Implementation of Regulation 2019/943 in relation to Dispatch and Redispatch SEM-20-028 – June 2020

Indaver welcomes the opportunity to respond to the *Implementation of Regulation 2019/943 in relation to Dispatch and Redispatch.*

Indaver provides waste treatment services to a significant municipal, commercial and industrial customer base and owns and operates a 17MW hybrid renewable waste-to-energy generator in Duleek, Co. Meath. This facility treats waste that cannot be prevented, reused or recycled and produces partly-renewable electricity. It is fully dispatchable and synchronous.

In terms of prospective developments, Indaver is in the process of applying for planning permission to install a hydrogen electrolyser at Meath. Indaver also has two facilities in the permitting and planning process.

In line with European and national policy, Indaver takes the view that whilst waste reduction and elimination must be prioritised, unavoidable wastes that cannot be recycled in a sustainable manner, can be safely and effectively treated by the waste-to-energy (WtE) process. However, the proposed revision to the priority dispatch hierarchy (SEM-11-062) is problematic in terms of aligning energy policy objectives with EU mandated waste and environment obligations and to ensure WtE facilities can meet their licence obligations. With respect to the hierarchy proposed in the application of non-market based down redispatching, WtE facilities should have the same shared priority as all renewables for downwards redispatching on a non-market basis.

Several elements of this paper will require further consultation, however a number of the questions in the consultation are beyond the scope of WtE facilities. In line with the position outlined in CEWEP's response, WtE's position relative to other renewables will become clearer when the more complex issues around non-synchronous generation are resolved.

Consultation Question 1: Do you agree with the RAs' interpretation of the requirements under Articles 12 and 13 and specifically the application of dispatch, redispatch and market based/non-market based redispatch in the SEM?

Response: We agree that energy actions are dispatch and non-energy actions are redispatch. However from the WtE perspective, the consultation paper is not clear on the categorisation of downward redispatch.

Consultation Question 2: In terms of the practical implementation of Article 12(1) to introduce a distinction between units which retain eligibility for priority dispatch and those which are not eligible, the RAs propose;

- Where a commissioning programme has been agreed with the TSOs on or before 4 July 2019, it is proposed that such units will be eligible for priority dispatch.
- Where a unit is eligible to be processed to receive a valid connection offer by 4 July 2019, the RAs are of the view that this represents a contract concluded before priority dispatch ceases to apply under Article 12 and that such units are also eligible for priority dispatch.
- Where a unit becomes active under a contract concluded before 4 July 2019 including a REFIT letter of offer or PPA, the RAs welcome feedback on the proposal for such generators to be eligible for priority dispatch. Interested stakeholder's views are invited on these proposals.

Response: A distinction should be drawn between those proposed projects that were eligible to receive a connection offer and those who were in receipt of a connection offer by July 4th 2019. Those who had appropriately progressed their projects within the context of assumed Priority Dispatch status should be considered to have concluded a contract for the purposes of Article 12. The most objective non-disputable measure of this is whether a generator was in receipt of a connection offer by July 4th 2019.

Consultation Question 3: It is the RAs' understanding that any unit which is non-renewable dispatchable but is no longer eligible for priority dispatch can be treated like any other unit within the current scheduling and dispatch process, through submission of PNs with an associated incremental and decremental curve. Feedback is requested on this aspect of implementation of Article 12 of the new Electricity Regulation.

Response: WtE facilities can continue to use EDIL.

Consultation Question 4: It is proposed that any unit which is non-dispatchable but controllable and is no longer eligible for priority dispatch would run at their FPN, be settled at the imbalance price for any volumes sold ex-ante and could set the imbalance price.

As part of this proposal, there is a question of whether such units would be required to submit FPNs or where no FPN is submitted, the unit could be assigned a deemed FPN calculated by the TSOs as per the process today. Where a unit elects to submit an FPN, in this case, the TSOs would be required to use this as long as it does not deviate above a certain percentage of the TSOs' own forecast availability of the unit.

As an alternative or as a possible interim measure, taking account of the zero marginal cost nature of non-dispatchable but controllable generation in the market today, i.e. wind, solar, units no longer eligible for priority dispatch could be scheduled to their availability as per the process today on the

assumption that this reflects economic dispatch in any case, but where there is excessive generation on the system such units would be subject to energy balancing prior to any priority dispatch units.

In particular, the RAs are seeking feedback from the TSOs on measures which can be introduced to facilitate required compliance with the new Electricity Regulation within the scheduling and dispatch and balancing market systems

Response: While the scenario outlined above does not directly impact WtE facilities, it is important to point out that in the cases whereby conventional generators and renewable generators may have FPNs that deviate from their ex-ante position, caution must be taken to ensure it does not lead to lost revenues for WtE due to increased curtailment (i.e. if downward resdispatch is shared with new renewables).

Consultation Question 5: Feedback is invited from interested stakeholders on the treatment of non-dispatchable and non-controllable units.

No comment.

Consultation Question 6: Do you agree with the RA's interpretation that new generators which are no longer eligible for priority dispatch (both dispatchable and non-dispatchable but controllable) will be subject to energy balancing actions by the TSOs, considered in dispatch economically and settled like any other instance of balancing energy?

Yes.

Consultation Question 7: What is your view on the application of bids and offers to zeromarginal cost generation?

