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Tech-Tracker
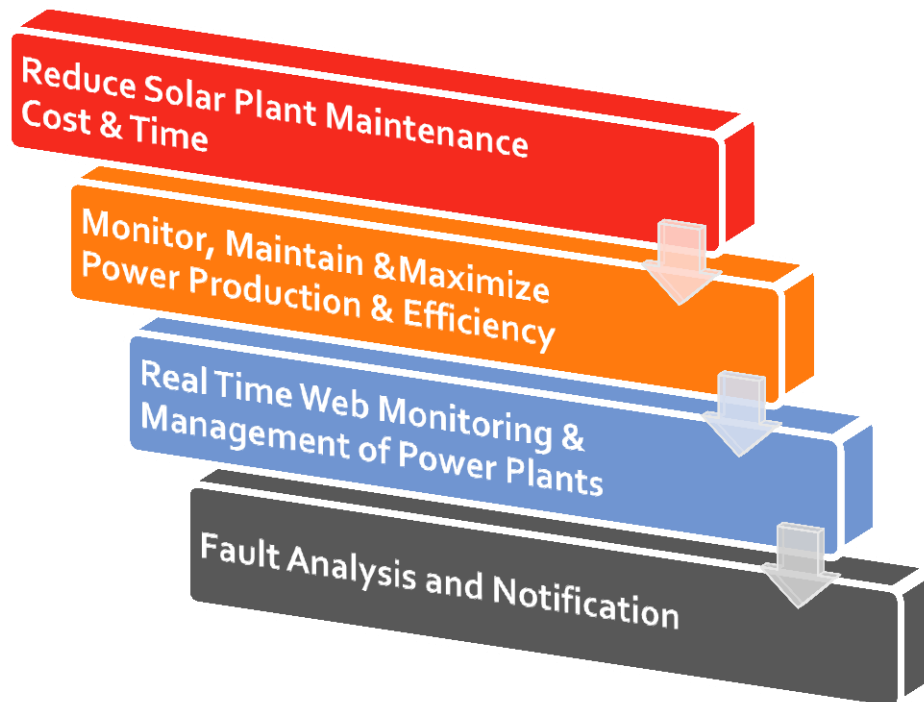
Introduction

Tech-Tracker is a Energy Remote Monitoring System to be used in Regular Energy Remote monitoring and Remote control in Industries, Renewable Energy Generation such as Solar PV, power plants, Wind Mills, Advanced Metering Infrastructure, etc. The system is based on GSM/GPRS or WiFi or RS485 and can work in remote places too. Data Monitoring, Analytics and Management is provided on a Cloud server for ease of access/use and also there is a provison for local storage.
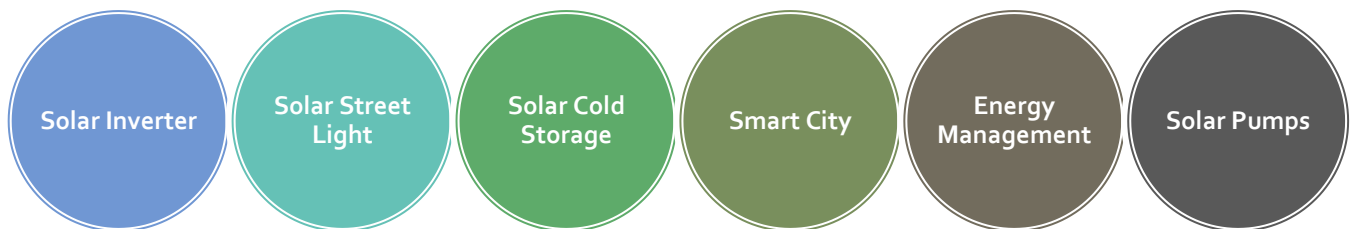
Benefits

