



VIRTUAL HIGH PERFORMANCE
HOME SUMMIT 2020

SEPT 29 - OCT 9 | ONLINE VIA WHOVA

Presents

ELECTRIQ  POWER™

Take Control of Your Electricity Bills with Home Energy Storage



Agenda



- Introduction
- Home Energy Storage Overview
- Value Propositions
- Industry growth
- Product components
- AC vs DC coupled
- System Modes
 - Backup
 - Time of Use
 - Self Supply
 - Off-Grid
- PowerPod
- Monitoring and control software
- Smart Home Integrations
- 3 Big Takeaways

About Electriq Power

Electriq Power is a smart home energy storage company.

We leverage world class battery and power electronics technology, plus our own proprietary firmware and software, to provide leading solutions for behind-the-meter power storage in single family homes.

Our products can connect to solar installations and/or the grid and provide our customers with peace of mind when it comes to emergency back-up power or simply reducing their utility bills.



About the Presenter



*Aric Saunders
EVP, Sales & Marketing*

- Owner/President of solar company
- Founder of 4 energy startups
- Helped introduce Tabuchi EIBS to the US market
- 10 years of residential and small commercial solar
- Previously in Real Estate and Development

Home Energy Storage

- Primarily Grid-Tied battery
- Currently driven by backup power
- Additional value in certain markets
- Accelerating Rapidly
- Names you may know – Tesla, LG, Generac
- A lot of names you may not know



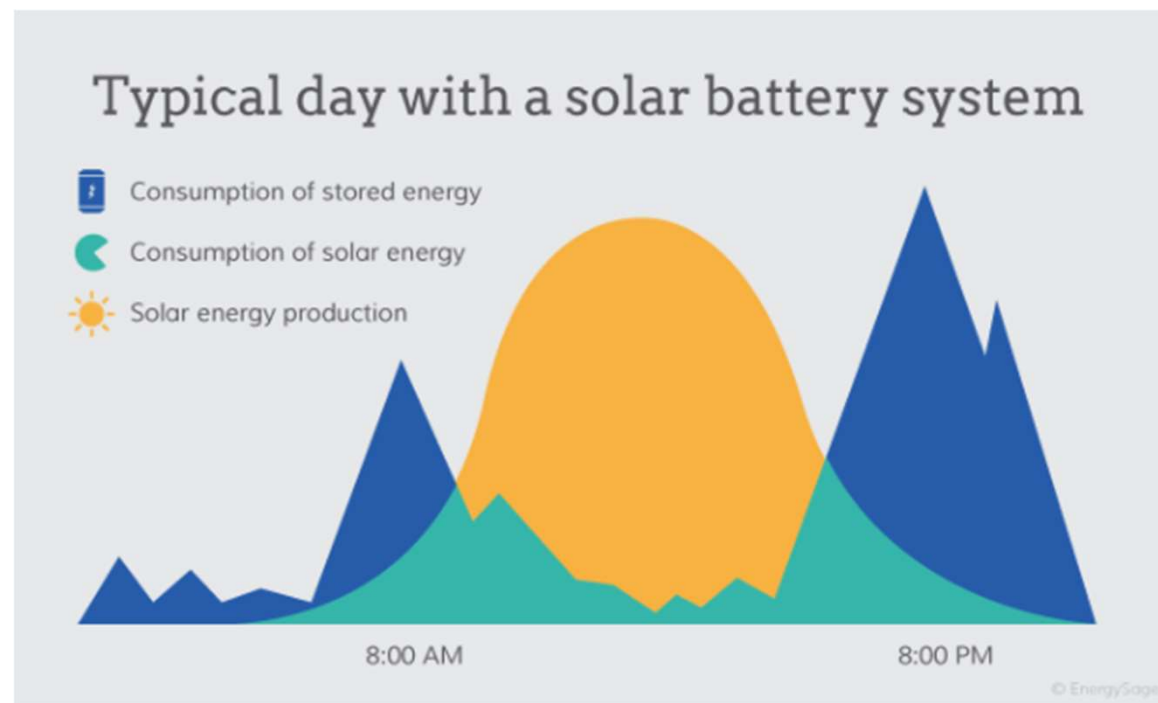
Residential Energy Storage Landscape



Hardware Suppliers			HEMS + Integrated Solutions
Battery Only	Inverter Only	Integrated Solutions	
			  
			
			
			
			

Value Propositions

- Backup Power
 - Resiliency
 - Safety
 - Security
- Time-of-Use
 - Rate arbitrage between peak and off-peak
 - Net Metering reductions
- Self Supply
 - Environmental
 - Limited or no grid import
- Grid Services
 - Additional revenue from Utility

