

Digitally managing Solar PV modules warranty claims

Naseer Mirza





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O&M Project Manager

- Over 9 years of experience in the renewable energy industry.
- Responsible for managing large scale Solar O&M projects in RES which include revamping and repowering of solar farms.
- BA (Hons) degree in Business Management from University of Cordoba.
- Hold SMSTS, IOSH, City & Guilds and NICEIC certifications in Solar and H&S.
- Passionate about renewable energy and fight against the climate change.

ACTIVITIES



DEVELOP



CONSTRUCT



SUPPORT
SERVICES

TECHNOLOGIES



WIND



SOLAR



STORAGE



T&D



GREEN
HYDROGEN

RES is the world's largest independent renewable energy company



WARRANTY MANAGEMENT

OPTIMISING THE PERFORMANCE OF ASSETS

- As PV modules age, degradation, corrosion, delamination and many other module defects all have an impact on the yield of the solar assets. It is an increasingly important task to replace these defective modules to maximise the yield of ageing solar assets.
- Lifetime of the modules should be 25 years. These modules normally have a 10 year PV module product warranty.
- Its not an easy task given the vast number of solar panels on the solar farms.
- Traditional methods such as utilising excel and manual recording of serial numbers are labour-intensive and not cost-effective.
- Site records are not accurate due to variety of O&M providers overseeing it over the years.



Example of PV module back sheet defect



Example of bus-bar corrosion on a PV module

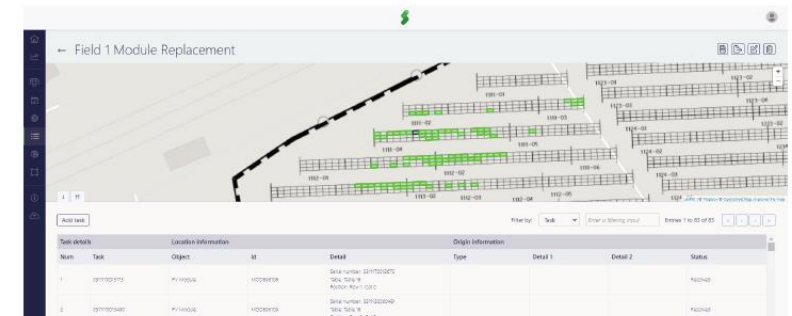
DIGITALISATION

MAXIMISING EFFICIENCIES

- Digitalise the solar farm via SolarGain digital twin portal. Geospatial and electrical layout of the site.
- Scan the modules serial number using the EyeSite mobile App.
- Take evidence pictures of the defective modules.
- Carry out IV curve testing at string and module level to confirm the performance impact.
- Use the data recorded to produce accurate “as-built” and site records.



Our partner's Above, EyeSite App



Our partner's Above, SolarGain Digital twin Portal

REDUCING COSTS

IMPROVING PERFORMANCE

- Cost effective solution for the client with significantly reduced cost and much better ROI than traditional pen and paper approach.
- Solar plant yield and performance increase once the module warranty has been successful and defective modules replaced.
- Smooth, quicker and professionally managed warranty claim with OEM due to all data been available in a digital portal instead of various unconnected excel files.
- Complete and accurate digital plant record of the site the management of future O&M activities, H&S, module warranty claims and revamping activities.



Any questions? 😊



Thank you!

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