

# The all-in-one application for optimizing your clean energy portfolio

Stem is unlocking the energy market by simplifying the management of clean energy. PowerTrack Monitoring and Control (M&C), Stem's flagship application, is the all-in-one platform to meet the needs of commissioning, monitoring, optimizing, and controlling your clean energy portfolio or fleet. Backed by depth of data for high-quality analytics, PowerTrack M&C enables intelligent decision making, leading to **reduced operating expenses by up to 3-5% and minimizing downtime for up to 1-5% total energy production gain.**

## Ranked #1

Stem ranked as #1 Solar and Storage Monitoring and Control Vendor by Guidehouse Insights Leaderboard



# PowerTrack application

## Keep your power on track

One application for your **ENTIRE** clean energy portfolio featuring:

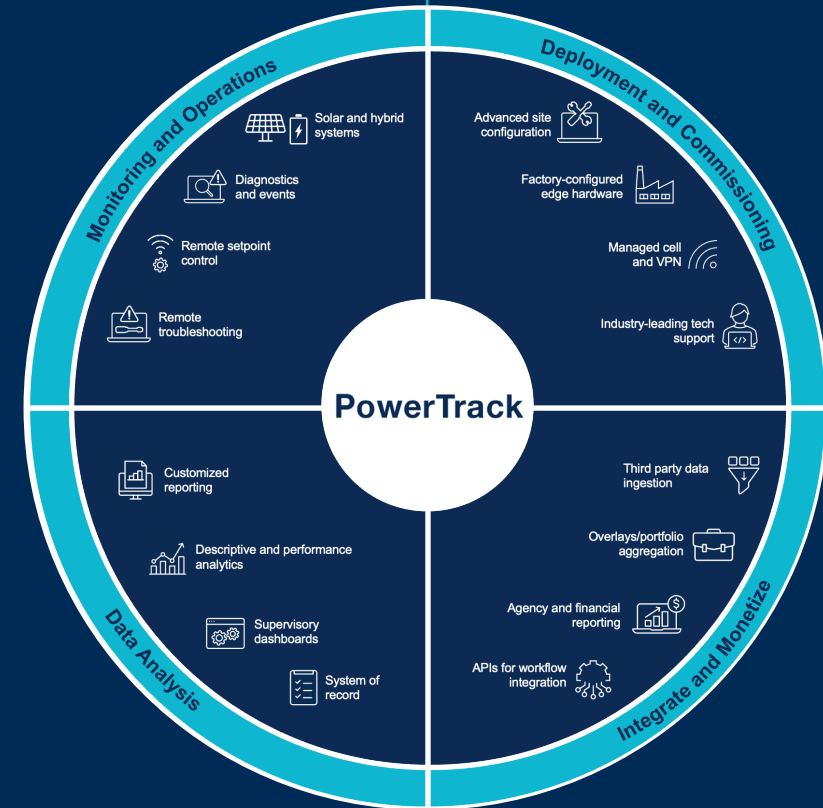
**Accessible** data coupled with data visualization for high-quality analytics leading to intelligent decision making