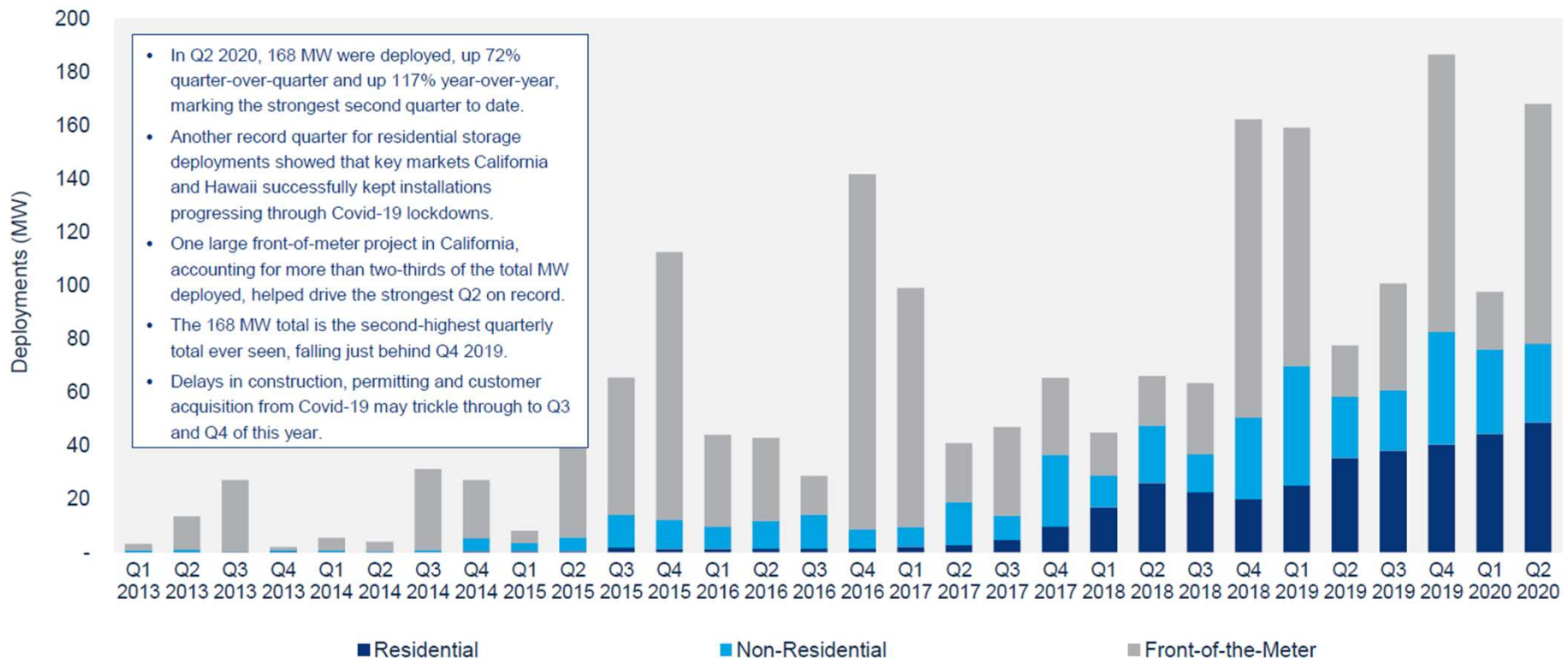


Source: EnergySage

Battery Storage Market: Major Growth

U.S. Q2 2020 deployments reached 168 MW

The strongest Q2 on record for deployments; Covid-19 pandemic has not hampered the downstream market



Source: Wood Mackenzie Power & Renewables

Battery Storage Market: Major Growth

US Market Expansion

U.S. energy storage annual deployments will reach 7.3 GW by 2025

Sharp scale-ups are being driven by utility procurements and the accelerating residential market

U.S. energy storage annual deployment forecast, 2012-2025E (MW)

