DRSP - Wholesale Demand Response Units

Fact Sheet

This fact sheet explains the registration requirements for Demand Response Service Providers (DRSP) looking to classify loads as Wholesale Demand Response Units (WDRU) and their rights and obligations as contemplated under the National Electricity Rules (NER) as at August 2021. This fact sheet is only a simplified summary of the relevant provisions of the National Electricity Law (NEL), NER and AEMO's NEM DRSP Application documents, which prevail to the extent of any inconsistency. Applicants must ensure they read and understand those documents and should obtain independent advice on their specific circumstances. AEMO may also adapt its approach as new technology and configurations emerge, and as market rules and technology regulations change.

Application Types

If you are not yet registered as a DRSP

To apply as a DRSP and classify loads as WDRU for the first time, applicants should use the **initial application form** and refer to the **initial application guide** on the DRSP registration webpage.

> Existing DRSPs applying to classify WDRU for the first time should use the **initial application form**.

If you are already registered as a DRSP

For participants who are already registered as DRSPs and have classified WDRU before, the Portfolio Management System is used for all registration and classification changes. This includes classifying new WDRUs, amending existing classifications or aggregations, and declassifying WDRUs.

> Existing DRSPs looking to make changes to their portfolio before 24 October 2021 should contact **onboarding@aemo.com.au** to discuss how this will be managed.

Qualifying loads

Only qualifying loads can be classified as WDRUs. There are various configurations available to be considered a qualifying load:

- Load comprises of a single connection point

OR

- Load comprises of a parent connection point, where all associated child connections are non-market

OR

- Load comprises of a child connection point which is also a market connection point

For each of the above configurations, the following criteria must also be met:

- ✓ Load is not a market load that is a scheduled load
- ✓ No connection point associated with the load is a connection point for a small customer load
    - If this is not the case, the small customer load must be a NERR aggregated premises
- ✓ The connection point must have type 1, 2, 3 or 4 metering installation

There are also obligations on the DRSP in relation to these loads:

- ✓ DRSP must obtain consent from retail customer at connection point to provide wholesale demand response
- ✓ DRSP must have arrangements in place for the provision of wholesale demand response

Meter Type

WDRU connections must satisfy the following criteria:

- ✓ Metering installation at the connection point must provide metering data in five-minute intervals
- ✓ Load cannot be classified as a WDRU or ASL by another person
- ✓ Load is served through single connection point (see qualifying load information above)
- ✓ Load does not comprise of electrical equipment that can be switched between multiple connection points
- ✓ Load is not subject to a reserve contract with AEMO at the time of application to classify the load as WDRU

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The DRSP must:

- ✓ Declare to AEMO that it will provide an available capacity of zero for a load (or loads) when aggregated in trading intervals where the load will be (or is likely to be) spot price exposed

Maximum Responsive Component

The maximum responsive component (MRC) is the maximum quantity (in MW) of wholesale demand response that a WDRU is able to provide in accordance with the NER.

NMI-Level MRC

New applicants and existing DRSPs are required to nominate an MRC per NMI when classifying loads as a WDRU. An explanation must be given for the nominated NMI-Level MRC. New applicants do this in their initial registration application to AEMO (in the **WDRU_NMI.csv**), and existing DRSPs will do so in the Portfolio Management System.

DUID-Level MRC

In the case of aggregation, in addition to providing NMI-Level MRCs for each load, new applicants and existing DRSPs must nominate a DUID-Level MRC for the aggregated WDRU. An explanation must be provided for the nominated DUID-Level MRC. New applicants will submit this in their initial application (in the **WDRU_Group.csv**) and existing DRSPs will do so in the Portfolio Management System.

For WDRUs that are unaggregated, the DUID-Level MRC is equal to the NMI-Level MRC.

Baseline Methodologies

A WDRU baseline is defined in two ways:

1) For a WDRU not being dispatched, the baseline is a forecast of the amount of electrical energy flowing at a connection point for the WDRU.

2) For a WDRU being dispatched to provide wholesale demand response, the baseline is an estimate of what the amount of electrical energy flowing to the WDRU would have been, had it not been dispatched.

New and existing DRSPs are required to nominate a baseline methodology from the **Baseline Methodology Register** to determine the baseline for their WDRUs:

- New applicants wanting to classify loads as WDRUs must nominate a baseline methodology and related baseline settings to apply to the proposed WDRU in the **WDRU_NMI.csv**.
- Existing DRSPs can nominate a baseline methodology when classifying new WDRUs within the Portfolio Management System.
- If a DRSP is looking to change the baseline methodology of an existing WDRU, this can also be done in PMS. The applicant will need to nominate a future trading day for baseline methodology changes to take effect.

AEMO will conduct baseline eligibility testing to ensure the nominated baseline satisfies baseline methodology metrics. DRSPs are responsible for reading the **Baseline Eligibility Compliance and Metrics Policy** and understanding their obligations outlined in this.

If a DRSP is aware that a single WDRU (or any unit within an aggregated WDRU) is baseline non-compliant, then it must bid the available capacity of the relevant DUID to zero.