**Configurable** reporting and dashboards that inform on fleet performance and asset health

**Remote** troubleshooting to identify problems in the field

**Drill-down** capabilities to rapidly identify critical hardware faults with a high signal-to-noise ratio

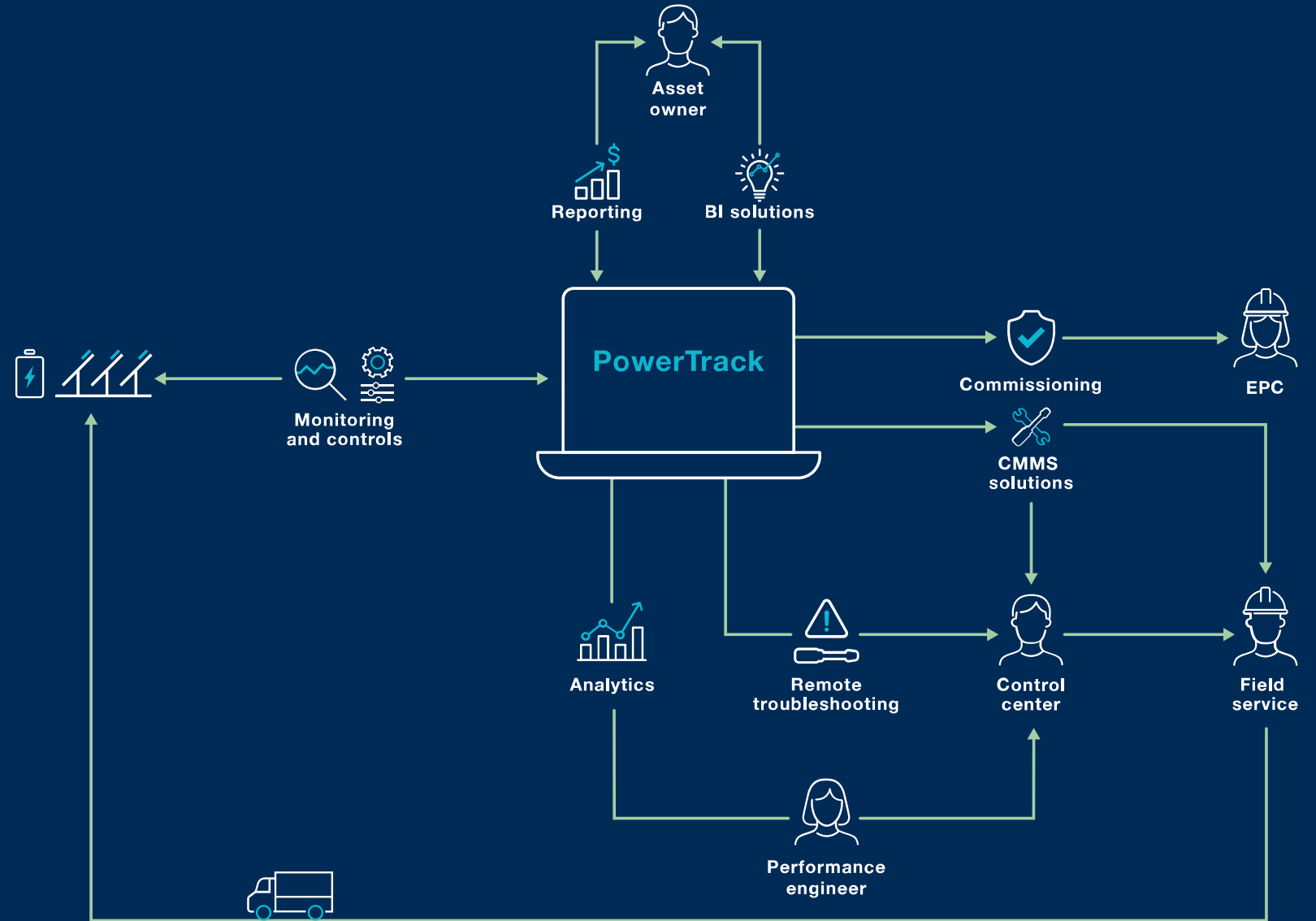
**Analytics** for long-term trends to make informed decisions about your fleet, assets and business



# All-in-one application connects ALL your stakeholders

Using PowerTrack, all stakeholders can quickly access the same data and collaborate cross-functionally to streamline their response.

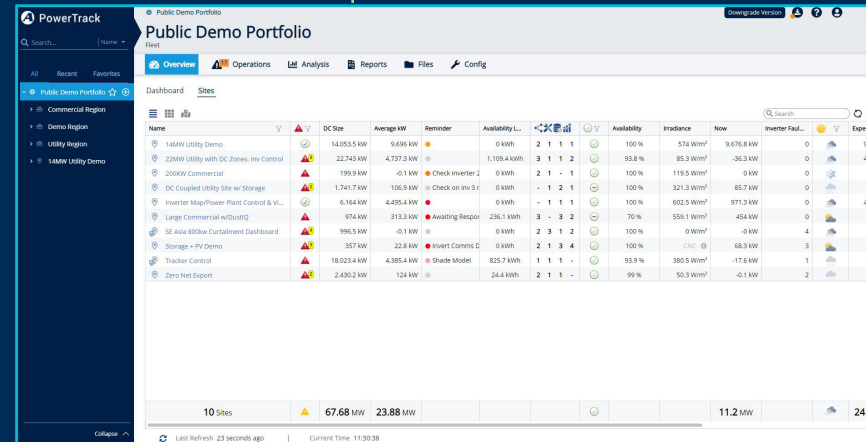
From a control center receiving an alert to a field service engineer on a truck roll replacing a piece of hardware, PowerTrack helps to ensure smooth workflows for a higher system uptime.



