



The Australian Electricity Market Operator (AEMO) is responsible for operating Australia's largest gas and electricity markets and power systems.

## CHALLENGE

AEMO conducts the market through a centrally-coordinated dispatch process (Central Dispatch) that pools generation from producers and delivers required quantities of electricity from the pool to wholesale consumers.

Generators with an intermittent output have previously been classified as non-scheduled and hence exempted from control by Central Dispatch. This was on the basis that their electrical output cannot be controlled "on demand" as their available energy source is inherently uncontrollable.

However, the rules have changed, in order to address market efficiency and transparency, now... "Generators have to register all new sources of significant intermittent generation under a new classification of semi-scheduled generating unit, which requires owners or operators of those units to participate in Central Dispatch in a similar way to Scheduled Generators".

To meet their obligations under Central Dispatch, intermittent generators are required to provide a mechanism to accept and action semi-scheduled instructions as issued by AEMO. The dispatch instructions are issued every 5 minutes and consist of two main parameters:

- Total Cleared – target generation MW (aka Generator Dispatch Limit - GDL)
- Semi Dispatch Cap (SDC) – when true, mandates the generator to follow Total Cleared

There are two methods by which this information is communicated to participants:

## CHALLENGE

Generators have to register all new sources of significant intermittent generation under a new classification of semi-scheduled generating unit, which requires owners or operators of those units to participate in Central Dispatch in a similar way to Scheduled Generators.

## SOLUTION

Cromarty developed a package called Eight Legs to provide this alternate path for receipt of the Semi Dispatch flag data which tends to respond faster than the existing method.

## RESULTS

Successful implementation of a robust and scalable solution which can cover one or multiple sites.



#### 1. Via 'SCADA' Interface

(i.e. AEMO controllers -> Transmission company controllers -> site controllers), typically this is via real-time systems using associated robust protocols such as DNP3 or IEC 61850. This method, though more reliable and timely, is considered the 'Backup' method by AEMO.

#### 2. Via AEMO Market-based Interface

This method requires the generator to collect the instructions from .csv files placed in the participant file share on AEMO servers every 5 minutes and transport them to site controllers for execution. AEMO consider this method the 'Primary' method, each participant must have this interface implemented and not solely rely on the 'Backup' method.

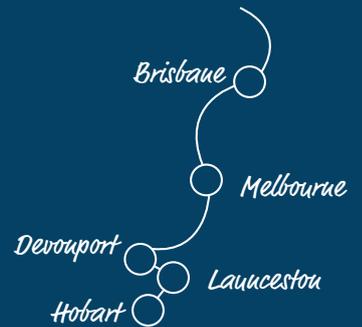
Hence, for the most reliable and timely solution, it is recommended the participant commission both the 'Primary' and 'Backup' interfaces and provide a method to failover automatically when an issue with one interface is detected.

### SOLUTION

Cromarty has developed a package called "Eight Legs" to provide this alternate path for receipt of the Semi Dispatch flag data which tends to respond faster than the existing method and has become the preferred path for the sites we have completed so far. This solution is low cost and flexible and can be hosted in the cloud or on your premises.

### RESULTS

We have successfully implemented Eight Legs for multiple other sites and can help you roll it out without any disruption. Eight Legs is a robust and scalable solution which can cover one or multiple sites if you are part of a group of generators.



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