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Aggregation

DRSPs can aggregate two or more WDRUs for the purpose of central dispatch. Aggregated wholesale demand response units must be:

- ✓ Connected within a single region
- ✓ Connected within the same load forecasting area
- ✓ Classified by a single DRSP

Load forecasting boundaries can be found in the **Power System Operating Procedure – Load Forecasting (SO_OP_3710)**.

Additional requirements include that:

- ✓ Control systems must satisfy the requirements of clause 2.3.6(e) of the NER
- ✓ Power system security must not be materially affected by the aggregation

AEMO may impose conditions on an aggregation. These may include specifying the MRC or stipulating situations where disaggregation must occur.

DNSP Endorsement

AEMO requires an endorsement from the relevant distribution network service provider (DNSP) of aggregations in certain circumstances (DNSP Endorsement).

If:

- You are applying to classify more than one load as WDRU and then aggregate them as one DUID for the purpose of central dispatch

AND

- The application, if approved, would result in the aggregation of WDRUs at or behind a single transmission node (as identified by a **transmission node identifier** (TNI) with an aggregate NMI-Level MRC of 5 MW or greater

you will need the DNSP Endorsement, or you will need to provide evidence to AEMO that the DNSP(s) had not provided the sought DNSP Endorsement by the time that AEMO is required to approve or reject the application. If the loads are connected to more than one DNSP, you will need an Endorsement or the relevant evidence from each DNSP.

Applicants must (if required) either submit a DNSP Endorsement or evidence to show they have applied for one at least 25 days before submitting their application. AEMO will discuss directly with the DNSP if the applicant indicates they have submitted the DNSP Endorsement request (at least 25 days earlier) and are awaiting a response.

Additionally, if you are applying to add loads to an existing aggregation, the DNSP Endorsement or evidence will be required regardless of the final aggregate NMI-Level MRC.

For more information on the DNSP Endorsement, please refer to the **DRSP Application Guide**.

Telemetry

The **Wholesale Demand Response Guidelines** outline the circumstances in which telemetry must be provided for a WDRU (note that telemetry is to be provided at the aggregation or DUID level).

Configurations that require telemetry	
Scenario 1	❑ Any individual WDRU with NMI-Level MRC of 5MW or greater
Scenario 2	❑ WDRUs classified by a DRSP at or behind a single transmission node AND ❑ Aggregate NMI-Level MRC of 5MW or greater (regardless of whether or how WDRUs are aggregated) e.g. If two DUIDs are located at a single TNI and have a combined NMI-Level MRC greater than 5MW, both DUIDs require telemetry.

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Scenario 3	❑ Individual (or aggregated WDRUs) with NMI-Level MRC (or DUID-Level MRC) below 5MW AND ❑ Located in area of power system where existing scheduled plant: a) Needs to be curtailed to maintain power system security OR b) Is forecast to be curtailed as a result of committed investments and works, or other changes in the power system for at least five hours per year

If a WDRU is required to supply telemetry data, mandatory and optional channels are provided below. Please refer to the **Wholesale Demand Response Guidelines** for more information on these:

Telemetry data channels		
WDR MW	The DRSP is required to estimate the quantity of wholesale demand response provided by a WDRU, representing the sum over all NMI points within the WDRU.	Mandatory
WDR Metered MW	The DRSP provides net metered active power flow for all DRSP controlled devices behind each NMI connection point summed over all NMIs within the WDRU. No adjustments need to be made for distribution or transmission losses.	Optional
WDR Baseline MW	The DRSP can estimate baseline net active power flow at all controlled devices behind each NMI connection point, summed over all NMIs within the WDRU. This is done by assuming no wholesale demand response is occurring and must be determined consistently with the baseline methodology applied to each NMI within the WDRU. No adjustments need to be made for distribution or transmission losses.	Optional

Telemetry Exemptions

A WDRU may be deemed exempt from providing telemetry data in instances where AEMO is reasonably satisfied the data is not required to support adequate power system operation.

If an applicant indicates that they do not intend to provide telemetry, they must either:

- Indicate their intention to be exempt in the **WDRU_Group.csv** file with supporting evidence of eligibility for exemption

OR

- Indicate they are not applying for a telemetry exemption in the **WDRU_Group.csv** file and provide supporting evidence for why this is appropriate (e.g. evidence that the WDRU or aggregation is not required to provide telemetry under the **Wholesale Demand Response Guidelines**)

Regional Thresholds

AEMO has imposed a threshold on the maximum quantity (in MW) of wholesale demand response that can be dispatched in each region for which no telemetry is provided. AEMO periodically reviews these maximum thresholds, and more information on them can be found in Section 3.2 of the **Wholesale Demand Response Guidelines**.

A list of current and historical thresholds can be found in the **Regional Thresholds** document on the DRSP registration webpage.

Where can I find more information?

For any enquiries, please contact AEMO's information and Support Hub via:

- supporthub@aemo.com.au or
- call 1300 236 600