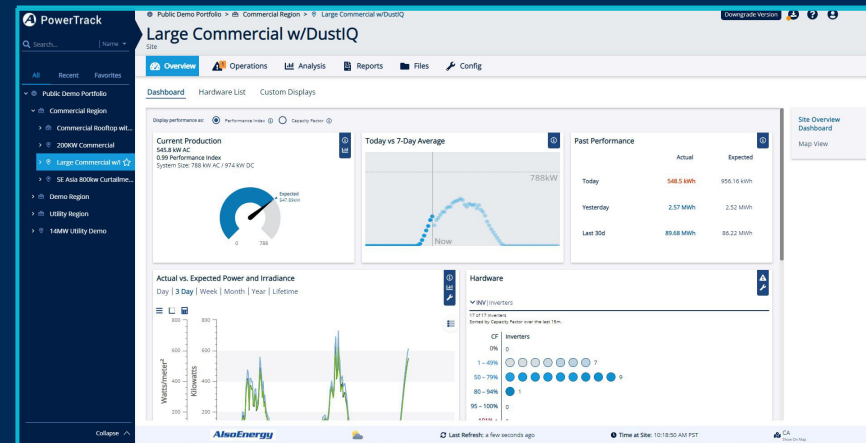
# A bird's eye view of your portfolio

You can set up PowerTrack to work for your needs with easily customizable dashboards that give you an at-a-glance view of your entire portfolio, including macro to micro perspective on portfolio, sites, and individual hardware.

- Intuitive interface for an easy-to-use application
- Customizable dashboards make it easy to drill down to inform on fleet performance and asset health
- View current production plus past performance comparisons
- View actual versus weather-adjusted energy production so you can easily identify any major issues



The Portfolio View allows you to zoom out for a higher-level look at your entire portfolio. Identify and prioritize sites that are experiencing the most severe energy losses and address the causes.



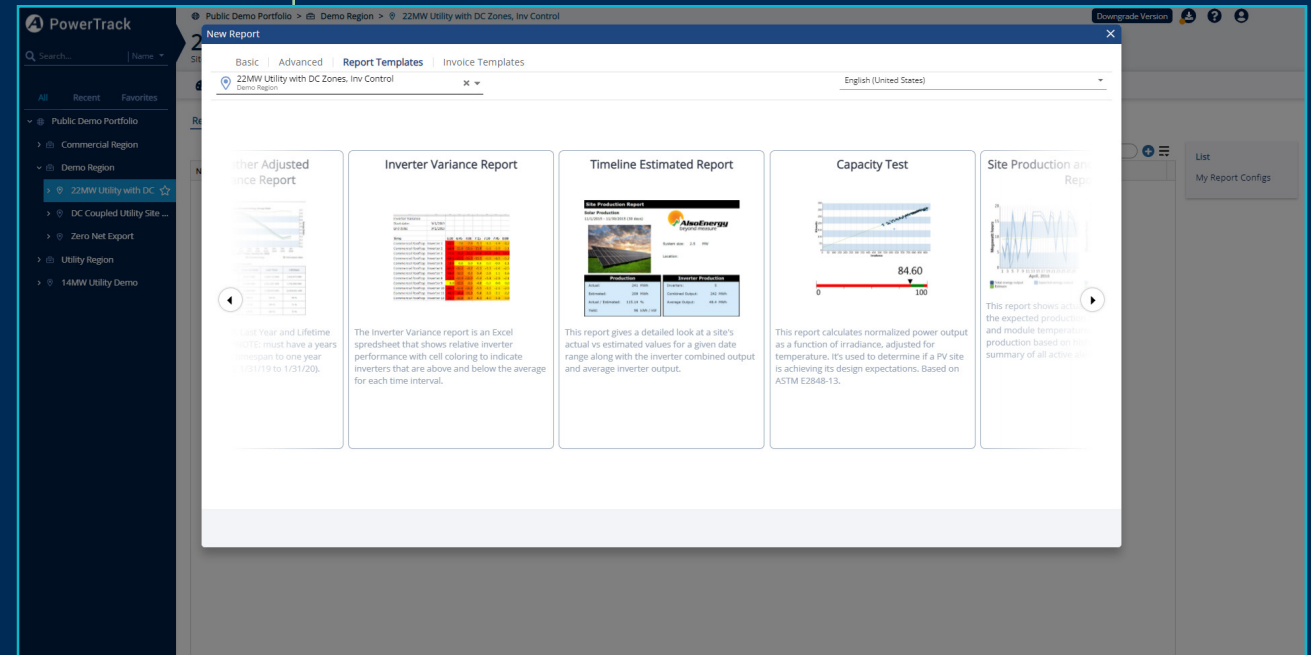
The Site Overview dashboard shows current production plus past performance comparisons so you can easily identify any major issues. It also allows you to see actual versus weather-adjusted energy production so you can tell if your site is performing at its peak.