Wood Mackenzie / ESA | U.S. energy storage monitor Q3 2020

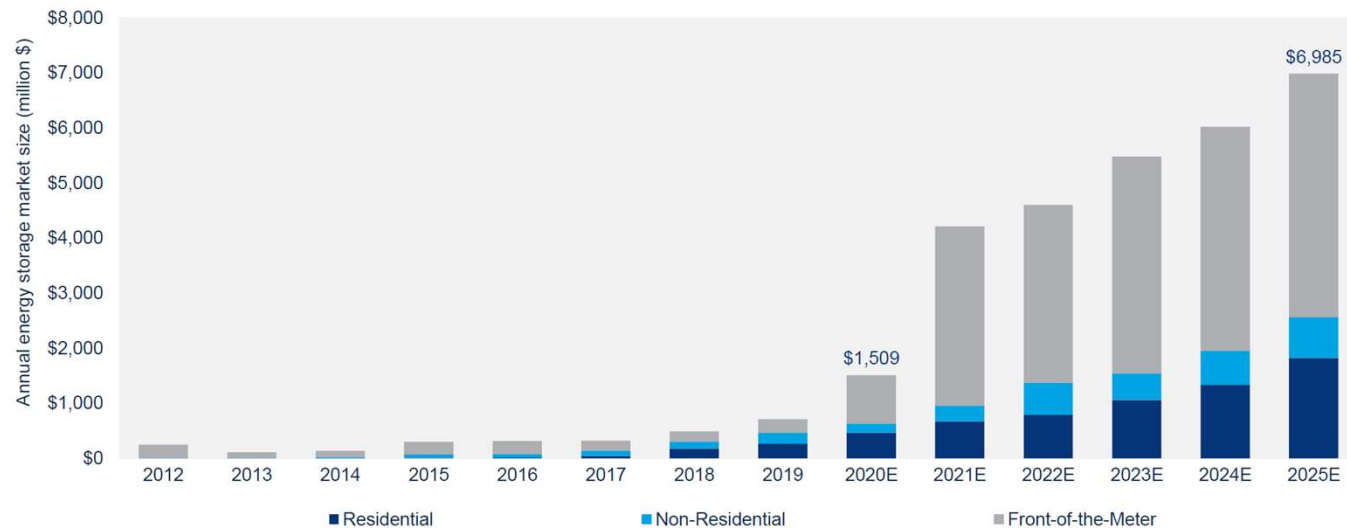
woodmac.com



U.S. energy storage will be a \$6.9 billion annual market in 2025

Market crosses \$1 billion annual threshold in 2020 even with Covid-19 impacts

U.S. annual energy storage market size, 2012-2025E (million \$)



Source: Wood Mackenzie Power & Renewables

Incentives

Federal – 26% in 2020, 22% in 2021

State

- California \$2,000 - \$20,000
- Hawaii \$5,000
- Maryland \$5,000
- Massachusetts Varies
- Nevada \$3,000
- New York \$250/kwh (Long Island)

Utility

- California MCE, gap funding and monthly bill credit
- Colorado Varies, \$80 to \$500/kw
- Connecticut ConnectedSolutions annual
- Massachusetts ConnectedSolutions annual
- Oregon Virtual Peaker upfront and Annual
- Rhode Island ConnectedSolutions annual
- Vermont Virtual Peaker annual

