Solar Power Today

Costs, Paybacks, Incentives

& Batteries

Scan to view our website

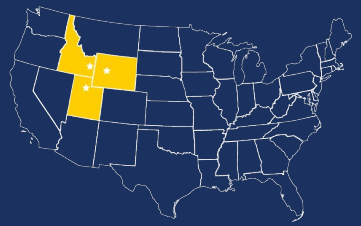
CEsolar.com
info@cesolar.com
801.487.6489

Taylorsville State Office Building Solar Parking Canopies

Scott Jones, MBA, NABCEP

Commercial Solar PV + Battery Project Development

- Commissioned 1,000+ residential & commercial solar projects (since 2013)
- Master of Business Administration Degree
- Board of Directors for Utah Solar Energy Association (USEA)
- Credentialed by the North American Board of Certified Energy Practitioners (NABCEP)
- Frequent Speaker for Renewable Energy Advocacy and Education
- Solar on my own home and office building

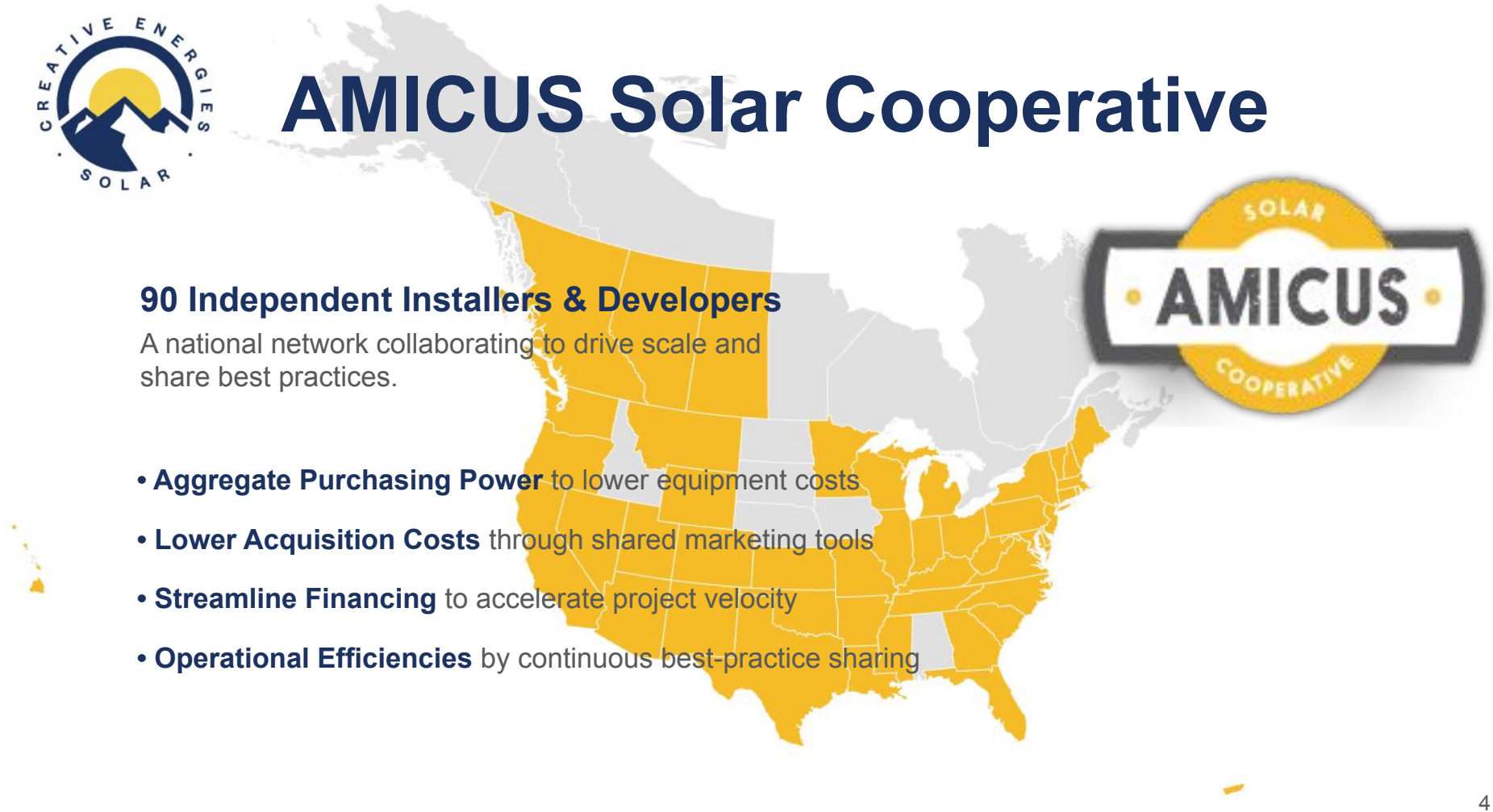


Who We Are

Since 2001, Creative Energies has provided customized residential, commercial, and off-grid solar solutions across Utah, Wyoming, Idaho, and beyond.

As a Certified B Corp and Amicus Solar Cooperative member, we are a collective of solar craftspeople committed to a clean energy future. Operating from net-zero offices, we advocate for renewable energy policy and support global solar access through the Honnold Foundation. With over 25 years of experience, we collaborate with customers to exceed their energy goals while modeling values-driven business. Join us in the movement for solar for good.

AMICUS Solar Cooperative



90 Independent Installers & Developers

A national network collaborating to drive scale and share best practices.

- **Aggregate Purchasing Power** to lower equipment costs
- **Lower Acquisition Costs** through shared marketing tools
- **Streamline Financing** to accelerate project velocity
- **Operational Efficiencies** by continuous best-practice sharing