Reduce Solar Plant Maintenance Cost & Time

Monitor, Maintain &Maximize Power Production & Efficiency

Real Time Web Monitoring & Management of Power Plants
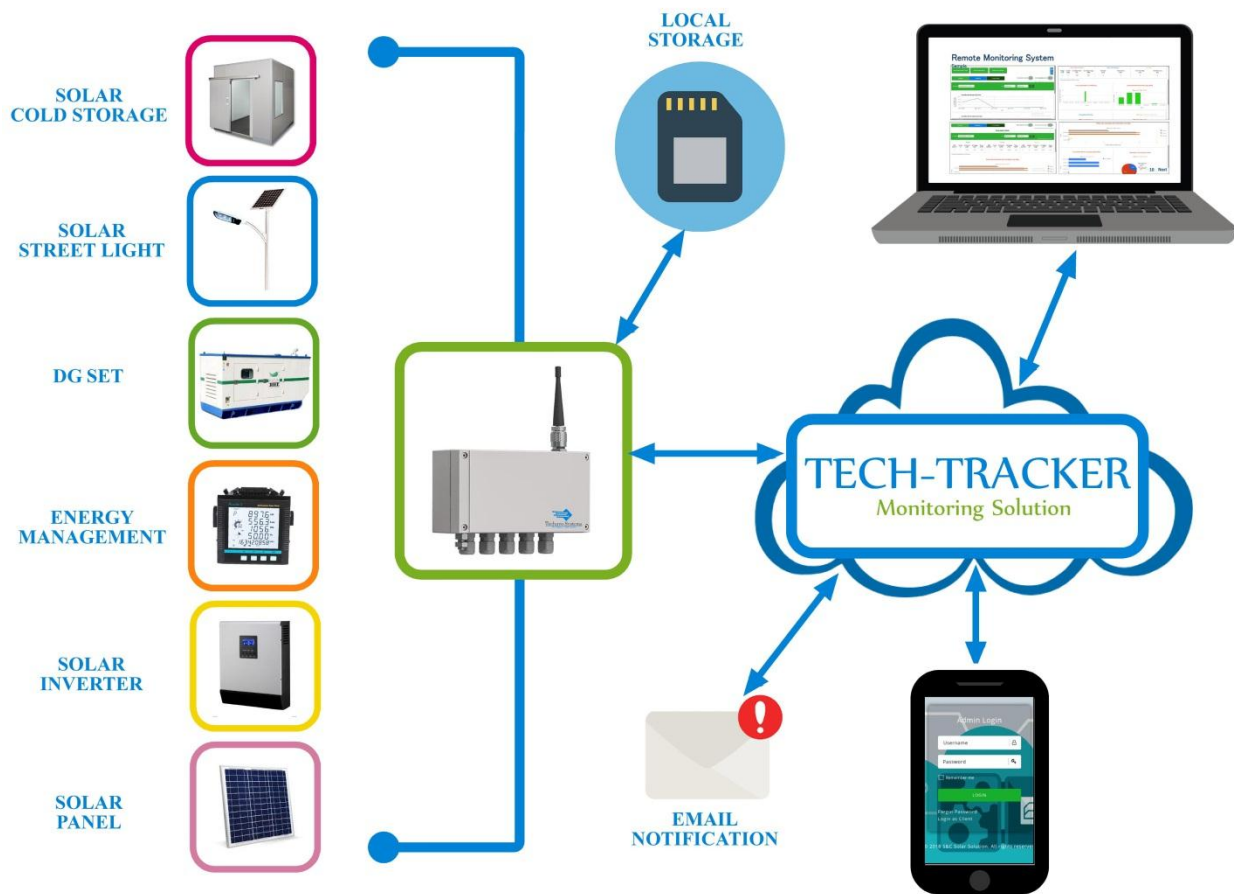
Fault Analysis and Notification

