



AUGHINISH ALUMINA LIMITED

25 October 2024

Dear SEM Committee,

Aughinish Alumina Limited (“Aughinish”) welcomes the opportunity to respond to the ‘Demand Side Units: A Revised Phase 1 Solution for Energy Payments and Other Issues’ consultation Paper SEM-24-046.

Since 1983, Aughinish, in West Limerick has refined Alumina. Aughinish employs over 800 people, between direct employees and on-site contractors. A further 900 additional jobs are generated as a result of Aughinish. The alumina refinery is one of the most energy efficient in the world and manufacturers more than 50% of EU alumina production, a product which is classified by the European Union as a Critical Raw Material. The refinery is the largest single site gas user in Ireland with an average demand of 19GWh per day, approximately 11% of Ireland’s gas demand. As a large user of energy, Aughinish’s operational viability is heavily dependent on energy and carbon pricing.

Aughinish has recently installed a world’s first high pressure 25MW Renewable Energy electric boiler (REB) capable of supplying 10% of its required steam demand at 330°C. Working with the TSO, Aughinish registered this boiler as a DSU (DSU_403790). The DSU mechanism allows Aughinish to provide DS3 system services to the grid when it is most needed (periods of high SNSP, when fewer conventional thermal generators are running).

This unit does not have a third-party electricity supplier, perhaps this makes it unique. Aughinish purchases the electricity for self-consumption in the ex-ante markets. Should the DSU be dispatched off by the TSO, there is no Supplier or DSU windfall/shortfall as highlighted by this consultation. The operation of this unit therefore does not create a ‘missing money’ problem.

Aughinish propose that any rule change should accommodate DSUs that procure power for their own use, where the site has no contract with a 3rd party Supplier, and therefore does not contribute to the missing money problem.

Kind Regards

Thomas O’Sullivan
Energy Lead



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Q17: How should decremental bid prices to reduce demand reduction be calculated? Under what circumstances do you consider that decremental prices could be negative? Please explain your view.

The non-energy charges on electricity consumption listed below add up to between €45.02/MWh and €69.39/MWh depending on the hour of the day:

- TUOS Demand System Service € 27.31/MWh (€30.04/MWh 5pm to 7pm)
- TUOS Demand Network € 3.49/MWh
- SEMO Capacity € 21.23/MWh (between 7am and 10pm)
- SEMO Imperfection € 14.62/MWh

Other charges apply to other connected consumers.

These costs must be recovered as part of a DSU dispatch. Simple energy arbitrage would suggest flexible bid prices to reduce demand reduction (demand turn off generation or Demand turn up) should be at their opportunity cost. The application of fees and charges on electricity consumption means the opportunity cost of some units will likely be sub-zero.

This is an inefficiency which inhibits energy arbitrage and decarbonisation through electrification. Bid's from reduced demand reduction might have to be negative even though the simple energy opportunity cost is positive. Due to some Renewable Energy Supports having a support floor of €0/MWh there might be a regulatory design flaw disrupting rational economics. This could prevent energy arbitrage.