

# O&M SERVICES

Canadian Solar Operations and Maintenance services are designed to maximise the lifetime value of your solar power plant assets. Leveraging our 18 years of solar industry experience and 1400+ MW under O&M operations, and 2.5 GW contracted worldwide, Canadian Solar pro-actively monitors and manages your plants minimising downtime and increasing site availability, resulting in maximum energy production, revenues and profitability. Customised service packages offer the right fit for any solar power plant owner.

## SERVICE OFFERINGS

BASIC	STANDARD	PREMIUM
<b>OPERATIONS</b>		
<b>PLANT SUPERVISION</b>	<b>PLANT SUPERVISION</b>	<b>PLANT SUPERVISION</b>
<ul style="list-style-type: none"> <li>Performance Monitoring</li> <li>Issue Detection</li> <li>Curtailment</li> </ul>	<ul style="list-style-type: none"> <li>Performance Monitoring</li> <li>Issue Detection</li> <li>Curtailment</li> <li>Security Monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Performance Monitoring</li> <li>Issue Detection</li> <li>Curtailment</li> <li>Security Monitoring</li> </ul>
<b>OFFICE SUPPORT</b>		
<ul style="list-style-type: none"> <li>Daily/Monthly/Annual Reports</li> <li>Grid Operator Interface</li> <li>Energy Forecasting</li> </ul>	<ul style="list-style-type: none"> <li>Daily/Monthly/Annual Reports</li> <li>Grid Operator Interface</li> <li>Energy Forecasting</li> </ul>	<ul style="list-style-type: none"> <li>Daily/Monthly/Annual Reports</li> <li>Grid Operator Interface</li> <li>Energy Forecasting</li> </ul>
<b>MAINTENANCE</b>		
<b>PREVENTATIVE MAINTENANCE</b>	<b>PREVENTATIVE MAINTENANCE</b>	<b>PREVENTATIVE MAINTENANCE</b>
<ul style="list-style-type: none"> <li>PV / MV / HV Electrical Maintenance</li> <li>Mechanical Maintenance</li> <li>Weather Station Sensor maintenance</li> </ul>	<ul style="list-style-type: none"> <li>PV / MV / HV Electrical Maintenance</li> <li>Mechanical Maintenance</li> <li>Weather Station Sensor maintenance and calibration</li> </ul>	<ul style="list-style-type: none"> <li>PV / MV / HV Electrical Maintenance</li> <li>Mechanical Maintenance</li> <li>Weather Station Sensor maintenance and calibration</li> </ul>
<b>CORRECTIVE MAINTENANCE</b>	<b>CORRECTIVE MAINTENANCE</b>	<b>CORRECTIVE MAINTENANCE</b>
<ul style="list-style-type: none"> <li>Manage CM for items under warranty</li> <li>CM for non-warranty items can be completed without bringing in 3rd party</li> </ul>	<ul style="list-style-type: none"> <li>All corrective maintenance (warranty and non-warranty items)</li> </ul>	<ul style="list-style-type: none"> <li>All corrective maintenance (warranty and non-warranty items)</li> </ul>
<b>SITE MAINTENANCE</b>	<b>SITE MAINTENANCE</b>	<b>SITE MAINTENANCE</b>
<ul style="list-style-type: none"> <li>Landscaping (grass cutting, plant watering as required)</li> <li>Module Cleaning (Once a year)</li> </ul>	<ul style="list-style-type: none"> <li>Landscaping (grass cutting, plant watering as required)</li> <li>Module Cleaning (As required to maintain PR guarantee)</li> <li>Snow removal</li> <li>Pest Control</li> <li>Environmental Compliance</li> </ul>	<ul style="list-style-type: none"> <li>Landscaping (grass cutting, plant watering as required)</li> <li>Module Cleaning (As required to maintain PR guarantee)</li> <li>Snow removal</li> <li>Pest Control</li> <li>Environmental Compliance</li> </ul>
<b>OFFICE SUPPORT</b>	<b>OFFICE SUPPORT</b>	<b>OFFICE SUPPORT</b>
<ul style="list-style-type: none"> <li>Site Health &amp; Safety</li> <li>Spare Parts Management incl. Purchasing</li> <li>Warranty Claim Management</li> </ul>	<ul style="list-style-type: none"> <li>Site Health &amp; Safety</li> <li>Spare Parts Management incl. Purchasing</li> <li>Warranty Claim Management</li> </ul>	<ul style="list-style-type: none"> <li>Site Health &amp; Safety</li> <li>Spare Parts Management incl. Purchasing</li> <li>Warranty Claim Management</li> </ul>
<b>GUARANTEES</b>		
<ul style="list-style-type: none"> <li>Response Time Guarantee</li> <li>Availability Guarantee</li> </ul>	<ul style="list-style-type: none"> <li>Response Time Guarantee</li> <li>Availability Guarantee</li> <li>Performance Ratio Guarantee</li> </ul>	<ul style="list-style-type: none"> <li>Response Time Guarantee</li> <li>Availability Guarantee</li> <li>Performance Ratio Guarantee</li> </ul>

### CSEye SITE MONITORING

Our monitoring/asset management software (CSEye) provides critical 24/7/365 remote monitoring, diagnostics and troubleshooting. Developed by using years of aggregated data from our PV plants under O&M, our proprietary algorithms are used to:

- Analyse daily plant performance
- Pinpoint potential problems even if they are not reported by the SCADA system



### REPORTING

Daily, Monthly and Annual reports provide a record of key parameters and significant operational events and trends. Reports include:

- Executive summary
- Daily performance statistics
- Annual performance
- Maintenance summary
- Spare parts summary
- Summary of technical and other issues
- Root cause analysis for corrective maintenance



### PREVENTATIVE MAINTENANCE

We continuously review the condition, operability and safety of all PV systems and perform the required preventative maintenance to ensure maximum performance of the plant.



