



# O&M Services

Looking toward future horizons



The future happens here

FRV is a **global provider of renewable energy solutions** in Australia, Asia, the Middle East, Africa, Europe and Latin America.

For customers seeking comprehensive O&M Services including:



MONITORING



DATA ANALYSIS

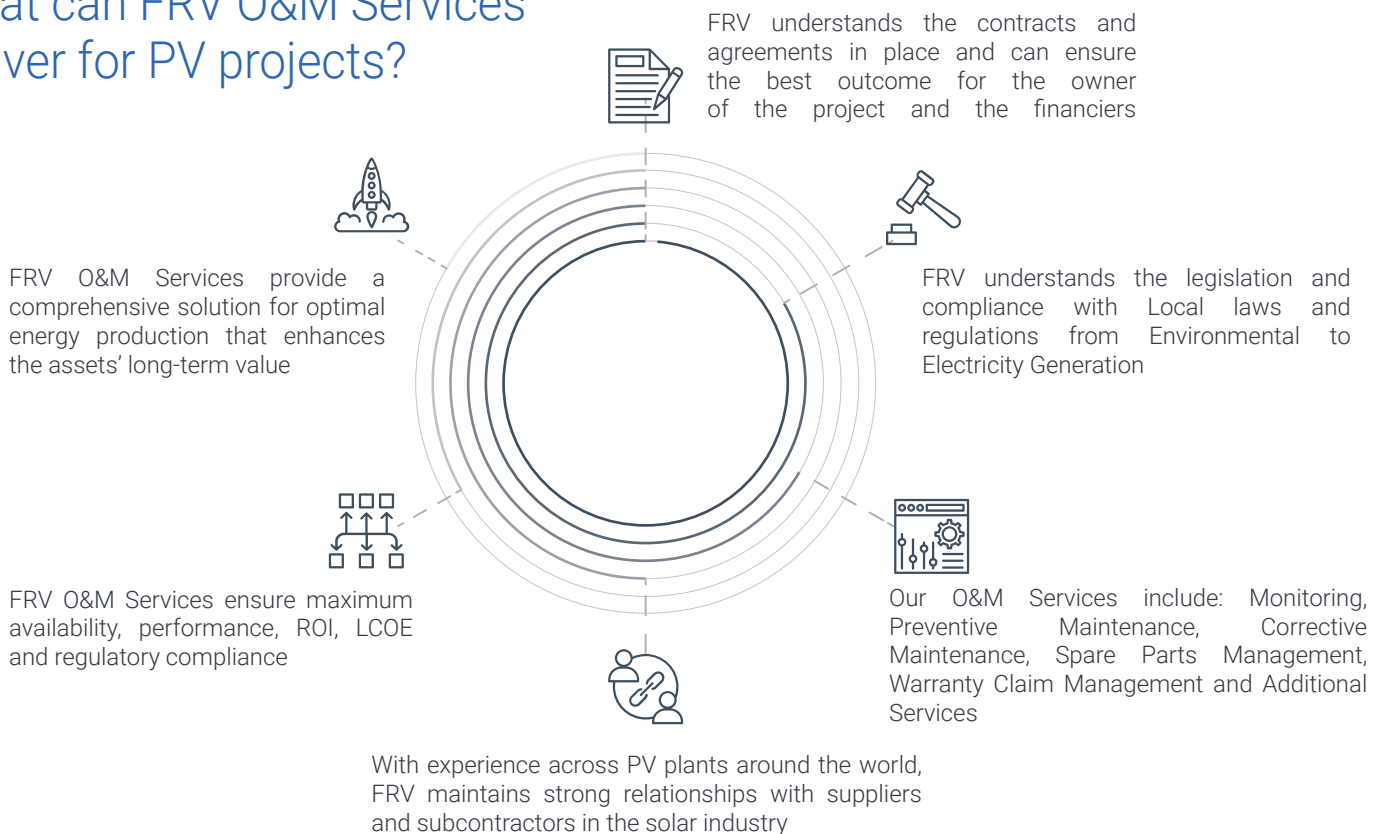


MAINTENANCE



ADDITIONAL SERVICES

## What can FRV O&M Services deliver for PV projects?





# Commercial Offer for FRV and Third party

● Included    ○ Cost plus not included

Maintenance (preventive and predictive)	Basic	Comprehensive
<b>PV Modules</b>		
Visual inspection	●	●
Module cleaning	○	●
Thermography	●	●
<b>Trackers/Fix structure</b>		
Visual inspection	●	●
Scheduled maintenance	●	●
<b>LV/Dc Cabling</b>		
Visual checks	●	●
Continuity and dielectric test	●	●
Thermography cables	●	●
Thermography connectors	●	●
<b>Combiner Boxes</b>		
Inspection	●	●
Scheduled maintenance	●	●
Thermography level 1 and 2 combiner boxes	●	●
<b>Inverters Maintenance (Central and String Inverters)</b>		
Inspection	●	●
Level 1 (Scheduled maintenance)	●	●
Level 2 (Minor correctives and parts replacement)	○	●
Level 3 (Firmware updates and major correctives)	○	○
Thermography (Inverters, nodes and IGBTs)	●	●
<b>Transformer Stations</b>		
Inspection	●	●
Scheduled maintenance	●	●
Thermography	●	●
Ground resistance measurement	○	●
Oil sample	○	●
<b>HV / AC cabling and RMU</b>		
Visual checks	●	●
Switchgear scheduled maintenance	●	●

	Basic	Comprehensive
Continuity and dielectric test	●	●
Thermography cables	●	●
Thermography connectors	●	●
<b>Substation</b>		
Visual inspection	○	●
Scheduled maintenance	○	●
Battery charger	○	●
Switchyard thermography	○	●
Voltage testing	○	●
Dielectric oil degradation test	○	●
<b>Metrological Sensors/Utility Meters</b>		
Inspection	●	●
Sensors scheduled maintenance	●	●
Calibration	○	●
<b>Communications</b>		
Fibre and cabling inspection	●	●
Server and routers inspection	●	●
<b>Security Camera/CCTV Maintenance</b>		
Inspection	●	●
Scheduled maintenance	●	●
<b>Monitoring and SCADA Maintenance</b>		
Inspection and data tests	●	●
<b>Fire Prevention System</b>		
Inspection and test	○	●
<b>Backup Generator/Batteries</b>		
Inspection	●	●
Scheduled maintenance	○	●
