

Explanation of Proposed Solution: Reactive Power Flows Associated with Exemptable Generating Plant

Section K of the Balancing and Settlement Code (BSC) currently prevents Parties other than Licensed Suppliers from taking responsibility for Reactive Power flows absorbed (imported) by Licence exempt generating plant (Exemptable Generating Plant). The proposal is to:

- a) Replace the terms 'Import' and 'Export' in Section K with 'Active Import' and 'Active Export'; and
- b) Introduce two new terms to Section K, 'Active Import Related Reactive Power' and 'Active Export Related Reactive Power'; and two supplementary terms to account for time and the flow of Reactive Power, 'Active Import Related Reactive Energy' and 'Active Export Related Reactive Energy'; and
- c) Assign responsibility for Active Import Related Reactive Power to a Supplier and assign responsibility for Active Export Related Reactive Power to an Exemptable Generating Plant.

The Data Transfer Network data flow, D0268 'Half Hourly Meter Technical Details' will be used to identify four categories of power quantities, according to the combination Active and Reactive Power recorded on both an Import Party's MPAN/MSID (a Supplier) and an Export Party's (an Exemptable Generating Plant) MPAN/MSID.

The required measurements to identify these categories are as follows:

- 1) Active import (quantity on AI register) with reactive import (quantity on RI register)
- 2) Active import (quantity on AI register) with reactive export (quantity on RE register)
- 3) Active export (quantity on AE register) with reactive import (quantity on RI register)
- 4) Active export (quantity on AE register) with reactive export (quantity on RE register).

An additional step is required to enable the configurator of the D0268 data to recognise the four power quantity categories: it has to cross-reference them with the standard metering identifiers:

- 1) Active import with lagging power factor
- 2) Active import with leading power factor
- 3) Active export with lagging power factor
- 4) Active export with leading power factor.

When it comes to implementing the solution, the typical example will require the Meter to be configured with six registers, 3 of which (AI, RI and RE) will be linked to the Supplier's MPAN/MSID via a D0268 and the other 3 (AE, RI and RE) will be linked to the Generator's MPAN/MSID via a separate D0268.

The combined solution will give licence exempt generating plant direct responsibility for Reactive Power imports, attributable to their Active Power export, for the first time. The

new BSC terms will ensure that this new responsibility is not deemed to be an unlicensed offtake of electricity, which is illegal under the Electricity Act (1989).

To summarise, a Supplier is responsible for reactive power flows when:

- The Meter records active import with lagging power factor, and the MPAN/MSID records Active Import via the AI register and Active Import Related Reactive Power via the RI register; or
- The Meter records active import with leading power factor; and the MPAN/MSID records Active Import via the AI register and Active Import Related Reactive Power via the RE register.

And an Exemptable Generating Plant is responsible for reactive power flows when:

- The Meter records active export with lagging power factor, and the MPAN/MSID records Active Export via the AE register and Active Export Related Reactive Power via the RE register; or
- The Meter records active export with leading power factor, and the MPAN/MSID records Active Export via the AE register and Active Export Related Reactive Power via the RI register.