



Hi James, I'm mAvenIt
Your Green Hydrogen Control Assistant. How can I help you today?

Try asking:

- ELECTROLYSIS OPERATIONS & CONTROL**
 - Start electrolyser stack 2 ramp-up
 - What-if: increase current density to 1.5 A/cm²
 - Apply APC load-following recommendations
 - Current H₂ production rate and efficiency
- STACK HEALTH & MONITORING**
 - Stack health heatmap (cell voltages)
 - Membrane degradation trend Stack 1
 - Equipment requiring attention
- WORK ORDERS & MAINTENANCE**
 - Open work orders
 - Create work order Stack 1 membrane inspection
 - Compressor C-101 maintenance history
 - Overdue maintenance items
 - When was PSA unit regenerated?
 - Water purification system notes
- QUALITY & ANALYTICS**
 - H₂ purity trend last 7 days
 - Specific energy consumption trend
 - Stack efficiency comparison (Stack 1 vs 2)
- ALARMS & SAFETY**
 - Show active alarms
 - H₂ leak detection status
 - Emergency depressurize readiness

Ask me anything - electrolysis operations, stack control, H₂ production, maintenance, what-if scenarios...

Press **Enter** to send, **Shift+Enter** for new line



Intelligent Energy Operations

Proven Industrial Technologies — Powered by AI
Sixteen Products. One Platform.

The Net Zero Challenge

The energy transition demands technologies that manage renewable complexity, optimise decarbonisation pathways, and deliver measurable, audit-ready emissions reductions — from grid edge to control room.



Renewable Variability

Wind and solar intermittency demands forecasting, storage integration, and real-time dispatch optimisation.



New Assets, New Control

Electrolysers, BESS and CO₂ capture need new control and lifecycle strategies — not legacy DCS tuning.



Accountable Decarbonisation

Net-zero commitments require accurate carbon accounting and audit-ready reporting across every asset.

CROSS-CUTTING PLATFORM

Every Application. One Platform



ADVANCED CONTROL MAVEN APC

Model-predictive control that co-ordinates set-points across electrolysers, turbines, batteries, and capture trains in real time — hitting the economic / emissions frontier simultaneously.

MPC | CONSTRAINT-AWARE | \$/MWh



ASSET RELIABILITY MAVEN APM

ML-driven health scoring and time-to-failure prediction for turbines, stacks, inverters, compressors, and pumps. Reduces unplanned downtime and extends 25-year lifecycles.

HEALTH INDEX | ANOMALY ML | RUL



DIGITAL TWIN MAVEN DTWIN

Physics-based digital twin for scenario testing, what-if dispatch, operator training and hybrid-system design. Validates control strategy offline before live deployment.

WHAT-IF | OPERATOR TRAINING | HYBRID DESIGN

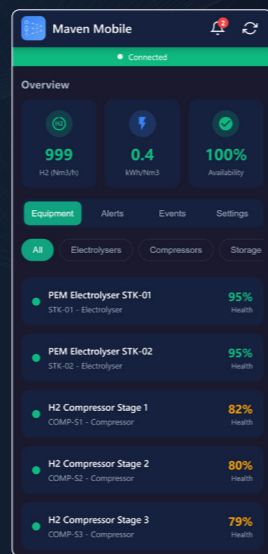


AI ASSISTANT — FLAGSHIP mAvenIt

Natural-language control for the modern control room. Ask plain-English questions, triage alarm floods, execute multi-step procedures with audit trail — across any asset class.