Topics Covered Today

01 Solar Cost Trends

02 ITC Guidelines & Available Incentives

03 Commercial Installation Considerations

04 Carports & Cost Impacts

05 Commercial Utility Bill Rates

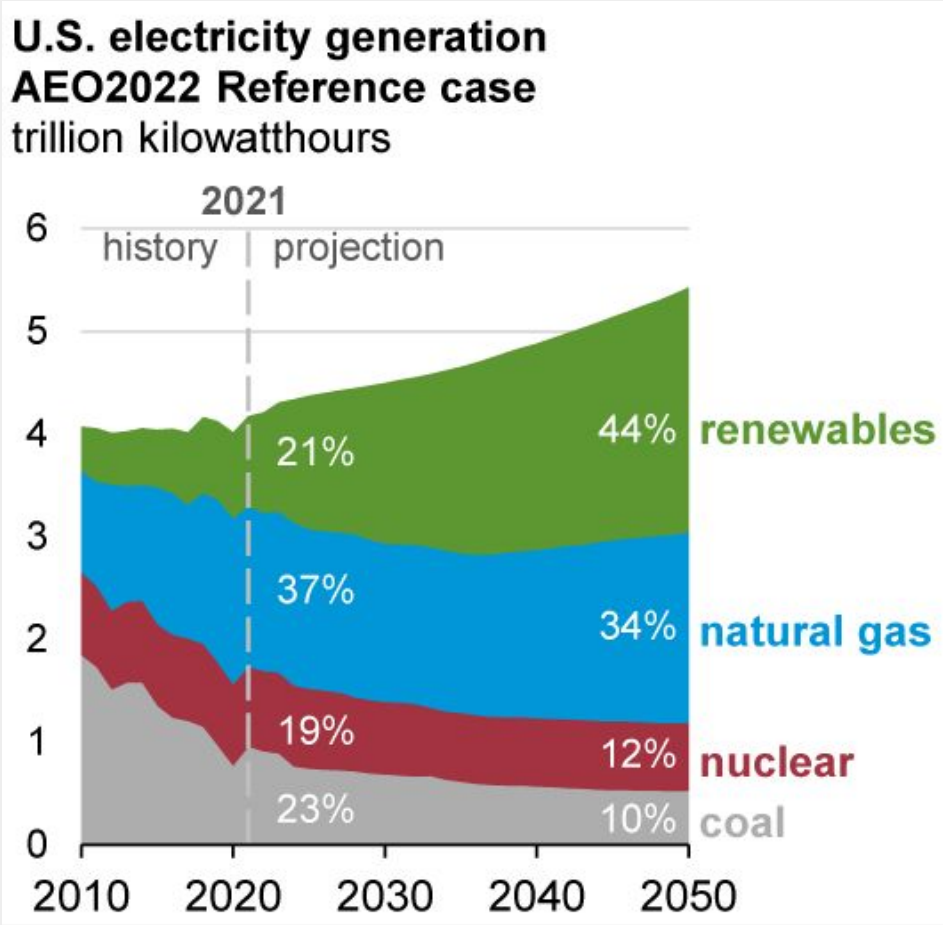
06 Expected Paybacks for Solar Only

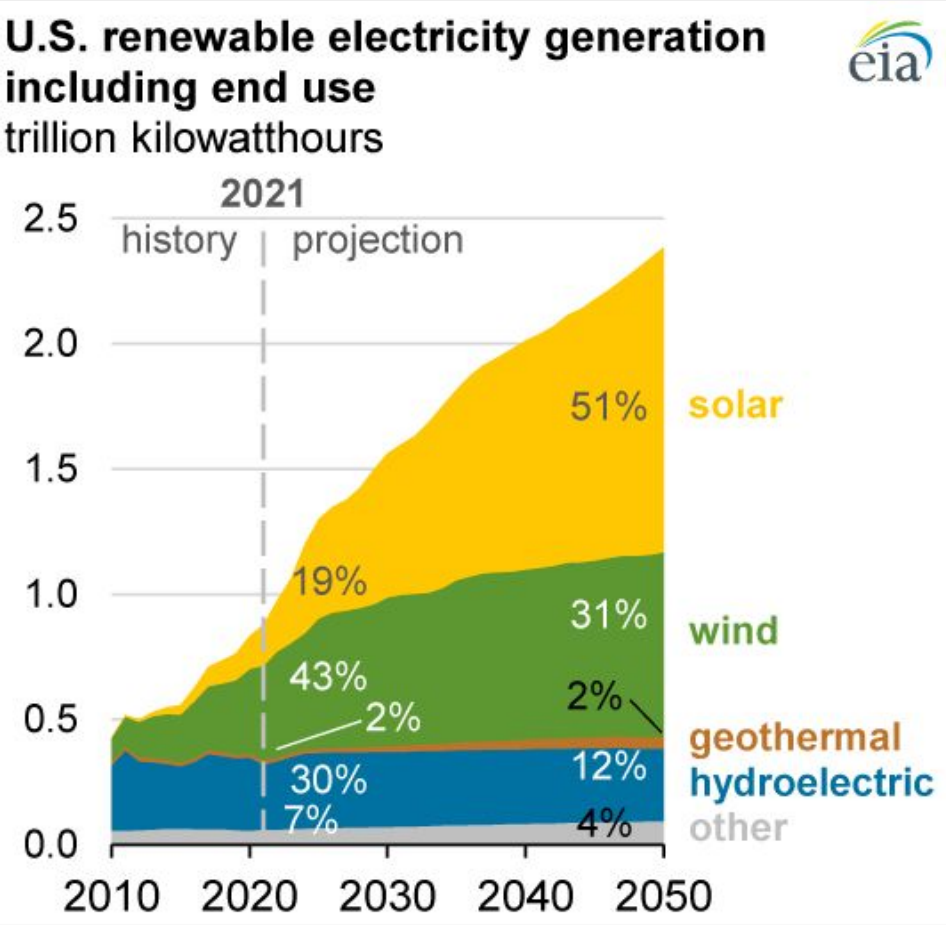
07 IECC 2024

08 Solar + Battery Trends

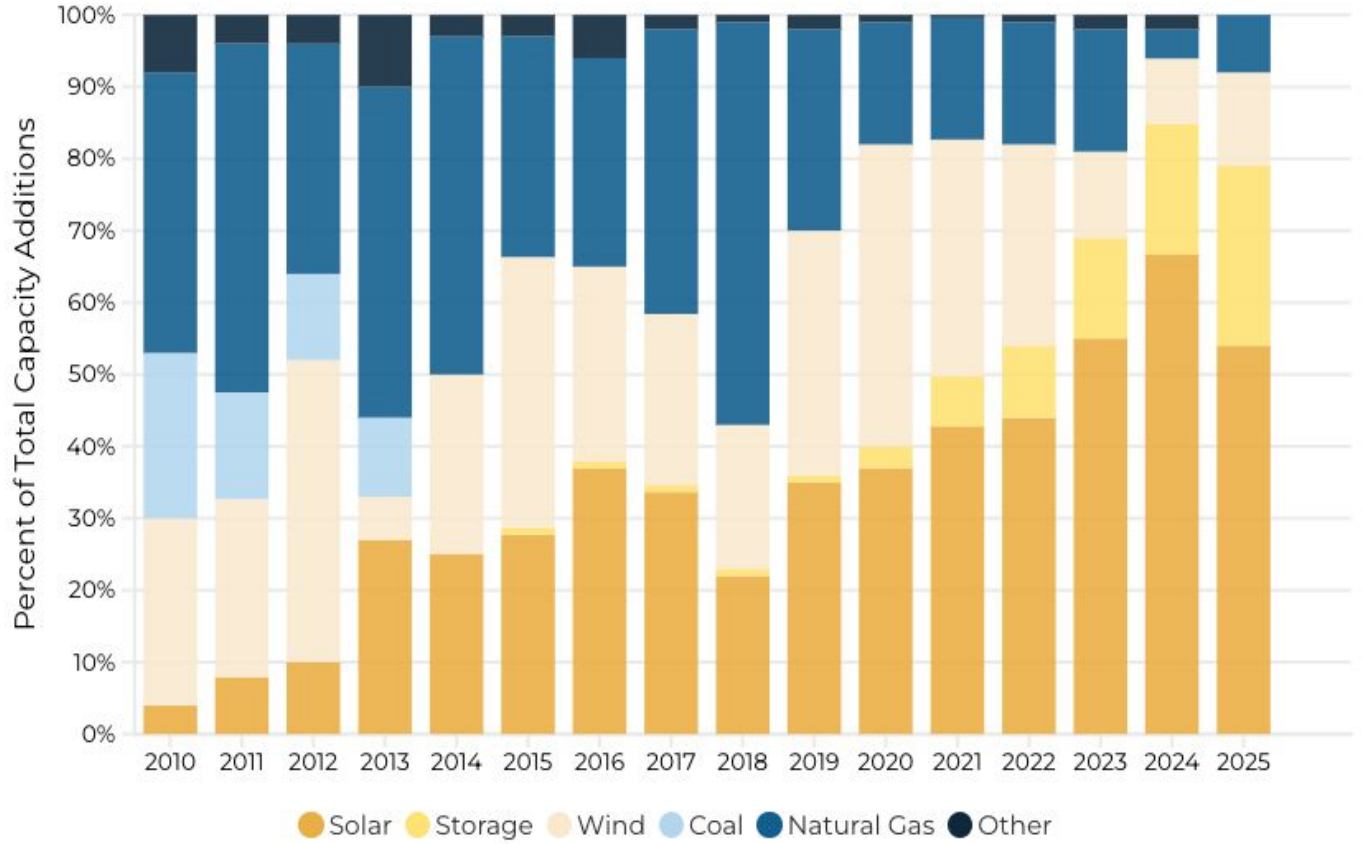
Please Ask Questions!

Feel free to ask questions throughout the presentation. There will be opportunities to discuss between each topic.

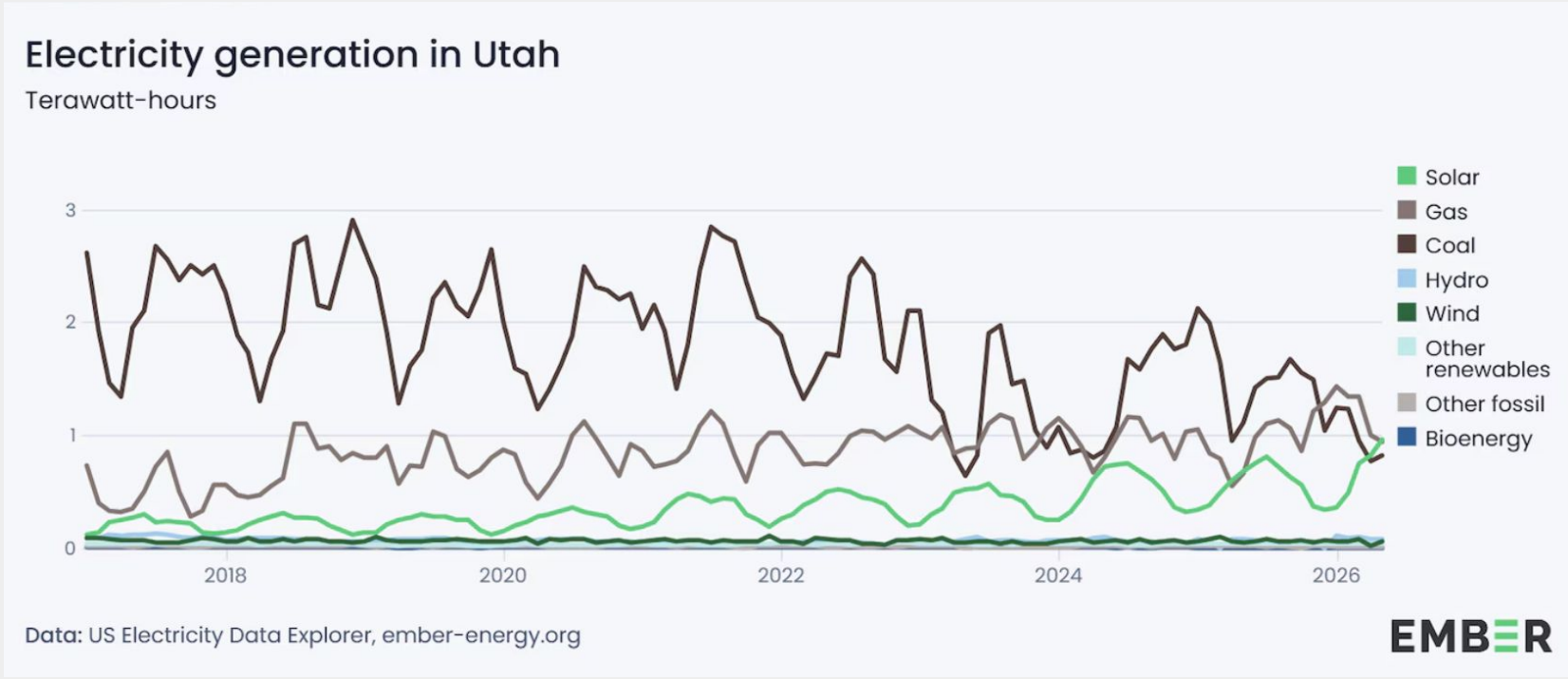

U.S. electricity generation
AEO2022 Reference case
trillion kilowatthours
2021
history
projection
6
5
4
3
2
1
0
2010
2020
2030
2040
2050
21%
37%
19%
23%
44%
34%
12%
10%
renewables
natural gas
nuclear
coal

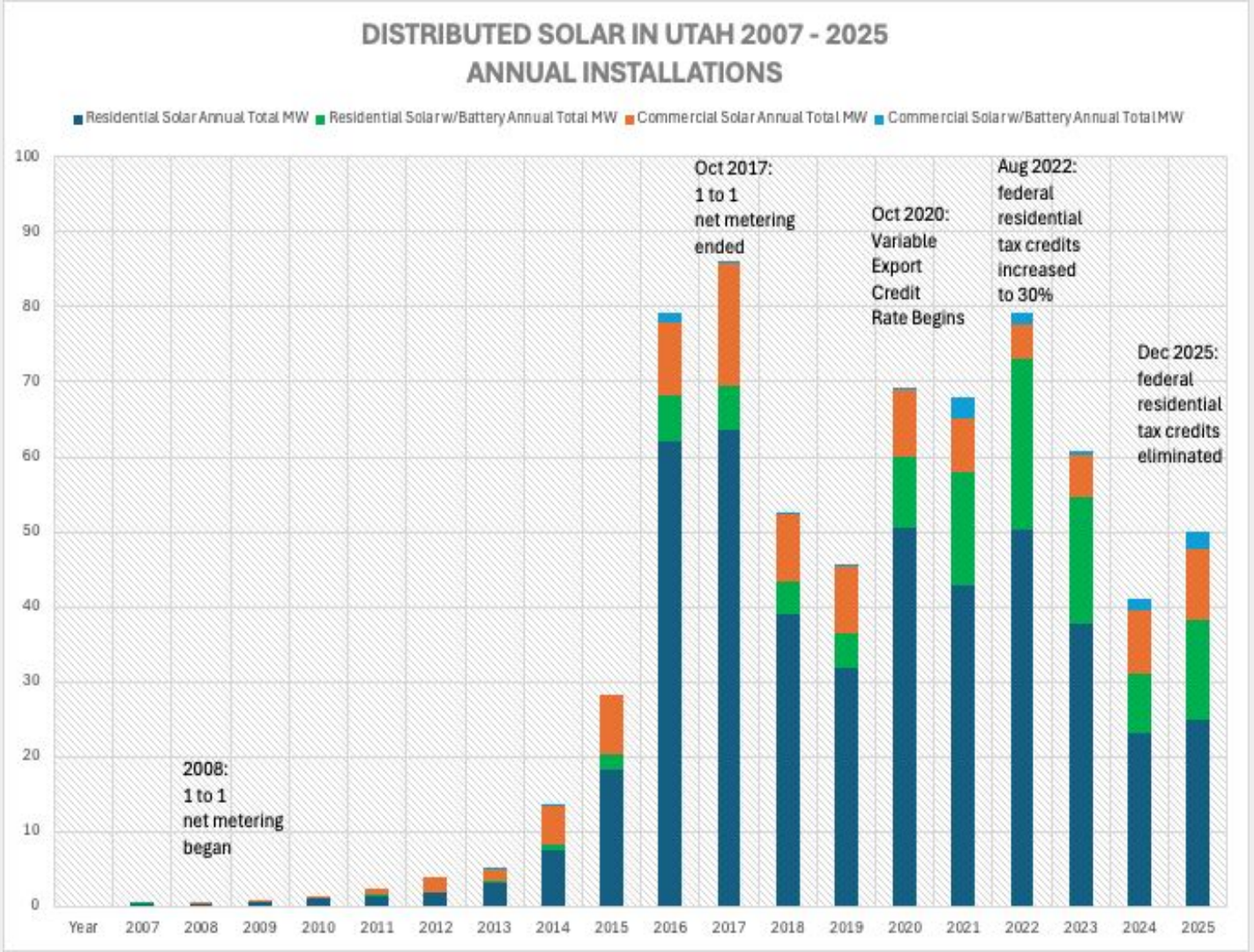

U.S. renewable electricity generation
including end use
trillion kilowatthours
eia
2021
history
projection
2.5
2.0
1.5
1.0
0.5
0.0
2010
2020
2030
2040
2050
19%
43%
2%
30%
7%
51%
31%
2%
12%
4%
solar
wind
geothermal
hydroelectric
other

U.S. Annual Additions of New Electric Generating Capacity



Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2025 Year in Review; EIA


Electricity generation in Utah
Terawatt-hours
3
2
1
0
2018
2020
2022
2024
2026
Solar
Gas
Coal
Hydro
Wind
Other renewables
Other fossil
Bioenergy
Data: US Electricity Data Explorer, ember-energy.org
EMBER


DISTRIBUTED SOLAR IN UTAH 2007 - 2025
ANNUAL INSTALLATIONS
Residential Solar Annual Total MW
Residential Solar w/Battery Annual Total MW
Commercial Solar Annual Total MW
Commercial Solar w/Battery Annual Total MW
2008: 1 to 1 net metering began
Oct 2017: 1 to 1 net metering ended
Oct 2020: Variable Export Credit Rate Begins
Aug 2022: federal residential tax credits increased to 30%
Dec 2025: federal residential tax credits eliminated
Year
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024
2025