Energy Storage Product Overview



ELECTRIC POWER

PowerPod



Backup



Self Supply



Time of Use



Custom



Popular Chemistries



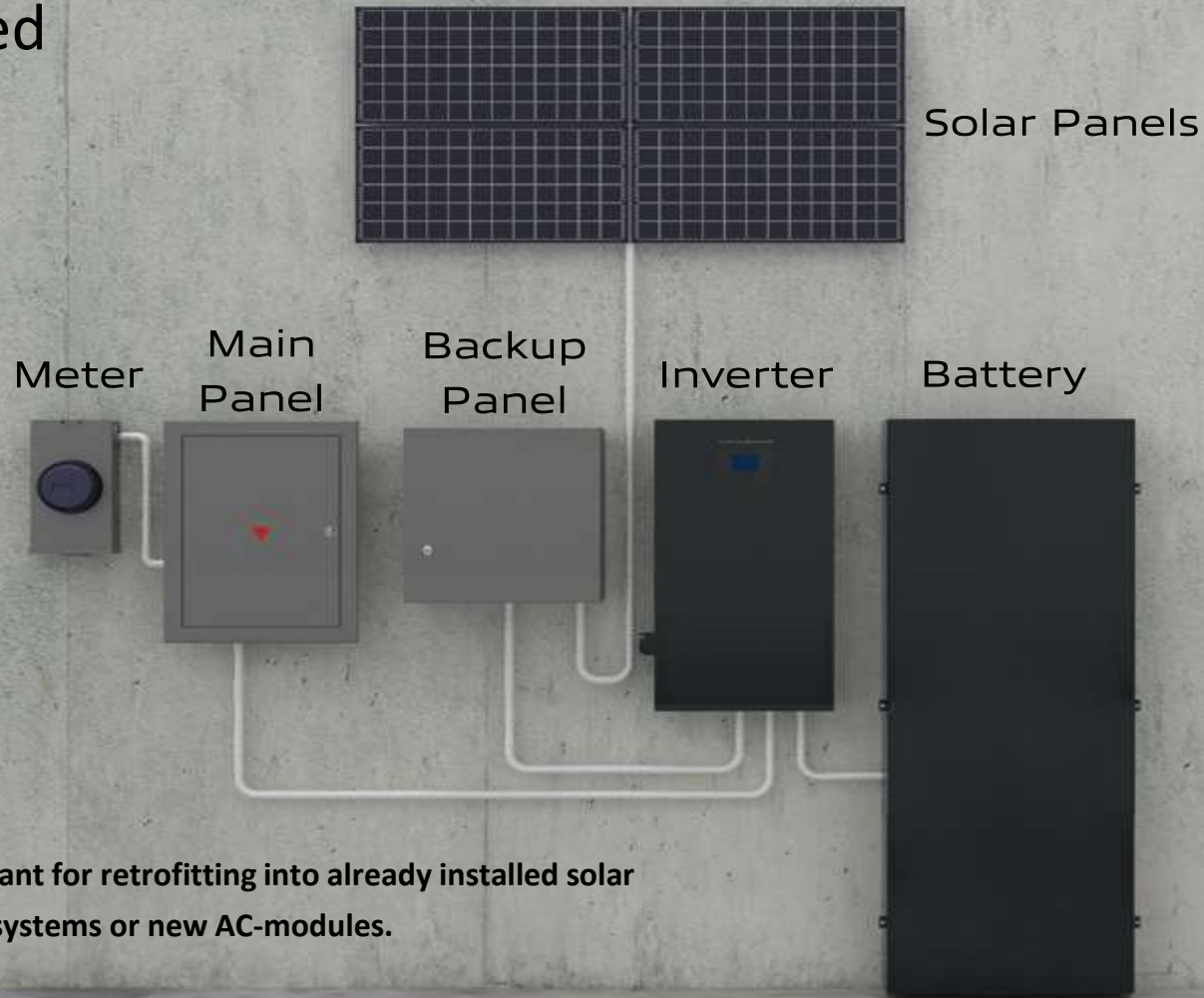
- Lead Acid
 - Original battery technology for homes
 - Low Depth of Discharge (50%)
 - Degradation and short life with lots of maintenance
- NMC
 - Higher density
 - Lower cost per kwh
 - Longer history
- LFP
 - 100% discharge
 - Increased cycle life (6,000 to 10,000)
 - Trajectory is moving in the right direction
- Fact vs Fiction
 - LFP is safer!!!
 - NMC doesn't have as many cycles
 - LFP is much more expensive

DC-Coupled



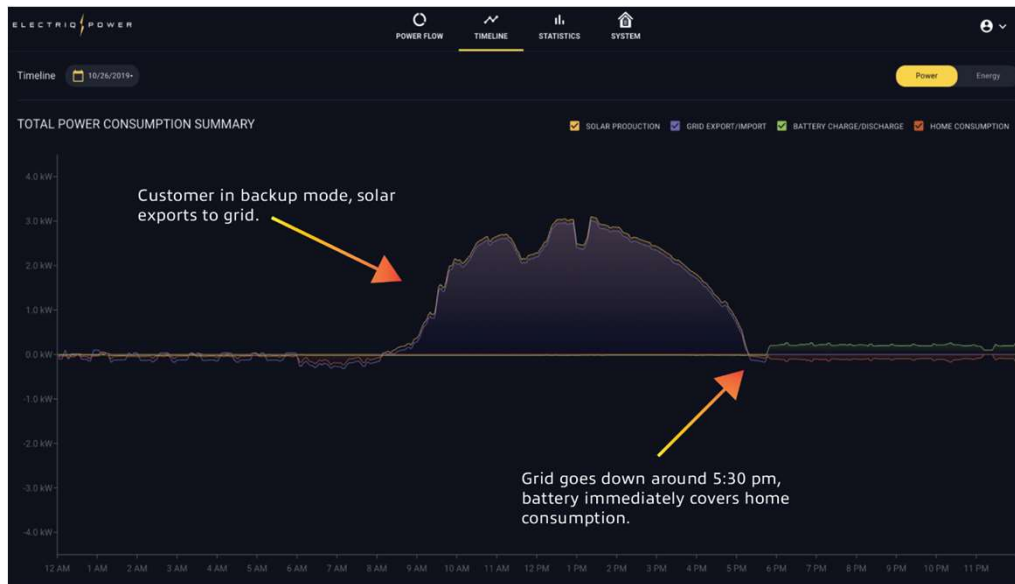
DC Coupling is meant for new Solar + Storage installations. There is no need for solar or micro-inverters.

