



AUGHINISH ALUMINA LIMITED

For Attention of
PSO Team (PSO@cru.ie)
Commission for Regulation of Utilities
The Exchange
Belgard Square North
Tallaght
Dublin 24

Non-Confidential Response to Public Service Obligation (PSO) Levy Arrangements

Dear Sir/Madam,

Aughinish Alumina Limited (Aughinish) since 1983 has operated a large alumina refinery based in West Limerick employing 450 permanent and 200 long term contract people. The alumina plant has one of the lowest carbon footprints in the world, ranked in the best 5%. Aughinish produces 30% of EU alumina requirements. The refinery is one of the largest users of gas in Ireland (circa 620,000 therms per day) operating on a 24-hour basis, 363 days of the year.

Aughinish has transitioned in technologies over the years through R&D and investment to become the most efficient, lowest carbon producing high temperature alumina refinery in the world.

The Aughinish high efficiency cogeneration plant (“CHP”) built at a cost of over €100M is a significant user of gas nationally. The CHP facility produces 160MW of electricity, 115MW exported to the national grid, enough to power over 200,000 households. This has benefited Ireland in terms of both reduced primary energy usage and CO2 emissions. Outside of renewable electricity, our high efficiency CHP plant is the lowest carbon emitting electricity producer in Ireland. Since commercial operation in 2006, the CHP plant has played a major role in Ireland reaching its energy efficiency targets and reducing emissions, accounting for an average saving of approx. 330,000 tonnes of CO2 per annum.

For large industry, the PSO Levy is charged by applying a levy to the Maximum Import Capacity (MIC). In the case of Aughinish, this means the calculation does not reflect actual consumption, and is not a fair and justifiable methodology. Almost 99.9% of the electricity Aughinish consumes is self-produced HE CHP electricity. The MIC is used to deliver approximately 0.1% of Aughinish’s electrical demand when the site becomes a net importer during very rare outages. As a generator, Aughinish exports ~940,000MWh and imports only ~500MWh of electricity annually.

The current proposed rates indicate a PSO levy rebate to Aughinish of €1.6m for the 2022/23 year. While Aughinish welcomes such a rebate in the current energy crisis, our core message regarding the PSO levy remains unchanged with previous years and are therefore willing to



AUGHINISH ALUMINA LIMITED

forego this rebate should the methodology used to charge the PSO levy consider electricity consumption.

The PSO tariff is calculated by peak demand associated with domestic, small commercial and medium/large commercial categories based on standard load profiles, metered data and forecast demand data. This methodology would correctly facilitate Aughinish's position as a net generator and would lead to an equitable PSO Levy, if it were charged on this basis. When allocating this tariff however, it is charged based on a MIC basis and therefore gives no recognition of self-generated electricity. Applying a consumption-based charge, or a charge based on net capacity incorporating Maximum Export Capacity (MEC) and MIC, would align with the intentions of the PSO and Climate Action plan by encouraging Medium and Large energy users to strive for energy efficiency.

In accordance with the governing PSO legislation, the CRU is responsible for the calculation of the PSO Levy and for ensuring that the PSO scheme is administered appropriately and efficiently. Aughinish believe that this has not been achieved.

One of the objectives of the CRU under the Energy Act 2016 is to have regard to the benefits of developing demand side participation in electricity markets, including distributed generation¹. The levy does not recognise the environmental benefits of HE CHP, and therefore is a barrier to further HE CHP installations in Ireland.

Proposal for PSO levy collection based on net capacity

Aughinish proposes that the calculation be adjusted to reflect the electricity exported from the HE CHP i.e. based on the net capacity. This was originally proposed by a Sustainable Energy Ireland HE CHP working Group as a method of recognising the contribution of HE CHP to the security of supply and energy efficiency.

According to the working group, *"this proposed system is considered fairer and more cost reflective since it takes into account that a proportion of the electricity consumed by a HE CHP producer is generated on-site. The subsequent reduction in the allocation of the PSO levy to the HE CHP producer will reduce the operational costs for a HE CHP user, and so encourage more sites to install HE CHP. This would in turn, increase the efficiency in the electricity system and through doing so reduce CO₂ emissions"*.

It was calculated that this proposal would have no impact on small and medium consumer's costs and would result in a negligible increase of all other large energy users' electricity bill.

The above methodology was originally calculated to accommodate HE CHP sites where the MIC is greater than the MEC. For sites that have an MIC less than MEC such as Aughinish, the calculation should of course reflect periods when the site is importing to ensure that they contribute their fair portion to the PSO.

It is our opinion that a modified levy based on the net capacity would remove a barrier to entry for HE CHP, remove the disincentive from further energy efficiency investments by industry

¹ <http://www.irishstatutebook.ie/eli/2016/act/12/section/11/enacted/en/html>



AUGHINISH ALUMINA LIMITED

and it would satisfy one of the founding objectives of the CRU to encourage the efficient use and production of energy.

PSO Levy and Fuel Switching

Another important consideration that Aughinish have highlighted is in the application of the PSO levy when fuel switching from a fossil fuel, to renewable power, in times of excess renewable generation. Such periods of excess renewables are a regular occurrence in Ireland. Aughinish are implementing a 25MW renewable electric boiler on the site as a pilot scale to switch a portion of its heat demand from natural gas to renewable electricity. The electricity will only be consumed in times of excess renewable generation, and will have wide reaching benefits. By fuel switching in times of high wind, dispatch down of wind farms will be reduced, our consumption in natural gas will fall, and in turn CO2 emissions will also fall.

Levies such as the PSO will be a barrier to further integration of this technology to facilitate renewables, and we would call on the CRU to grant exemptions for such technology which switches fuel in times of excess renewables.

Future considerations

The CRU has a role to play “to encourage the efficient use and production of energy” as laid down in its objectives in the electricity Regulation Act 1999 8 (5) (b). The CRU must consider alternative methods of calculating and apportioning the cost of the next round of renewable electricity support schemes, and ensure that any methodology for collecting the PSO encourages energy efficiency. Aughinish would be willing to forego next years rebate should our concerns be addressed.

Yours sincerely,

David Horan

David Horan

Aughinish Alumina