NL QUERIES | ALARM TRIAGE | PROCEDURE AI

MOBILE COMPANION MAVEN MOBILE

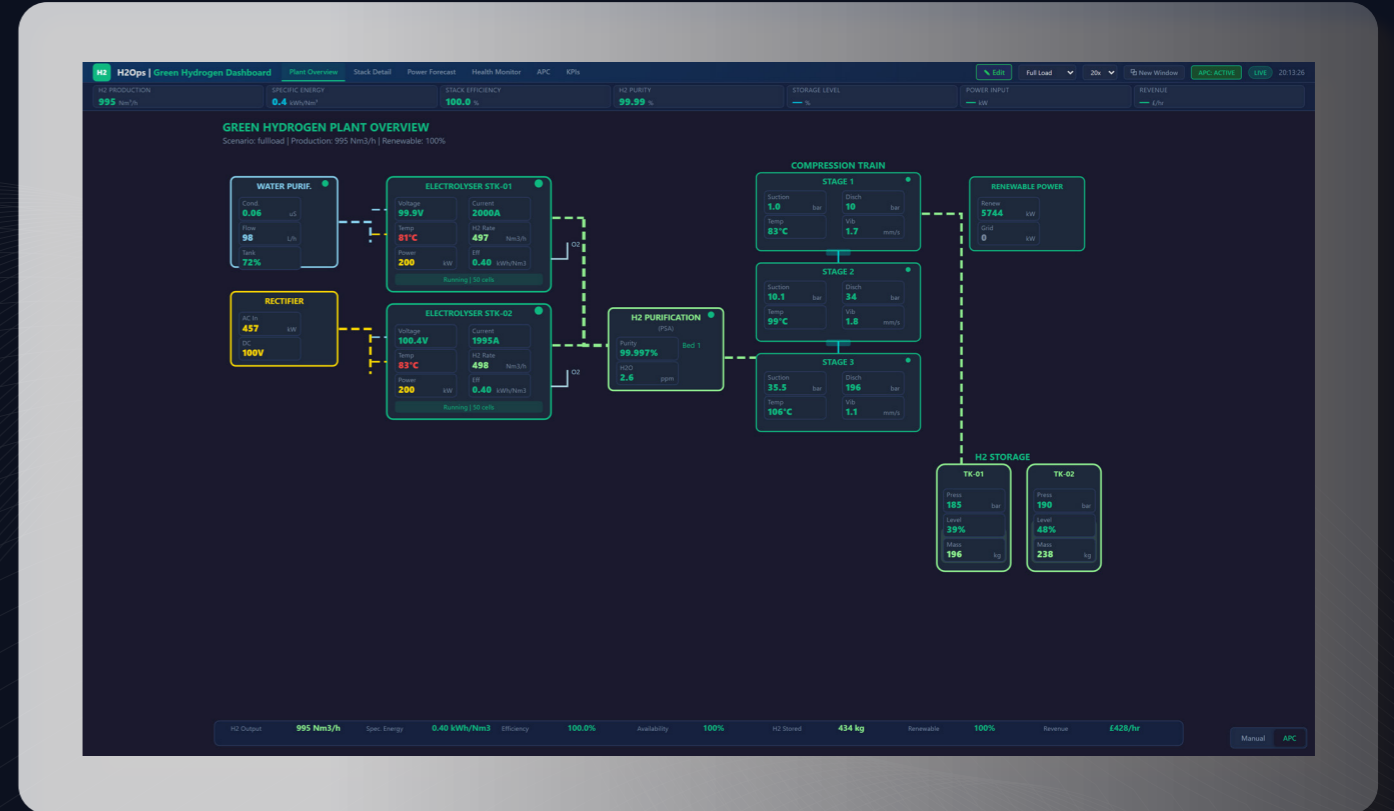


Your plant in your pocket — live KPIs, alerts and equipment health for every module.

IOS | ANDROID | PWA | OFFLINE

Green Hydrogen Operations

Complete hydrogen plant platform — electrolyser stack control, multi-stage compression, cascade storage management, PSA purification and renewable dispatch integration.