# Robust and automated reporting

Automated and customized reports are simplified in Powertrack's suite of reporting tools. Run sophisticated queries and create customized and templated reports for you and your business stakeholders.

- Over a dozen templated reports, such as financial reports, site validations, capacity tests, production comparisons, expected versus actual modeling, loss alert reports, and invoice templates
- Options to automatically send custom data reports
- API availability to ingest and integrate your data
- Multi-level reports for portfolio, sites, and devices



EPC



Performance  
engineer

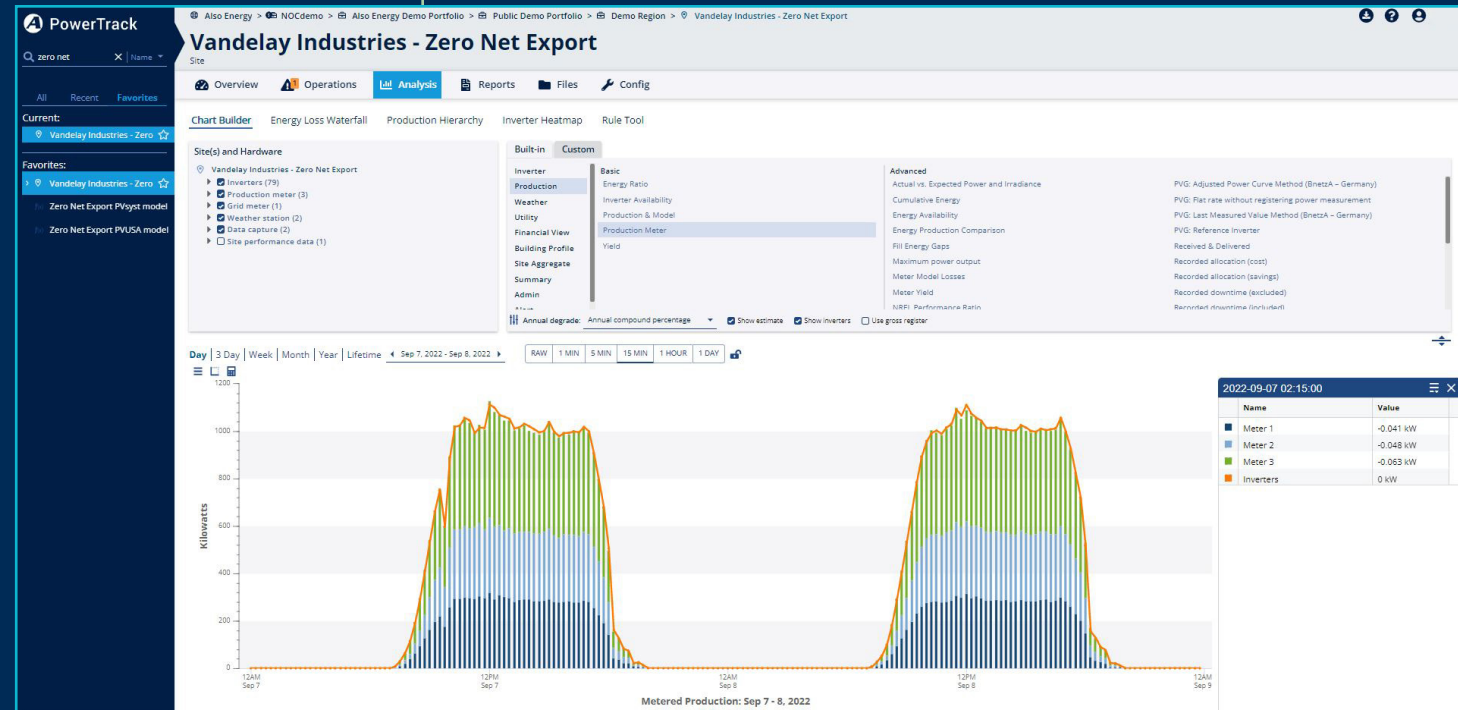


Asset  
owner

# Templated and tailored charting

Build your own charts or use templates, to filter and customize data, analyze performance, and troubleshoot issues. Having the capability to select and deselect components to refine your information allows you to analyze any issues and stay up to date with asset performance and health.