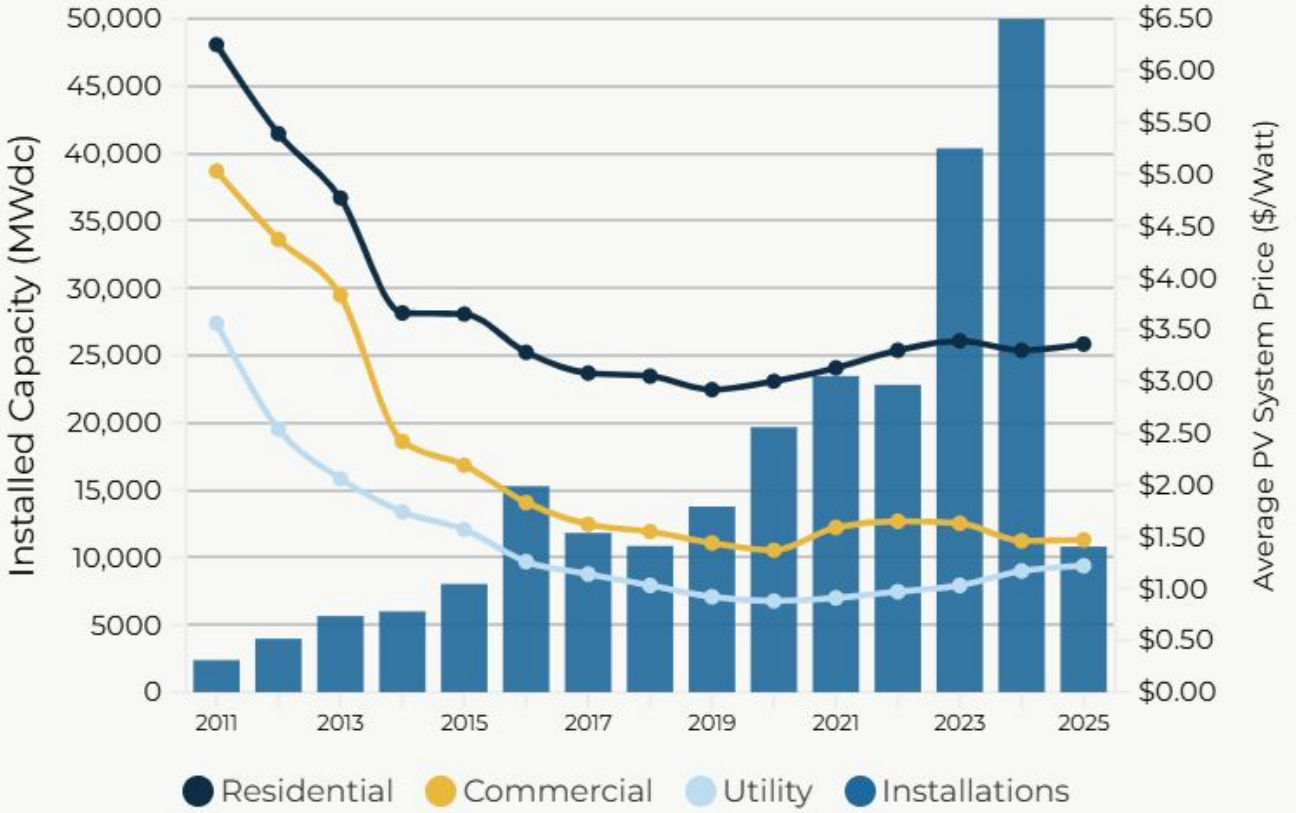
American Campus Communities
University of Utah
312kW Ballasted Rooftop PV
Completed Summer 2026

photo credit The Salt Lake Tribune

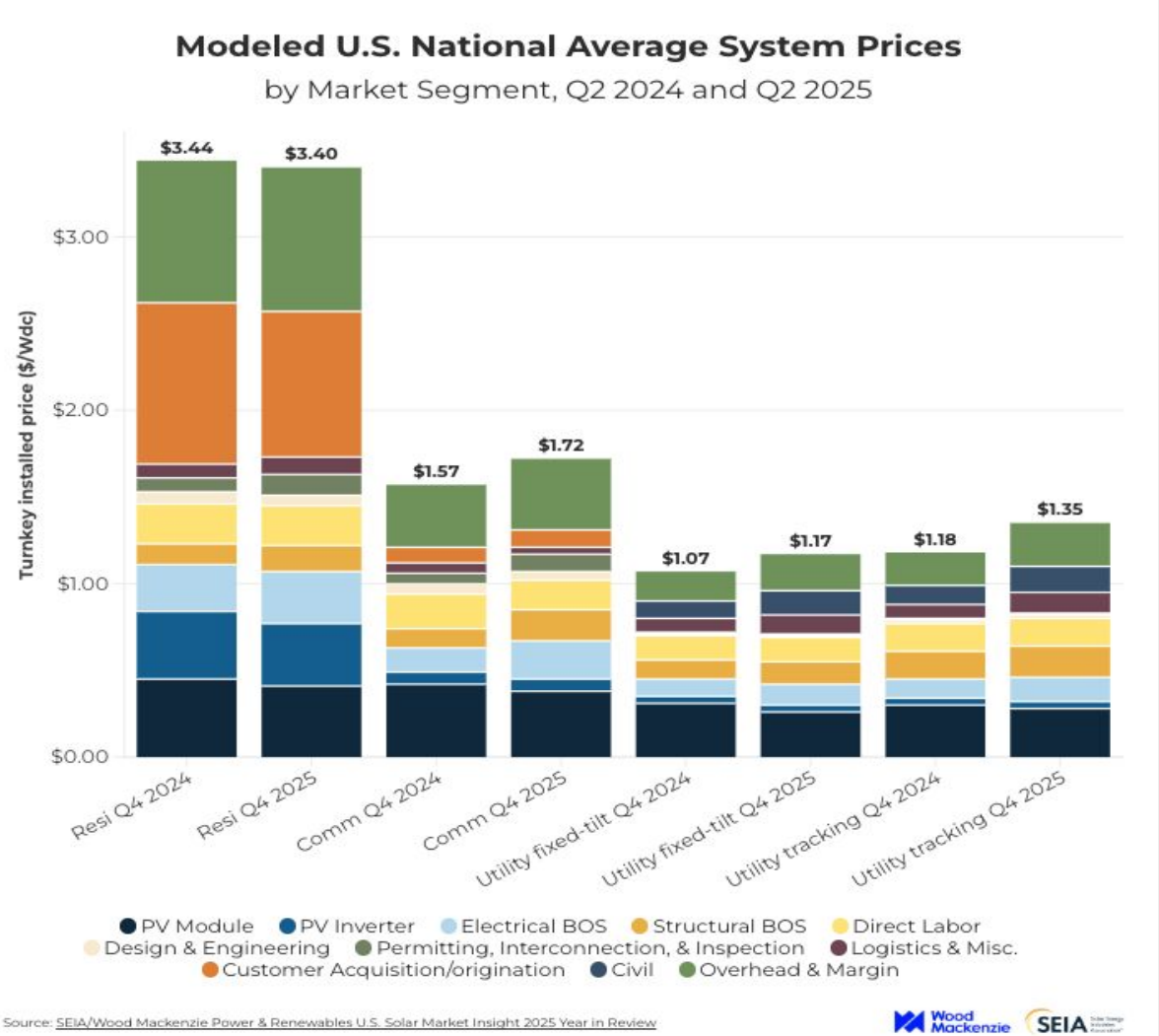
New West High School Campus 1.56MW Ballasted Rooftop PV Coming 2029

photo credit VCBO Architects

U.S. Solar PV Pricing Trends & Deployment Growth



Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2025 Q2


Modeled U.S. National Average System Prices
by Market Segment, Q2 2024 and Q2 2025
Turnkey installed price ($/Wdc)
$0.00
$1.00
$2.00
$3.00
$3.44
$3.40
$1.57
$1.72
$1.07
$1.17
$1.18
$1.35
Resi Q4 2024
Resi Q4 2025
Comm Q4 2024
Comm Q4 2025
Utility fixed-tilt Q4 2024
Utility fixed-tilt Q4 2025
Utility tracking Q4 2024
Utility tracking Q4 2025
PV Module
PV Inverter
Electrical BOS
Structural BOS
Direct Labor
Design & Engineering
Permitting, Interconnection, & Inspection
Logistics & Misc.
Customer Acquisition/origination
Civil
Overhead & Margin
Source: SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight 2025 Year in Review
Wood Mackenzie
SEIA

Available Incentives for Commercial Solar Projects

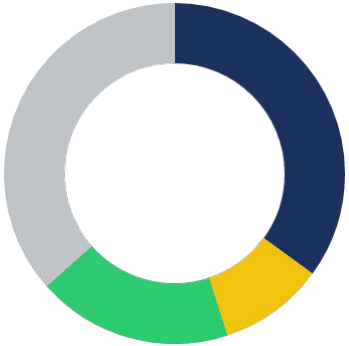
Federal Investment Tax Credit (ITC) • 30% to 40%
Credit depending on domestic content, active until EOY 2027.

Utah State Tax Credit • Additional 10%
Maximizing commercial returns, expires EOY 2027.

Accelerated Depreciation (MACRS) • Up to 18.5%
Net value recovery through 100% bonus depreciation rules. Can take 100% in Year 1 or through Year 5.

Residential Note:
Expired. No active equivalent federal/state incentives available for residential.

Estimated Solar Cost Breakdown



Federal ITC (Avg. 35%): **Ranges 30-40%**
Utah Tax Credit: **10.0%**
MACRS Depreciation: **18.5%**
Net Out-of-Pocket Cost: 36.5%

Major Changes to Commercial Solar Tax Incentives!

Following the federal budget reconciliation legislation (*H.R. 1 / One Big Beautiful Bill Act* “OBBB”) and subsequent Treasury/IRS guidance, federal solar tax incentives underwent substantial changes.

- **Accelerated Expiration Timelines (Section 48E) with stricter compliance rules**
- **Foreign Entity of Concern (FEOC) Restrictions**
- **Direct Pay (Elective Pay) Retained for Non-Profits and Municipalities**
- **Labor & Depreciation Rules**
- **New Section 232 Tariffs just announced**

Accelerated Expiration Timelines (Section 48E)

The previously established long-term phase-out schedule was replaced with shorter, hard deadlines:

- **The 2027 In-Service Deadline:** Commercial systems installed and placed in service by **December 31, 2027**, can qualify for the standard 30% Investment Tax Credit (ITC).
- **The "Beginning of Construction" Extension:** Projects that formally began construction by **July 4, 2026** (via physical work tests or the 5% safe harbor expenditure rules) locked in eligibility and have a 4-year window (until **December 31, 2030**) to be placed in service. This ship has sailed.

Foreign Entity of Concern (FEOC) Restrictions

To qualify for Section 48E credits, projects must adhere to strict component-sourcing limits from prohibited foreign entities (FEOCs):

- **Content Thresholds:** For projects beginning construction, at least **40% of the total value of manufactured products** must come from non-FEOC compliant sources. This requirement increases by 5% each year up to 60%.
- **Certification Safe Harbors:** Taxpayers must obtain formal supplier certifications verifying that components (panels, inverters, racking) meet non-FEOC compliance standards to qualify

Direct Pay / Elective Pay Retained at 30%

Non-taxable entities—such as local governments, school districts, tribal nations, and 501(c)(3) non-profits—retain access to the **Direct Pay option** (Section 6417):

- Non-profits receive a cash refund directly from the IRS equivalent to the 30% credit value rather than a tax offset.
- Entities claiming Direct Pay must pre-file for an IRS registration number during the tax year the system is placed in service.

10% Domestic Content Bonus Credit (Adder)

Provides an additional 10 percentage point tax credit on top of the base investment tax credit (ITC)—potentially taking a commercial solar project's ITC from 30% to 40%.