PLANT OVERVIEW — ELECTROLYSERS, COMPRESSION, CASCADE STORAGE, PSA PURITY



STACK DETAIL — CELL VOLTAGE & DEGRADATION

- Dynamic renewable-input following with stand-by management
- Multi-stage compression with cascade storage control
- Electrolyser efficiency optimisation (kWh / kg H₂)



HEALTH MONITOR — FAULTS & DIAGNOSTICS

- Stack degradation tracking & 80,000+ hour lifespan protection
- Hydrogen purity QA to 99.999% with drift detection
- Safety interlocks & emergency venting sequences

ALKALINE / PEM | CASCADE STORAGE | PSA PURIFICATION | RENEWABLE INTEGRATION | APC / APM READY |

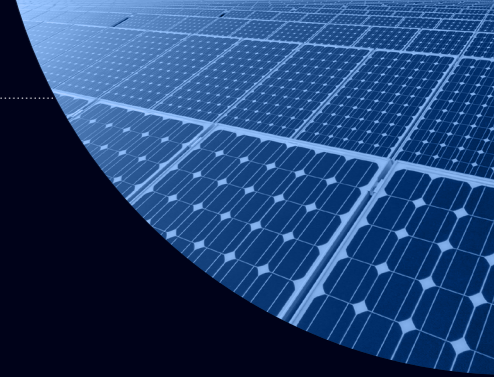
Wind Farm Performance

Real-time farm SCADA, turbine-level performance tracking, yaw & pitch optimisation, wake-effect modelling and curtailment control for onshore and offshore installations.