- Identify sources of energy losses, under performance, or asset issues
- Numerous configurations and selections to build your own charts
- Key insights can be easily extracted with charting and data visualization



EPC



Control center



Performance engineer

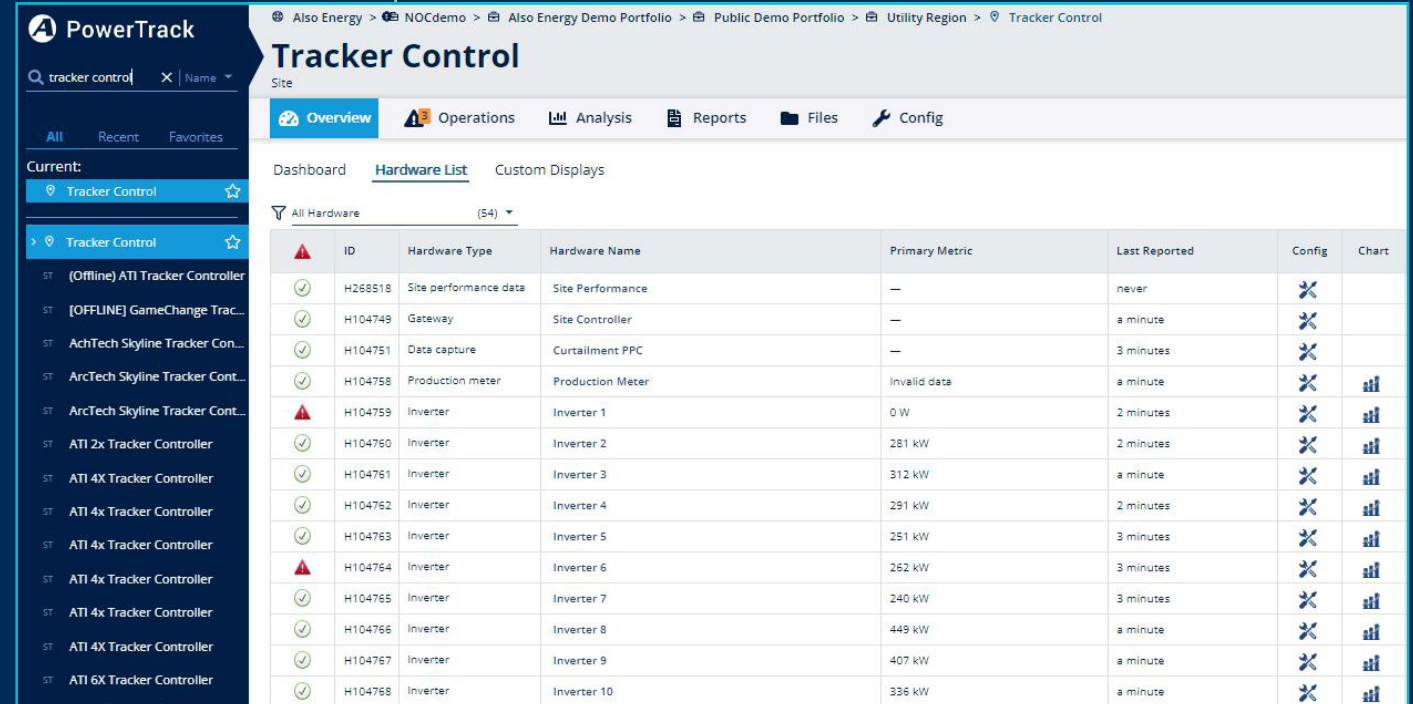


Asset owner

# Quickly configure and analyze hardware

The hardware analysis tool automatically checks all site hardware, verifying functionality and communications, while also solving many types of issues.

- Automatically identifies issues
- Finds invalid alerts, conflicts, driver issues, and more
- Quickly checks communication and configuration of data for the entire site in 30 seconds
- Confirm installations and fixes are complete while on site



The screenshot displays the PowerTrack Tracker Control interface. The left sidebar shows a list of hardware items, including various ATI Tracker Controllers. The main panel shows a table of hardware details.

	ID	Hardware Type	Hardware Name	Primary Metric	Last Reported	Config	Chart
ST	(Offline) ATI Tracker Controller						
ST	[OFFLINE] GameChange Trac...						
ST	AchTech Skyline Tracker Con...						
ST	ArcTech Skyline Tracker Cont...						
ST	ATI 2x Tracker Controller						
ST	ATI 4X Tracker Controller						
ST	ATI 4x Tracker Controller						
ST	ATI 4x Tracker Controller						
ST	ATI 4x Tracker Controller						
ST	ATI 4x Tracker Controller						
ST	ATI 4X Tracker Controller						
ST	ATI 6X Tracker Controller						
ST	H268518	Site performance data	Site Performance	—	never	✕	
ST	H104749	Gateway	Site Controller	—	a minute	✕	
ST	H104751	Data capture	Curtailment PPC	—	3 minutes	✕	
ST	H104758	Production meter	Production Meter	Invalid data	a minute	✕	📊
ST	H104759	Inverter	Inverter 1	0 W	2 minutes	✕	📊
ST	H104760	Inverter	Inverter 2	281 kW	2 minutes	✕	📊
ST	H104761	Inverter	Inverter 3	312 kW	a minute	✕	📊
ST	H104762	Inverter	Inverter 4	291 kW	2 minutes	✕	📊
ST	H104763	Inverter	Inverter 5	251 kW	3 minutes	✕	📊
ST	H104764	Inverter	Inverter 6	262 kW	3 minutes	✕	📊
ST	H104765	Inverter	Inverter 7	240 kW	3 minutes	✕	📊
ST	H104766	Inverter	Inverter 8	449 kW	a minute	✕	📊
ST	H104767	Inverter	Inverter 9	407 kW	a minute	✕	📊
ST	H104768	Inverter	Inverter 10	336 kW	a minute	✕	📊



