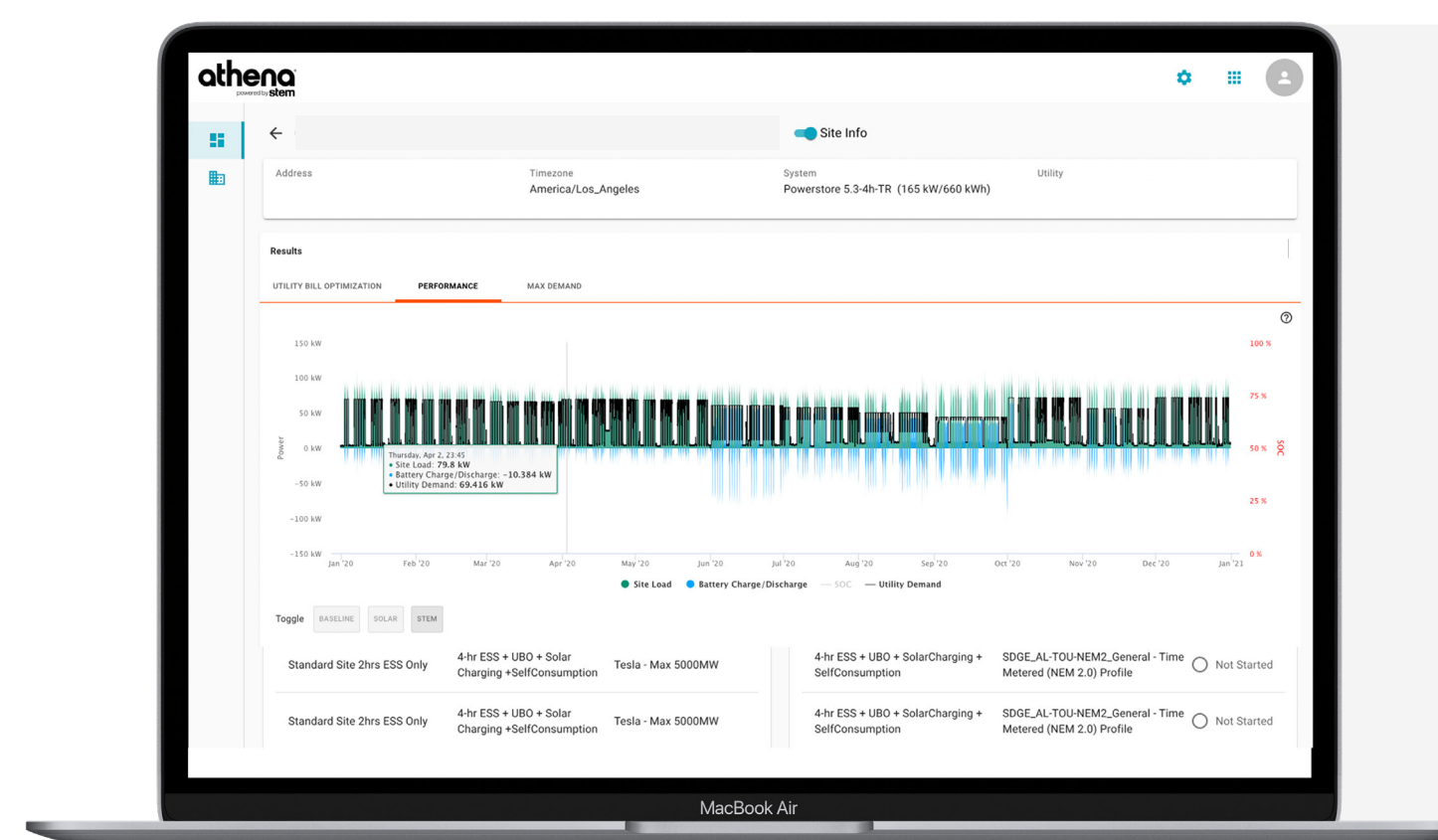
Construction Start Date	2024	2025	2026	2027+
Steel / Iron Domestic Content Requirement		100%		
Manufactured Products Domestic Content Requirement	40%	45%	50%	55%
% of Direct Pay if Domestic Content Not Met	90%	95%	0%	0%

Success Factors for Market Growth



Prioritize Markets That Stack Value

- Certain states and utility areas will have a higher proportion of energy and low income communities that can stack to make a project's ITC value 50%+ in addition to the PTC for projects that include solar
- We've created a tool to help evaluate the entire value stack of storage across the most viable IOUs and ISOs - taking into account incentives, grid services and utility bill optimization across each geography in addition to the PTC and ITC values



Consider all available value streams and incentives to arrive at optimal project configuration

Greater Savings, More Revenue

1. Identify market opportunities and simulate project economics
2. Simulate solar and storage values for a variety of BTM and FTM use cases
3. Leverage Stem's market expertise to identify available use cases and incentives by market

10+ years of development

1B+ runtime hours

FTM + BTM solutions

Why co-deploy Distributed Energy Resources with EV?

Most sites can realize more than one benefit of DERs on the same project



Enable resilience

Continue EV charging during outages, driving resilience into your Electrification strategy.

Charge during outages.



Maximize renewable use in EV charging

Reduce emissions from fleet charging using stored solar energy on-site, or cleaner energy from the grid.

Charge from the sun.



Unlock operational savings

Athena promotes efficient operation and optimizes power from mixed resources to maximize revenues and utility bills savings.

Unlock economic value.



Maximize peak charging power

Use solar + storage to mitigate constrained grid conditions and accelerate charging deployments.

Overcome grid limitations.

Leverage asset monitoring solutions to help maximize PTC revenues

AlsoEnergy delivers a reliable edge-to-cloud platform that makes clean energy more resilient, manageable, and scalable.

Ranked #1

Guidehouse Insights 3Q 2022 Leaderboard: Solar and Storage Monitoring and Control Vendors

25+GW

Solar assets under management

50+

Countries with assets under management

200,000+

Solar sites worldwide