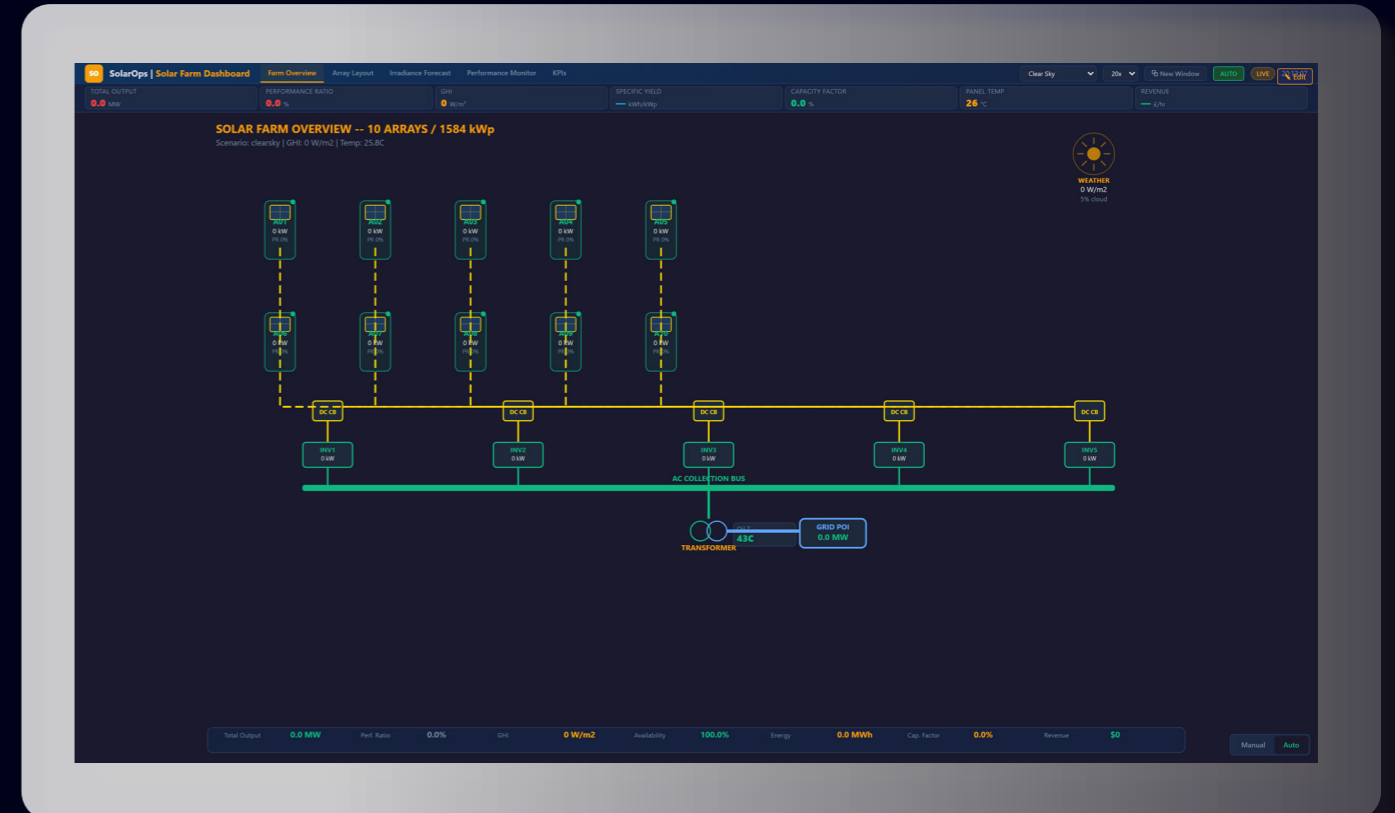


Solar Farm Intelligence

Inverter and string-level monitoring, soiling detection, performance-ratio analytics and predictive upkeep for utility-scale and distributed PV installations.



FARM OVERVIEW — TURBINE STATUS, POWER OUTPUT, WIND CONDITIONS



FARM OVERVIEW — ARRAY STATUS, GENERATION, IRRADIANCE



TURBINE LAYOUT — WAKE ZONES

Capacity % Yaw Error * GB Vib mm/s Availability

13.2%	-5.9	1.2	AVAILABLE
15.1%	5.0	1.0	AVAILABLE
31.0%	5.1	1.0	AVAILABLE
19.9%	-4.3	0.6	AVAILABLE
42.4%	5.1	1.1	AVAILABLE
13.1%	-13.9	1.4	AVAILABLE
28.1%	9.5	0.9	AVAILABLE
23.2%	3.5	1.4	AVAILABLE
0.0%	-2.9	6.3	UNAVAILABLE
36.4%	-5.7	1.1	AVAILABLE
12.6%	4.0	1.1	AVAILABLE

POWER FORECAST — WEATHER-INTEGRATED



ARRAY LAYOUT — STRING PERFORMANCE

DC (kW)	AC (kW)	PR %	Cell Temp C
0	0	0.0%	27
0	0	0.0%	27
0	0	0.0%	25
0	0	0.0%	24
0	0	0.0%	16
0	0	0.0%	27
0	0	0.0%	27
0	0	0.0%	23
0	0	0.0%	27
0	0	0.0%	24

IRRADIANCE FORECAST — GENERATION PREDICTIONS

- Turbine-level monitoring with SCADA analytics
- Wake effect modelling & farm-level power optimisation
- Yaw & pitch optimisation for energy yield

- Predictive maintenance — gearbox, bearing, blade faults
- Weather-integrated generation forecasting for dispatch
- Curtailment control & grid-compliance tracking

- Panel and string-level performance monitoring
- Inverter efficiency tracking & fault diagnostics
- Performance-ratio & degradation analytics

- Soiling detection with cleaning optimisation
- Irradiance forecasting for dispatch predictions
- Utility & distributed PV at portfolio scale

ONSHORE | OFFSHORE | SCADA ANALYTICS | WAKE MODELLING | APC / APM READY

UTILITY PV | DISTRIBUTED | STRING ANALYTICS | SOILING DETECTION | APC / APM READY

Intelligent Battery Storage

Battery storage management paired with renewables for revenue optimisation, frequency stabilisation and curtailment recovery. Model-predictive charge & discharge control for maximum value.