<b>Civil Maintenance</b>		
Inspection	●	●
<b>Vegetation Control</b>		
Vegetation clearing	○	●
<b>Buildings Maintenance</b>		
Inspection	●	●
General cleaning	○	●



# Commercial Offer for FRV and Third party

● Included      ○ Cost plus not included

	Basic	Comprehensive
<b>Corrective Maintenance</b>		
<b>Corrective Maintenance (labour)</b>	○	●
<b>Equipment Supply</b>	○	○
<b>Additional Services</b>		
Security remote surveillance	○	●
Pest and rodent control	○	●
Waste management	○	●
Road corrective maintenance	○	○
Buildings corrective maintenance	○	○
Snow removal	○	○
HVAC maintenance	○	●
Landscaping and watering	○	●
Septic tank maintenance	○	●

	Basic	Comprehensive
<b>Operations</b>		
<b>Monitoring</b>		
Real-time supervision	●	●
Remote plant monitoring	●	●
Ticketing service	●	●
24/7 emergency service	●	●
Performance and KPIs analysis	●	●
Issue detection	●	●
Dispatching	○	○
<b>Operation and Control</b>		
Plant controls	●	●
Power output forecasting	○	○
Grid operator interface	○	●
Maintenance scheduling	●	●
<b>Management</b>		
<b>Plant documentation management</b>	●	●
<b>Warranty claim management</b>		●
<b>Spare parts control and management</b>	○	●
<b>Spare parts procurement</b>	○	○
<b>Consumables procurement and management</b>	○	●
<b>Reporting</b>		
Weekly	○	●
Monthly	●	●
Annually	●	●
WHS & EHS	●	●
Quality assurance		●
Environmental assessment	●	●
<b>Guarantees</b>		
Availability guarantee	●	●
Performance guarantee	○	○
Response time guarantee	○	●

# FRV Portfolio

**>19**  
PLANTS

**>2**  
GW

**5**  
CONTINENTS



**Mexico 638,34**

FRV (Potosi)	341,97
FRV (Potrero)	296,37

**Chile 117**

FRV (Punta Colorada)	117,00
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**Uruguay 64,82**

Third Party (Jacinta)	64,82
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**Spain 237,97**

FRV (Solanilla)	50,00
FRV (Esparragal)	49,99
FRV (San Servan, 6, 7 and 8)	137,99

**Jordan 133,38**

FRV (Mafraq I)	66,69
FRV (Empire)	66,69

**Armenia 62**

FRV (Masrik)	62,00
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**Australia 763,57**

FRV (Moree)	70,18
Third Party (Clare I)	127,82
FRV (Lilyvale I)	125,56
FRV (Winton)	99,45
FRV (Sebastopol)	110,36
FRV (Metz)	141,08
FRV (Goonumbla)	89,12



Contact us  
[www.frv.com](http://www.frv.com)