AC-Coupled

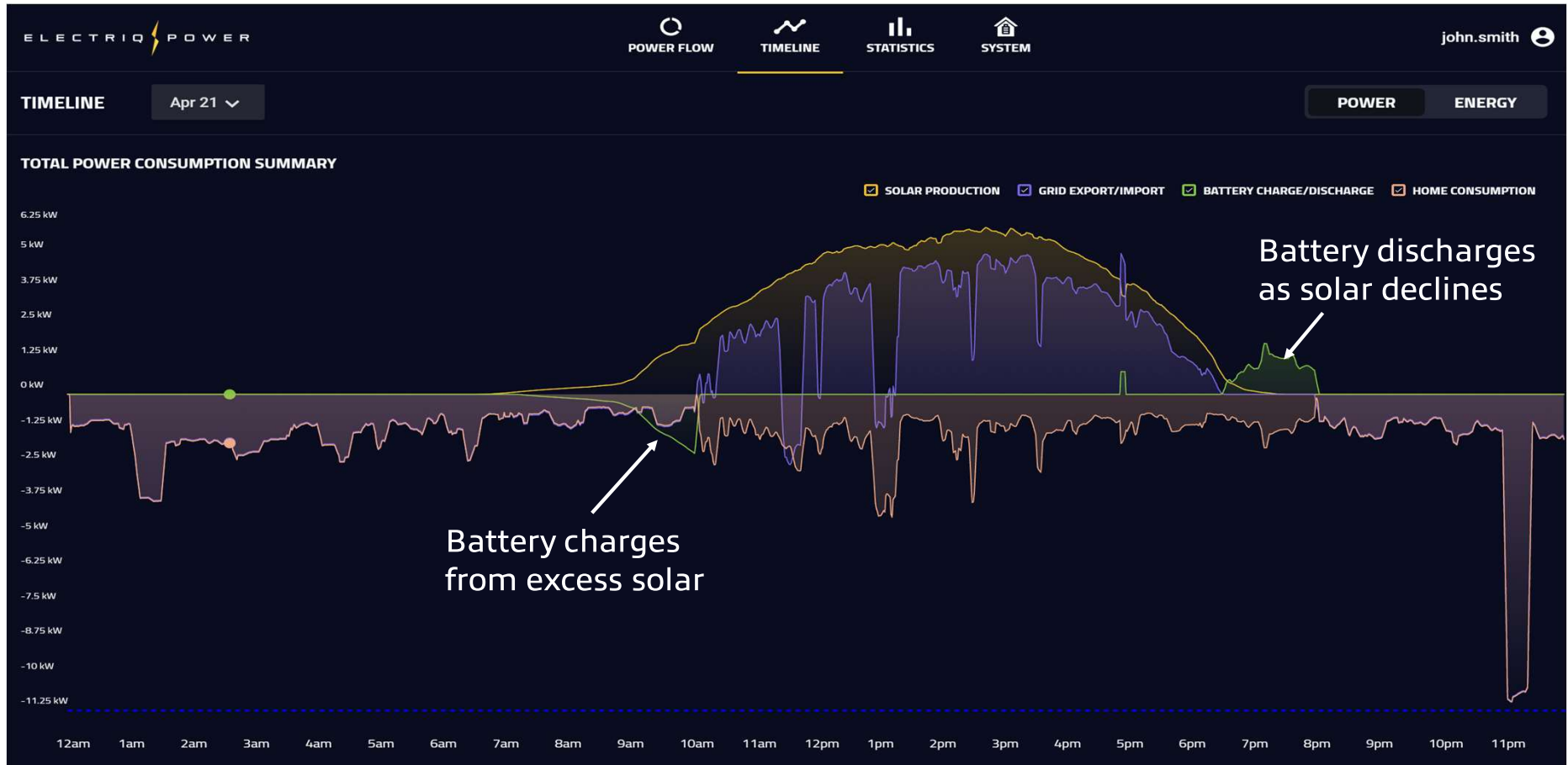


AC Coupling is meant for retrofitting into already installed solar systems or new AC-modules.