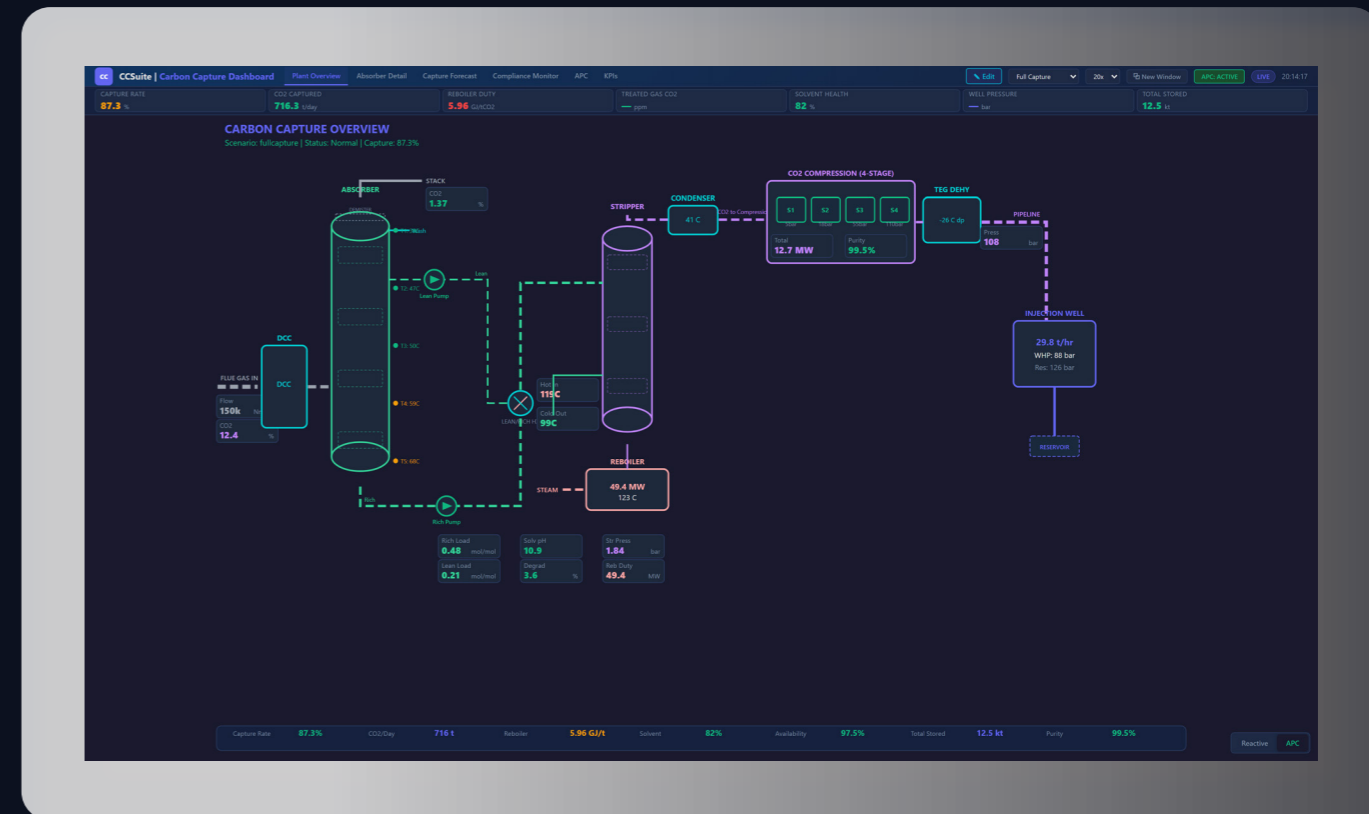


Carbon Capture & Storage

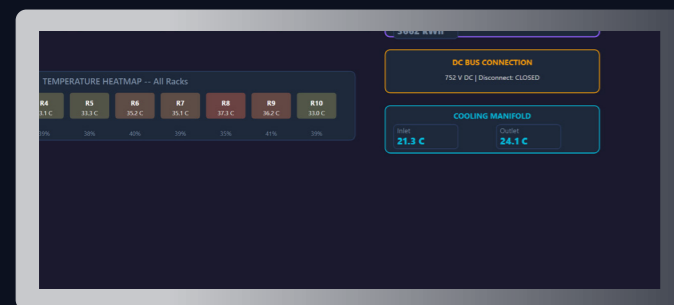
Amine-based and post-combustion CO₂ capture optimisation. Manages solvent regeneration, lean loading and capture rate for maximum reduction at minimum operating cost.