EPC



Control center



Performance engineer

# Confirm device communication and performance

Taking a deep dive into each device is crucial to assessing and optimizing the overall health of assets. The ability to quickly pinpoint faults and identify outliers is available instantaneously - both onsite and remotely.

- Identify and sort all devices with actionable information
- Easily test individual device communication and configuration
- Automatic alert resolution and hardware performance confirmation

**PowerTrack**

Public Demo Portfolio > Utility Region > Tracker Control > INV Inverter 19

## Inverter 19

Hardware

**Overview** Operations Analysis Reports Files Config

**Dashboard**

Inverter 19 Last Communication: 4/25/2022, 4:19:17 PM EDT  
Last Attempt: 4/25/2022, 4:19:45 PM EDT In service [Reload Latest Data](#)

Registers: Data [ Detailed View ]

Register Name	Legacy Data Na...	Data Stored	Address	Value	Units	Register	Scale	H...	Register
VoltsAB	VacAB	✓	6136	393.1	V	3931	*0.1		
VoltsBC	VacBC	✓	6137	396.1	V	3961	*0.1		
VoltsCA	VacCA	✓	6138	396.3	V	3963	*0.1		
Current A	IacA	✓	6139	936	A	9360	*0.1		
Current B	IacB	✓	6140	936.3	A	9363	*0.1		
Current C	IacC	✓	6141	935.6	A	9356	*0.1		
DC input voltage	Vdc	✓	6143	623.6	V	6236	*0.1		
DC input current	Idc	✓	6144	1042.9	A	10429	*0.1		
Line frequency			6146	60	Hz	600	*0.1		
Line kW	KwAC	✓	6142	636.4	kW	6364	*0.1		
Line kVA			6129	636.1	kVA	6361	*0.1		
Line kVAR	kVAR	✓	6132	4.5	kVAR	45	*0.1		
Total KWH delivered	KwhAC	✓	2050	2302430.6	kWh	23024306	this * 0.1 + KWHOffset		
kW DC	KwDC	✓	10000	650	kW	4294967295	'DC input voltage' * 'DC input		



Control center



Performance engineer



# Remotely troubleshoot inverter production issues

Powerful data visualization of near real-time and historical production in PowerTrack enables you to easily spot performance anomalies so you can troubleshoot and identify the cause.

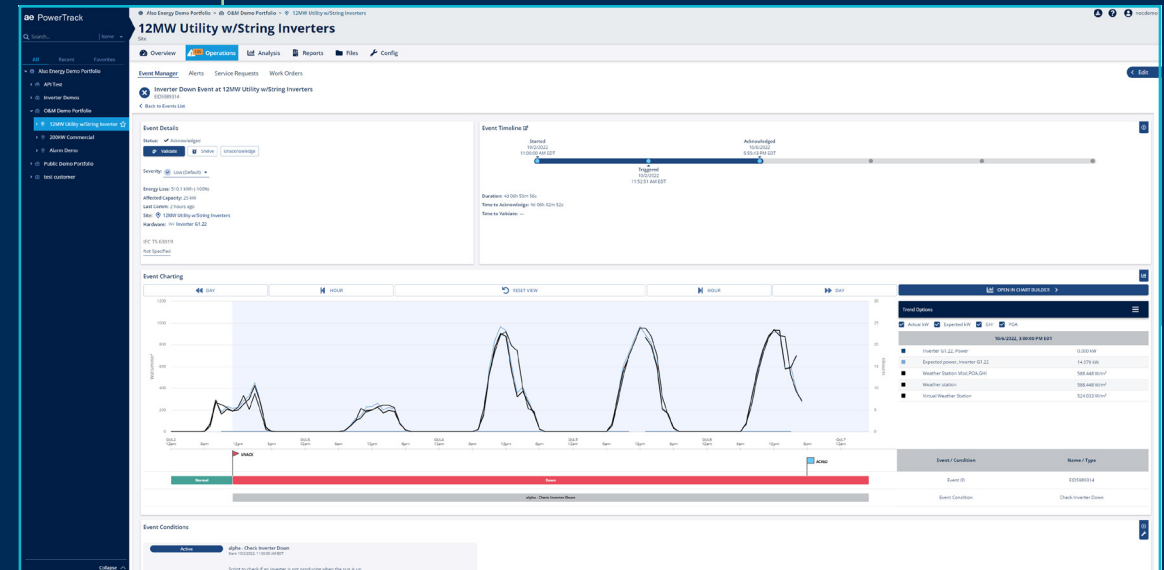
The Inverter Heat Map tool visualizes inverter production comparisons, enabling identification of inverter production problems.



