RCM Accredited Independent Experts Information Session 2024

WA Capacity Market Investment

May 2024

Who is required to provide an Independent Expert Report (IER)?

- According to clause 4.10.2 of the WEM Rules, Facilities or components that are eligible to use the Relevant Level Method (RLM) are:
  - Intermittent Generating System (IGS) components of Non-Scheduled, Semi-Scheduled and Scheduled Facilities.
  - ESR-only Non-Scheduled Facilities (NSF) in operation for the entire 5-year period
- If the above RLM-assessed Facilities either (1) not operate with current configuration for the entire 5-year period; (2) yet to enter service; (3) re-enter service after significant maintenance; or (4) being upgraded, an IER is required (Clause 4.10.3).
- The 5-year period used for assessing RLM in 2024 CRC: 8:00am 1 April 2019 - 7:30am 1 April 2024

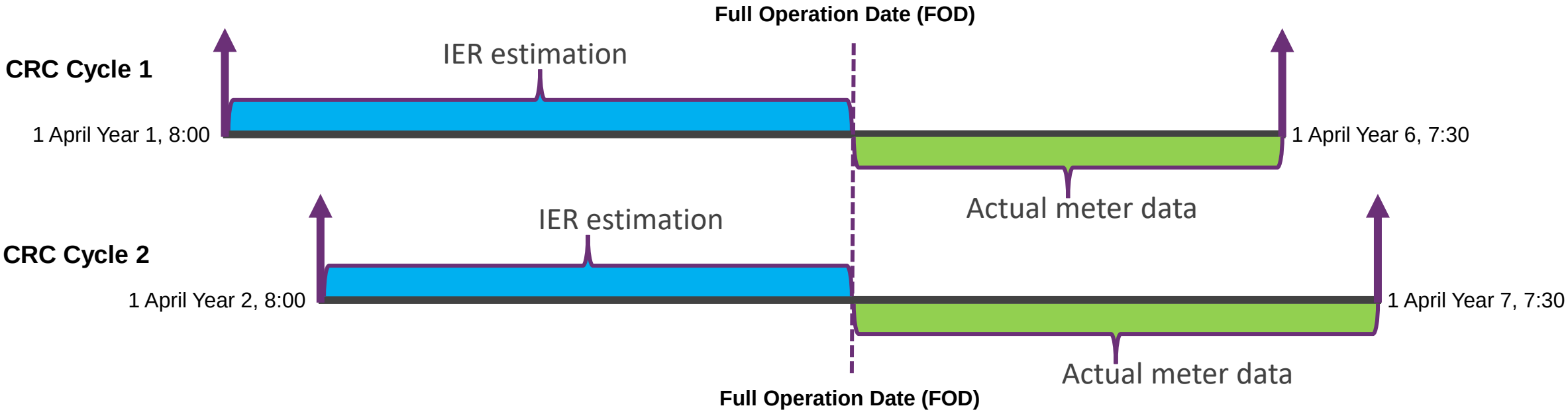
Who is required to provide a *new* IER?

AEMO may accept estimations from a previous IER for some eligible Facilities.

Rule of thumb:

If the energy output data in the “IER estimation” period for the current CRC cycle (Cycle 2 in the figure below) has already been covered in the previous cycle (Cycle 1), a previous IER may be accepted.

Energy output data used for RLM calculation



What AEMO expects from an IER?

The IER must include the criteria as specified under Clause 4.10.3A .

AEMO expects that a reasonable estimate of the expected energy as required under Clause 4.10.3A(a) includes estimate of loss factors that are applicable to the Facility. The estimates of loss factors should be reflective of industry accepted typical loss categories and calculation standards, such as for:

- **Wind farms:** availability loss, electrical loss, turbine degradation (temperature, mechanical, etc).
- **Solar farms**: soiling loss, module quality loss, light induced degradation etc.
- **Biogas and landfill**: availability loss etc.

AEMO also expects an IER to include assumptions and explanations on the loss factors used in the development of the IER.

Tips for providing the expected energy output

- Provide the time series by the start time of a Trading Interval (TI), e.g. the first TI of the 5-year period for 2024 CRC is

  01/04/2019 08:00 √

  01/04/2019 08:00am ✖ 01/04/2019 08:30 ✖

- Keep the **expected energy output to a precision of four decimal places**
- If the **Facility is already in full operation**, **for all TIs** include and after 8:00 am of the FOD, **enter "0" instead of "null"**
- **Replace negative estimates with "0"**
- May exclude consequential losses and curtailment instructions from the Network or Market Operator

Refer to IER Information Guide for more details

EFLSG & NFLSG

- **[E]$_{xisting}$**FLSG TIs – for Facilities in operation in the entire 5-year period
  - Published on AEMO website
  - Based on actual meter data only
  - Only calculate the most recent year, no recalculation of 4 previous years

- **[N]$_{ew}$**FLSG TIs for new Candidate Facilities - not in operation for entire 5-year period
  - NFLSG ≠ EGLSG
  - Individually calculated for each new Facility
  - Designed so that estimated data for new Facilities does not affect calculation of other Facilities
  - Prior-FOD: NFLSG = EFLSG + (Actual – Estimated) Generation
  - Post-FOD: NFLSG = EFLSG

! If Independent Experts were to provide a Relevant Level estimation for their customers,

DO NOT use the EFLSG TIs published by AEMO for new Candidate Facilities.

Some reflections

- **Ensure assessment accuracy**

Accurate wind speed & direction and solar irradiance measurement technologies. LiDAR SoDAR etc.

- **Use advanced tools and models**

Sophisticated software, algorithms and modelling methodologies. Use of AI and GIS

- **Understand local conditions**

Reliable data sources if site assessment not feasible

- **Incorporate losses and uncertainties**

Account for all possible losses and include uncertainty margins

- **Data quality check**

  Validation and correction of data provided by the Market Participant or procured from a third party.

  - Meteorological data e.g. wind speed and direction, air density, solar irradiance, temperature
  - Meter data and power curve
  - Other data e.g. landfill flaring data
  - Maintenance, curtailment, output variance data, etc.

- **Facility Upgrade**
  - Declared Sent Out Capacity (DSOC) and Nameplate Capacity increase
  - Required Leve calculation. Two 5% PoE values (upgrade standalone and combined)

- **Full Operation Date**
  - Double check with Market Participant
  - New FOD for upgrade

Q&A and Discussion

You can also direct any further queries to the WA CMI team at wa.capacity@aemo.com.au