### CORRECTIVE MAINTENANCE

We arrange for corrective maintenance to be performed on site. Our field technicians have experience with numerous inverter technologies.



### WARRANTY MANAGEMENT

Let Canadian Solar be your advocate for all warranty claims. We will enforce your claims and exercise all your rights of arising under warranties and guarantees for components located within the project.



### SPARE PARTS MANAGEMENT

Canadian Solar can maintain an inventory of spare parts either on site or at an off-site facility controlled by the owner.



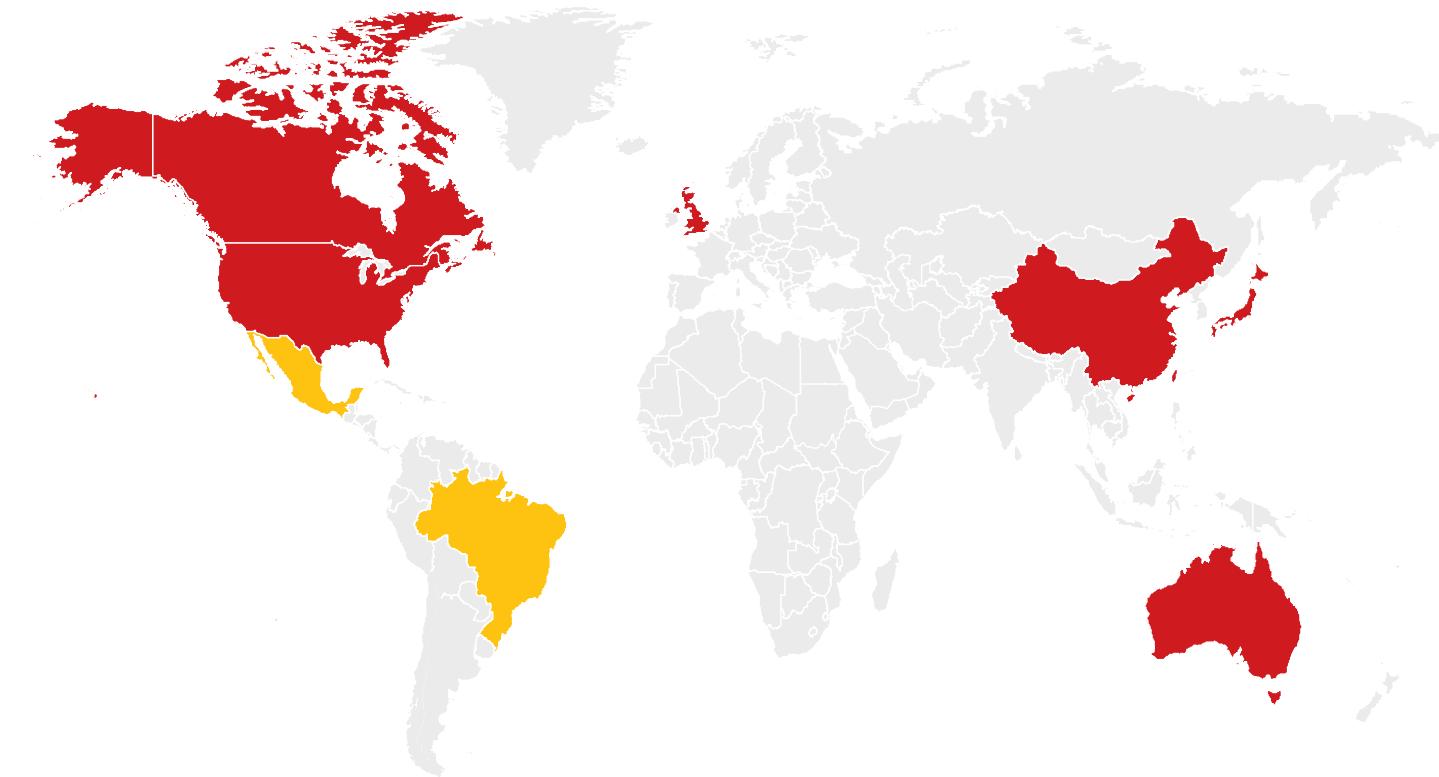
### SAFETY

At Canadian Solar, Safety is of paramount importance. We ensure the safety of all maintenance activities performed at the site. To date, we have zero lost time due to any safety issues.



# CANADIAN SOLAR O&M EXPERIENCE

- Over 1400 MW under operation and 2.5 GW contracted worldwide
- 132 MW under operation and 640 MW contracted in Australia
- 100+ plants, including ground mount utility scale and commercial rooftops
- Experience with leading inverter technologies



█ Performing O&M services  
█ O&M contracts in place for future services

## **CANADA (GLOBAL HEADQUARTERS)**

Canadian Solar Inc.  
545 Speedville Avenue West  
Guelph, Ontario, Canada N1K 1E6  
TEL +1 519 837 1881  
FAX +1 519 837 2550  
E-MAIL [sales.ca@canadiansolar.com](mailto:sales.ca@canadiansolar.com)

## **AUSTRALIA OFFICE**

Canadian Solar O&M (Australia) Pty Ltd.  
44 Stephenson Street  
Cremorne VIC 3121, Australia  
TEL +61 3 8609 1844  
E-MAIL [sales.au@canadiansolar.com](mailto:sales.au@canadiansolar.com)

[www.canadiansolar.com/au](http://www.canadiansolar.com/au)