Must satisfy two strict requirements:

1. **100% Domestic Steel and Iron Requirement:**
    - All structural steel and iron components (such as racking, mounts, and structural support frames) must be 100% mined, produced, or manufactured in the United States.
    - Non-structural equipment or minor components (like nuts and bolts) are generally exempt.
2. **Manufactured Products Adjusted Percentage Rule:**
    - Manufactured items (such as solar modules, inverters, and battery storage units) must meet a minimum threshold of U.S.-sourced manufacturing costs.
    - The percentage is calculated based on the manufacturer’s direct material and direct labor costs.

Labor Rules

- **Prevailing Wage & Apprenticeship:** Systems under 1 MW AC automatically qualify for the full 30% base rate. Systems 1 MW AC or larger must satisfy prevailing wage and registered apprenticeship rules to receive the 30% rate (otherwise dropping to a 6% base rate).

Impacts of Depreciation & Paybacks

MACRS Depreciation Overview

- **Bonus Depreciation:** 100% available.
- **Cost Basis:** 85% of total project cost.
- **Effective Tax Benefit:** At a 22% tax rate, this yields a benefit of approximately 18.5% of the total project cost.
- **Flexibility:** Tax credits can be carried forward for up to 5 years.

Will review an actual case-study proposal shortly…

New Section 232 Tariffs!

- Direct Tariffs on Polysilicon & Solar Components
- Solar Modules (Panels): $0.38 per watt floor.
- Balance of System (BOS) Equipment Tariffs
  - Steel and aluminum racking, mounts
  - Conduit, wire, transformers, etc
- Shift to Domestic Sourcing
  - Eliminates Cheap Commercial Solar Panels
  - Expect ~20% Cost Increases Q4 2026

In short… We're riding the Solarcoaster!

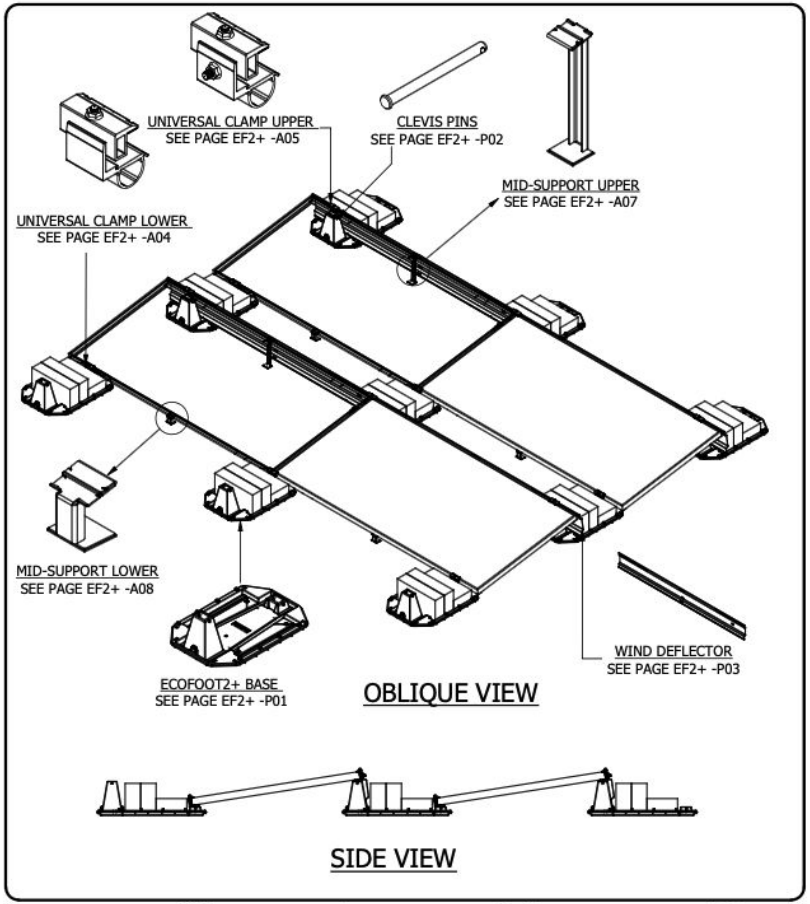
Commercial Installation Considerations

Roof Assessment & Mounting Options

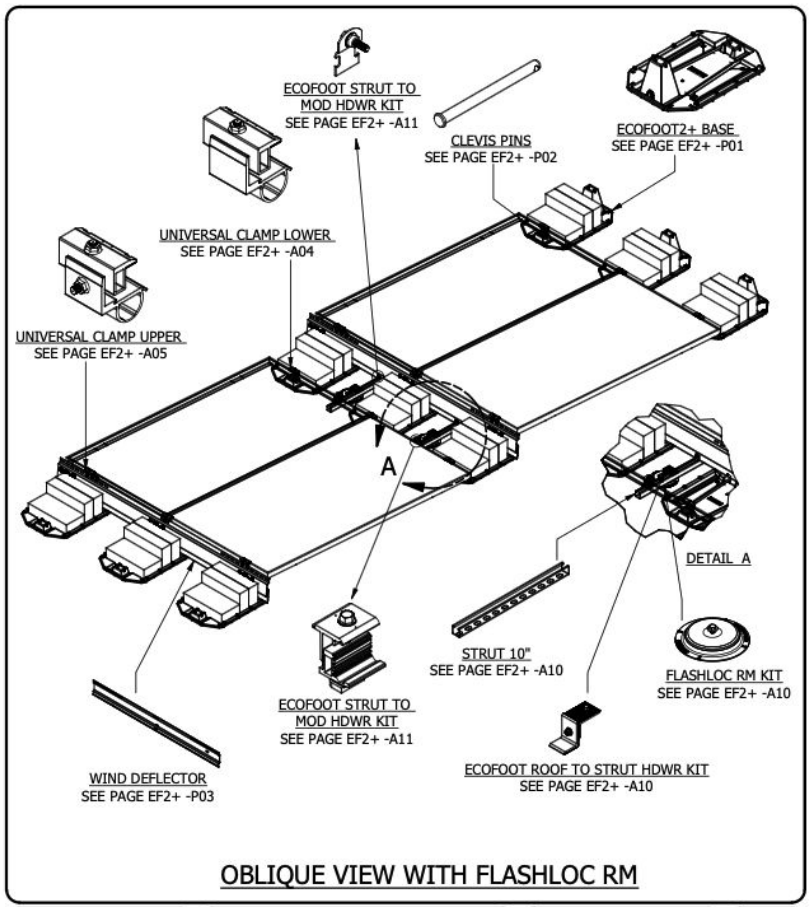
- Roof Conditions: Evaluate age and membrane type (TPO, PVC, EPDM); determine if installation is mechanically attached or ballasted.
- South-Facing Systems:
  - Traditional tilt-leg installations (30-degree optimization).
  - Ballasted Systems 5-10-Degree Tilt Angle
  - Dual-Tilt (East/West) Systems
- Ground Mount Systems
- Carport Solar Parking Canopy Systems

Roof Mounting Options

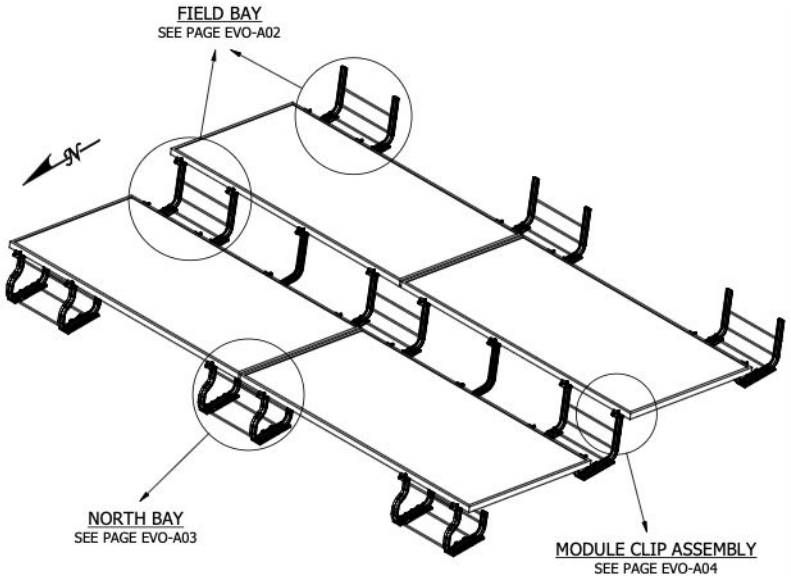
- South-Facing Systems:
  - Traditional tilt-leg installations (30-degree optimization).
  - Ballasted Mounting Includes systems from UniRac, K2, TerraGen, PanelClaw.
  - Inter-row spacing (10"–19"): >14" ideal to prevent shading.
  - High power density, but requires significant ballast (approx. 8 psf) to counter wind uplift.
- Dual-Tilt (East/West) Systems:
  - Broader energy production curve (flatter peak) with lower individual efficiency but higher overall power.
  - Reduces ballast weight, total roof load, and wind uplift concerns.

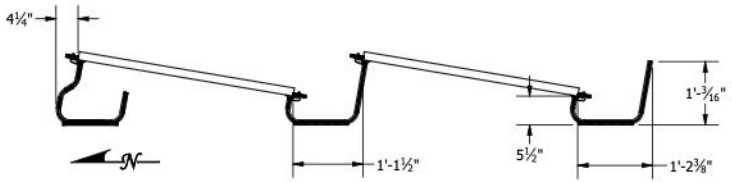


UNIRAC	
1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	
PRODUCT LINE:	ECOFOOT 2+
DRAWING TYPE:	ASSEMBLY & PARTS
DESCRIPTION:	SYSTEM OVERVIEW
REVISION DATE:	10/15/2025
DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	
PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	
EF2+ -A01 SHEET	



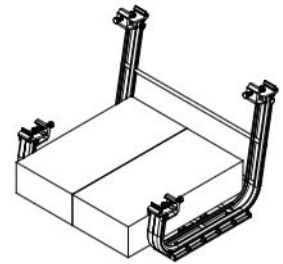
UNIRAC	
1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	
PRODUCT LINE:	ECOFOOT 2+
DRAWING TYPE:	ASSEMBLY & PARTS
DESCRIPTION:	SYSTEM OVERVIEW
REVISION DATE:	10/15/2025
DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	
PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	
EF2+ -A09A SHEET	



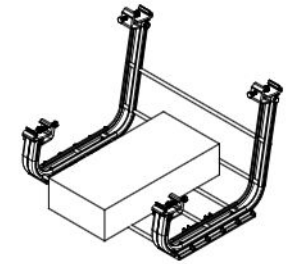


PROFILE VIEW

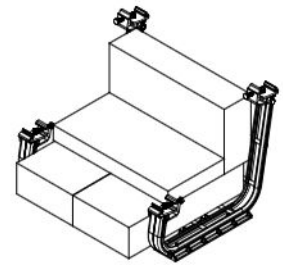
NOTES:
1. ARRAY DIMENSIONS WILL VARY BASED ON MODULE WIDTH, LENGTH AND RETURN FLANGE.



