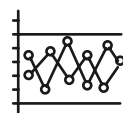
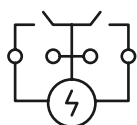
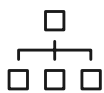


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## Technical Services Yarraville

# Energy metering projects and compliance

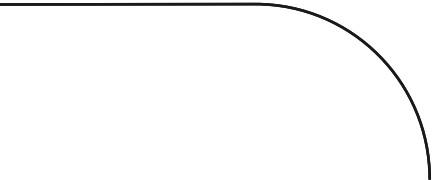


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WE CAN COME TO YOU

**Our on-site services  
ensure convenience  
for our clients.**



## Your partner for technical energy solutions and high voltage metering & testing

### Your assets are in safe hands

We draw on decades of experience looking after both transmission and distribution networks. The long term health of your asset is paramount and we put in place a program that will inspect, assess, monitor and protect your assets from the ground up.

As one of Australia's top multi-utility metering businesses, Mondo is at the forefront of powering the future of Australian companies. We understand that businesses are the heartbeat of our nation's progress, and thus we strive to provide the most advanced energy solutions for today and tomorrow.

Specialising in technical services, we offer bespoke solutions to a diverse range of clients including distribution and transmission network service providers, developers, constructors, engineers, asset owners, retailers, consultants, and various commercial and industrial businesses.

Working together for a **bright future.**

Mondo Power Pty Ltd is an independent subsidiary of AusNet Services Ltd



## ABOUT

# Working with the Mondo Yarraville team:

Located in Yarraville, we are a team of specialists in executing complex energy metering and testing services. With years of experience, we take pride in helping businesses manage risk, control costs, and meet compliance obligations.

Our team combines state-of-the-art technology with their vast expertise to solve the problems that large infrastructure businesses face. We have a strong track record of delivering high-quality results to exacting standards, making us a trusted partner for many companies.

We are proud to be a NATA Accredited Metrology Facility and an AEMO Accredited Meter Provider. This dual accreditation demonstrates our commitment to quality and excellence and enables us to offer our clients a wide range of services.

Our team works directly with customers and project managers, providing a suite of diverse services including:

- Consultancy and compliance management of NEM/AEMO Transmission metering assets.
- HV meter, CT & VT compliance testing and NATA certification.
- Earth Grid testing for terminal stations/substations to measure and verify the integrity of earthing systems.
- REFCL (Rapid Earth Fault Current Limiter) verification testing.
- In-house metrology verification of test equipment.



## Post-commissioning metering and reporting

Mondo provides both contestable 'market' and sub-metering 'off-market' services. We can design a metering solution to allow a granular view of your electricity usage.

### Our services include:

- Metering Coordinator
- Meter Provider
- Meter Data Provider
- Sub-metering, including for complex PPA arrangements
- Web portals for data visualisation and reporting

## Earth Grid Testing

One of the most integral component of a power system. Terminal stations, generating stations and lines all require a good earthing systems to protect from power earth faults.

### We can measure:

- Step and Touch Potentials
- Earth Potential Rise
- Soil Resistivity
- Earth Continuity
- Earth Grid Testing

## REFCL commissioning and testing

Rapid Earth Fault Current Limiter (REFCL)

### We can measure:

- Undertake REFCL commissioning Fault Throw Testing
- Ongoing AVT (Annual Verification Testing)

## Power quality metering and analysis

We offer a real-time power quality metering solution that can be used to monitor and analyse fluctuations in voltage and current harmonics. We offer both permanent and short-term solutions using four quadrant energy meters with power quality features.

### We can measure:

- Harmonic analysis to 50th harmonic of voltage and current
- Total Harmonic Distortion of voltage and current
- Recording frequency variance
- Instantaneous 3 phase waveform capture
- Detailed site-specific analysis and reporting on the results



WHAT WE DO

# Current, voltage transformer testing and energy metering calibration

We ensure that your metering infrastructure is safe and the data is accurate for market billing. In addition, we ensure your compliance with all National Electricity Rules.



