Life extension of existing solar assets has become increasingly demanding, especially due to the ageing and under-performing assets across the globe. Historically, many systems have been deployed under certain financial mechanisms. Maintaining the existing compliances is the critical factor to continue enjoying the revenue of the system for the remaining life of the project. That is why it is essential to assess the impact of any change in component to the existing system due to compliance reasons and also to improve the performance of the assets for the extended life of the project.

Extension of life could be described with a multifold approach:

- Building permit approval timeline
- Grid connection agreement with the utility company
- Revamping solar module, inverter and HV components
- Compliance with DC and AC capacity of the existing system

Our evaluation of the technical solution includes the following scopes:

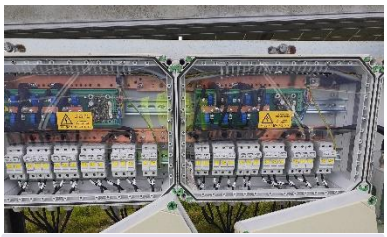
- The mechanical infrastructure of the existing module mounting system
- Existing string configuration and the maximum system voltage level
- Conditions of the existing modules, DC string cables, DC string combiner box
- Condition of the inverter and transformer
- MPPT voltage range of the existing inverter
- Matching specifications of existing LV and HV equipment of the system
- Minimise the change interface and onsite work
- Inverter grid code compliance

Case Studies

Location: UK
Capacity: 5 MWp
Module: Poly crystalline (260 Wp)
Inverter: Central
Repowering inverter with matching electrical parameters.

Location: UK
Capacity: 10 MWp
Module: Poly crystalline (245 Wp)
Inverter: Central
Repowering inverter with matching electrical parameters

Location: UK
Capacity: 5 MWp
Module: Poly crystalline (260 Wp)
Inverter: Central
Repowering inverter with matching electrical parameters



Location: UK
Capacity: 8 MWp
Module: Poly crystalline (265 Wp)
Inverter: Central
Repowering inverter, string combiner box and transformer with matching electrical parameters.

Location: UK
Capacity: 5 MWp
Module: Poly crystalline (245 Wp)
Inverter: Central
Repowering module with matching mechanical and electrical parameters

Location: UK
Capacity: 5 MWp
Module: Poly crystalline (260 Wp)
Inverter: Central
Repowering module with matching mechanical and electrical parameters