Device Specifications

- Intelligent Modbus, IO, Data Logger, 2G,4G GPRS/WiFi/Lora Connectivity
- 1 x RS-485 port for RTU Modbus, 1x RS232 port for HMI, TTL for Configuration
- Embedded ARM® Cortex™-M4 32 Bit RISC Core, 168 MHz inside, RTOS system, reliable performance with in-built watchdog;
- Wide range power supply 9~36VDC with over voltage and phase-reversal protection;
- 3 Phase AC Voltage Input 0-300VAC
- 3 Phase Secondary CT Input with 0-5AMP
- 3 Relay Outputs configurable to operate on Alarm/ SMS/ Timer
- Parameters monitored are VAC,AMP,3 PHASE KW, 3PHASE KWH, PF, FREQUENCY
- RS485 Modbus Output to read all the parameters
- Smart Inbuilt Data Logger works during Network and Server Disconnection
- Logger Sends offline data once Network and Server Connected
- Upto 6 Authorized numbers list for command and Configuring.
- Configurable TCP/Http/MQTT/Https Mode, GET/POST Methods
- Configurable CSV/JSON/Custom Format for Parameter Packetization
- Remote Configuration through SMS/GPRS/Server IP Commands
- Alerts: Over Voltage, Under Voltage, Over Current, Under Current, max KW
- OTA (Over The Air) Firmware upgrade, Device Configuration update.
- LED & LCD indicators to provide GSM, GPRS, Signal, Modbus Tx/Rx COM Status.
- Configurable Server Connection: Connects on Demand or Always Connected.
- Keep Alive command to maintain socket connection

Area of Usage

Solar Inverter

Solar Street Light

Solar Cold Storage

Smart City

Energy Management

Solar Pumps

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How It Works

SOLAR COLD STORAGE

SOLAR STREET LIGHT

DG SET

ENERGY MANAGEMENT

SOLAR INVERTER

SOLAR PANEL

LOCAL STORAGE

Remote Monitoring System

TECH-TRACKER
Monitoring Solution

EMAIL NOTIFICATION

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Web Monitoring Screenshots

Welcome_UNDP Logout

| Energy Demand & Supply Analysis | Plant Performance Data Log | Update Device Configuration |

| Generation | Consumption | Carbon Abatement |

Total Generation (kWh) 571.72   Total Consumption (kWh) 1487.94

Displays total generation and total consumption till date

Device ID Select ID   From mm/dd/yyyy To mm/dd/yyyy Go

Cumulative Net Generation (Day Wise)

Cumulative Net Consumption (Day Wise)

Cumulative Net Generation versus Cumulative Net Consumption (Day Wise)

- Cumulative Net Generation (kWh)
- Cumulative Net Consumption (kWh)

Welcome_UNDP Logout

| Energy Demand & Supply Analysis | Plant Performance Data Log | Update Device Configuration |

| Generation ✓ | Consumption | Carbon Abatement |

Total Generation (kWh) 571.72   Total Consumption (kWh) 1487.94

Displays total generation and total consumption till date

Generation Details Capacity Wise

Device ID Select ID   From mm/dd/yyyy To mm/dd/yyyy Go

Selection will only impact 'Cumulative Net Generation' chart shown below

Machine ID	MPPT No.	DC Current (amp)*	DC Voltage (volt)*	Generation (kWh)	Capacity (kW)	Running (in Day Hours)
3	1	17.97	486.25	0.35	8.74	12.69

Machine ID	MPPT No.	DC Current (amp)*	DC Voltage (volt)*	Generation (kWh)	Capacity (kW)	Running (in Day Hours)
3	2	0	0	0	0	12.69

Machine ID	MPPT No.	DC Current (amp)*	DC Voltage (volt)*	Generation (kWh)	Capacity (kW)	Running (in Day Hours)
3	3	0	0	0	0	12.69

* Displaying the latest data from all the AMR Devices

Hourly Generation (13-09-2018)

Cumulative Net Generation (Day Wise)
[01-01-2018 to 30-09-2018]

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Welcome,UNDP [Logout]