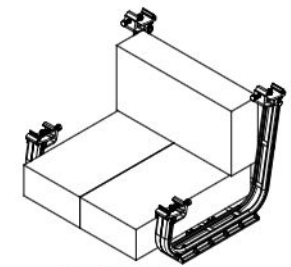
2 BLOCK BAY



1 BLOCK BAY



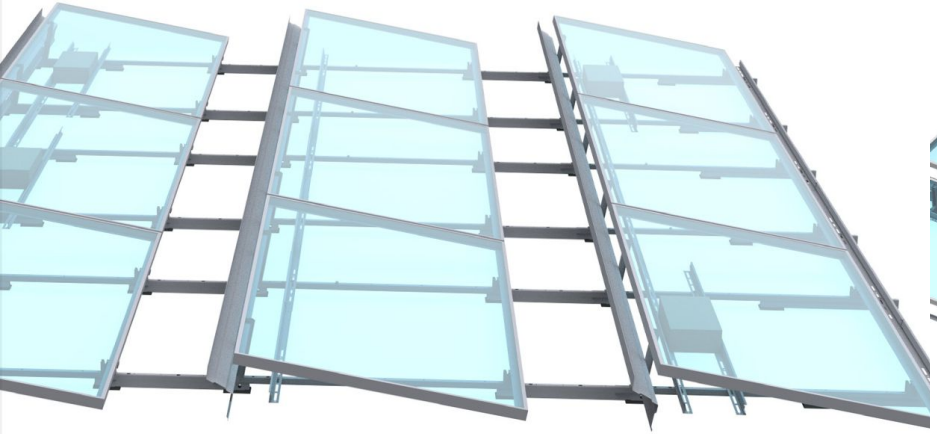
3-1/2 BLOCK BAY

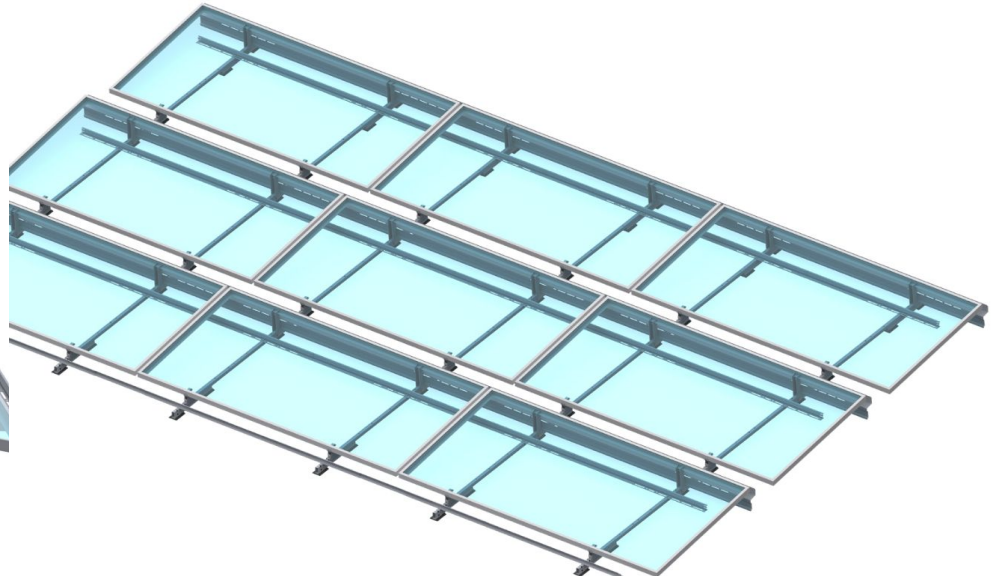


3 BLOCK BAY

UNIRAC	
1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	
PRODUCT LINE:	RM10 EVO
DRAWING TYPE:	SYSTEM ASSEMBLY
DESCRIPTION:	RM10 EVO
REVISION DATE:	10/16/2025
DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	
PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	
EVO-A01 SHEET	

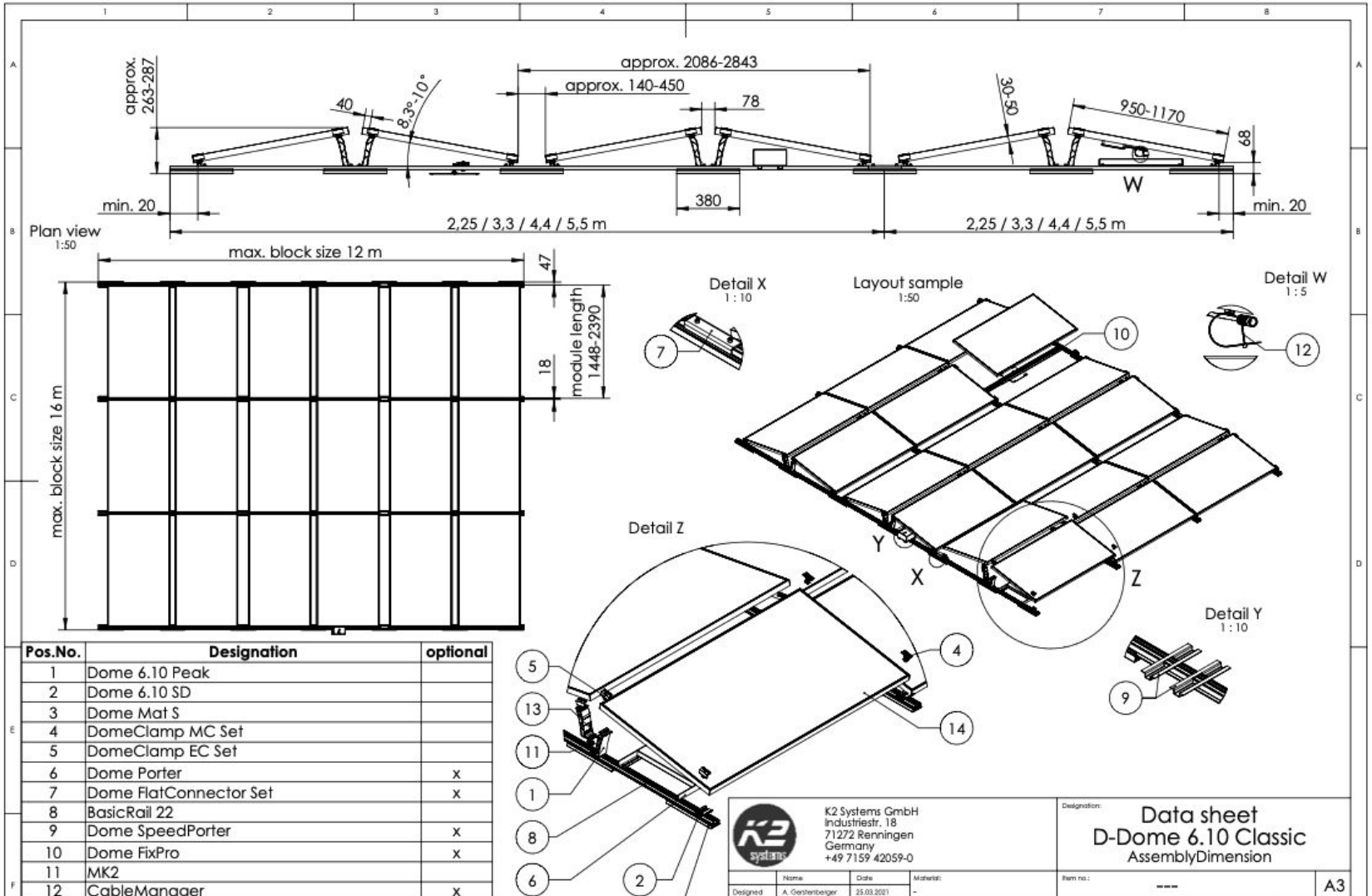
UNIRAC	
1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	
PRODUCT LINE:	RM10 EVO
DRAWING TYPE:	PARTS ASSEMBLY
DESCRIPTION:	FIELD BAY BALLAST LAYOUT
REVISION DATE:	10/16/2025
DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	
PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	
EVO-A07 SHEET	





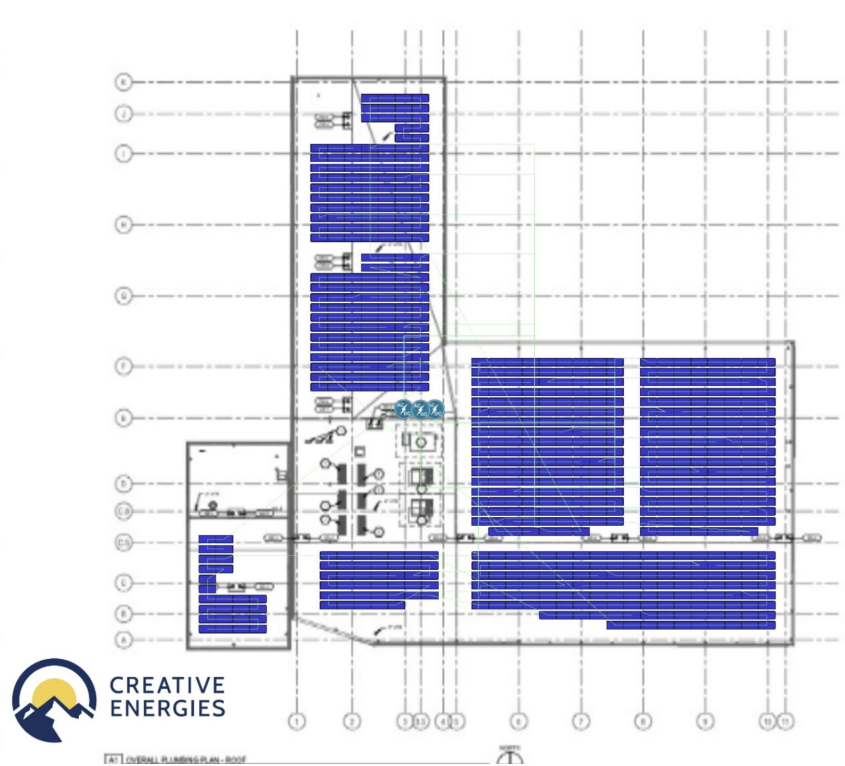
PANELCLAW®

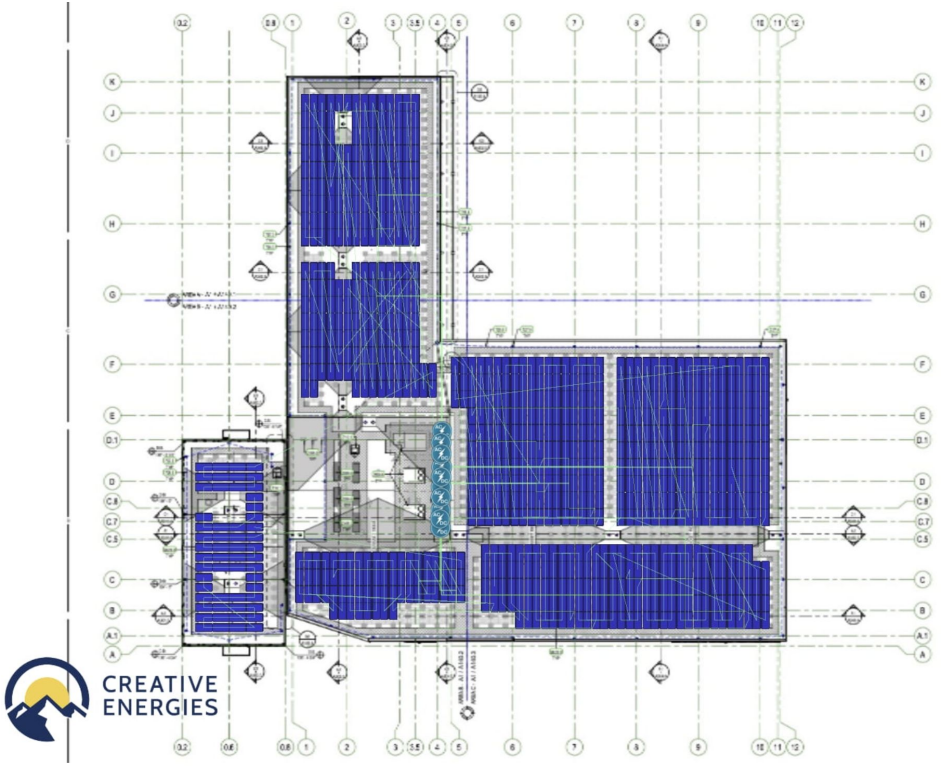
Configuration Name	Row-Row Gap	Example clawFR 10 Degree dimensions based on a module width of 1310 mm [51.57 in]				Example clawFR 10 Degree dimensions based on a module width of 1130 mm [44.49 in]			
		Tilt Angle [degrees]	Roof Coverage Ratio	Shading Ratio [H:V]	N-S Repeat	Tilt Angle [degrees]	Roof Coverage Ratio	Shading Ratio [H:V]	N-S Repeat
clawFR 10Deg-29 cm (11 in)	11.4 in [288 mm]	7.8	83%	1.59	62.2 in [1579 mm]	9.0	80%	1.61	55.2 in [1401 mm]
clawFR 10Deg-35 cm (14 in)	13.9 in [354 mm]	7.8	80%	1.96	64.8 in [1645 mm]	9.0	77%	1.98	57.8 in [1467 mm]
clawFR 10Deg-44 cm (17 in)	17.4 in [443 mm]	7.8	76%	2.46	68.2 in [1733 mm]	9.0	72%	2.48	61.3 in [1556 mm]