## Current Transformer

The current transformers (CTs) form part of the metrology of the installation. We use state of the art equipment to complete excitation, ratio, polarity and winding resistance tests:

- Testing to AS 60044.1 and AS 1675 standards
- Testing both IEC 61869 International Standard and AS 61869 Australian Standard
- Primary injection
- Secondary injection
- Burden-impedance measurement

## Voltage Transformer

Similar to the CTs, the voltage transformers (VTs) also form part of the metrology of the installation. It is important to verify ratios and phase accuracies to ensure data being measured is compliant and accurate:

- Testing to AS 60044.2 & 5, AS 1243 and AS 61869
- Primary injection with independent source
- Investigating simulated supply testing by use of Omicron Votano
- Using Omicron Votano for secondary injection testing

## Metering Calibration

It is important to ensure the meter is calibrated and is operating within the specifications provided by the manufacturer. Our testing facility provides the following calibration services, both in the field and in our laboratory:

- 4 quadrant calibration
- Active and reactive energy
- In-service burden measurement and compensation determinations, if required
- Test equipment calibrations for metering applications



## NATA accredited

As a NATA-accredited service provider we ensure that your metering infrastructure is safe and the data is accurate for market billing. In addition, we ensure your compliance with your HV testing obligations under the National Electricity Rules



WHAT WE DO

# High voltage metering products and services

From metering advisory to ongoing testing and detailed data analysis, we provide a tailored range of products and services and our high voltage experts can help you establish the best solution for your installation.





## High voltage advisory services

Our team works directly with customers and project managers to provide guidance and advice on all aspects of HV metering.

### Our services include:

- Metering scope advisory
- Process and engineering advice
- AEMO application and registration of "I" form
- Obtain and register a NMI for Victorian TNSP
- Interpreting Chapter 7 of the National Electricity Rules
- Nominating a Metering Coordinator

## Pre-commissioning and installation

Our pre-commissioning services ensure an on-schedule, compliant and efficient HV metering installation. We are one of the few that provide NATA-accredited testing of CTs and VTs.

### We offer:

- Design, scoping and drawings
- In-house manufacture and build of meter panels
- Pre-commission testing as required by the Rules
- HV meter, CT and VT installation and commissioning
- Post-installation follow-up

## Testing and ongoing compliance

Our ongoing compliance package is specifically designed to provide peace of mind that your metering assets are operating correctly and to be there for you if a fault arises

### This includes:

- Priority fault response
- HV Maintenance Plan
- Ongoing meter testing and CT visual inspections
- Yearly reports on site performance
- Burden measurement of metering circuitry
- NATA testing of metering CTs and VTs

## Did you know?

The National Electricity Rules require all components of a HV metering installation to be tested periodically. This includes the meters to be tested every 5 years. Current transformers (CTs) and voltage transformers (VTs) to be tested every 10 years.



# What we need from you to get started

## Pre-commissioning

1. Single Line Diagram that shows the metering point
2. Map of the connection point
3. CT VT ratios, classes and burdens
4. Whether you require market or non-market metering

## Post-commissioning

1. NATA/ILAC Certificates for instrument transformers
2. Estimate of your annual energy consumption or generation
3. Single Line Diagram showing an overview of your powerflow
4. Wiring diagrams that show the connection from secondary terminals of CTs and VTs to the meter marshalling box and then to the meter panel
5. Whether you require market or non-market metering

## We recommend

- VT class and accuracy is 0.5 and rated burden of VT is 50VA
- CT class and accuracy is 0.5s and rated burden of CT is 15VA
- One NMI for each connection point/metering point
- Your Registered Electrical Contractor (REC) follows the local Service & Installation Rules (SIRs)

# Want to learn more?

Call: 1300 735 328

Email: [emg.team@mondo.com.au](mailto:emg.team@mondo.com.au)





Engineering a **bright future.**

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