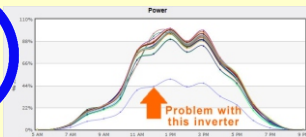


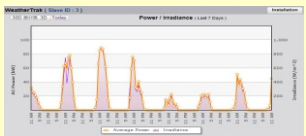
Pedal to the Metal

Unlike your car, solar PV systems should run flat out all the time, generating as much power as possible. SolarVu is a comprehensive monitoring system that can detect faults like bad panels, blown string fuses, arc fault tripped inverters and equipment failure which reduce revenue. **Choosing** the inverter manufacturer's monitoring package instead, which only provides inverter measurements, can prove costly due to lost revenue from other fault conditions that go undetected. SolarVu sends alarms for all monitored equipment, gives detailed diagnostic data to reduce expensive O&M time, eliminates unnecessary routine maintenance checks and has portfolio asset management reporting tools. Install a SolarVu energy portal with appropriate options and achieve the full yield each system was designed for.



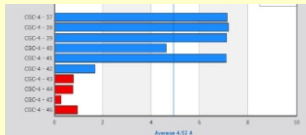
SolarVu portal

Live and lifetime energy, power, savings gages and graphs. PowerWatch compares all inverter outputs to identify a faulty inverter.



WeatherTrak

SunLowPower alarm if any inverter output is lower than expected for measured irradiance. Min/max temperature and irradiance logs.



SmartStrings

Compares each string to quickly detect low output panels on a large roof. Alarm shows string location for fast O&M repair. Zone monitoring also available.



PayCheck

Verify correct utility payment, 90 day revenue grade meter log for troubleshooting, PVsyst forecast to actual variance performance analysis reports.



SnoCam

Live roof conditions and local weather. Lifetime daily photo storage. 24/7 in-camera video for security and insurance.



SMART Enterprise

Manage a large portfolio of installations with alarm status, live values by site and totals, asset management reports. Navigate directly to each site.



SCADA

Interface equipment, programming and commissioning to meet LDC SCADA requirements

Inverter manufacturer monitoring systems only cover a small portion of the problems that occur in solar PV systems

STUFF HAPPENS

COMMISSIONING

- Incorrect comms settings in inverters and BOS devices
- Serial wiring errors by electrician
- Meter CT/PT wiring errors/settings
- Router network settings
- Weak 3G cellular reception
- Wrong/missing equipment data supplied

EQUIPMENT FAILURE

- Inverter failure
- Solar panels fail
- Corroded connections
- Loose connection = overheating, fire hazard
- Equipment left off after maintenance
- BOS equipment failure weather sensors, meter, SCADA etc

ENVIRONMENT

- Combiner box water ingress
- Rodent chews through panel wires
- Lightning damages equipment
- Grid issues cause shutdown - under/over voltage
- Snow cover / dirt buildup

COMMUNICATIONS

- Loss of internet connection
- Router/network configuration
- Customer changes router settings
- Router/ network failure
- 3G SIM card disconnected non-payment
- Weak reception in rural areas
- Equipment loss of communications
- Faulty connection
- Incorrect settings after replacement
- Noisy environment, data corruption
- Inverter design - firmware bugs

GETTING PAID

- Utility payment below expected - meter fault / accounting
- LDC SCADA problem = shutdown by LDC
- RMA for warranty claim - support data