Pos.No.	Designation	optional
1	Dome 6.10 Peak	
2	Dome 6.10 SD	
3	Dome Mat S	
4	DomeClamp MC Set	
5	DomeClamp EC Set	
6	Dome Porter	x
7	Dome FlatConnector Set	x
8	BasicRail 22	
9	Dome SpeedPorter	x
10	Dome FixPro	x
11	MK2	
12	CableManager	x

Helioscope South Versus East West





South 10-Degree: 400kW

East/West 10-Degree: 515kW

Inverters & Rapid Shutdown

- String Inverters with APsmart (circuit interrupters) FEOC-Free
  - More prone to energy loss due to: shade, mismatch, etc
  - PVRSS does not optimize yield
  - PVRSS is another failure point that can increase O&M
  - String-level monitoring is less granular
- String Inverters with Optimizers (FEOC-Free)
  - Better Yield - optimized at panel level
  - Panel-level monitoring - easier, faster O&M diagnosis

CREATIVE ENERGIES SOLAR

APsmart

/ STP 33-US-41 / STP 50-US-41 / STP 62-US-41

SMA

Sunny Tripower CORE1-US

33 / 50 / 62

It stands on its own

/ **Complies with IEEE 1547-2018 and UL 1741 SB standards**

UL 3741 LISTED
PV Hazard Control

SMA
Smart Connected

SMA ShadeFix
STRING LEVEL OPTIMIZATION

c UL us

Commercial Power Optimizer

USA Domestic Content Eligible

C651U

Three Phase Inverter with Synergy Technology

USA Domestic Content Eligible

For North America

SE50KUS / SE100KUS / SE110KUS / SE120KUS

INVERTER

12-20
YEAR
WARRANTY

Made in the USA
from imported parts

Ground Mount Example

Hill Air Force Base & Aerospace Museum

Solar Carports & Cost Impacts

Pros and Cons of Solar Carports

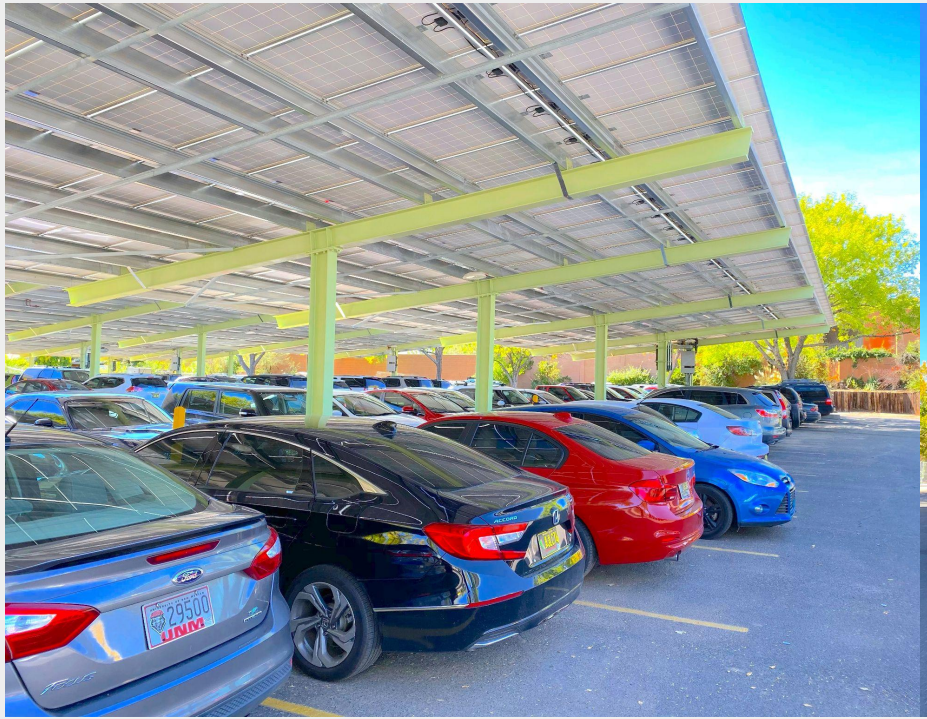
- **Costs:** Higher initial investment (structural steel, trenching, paving, extensive electrical conduit, engineering, and drainage).
- **Benefits:** Avoids rooftop O&M replacement costs, offers shaded parking, maximizes land usage (dual-stall layouts), increases PR visibility, and supports EV charging integration.

Carport Considerations

- 9’ minimum clearance up to 14’
- T-Install (dual bay) is more cost effective
- Cantilvered (single bay) more expensive
- Decked versus undecked
- Water management
- Custom Colors
- EVSE Integration

Carport Examples

T-Shaped, Dual Stall, 9’ Clear Height



Carport Examples

Cantilevered, Single Stall, 9’ Clear Height

Understanding Commercial Utility Bill Rates

Small Commercial Rate 23: Higher cost for the first 1,500 kWh encourages smaller systems that offset only premium-priced energy.

Large Commercial Rate 6: Offers low energy costs but high demand charges that can overshadow savings. Peak reduction without BESS is unreliable; BESS offers potential but requires specific scenarios.

Large Commercial Rate 6A TOU: Higher energy charges with no demand charges.

RMP - NET BILLING SERVICE
Solar Export Credit Rates (ECRs)

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

P.S.C.U. No. 52

First Revision of Sheet No. 137.3
Canceling Original Sheet No. 137.3

Exported Customer-Generated Energy Credit Rates:

Billing Months – June through September inclusive
4.855¢ per kWh for all exported kWh

Billing Months – October through May inclusive
4.033¢ per kWh for all exported kWh

RMP Utility Rates - Residential

Rocky Mountain Power - State of Utah Price Summary - In Effect as of July 1, 2026

Tariff Schedules	Tariff Base Rate	EBA Schedule 94[1]	REC Schedule 98[1]	DSM Schedule 193[1,2]	STEP Schedule 196[1,2]	EVIP Schedule 198[1,2]	Lifeline Program Schedule 91[1]
Schedule 1 - Residential Service							
Customer Charge - Single Phase - Single Family	$12.00 /month						$0.16 /month
Customer Charge - Three Phase - Single Family	$19.50 /month						$0.16 /month
Customer Charge - Single Phase - Multi Family	$7.00 /month						$0.16 /month
Customer Charge - Three Phase - Multi Family	$14.50 /month						$0.16 /month
Energy Charge							
June through September							
1st 400 kWh	9.3199 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
All add'l kWh	12.0130 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
October through May							
1st 400 kWh	8.2477 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
All add'l kWh	10.6309 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
Energy Charge - TIME-OF-USE OPTION							
June through September							
On-Peak kWh	32.0834 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
Off-Peak kWh	7.1296 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
October through May							
On-Peak kWh	28.3924 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
Off-Peak kWh	6.3094 ¢/kWh	7.63%	-0.53%	3.84%	0.00%	0.17%	
On peak: 6:00 p.m. to 10:00 p.m. Monday thru Friday, except holidays. Off peak: All other times.							
Subscriber Solar Energy Charge (Schedule 73)	12.0525 ¢/kWh		-0.53%	3.84%	0.00%	0.17%	

RMP Utility Rates - Small Commercial - Schedule 23

Rocky Mountain Power - State of Utah Price Summary - In Effect as of July 1, 2026

Tariff Schedules	Tariff Base Rate		EBA Schedule 94[1]	REC Schedule 98[1]	DSM Schedule 193[1,2]	STEP Schedule 196[1,2]	EVIP Schedule 198[1,2]	Lifeline Program Schedule 91[1]
Schedule 23 - General Service, Distribution Voltage, Small Customer								
Customer Charge	$10.00	per customer						$0.26 /month
Power Charge								
June through September	$9.19	/kW for all kW over 15 kW	7.93%	-0.51%	3.81%	0.00%	0.16%	
October through May	$8.13	/kW for all kW over 15 kW	7.93%	-0.51%	3.81%	0.00%	0.16%	
Energy Charge								
June through September								
First 1,500 kWh	12.1439	¢/kWh	7.93%	-0.51%	3.81%	0.00%	0.16%	
All additional kWh	6.7749	¢/kWh	7.93%	-0.51%	3.81%	0.00%	0.16%	
October through May								
First 1,500 kWh	10.7468	¢/kWh	7.93%	-0.51%	3.81%	0.00%	0.16%	
All additional kWh	5.9955	¢/kWh	7.93%	-0.51%	3.81%	0.00%	0.16%	
Voltage Discount (≥ 2,300 V)	$0.48	/kW			3.81%	0.00%	0.16%	
Subscriber Solar Energy Charge (Schedule 73)	11.2671	¢/kWh		-0.51%	3.81%	0.00%	0.16%	
Seasonal Service	$120.00	plus monthly Power and Energy Charges						

RMP Utility Rates - Large Commercial - Schedule 6

Rocky Mountain Power - State of Utah Price Summary - In Effect as of July 1, 2026

Tariff Schedules	Tariff Base Rate	EBA Schedule 94[1]	REC Schedule 98[1]	DSM Schedule 193[1,2]	STEP Schedule 196[1,2]	EVIP Schedule 198[1,2]	Lifeline Program Schedule 91[1]
Schedule 6 - General Service, Distribution Voltage							
Customer Charge	$55.00 /month						$5.60 /month
Facilities Charge	$4.14 /kW			3.60%	0.00%	0.15%	
Power Charge							
June through September	$13.77 /kW	9.82%	-0.61%	3.60%	0.00%	0.15%	
October through May	$12.18 /kW	9.82%	-0.61%	3.60%	0.00%	0.15%	
Energy Charge							
June through September							
All kWh	3.9408 ¢/kWh	9.82%	-0.61%	3.60%	0.00%	0.15%	
October through May							
All kWh	3.4873 ¢/kWh	9.82%	-0.61%	3.60%	0.00%	0.15%	
Voltage Discount (≥ 2,300 V)	$0.96 /kW			3.60%	0.00%	0.15%	
Subscriber Solar Energy Charge (Schedule 73)							
(no interval meter)	7.1250 ¢/kWh		-0.61%	3.60%	0.00%	0.15%	
(with interval meter-solar generation)	5.9250 ¢/kWh		-0.61%	3.60%	0.00%	0.15%	
(with interval meter-solar delivery)	Under Schedule 32 /kW			3.60%	0.00%	0.15%	

Schedule 6 - Billing Example

ROCKY MOUNTAIN POWER

*Questions about your bill: Call toll free **1-866-870-3419** RockyMountainPower.net*

BILLING DATE: **Nov 22, 2024** DUE DATE: **Dec 18, 2024** AMOUNT DUE: **$10,771.70**

ITEM 3 - ELECTRIC SERVICE

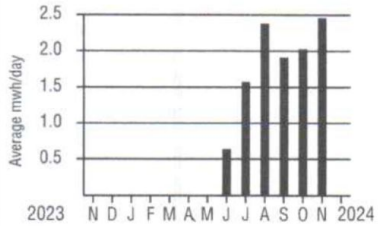
Schedule 6

METER NUMBER	SERVICE PERIOD From	To	ELAPSED DAYS	METER READINGS Previous	Current	METER MULTIPLIER	AMOUNT USED THIS MONTH
	Oct 22, 2024	Nov 21, 2024	30	872	1118	300.0	73,800 kwh
	Oct 22, 2024	Nov 21, 2024	30	500	609	300.0	32,700 kvarh
	Demand	Nov 21, 2024			1.136	300.0	341 kw

Next scheduled read date: 12-24. Date may vary due to scheduling or weather.

