



# Solar Ware Ninja Initial Responder and Parts Replacement Training

Technical training course covering basic operation and hands-on training for O&M providers, qualified client engineers, and 3rd party service providers.

- 3 day training course for engineering and maintenance personnel
- Inverter and Solar Ware<sup>®</sup> System Hardware and software operation, maintenance, and troubleshooting
- Hands-on classroom and lab exercises
- Presented by experienced industry service engineers

#### Students will learn:

- $\sqrt{\phantom{a}}$  Fundamentals of operation of the TMEIC inverter and Solar Ware  $^{\circledR}$  System
- √ Use of the Touch Screen user interface
- √ To recognize normal and abnormal operation
- √ To troubleshoot faults
- $\sqrt{\phantom{a}}$  To identify and replace defective parts
- **√** Preventive Maintenance procedures
- **√** TMEIC Warranty processes

#### Cost:

\$4,000.00 per person

Registration fees are non-cancellable and non-refundable unless notified at least one week prior to the class start date.

The class does not cover the installation of the equipment.



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#### Who should attend?

Qualifi ed Engineers and Technicians involved in the operation, maintenance, and troubleshooting of photovoltaic systems will benefit from this course.

#### **Course Overview**

TMEIC Solar Ware® Operations and Maintenance training is a 3 day course which includes a combination of classroom lecture and hands-on training. At the completion of the course, the student will have a basic understanding of the operation and maintenance of the TMEIC PV Inverter and Solar Ware® Systems. The student will be able to provide technician level troubleshooting of basic faults and replacement of parts such as circuit breakers, AC/DC fuses, circuit boards and cooling fans. Preventative maintenance procedures will be covered and the TMEIC warranty processes will be reviewed. The student will receive a Certificate of Achievement when the class is completed. Note – this course covers operation and maintenance of our inverters by the end user or service provider.

This class does not cover installation and commissioning of the equipment.

## **Prerequisites**

- A basic knowledge of electrical concepts.
- A basic working knowledge of utility scale photo voltaic inverter systems
- A working knowledge of sound safety procedures
- A signed EHS statement plus supporting certificates must be received by TMEIC Client Training before training commences. EHS Agreement.
- Proper signed agreements- Self-Perform or Authorized Service Provider.

## **Typical Agenda**

#### Day One

- Introduction to TMEIC inverters maintenance and troubleshooting
- Solar Ware® System details and station troubleshooting
- Inverter operation details

#### **Day Two**

- Inverter maintenance and preventive maintenance
- Inverter parts replacement
- Inverter troubleshooting

#### **Day Three**

- Warranty processes
- Q&A and general discussion

#### **Student Materials**

- Class presentation documents
- Technical Manuals
- Sample electrical drawings

#### For more information please contact:

Email: training@tmeic.com

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### **Topics**

- Introduction to TMEIC Power Electronics Equipment
- Walk-through of hardware components/power flow
- Electrical Drawing
- 1500V PV Inverter Installation Manual
- Inverter Operations Quick Guide
- Inverter De-energization/ Ninja Skid LOTO
- Grounding MOP
- Aux Power MOP
- AC fuse MOP for replacement
- DC fuse MOP for replacement
- Inverter web server
- Event log recordings
- SCU webserver
- Start/stop individual inverters
- Start/stop skid
- Monitoring of Modbus feedbacks
- Technical Services Team and Case Generation
- Grounding Experiential Learning Module
- Aux Power Experiential Learning Module
- Fuse Replacement Experiential Learning Module
- Power Bridge Fan MOP for Replacement
- Roof Fan MOP for Replacement
- Fan Replacement Experiential Learning Module
- AC CT MOP for Replacement
- DC CT MOP for Replacement

- CT Experiential Learning Module
- PCB MOPs for Replacement
- PCB Experiential Learning Module
- SPD MOP for Replacement
- SPD Experiential Learning Module
- Thermal Sensor MOP for Replacement
- Thermal Sensor Experiential Learning Module
- Ground Resistor MOP for Replacement
- VI1 Resistor MOP for Replacement
- Output Filter Resister MOP for Replacement
- Bleed Off Resistor MOP for Replacement
- Resistor Replacement Experiential Learning Module
- Fan Contactor MOP for Replacement
- 72C DC Contactor MOP for Replacement
- 52RC AC Contactor MOP for Replacement
- 52R Disconnect MOP for Replacement
- Contactor Replacement Experiential Learning Module
- Review of Technical Services Team and Case Generation

For more information please contact:

Email: training@tmeic.com

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