System Modes - Backup



System Modes – Time-of-Use



Time-of-Use Tariff Examples



PG&E – TOU-A/TOU-B

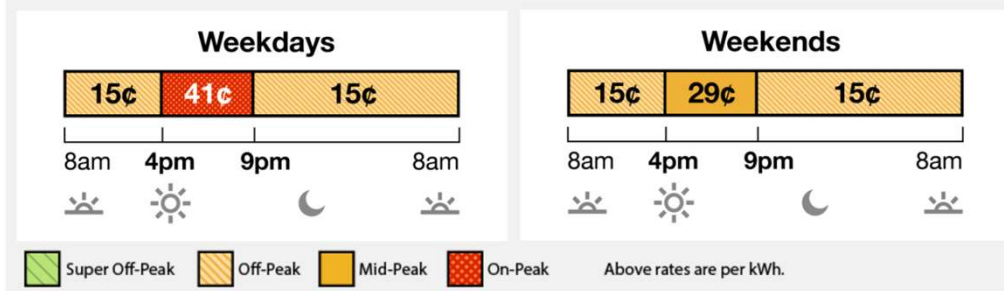
Rate Schedule	Season Summer: May-Oct Winter: Nov-Apr	Time-of-Use Period	Energy Charge ^{2/} (\$/kWh) (No Tiers)
Residential Time-of-Use Service for Plug-In Electric Vehicle, Rate Schedule EV, Rate A ^{8/}	Summer	Peak	\$0.54121
		Part-Peak	\$0.29567
		Off-Peak	\$0.14232
	Winter	Peak	\$0.37957
		Part-Peak	\$0.23289
		Off-Peak	\$0.14567

Utilizing TOU to Save

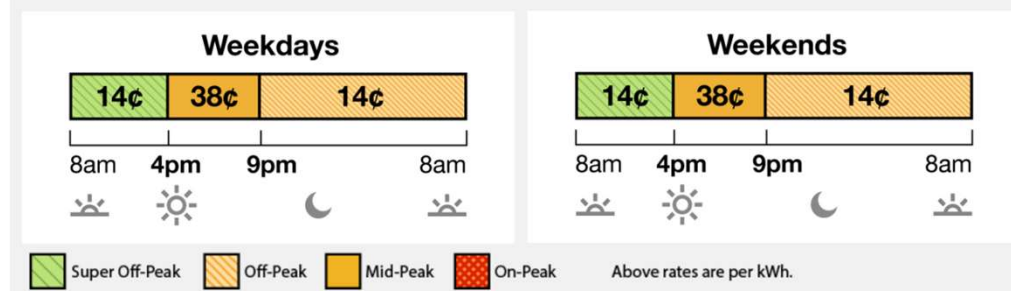
	Summer Arbitrage	Winter Arbitrage	Summer Daily Savings	Winter Daily Savings	Annual Savings
PG&E	\$ 0.40	\$ 0.23	\$ 3.99	\$ 2.30	\$1,149.11
SCE	\$ 0.26	\$ 0.24	\$ 2.60	\$ 2.40	\$ 900.40

SCE – TOU-Prime (Storage Tariff)