NEW CHARGES - 11/24	UNITS	COST PER UNIT	CHARGE
Basic Charge - 3P			53.00
Demand Charge - Winter	341 kw	11.7400000	4,003.34
Facilities Charge	341 kw	3.9900000	1,360.59
Energy Charge - Winter	73,800 kwh	0.0344050	2,539.09
Renewable Energy Adjustment		-0.0020000	-13.08
Energy Balancing Account		0.2637000	1,725.24
Customer Efficiency Services		0.0360000	346.15
Elec Vehicle Infrastructure		0.0027000	25.96
Home Electric Lifeline Program			5.60
Utah Sales Tax Non-residential		0.0660000	662.66
Total New Charges			**10,708.55**

Historical Data - *ITEM 3*



Your Average Daily kwh Usage by Month

PERIOD ENDING	NOV 2024	NOV 2023
Avg. Daily Temp.	44	47
Total kwh	73800	0
Avg. kwh per Day	2460	0
Cost per Day	$356.95	$0.00

RMP Utility Rates - Large Commercial - Schedule 6A TOU

Rocky Mountain Power - State of Utah Price Summary - In Effect as of July 1, 2026

Tariff Schedules	Tariff Base Rate	EBA Schedule 94[1]	REC Schedule 98[1]	DSM Schedule 193[1,2]	STEP Schedule 196[1,2]	EVIP Schedule 198[1,2]	Lifeline Program Schedule 91[1]
Schedule 6A - General Service, Energy Time-of-Day Option							
Customer Charge	$54.00 /month						$5.60 /month
Energy Charge							
All kWh under 50 kWh/kW (Jun-Sept)	26.6152 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
All additional kWh (Jun-Sept)	9.7456 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
All kWh under 50 kWh/kW (Oct-May)	23.5533 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
All additional (Oct-May)	8.6244 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
Off-Peak kWh (Jun-Sept)	-2.8581 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
Off-Peak kWh (Oct-May)	-2.5293 ¢/kWh	8.97%	-0.56%	3.70%	0.00%	0.15%	
Voltage Discount (≥ 2,300 V)	$0.61 /kW			3.70%	0.00%	0.15%	
Subscriber Solar Energy Charge (Schedule 73)							
(no interval meter)	7.1250 ¢/kWh		-0.56%	3.70%	0.00%	0.15%	
(with interval meter-solar generation)	5.9250 ¢/kWh		-0.56%	3.70%	0.00%	0.15%	
(with interval meter-solar delivery)	Under Schedule 32 /kW			3.70%	0.00%	0.15%	

On peak: 6:00 p.m. to 10:00 p.m. Monday thru Friday, except holidays. Off peak: All other times.

Case Study Proposal with 40% ITC, 10% UT, MACRS Depreciation

3 CUSTOMIZED SYSTEM DESIGN

4 PROJECT SUMMARY

Payment Options	Cash Purchase
IRR - Term	20.3%
LCOE PV Generation	$0.025 /kWh
Net Present Value	$1,001,356
Payback Period	4.2 Years
Total Payments	$852,994
Total Incentives	$525,243
Net Payments	$327,751
Electric Bill Savings - Term	$2,579,745
Upfront Payment	$825,074

COMBINED SOLAR PV RATING

Power Rating: 388,810 W-DC
Power Rating: 338,677 W-AC-CEC

CUMULATIVE ENERGY COSTS BY PAYMENT OPTION

4.1.1 PV SYSTEM DETAILS

GENERAL INFORMATION

Facility: Meter #1
Address: 408 S Tooele Blvd Tooele UT 84074

SOLAR PV SYSTEM RATING

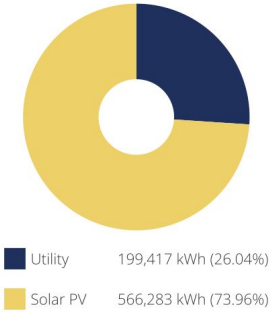
Power Rating: 388,810 W-DC
Power Rating: 338,677 W-AC-CEC

SOLAR PV EQUIPMENT DESCRIPTION

Solar Panels: (659) Hanwha Q Cells Q.PEAK DUO XL-G11S 590
Inverters: (3) SolarEdge SE100KUS (SE-TRI-US00IBNS4) - Domestic Content

ENERGY CONSUMPTION MIX

Annual Energy Use: 765,700 kWh



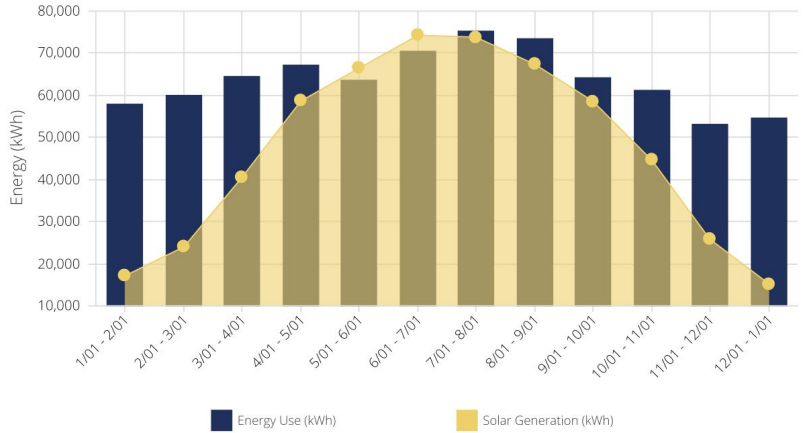
SOLAR PV EQUIPMENT TYPICAL LIFESPAN

Solar Panels: Greater than 30 Years
Inverters: 15 Years

Solar PV System Cost and Incentives

Solar PV System Cost	$825,074
Federal - 100% Bonus Depreciation	-$145,213
Federal ITC	-$330,030
Utah Tax Credit	-$50,000
Net Solar PV System Cost	**$299,831**

MONTHLY ENERGY USE VS SOLAR GENERATION



4.1.2 REBATES & INCENTIVES

This section summarizes all incentives available for this project. The actual rebate and incentive amounts for this project are shown in each example.

Utah - Renewable Energy Tax Credit (Commercial)

Utah's income tax credit for renewable energy systems includes provisions for both residential and commercial applications. The Utah Office of Energy Development administers the tax credit and has responsibility for revising the tax credit rules and certifying systems as eligible for the credit. The credit is worth 10% of the reasonable installed costs. The tax credit is structured as a refundable credit. Commercial tax credit is capped at $50,000.

Total Incentive Value: $50,000

Investment Tax Credit (ITC) - 30% (with Adders)

A federal Investment Tax Credit (ITC) for Photovoltaic (PV) projects at a rate of 30% of the total PV system cost. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar. The PV ITC allows a carryback period of 3 years, and the carryforward period of 22 years, in cases where the tax credit exceeds a customer's tax liability in the 'placed-in-service' year.
For PV projects greater than 1 MW AC in size, prevailing wage and apprenticeship requirements take effect in order to qualify for the full 30% "increased rate", rather than a "base rate" which would only qualify for a 6% ITC. Projects with an output of less than 1 megawatt qualify for the "increased rate" irrespective of if prevailing wage or apprenticeship requirements are met.
In addition to the 30% ITC, three different types of ITC "Adders", which provide additional tax credits of up to 10% each, for projects that meet specified requirements. (1) Energy Community. (2) Low-income. (3) Domestic Content.

Total Incentive Value: $330,030

Federal - 100% bonus depreciation (Tax Reform Bill)

The Tax Reform Bill modifies bonus depreciation under Code Section 168(k) to allow 100% expensing for property placed in service. By increasing bonus depreciation to 100 percent, the new tax bill essentially allows eligible entities to deduct the entire allowable tax basis of the system in the first year of operation.
Under the federal Modified Cost Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. MACRS establishes a lifespan for various types of property over which the property may be depreciated. For PV systems, the taxable basis of the equipment must be reduced by 50% of any federal tax credits associated with the system.

Total Incentive Value: $145,213

4.1.3 UTILITY RATES

You have the option to remain on your current rate schedule (6) or switch to an alternative rate schedule (6A). The rates for each are shown below and your estimated electric bills are shown on the following page for each rate schedule.

Customer Charges					Energy Charges					Demand Charges				
Season	Charge Type	Rate Type	6	6A	Season	Charge Type	Rate Type	6	6A	Season	Charge Type	Rate Type	6	6A
W	Flat Rate	per billing period	$60.73	$59.73	W	Flat Rate	Import	$0.04678	-	W	Flat Rate	Import	$20.65	-
S	Flat Rate	per billing period	$60.73	$59.73	S	Flat Rate	Import	$0.05286	-	S	Flat Rate	Import	$22.78	-
					W	T < 50 kWh	Import	-	$0.31126					
					W	50 kWh < T	Import	-	$0.11397					
					S	T < 50 kWh	Import	-	$0.35172					
					S	50 kWh < T	Import	-	$0.12879					
					W	On Peak	Import	-	$0.00					
					W	Off Peak	Import	-	-					
					S	On Peak	Import	-	$0.00					
					S	Off Peak	Import	-	-					

4.1.4 CURRENT ELECTRIC BILL

The table below shows your annual electricity costs based on the most current utility rates and your previous 12 months of electrical usage.

RATE SCHEDULE: RMP-UT - 6

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges				
Bill Ranges & Seasons	Total	NC / Max	Other	NBC	Energy	Demand	Total
1/1/2026 - 2/1/2026 W	58,000	372	$61	$0	$2,713	$7,681	$10,455
2/1/2026 - 3/1/2026 W	60,000	340	$61	$0	$2,807	$7,020	$9,888
3/1/2026 - 4/1/2026 W	64,500	334	$61	$0	$3,017	$6,896	$9,974
4/1/2025 - 5/1/2025 W	67,200	317	$61	$0	$3,143	$6,545	$9,750
5/1/2025 - 6/1/2025 W	63,600	324	$61	$0	$2,975	$6,690	$9,726
6/1/2025 - 7/1/2025 S	70,500	342	$61	$0	$3,727	$7,791	$11,578
7/1/2025 - 8/1/2025 S	75,300	396	$61	$0	$3,980	$9,021	$13,062
8/1/2025 - 9/1/2025 S	73,500	368	$61	$0	$3,885	$8,383	$12,329
9/1/2025 - 10/1/2025 S	64,200	285	$61	$0	$3,394	$6,492	$9,947
10/1/2025 - 11/1/2025 W	61,200	387	$61	$0	$2,863	$7,991	$10,914
11/1/2025 - 12/1/2025 W	53,100	420	$61	$0	$2,484	$8,672	$11,217
12/1/2025 - 1/1/2026 W	54,600	400	$61	$0	$2,554	$8,259	$10,874
Total	765,700	-	$729	-	$37,542	$91,443	$129,713

4.1.5 NEW ELECTRIC BILL

RATE SCHEDULE OPTION 1: RMP-UT - 6

Time Periods	Energy Use (kWh)	Max Demand (kW)	Charges				
Bill Ranges & Seasons	Total	NC / Max	Other	NBC	Energy	Demand	Total
1/1/2026 - 2/1/2026 W	40,893	359	$61	$0	$1,951	$7,413	$9,425
2/1/2026 - 3/1/2026 W	35,975	327	$61	$0	$1,730	$6,752	$8,543
3/1/2026 - 4/1/2026 W	24,033	320	$61	$0	$1,210	$6,607	$7,878
4/1/2025 - 5/1/2025 W	8,531	264	$61	$0	$515	$5,451	$6,026
5/1/2025 - 6/1/2025 W	-2,829	272	$61	$0	$39	$5,616	$5,716
6/1/2025 - 7/1/2025 S	-3,763	212	$61	$0	$88	$4,829	$4,803
7/1/2025 - 8/1/2025 S	1,487	258	$61	$0	$178	$5,877	$6,116
8/1/2025 - 9/1/2025 S	6,153	267	$61	$0	$415	$6,082	$6,558
9/1/2025 - 10/1/2025 S	5,594	179	$61	$0	$382	$4,078	$4,520
10/1/2025 - 11/1/2025 W	16,646	358	$61	$0	$884	$7,392	$8,337
11/1/2025 - 12/1/2025 W	27,301	411	$61	$0	$1,327	$8,486	$9,874
12/1/2025 - 1/1/2026 W	39,394	397	$61	$0	$1,869	$8,197	$10,127
Total	199,415	-	$729	-	$10,412	$76,781	$87,922