# Efficiently identify and resolve events

Event Manager detects and prioritizes faults while providing insights into events so you can efficiently address issues with centralized communication. This enables a streamlined and automated workflow for identifying, understanding, and fixing faults across your fleet, saving time, decreasing costs, and increasing system uptime.

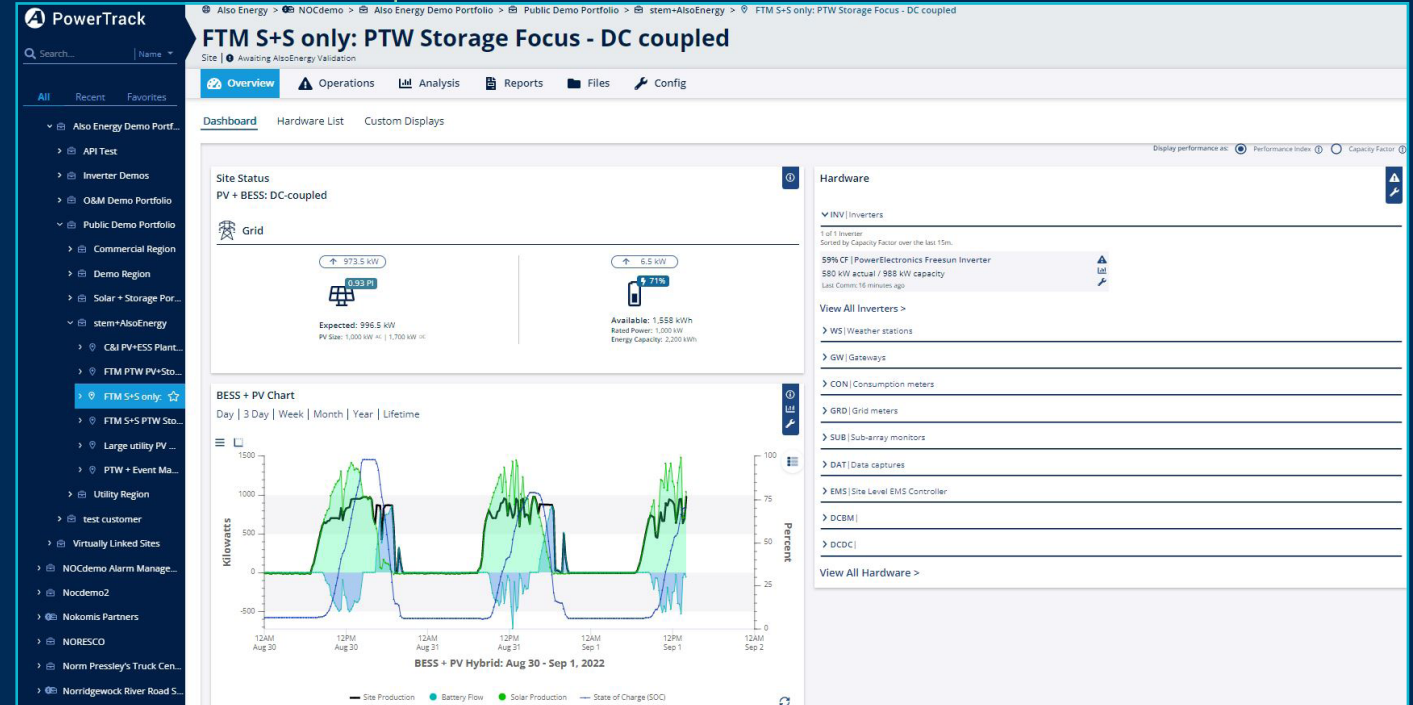
- Efficiently hand off faults and create work orders
- Improves signal-to-noise ratio by 50%
- Enables users to categorize and prioritize events
- CMMS integration for work orders to quickly resolve events that need to be actioned
- Detailed information for fast onsite fixes



# Improve visibility into storage assets

With Storage Visibility, you have a more complete picture of your storage assets to improve site performance and maximize revenue streams.