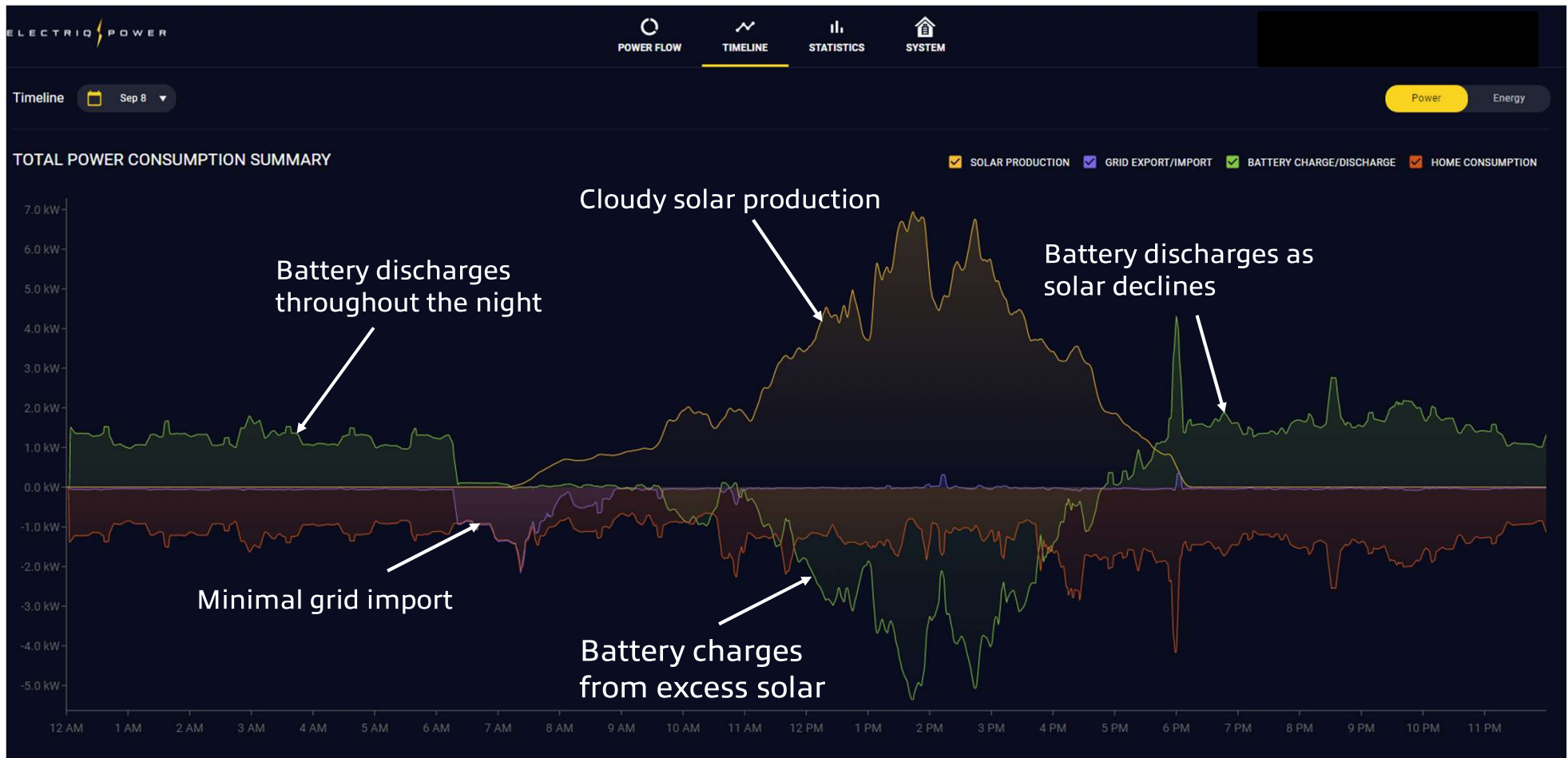
June to September (4 months)



October to May (8 months)



System Modes – Self-Supply



Software, Software, Software

- Embedded PowerOS
- Customer-facing dashboard/mobile apps
- Installer-facing mobile apps
- Fleet Management
- Network Operating Center (NOC)
- Integrations



Software Overview – BTS

Customer Site



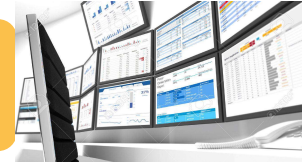
System includes PowerHub which controls the inverter and batteries as per desired system mode. Enables remote config, command & control, software updates

Electriq Power Cloud



Data intake, processing, storage of all incoming telemetry data. All services for commissioning, monitoring, configuration, command and control, user management are handled from here.

Smart Home Integrations



Utilizing Electriq's OpenADR or PowerADR APIs Smart Home Providers can get access to energy usage and production data in near real time

Network Operations Center (NOC)



NOC is Electriq's "command station" which monitors grid conditions, weather patterns and demand response programs to optimize system functionality

Fleet Management



Real-time monitoring of Electriq systems with incident management allowing automatic or manual intervention for resolutions

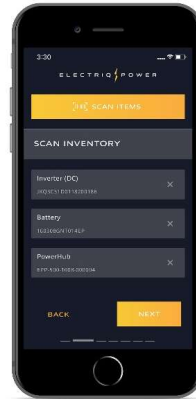
Electriq's Product Suite



ELECTRIQ POWER APP

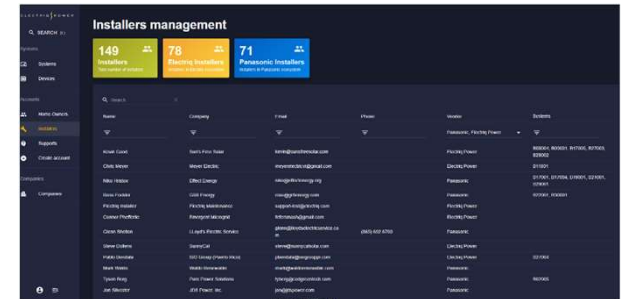
The Electriq Power App provides users with real time energy monitoring and intelligence to automate energy costs savings on any device.