NEW RATE SCHEDULE OPTION 2: RMP-UT - 6A

Time Periods	Energy Use (kWh)		Max Demand (kW)	Charges			
Bill Ranges & Seasons	On Peak	Off Peak	NC / Max	Other	NBC	Energy	Total
1/1/2026 - 2/1/2026 W	826	40,067	359	$60	$0	$7,103	$7,163
2/1/2026 - 3/1/2026 W	1,570	34,405	327	$60	$0	$6,473	$6,533
3/1/2026 - 4/1/2026 W	393	23,640	320	$60	$0	$5,660	$5,719
4/1/2025 - 5/1/2025 W	-448	8,979	264	$60	$0	$4,044	$4,104
5/1/2025 - 6/1/2025 W	-2,712	-118	272	$60	$0	$3,543	$3,602
6/1/2025 - 7/1/2025 S	-1,336	-2,427	212	$60	$0	$3,158	$3,217
7/1/2025 - 8/1/2025 S	-746	2,234	258	$60	$0	$4,037	$4,096
8/1/2025 - 9/1/2025 S	2	6,151	267	$60	$0	$4,486	$4,546
9/1/2025 - 10/1/2025 S	1,602	3,992	179	$60	$0	$3,440	$3,500
10/1/2025 - 11/1/2025 W	259	16,387	358	$60	$0	$5,545	$5,605
11/1/2025 - 12/1/2025 W	931	26,370	411	$60	$0	$6,594	$6,654
12/1/2025 - 1/1/2026 W	934	38,460	397	$60	$0	$7,284	$7,344
Total	1,275	198,140	-	$717	-	$61,368	$62,085

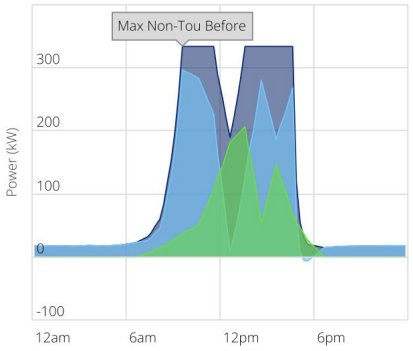
ANNUAL ELECTRICITY SAVINGS: $67,629

DEMAND PROFILES

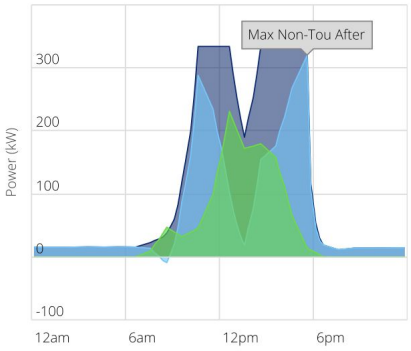
Date Range: 3/1/2026 - 4/1/2026

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 3/2/2026



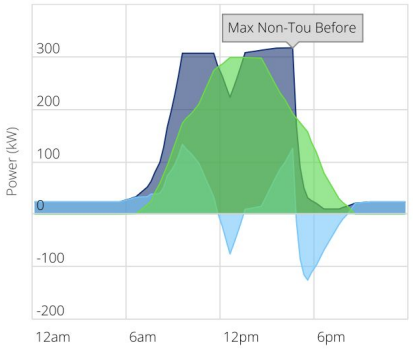
Max Demand After 3/5/2026



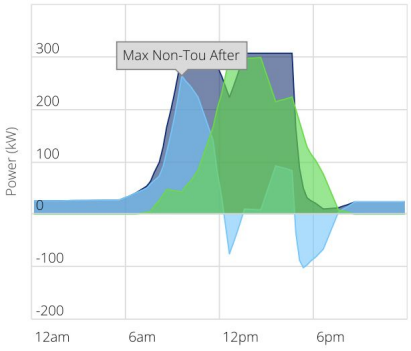
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Date Range: 4/1/2025 - 5/1/2025

Max Demand Before 4/29/2025



Max Demand After 4/4/2025



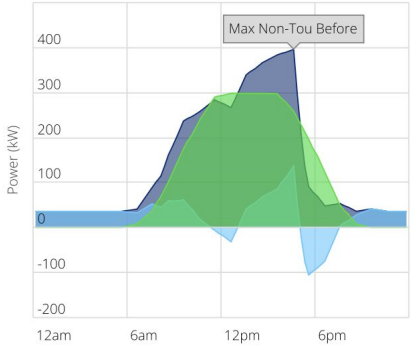
Legend: Demand Before | Solar PV | Energy Storage | Demand After

DEMAND PROFILES

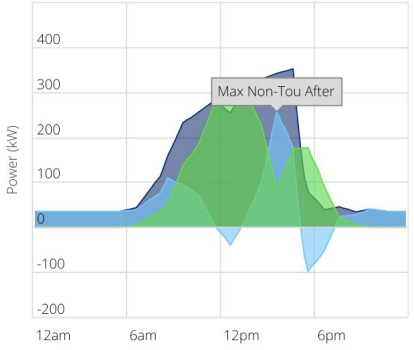
Date Range: 7/1/2025 - 8/1/2025

Max NC Demand: The charts below show when the maximum non-coincident (NC) demand for this facility occurred before and after the hybrid Solar PV with Storage system simulation.

Max Demand Before 7/2/2025



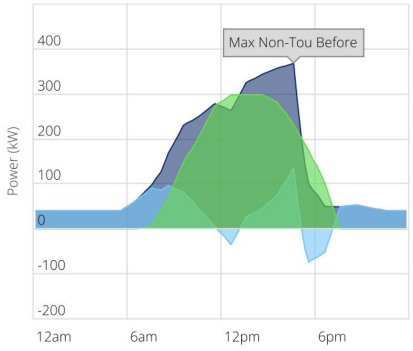
Max Demand After 7/9/2025



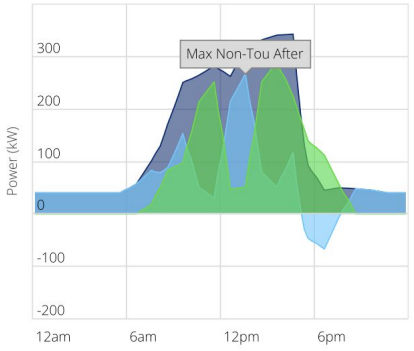
Legend: Demand Before | Solar PV | Energy Storage | Demand After

Date Range: 8/1/2025 - 9/1/2025

Max Demand Before 8/26/2025



Max Demand After 8/8/2025



Legend: Demand Before | Solar PV | Energy Storage | Demand After

5.1 Cash Purchase

Assumptions and Key Financial Metrics

IRR - Term	20.3%	Net Present Value	$1,001,356	Payback Period	4.2 Years
ROI	272.9%	PV Degradation Rate	0.60%	Discount Rate	5.0%
Energy Cost Escalation Rate	4.0%	Federal Income Tax Rate	22.0%	State Income Tax Rate	8.0%
Total Project Costs	$852,994				

Years	Project Costs	Electric Bill Savings	State Tax Effect	Federal Tax Effect	Total Cash Flow	Cumulative Cash Flow
Upfront	-$825,074	-	-	-	-$825,074	-$825,074
1	-	$67,629	$50,000	$475,243	$592,871	-$232,203
2	-	$69,912	-	-	$69,912	-$162,291
3	-	$72,269	-	-	$72,269	-$90,022
4	-	$74,704	-	-	$74,704	-$15,318
5	-	$77,217	-	-	$77,217	$61,899
6	-	$79,812	-	-	$79,812	$141,711
7	-	$82,491	-	-	$82,491	$224,202
8	-	$85,257	-	-	$85,257	$309,459
9	-	$88,112	-	-	$88,112	$397,571
10	-	$91,059	-	-	$91,059	$488,629
11	-	$94,100	-	-	$94,100	$582,730
12	-	$97,240	-	-	$97,240	$679,970
13	-	$100,480	-	-	$100,480	$780,449
14	-	$103,823	-	-	$103,823	$884,272
15	-$27,920	$107,273	-	-	$79,353	$963,626
16	-	$110,834	-	-	$110,834	$1,074,460
17	-	$114,507	-	-	$114,507	$1,188,967
18	-	$118,297	-	-	$118,297	$1,307,263
19	-	$122,207	-	-	$122,207	$1,429,470
20	-	$126,240	-	-	$126,240	$1,555,710
21	-	$130,401	-	-	$130,401	$1,686,111
22	-	$134,692	-	-	$134,692	$1,820,803
23	-	$139,118	-	-	$139,118	$1,959,921
24	-	$143,683	-	-	$143,683	$2,103,604
25	-	$148,390	-	-	$148,390	$2,251,993
Totals:	-$852,994	$2,579,745	$50,000	$475,243	$2,251,993	-

7 ENVIRONMENTAL BENEFITS

OVER THE NEXT 20 YEARS, YOUR SYSTEM WILL DO MORE THAN JUST SAVE YOU MONEY. ACCORDING TO THE EPA'S GREENHOUSE GAS EQUIVALENCIES CALCULATOR (SOURCE), YOUR SOLAR PV SYSTEM WILL HAVE THE IMPACT OF REDUCING:

8,874

tons of CO2 Offset

20,171,000

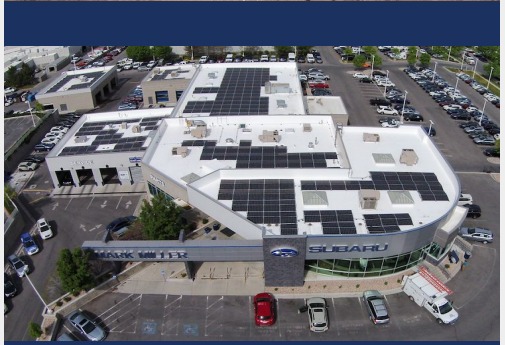
Miles Driven By Cars

133,077

Trees Planted

Expected Paybacks for Solar Only

- Rate viability depends on the specific schedule (Small Commercial 23 vs. 6).
- Switching from Rate 6 to 6A TOU is generally advantageous if PV systems offset more than 70% of the energy profile.



IECC 2024

Following the adoption of the 2024 IECC, Utah now mandates one of the following requirements:

- 0.75 Watt/Ft² of on-site renewable energy capacity
- Or Procurement of equivalent Renewable Energy Credits (RECs) or PPAs

Solar + Battery Trends

When should customers consider this route?

Why BESS Makes Sense

- **High Demand Charges & Peak Shaving**
  - Enables effective peak demand reduction.
- **Solar PV Synergy**
  - PV Charges the battery during low-cost or surplus hours.
- **Operational Resilience**
  - Prevents costly business disruptions caused by power failures.

Solar + Battery Trends

What are Hurdles to BESS Entry?

- Significant initial investment
- Extended Payback Periods
- Degradation and Limited Life Span
- Regulatory and Permitting Barriers
- Space Constraints
- Climate Control
- Technology continues to evolve rapidly

Choosing the Right Partner

Selecting the right solar trade partner is essential to custom-fit to the facility's needs and avoid common pitfalls.

- **Comprehensive Assessment:** Analyzing the facility's unique energy profile and aligning with the owner's specific goals.
- **Collaborative Approach:** Engaging in transparent, consultative planning throughout the process.
- **Reliable Delivery:** Ensuring the capacity to execute projects on time and within budget.
- **Sustainable Partnership:** Providing dedicated, long-term operational support.

Thank you!

Scan to view our website

Our purpose is to lead our communities into a clean energy future.

Scott Jones
ScottJones@CEsolar.com
801.487.6489

Association of Energy Engineers