- At-a-glance view of asset type at portfolio and fleet-level view
- Visualization of battery status at site level dashboard
- Detailed charting for energy storage
- Ensure program compliance



Performance engineer

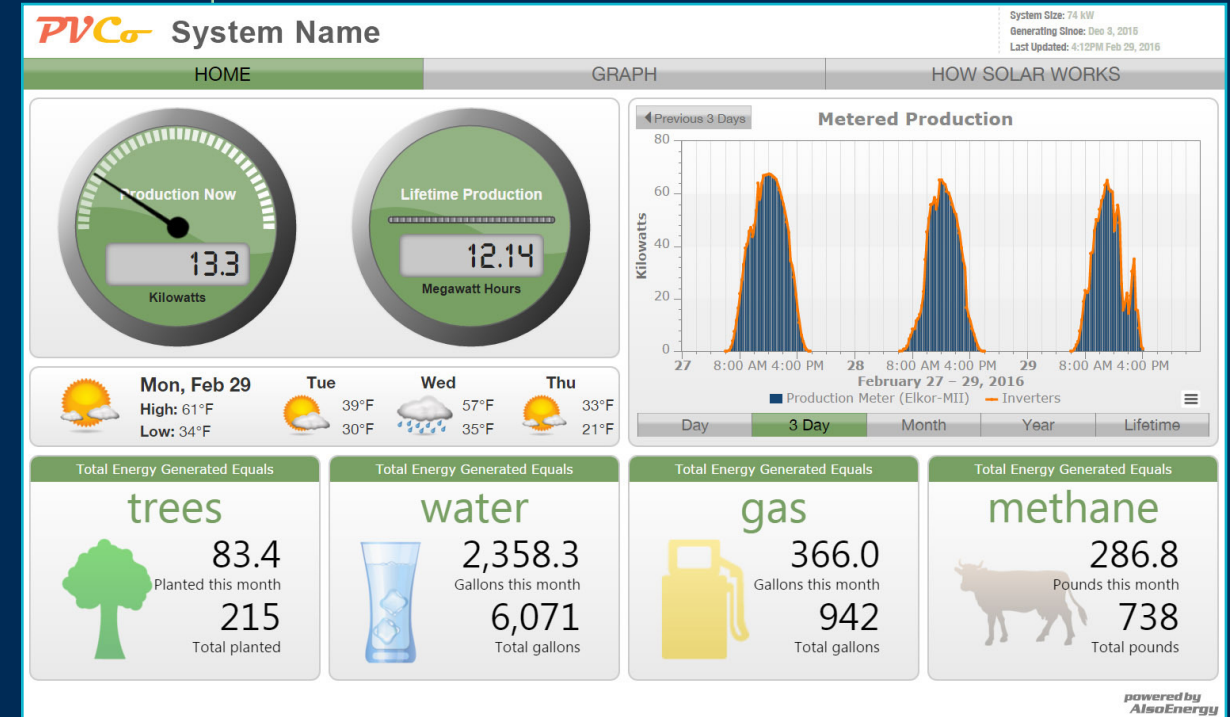


Asset owner

# Share your environmental impact

Sharing your sustainability efforts with the public is easy with PowerTrack. Various display options include mini-sites for web sharing or email, dashboards for mobile devices and kiosks.

- Show data for one system or for your entire portfolio assets
- Display the environmental impact equivalents of your ESG program, such as energy produced, cars taken off the road, and trees planted
- Customizations available for your logo, colors, and photos
- Share real-time data configured to your preferences
- Options to show aggregated data, educational content, weather forecast, and performance analytics



About Stem, Inc.

**Stem (NYSE: STEM) is a global leader in AI-enabled software and services that enable its customers to plan, deploy, and operate clean energy assets.**

Stem offers a complete set of solutions that transform how solar and energy storage projects are developed, deployed, and operated, including an integrated suite of software and edge products, and full lifecycle services from a team of leading experts.

More than 16,000 global customers rely on Stem to maximize the value of their clean energy projects and portfolios. [Learn more at stem.com](https://stem.com).

Industry Leader

**+200,000**

Sites

041825

**50**

Countries

**+28**

GW of  
Monitored  
Power

**15**

Years

Industry leaders rely on Stem



To book a meeting contact

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