Energy Demand & Supply Analysis	Plant Perfomance Data Log	Update Device Configuration

Generation	Consumption ✓	Carbon Abatement

Total Generation (kWh) **571.72**   Total Consumption (kWh) **1487.94**

Displays total generation and total consumption till date

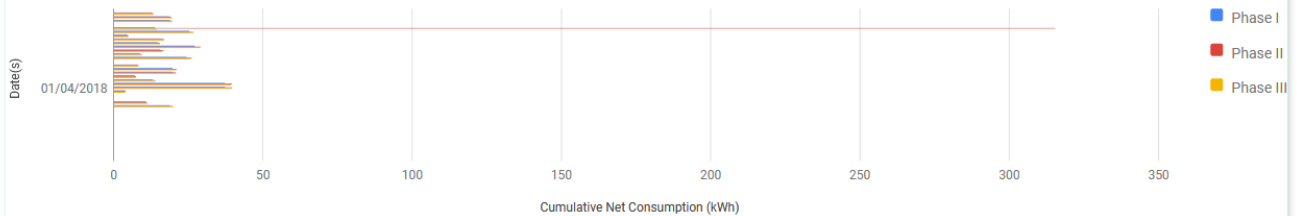## Consumption Details

Device ID: [Select ID ▼]   From [mm/dd/yyyy] To [mm/dd/yyyy] [Go]

Selection will only affect the charts below

Phase I					Phase II					Phase III			
AMR Device ID	AC Current (amp)*	AC Voltage (volt)*	Power Factor*		AMR Device ID	AC Current (amp)*	AC Voltage (volt)*	Power Factor*		AMR Device ID	AC Current (amp)*	AC Voltage (volt)*	Power Factor*
3	16.81	232.63	0.99		3	18.2	235.72	0.99		3	17.89	245.68	0.99

* Displaying the latest data from all the AMR Devices
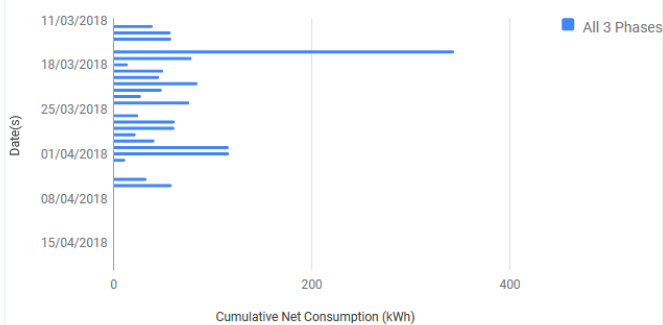
Phase wise Cumulative Net Consumption (by Date)
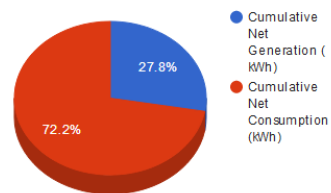
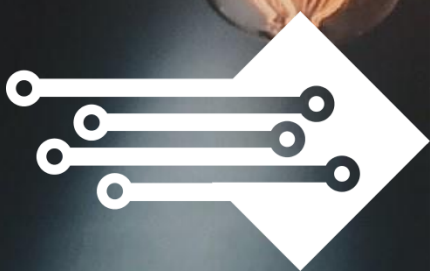From 01-01-2018 To 13-09-2018

Cumulative Net Consumption (Day Wise)

From 01-01-2018 To 13-09-2018

Generation-Consumption Ratio

From 01-01-2018 To 13-09-2018

27.8%
72.2%

- Cumulative Net Generation (kWh)
- Cumulative Net Consumption (kWh)

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About Us

Incepted in the year of 2014, Techavo Systems are the leading **designer, manufacturer** and **wholesaler** of **Iot based Products, Meters, Data Logger, Solar Chargers.** Techavo provides **Custom Electronic Design, PCB Design, Embedded Systems Design,** domain