Customer Dashboard



ELECTRIQ POWERTOOLS

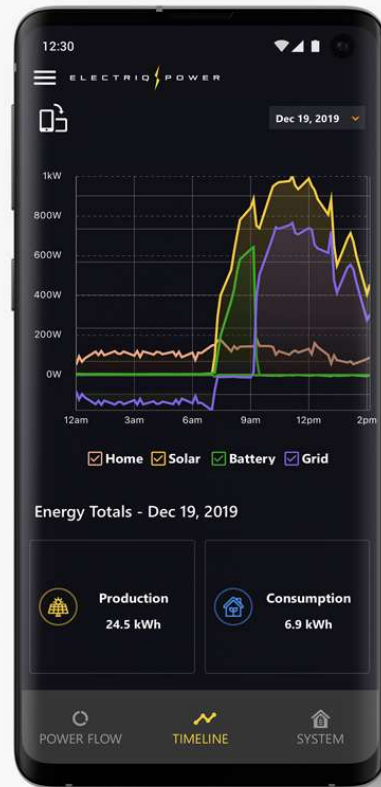
Electriq PowerTools provides online training, videos, and certification for installers as well as all the necessary tools to size and commission systems.



ELECTRIQ POWER FLEET

Electriq Power Fleet allows our network operating center to monitor and control systems in the field to help diagnose issues, and provide grid services to utilities.

Electriq Power App Screenshots

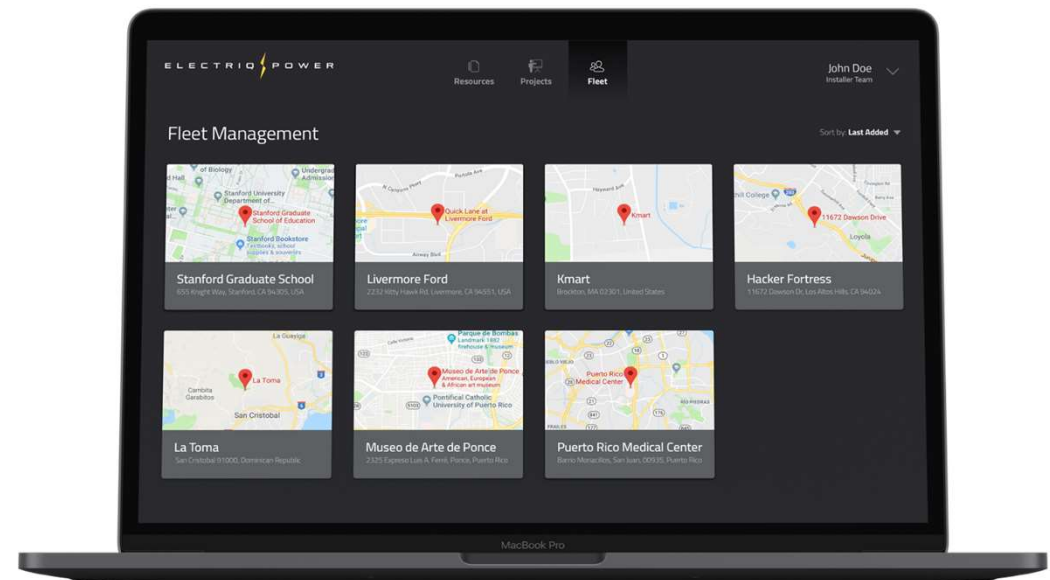


Grid Services Integration

System Capabilities

- Open ADR 2.0b or certified
 - Plug-and-play solution
- Proprietary Software – PowerADR
 - Take control en masse
 - Aggregated network of opted-in systems can be controlled
 - Set discharge schedules with as much, or as little, power as needed

ELECTRIQ POWER PowerADR



Smart Home Integration

- Open ADR 2.0b or PowerADR options
- Alexa, Google Home
- Smart Load Panels: Span.io, Lumin
- What can be done with access to
 - Real time data
 - Grid power, home consumption solar power, and battery data
 - Weather forecasting
 - Instantaneous control of electricity sources and loads
- Not just monitoring, but control
- How valuable is a smart home without power?



Google Home

SPAN

lumin®

Three Big Takeaways

Industry is maturing and growing rapidly

Not just a generator replacement

Software is the key





Thank You

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