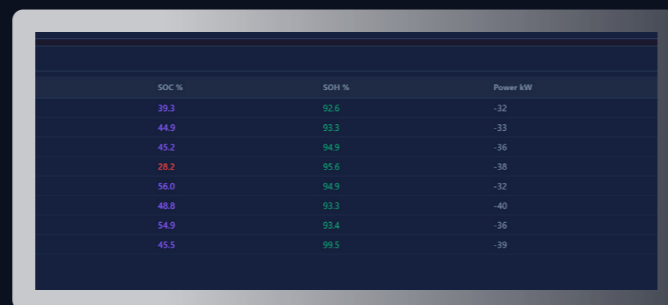
FACILITY OVERVIEW — CONTAINERS, POWER FLOW, GRID CONNECTION



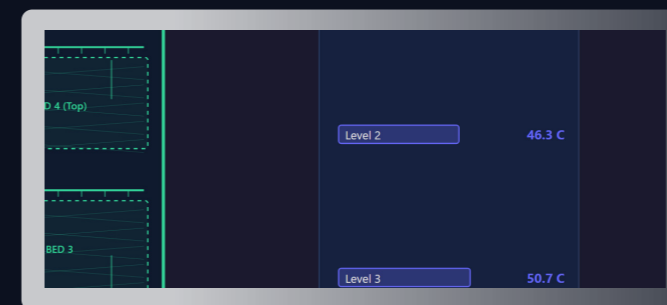
PLANT OVERVIEW — ABSORBER, STRIPPER, COMPRESSION, INJECTION



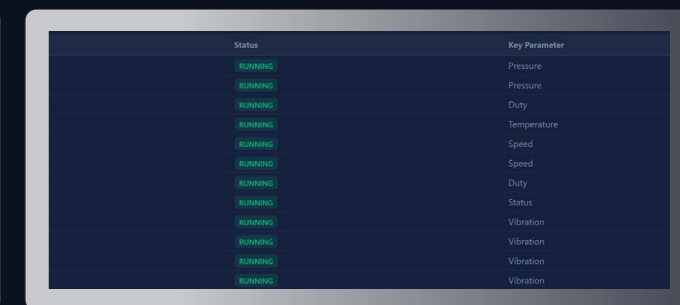
CONTAINER LAYOUT — SOC / SOH / TEMPERATURE



PRICE FORECAST — ARBITRAGE & DISPATCH



ABSORBER DETAIL — TEMPERATURE & LOADING



CAPTURE FORECAST — RATE PREDICTION

- State of Charge & State of Health per container
- Thermal management and degradation prediction
- MPC-based charge / discharge optimisation

- Revenue maximisation via arbitrage & grid services
- Grid frequency response & ancillary service dispatch
- Renewable pairing & curtailment recovery

- CO₂ capture rate maximisation with energy-penalty minimisation
- Compression & pipeline transport management
- Amine / post-combustion optimisation

- Solvent degradation monitoring & regeneration control
- Carbon accounting & audit-ready reporting
- Injection well performance & containment tracking

GRID-SCALE | C&I | ARBITRAGE | FREQUENCY RESPONSE | APC / APM READY

AMINE | POST-COMBUSTION | CO₂ ACCOUNTING | TRANSPORT & INJECTION | APC / APM READY

Ready to Transform Your Energy Operations?

OPTIMISE

Maximise generation,
minimise losses, and capture
every revenue opportunity.

PREDICT


Anticipate equipment failures
before they impact availability
or safety.

AUTOMATE

From startup sequences to dispatch
optimisation, let our proven technologies
- Powered by AI, handle the complexity.

Contact us now

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