



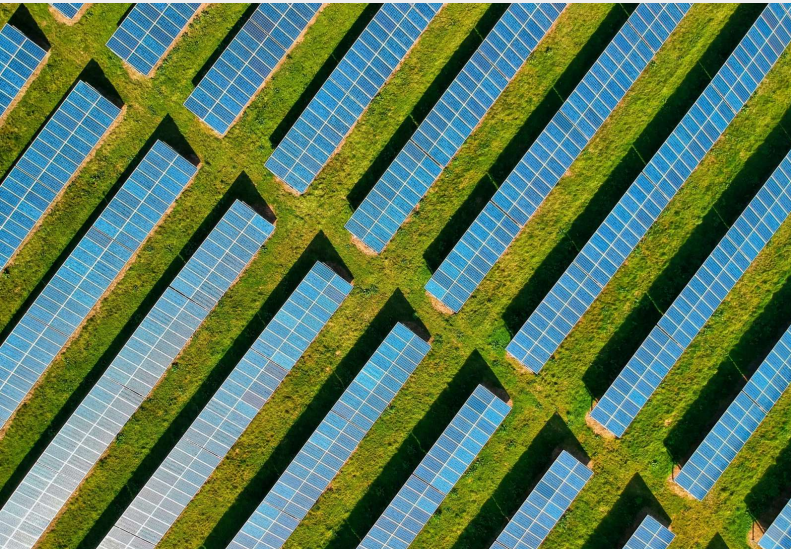
Solar Farm Critical Network Communication

"A cloudy day is no match for a sunny disposition" - William Arthur Ward

Industry
Energy

Sector
Renewables

Segment
Solar



Project

- The client is an operator of a newly constructed 175MW solar farm.
- The operator was unable to meet Hold Point Testing requirements for reliable transmission of both power to the grid and data to the regulator due to communications network issues.
- As a result, liquidated damages were in affect until the Hold Point Testing could be properly completed.
- The client needed to quickly resolve the issue and asked Cromarty to assist assessing the root cause of the issues preventing the system from operating as required.

Solution

To find a solution Cromarty firstly:

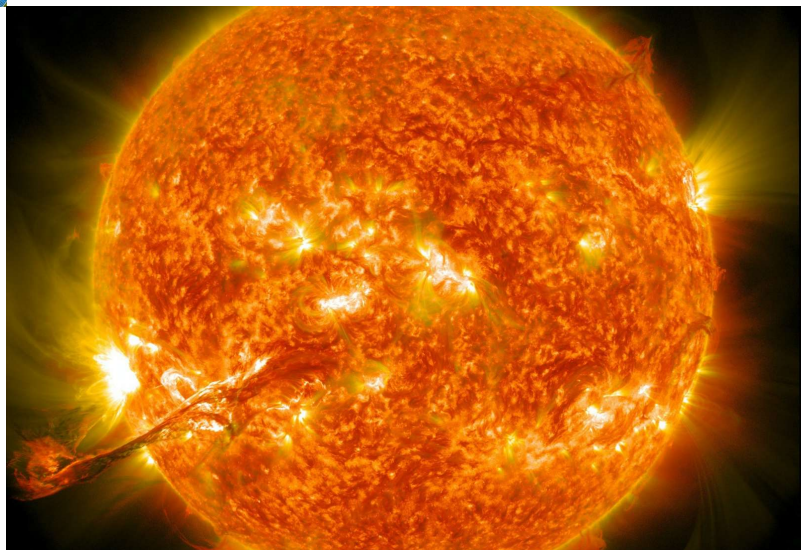
- Conducted a communications network audit involving network traffic analysis.
- Reviewed the network topology and network switch configurations.

After review of the findings Cromarty:

- Discovered that the redundancy protocol was improperly configured.
- Non-managed switches were introduced into the ring and were configured as per default settings.
- The Plant Power Controller (PPC) had an issue that interfered with the TCP conversation between it and the Power Quality Meter and inverters.

Cromarty then addressed the issue by:

- Correcting the redundancy protocol issues by implementing the switch vendor specific 'chain' protocol.
- Removed non-managed devices from the network.
- Notified the vendor of the PPC of the issue.



Outcome

The client was delighted with the outcome as Cromarty had investigated the PPC TCP conversations thoroughly which identified the root cause of the PPC communication issue and also identified an underlying issue with the PPC which even the manufacturer wasn't aware of. With both the network redundancy protocols implemented properly and PPC replaced the operator was able to complete Hold Point Testing successfully and liquidated damages ceased.