Response: As WtE facilities are not zero cost generators offers are regulated in line with the BMPCOP. The BMPCOP includes a strict non-subsidised avoided cost formula, which does not distinguish the level of subsidy foregone or the wider costs stemming from non-compliance with licensing conditions or waste policy. We would question the rationale of precluding the recovery of lost opportunity costs on a market basis for market based redispatch.

Consultation Question 8: What is your view on a potential rule-set being implemented for non-dispatchable units where (a), systems cannot facilitate ranking of decremental bids for such units for balancing actions for a certain time period and/or (b) where convergent bid prices require a tie-break rule?

No comment.

Consultation Question 9: Do you agree with the TSOs' proposal for a revised priority dispatch hierarchy? The RAs request that the TSOs consider the points raised in this Section in their response with any further proposed changes to the hierarchy.

Response: WtE has priority dispatch, and there is no justification for different treatment with other renewables in relation to energy balancing. All priority dispatch renewables should be dispatched last for energy balancing, and subsequently pro-rata.

Indaver is concerned that the proposed priority dispatch hierarchy does not adequately address a number of areas specifically relating to the implementation of waste policy and enabling the efficient operation of WtE facilities.

The primary objective of WtE is to treat waste. Proposals in the revised priority dispatch (specifically dispatching down to autoproducer level and then dispatching down to off) are at odds for a number of reasons. While the consultation argues that WtE allows for energy to be used later (as against wind, solar or tidal units where utilisation of the resource cannot be deferred), waste needs to be treated and the approach proposed in the consultation paper will result in a range of problems as outlined below.

Firstly, WtE facilities are designed to operate at baseload. Not only do instructions to dispatch down have an impact on the amount of waste that can be treated, but it is having an impact on the operation of the facility. A pattern has emerged whereby the plant has experienced **technical difficulties** following a period of frequent instructions to dispatch down. We assume that this is because the plant is not operating as it was designed to. The proposal to dispatch down to off would be highly problematic from a technical perspective.

In addition to the negative operational impacts, WtE facilities must operate in line with requirements of the Industrial Emissions Directive and national licensing Regulations. The acceptance of waste may only take place in accordance with **licence conditions** and within the scope of the appropriate national and European legislation and protocols. In contrast to the suggestion in the consultation that "the waste to energy resource allows it to be used later", notwithstanding the public health aspects, the storage of waste is not permitted at WtE facillities with the exception of residues produced from the incineration process.

Another aspect that needs to be considered in WtE's role in meeting **waste and environmental policy** objectives. Ireland has EU mandated targets to divert waste from landfill and move it up the waste hierarchy. A key environmental benefit of diverting waste from landfill is that it reduces GHG emissions from waste treatment by avoiding methane emissions (methane is 28 times more potent than CO2)[1]. WtE makes maximum use of energy contained in waste by converting it to electricity and/or heat thereby giving it recovery status in the waste hierarchy.

According to EU waste policy, WtE facilities can be classified as either a recovery operation (R1 - use principally as a fuel or other means to generate energy) or a disposal operation (D10 - incineration on land). As waste policy has evolved and become increasingly focused on moving waste 'up the hierarchy', national targets for recycling and recovery reflect this shift in emphasis. The distinction between 'recovery' and 'disposal' has become progressively more relevant, both commercially and economically. WtE is classified as recovery if it meets the **R1 energy efficiency threshold** *i.e.* level of energy recovery from waste. The Waste Framework Directive specifies that WtE can be classified as R1 only where their energy efficiency is equal to or above 0.65. WtE facilities are designed with this threshold in mind and report this information on an annual basis to ensure it still meets the recovery threshold. Instructions to dispatch down to minimum generation (or indeed dispatch down to off) can impact the amount of waste treated, the amount of electricity produced and ultimately Ireland's

[1] Intergovernmental Panel on Climate Change, Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

ability to meet these targets. Failure to meet these targets could lead to material fines from Europe for non-compliance.

Unlike other forms of renewable generation, WtE produces more CO2 per MW when instructed to minimum generation levels. This is because less electricity is being derived for export per tonne of waste treated.

Autoproducer definition

The paper suggests that the minimum generation level at the level that would allow for the demand requirements of onsite processes to continue unaffected. The Trading and Settlement Code defines an autoproducer as:

> *"a Demand Site where the Demand is not solely for the purpose of Generation (i.e. Demand is not just associated with Unit Load) which contains one or more Generator Units which are not Demand Side Units."*

While the definition allows for the level to meet the house load of the facility, notwithstanding the technical challenges, it is not sustainable to treat waste in a WtE facility in the absence of power generation and export. As aforementioned, the inability to treat waste has ramifications in terms of the operational performance of the plant as well as meeting licence conditions and broader environmental and waste policy obligations. While we agree with the assertion that the onsite process should continue unaffected by the dispatch down requirements, the autoproducer levels should be considered at high load. Furthermore, Indaver would like to better understand how the proposal to dispatch down to the level of autoproduction aligns with current Grid Code obligations relating to minimum production (or indeed if either Grid Code derogations or different treatment in dispatch should be explored).

Consultation Question 10: Feedback is requested from interested stakeholders on the types of demonstration projects that may be suitable for an application process for limited priority dispatch eligibility.

Not applicable.

Consultation Question 11: The RAs' interpretation of the Regulation is that where a new connection agreement is required or where the generation capacity of a unit is increased, a unit will no longer be eligible for priority dispatch. The RAs also propose that units should be able to make a choice on whether they wish to retain their priority dispatch status or not. Feedback is requested on this proposal.

Response: The consultation paper points to the potential perverse incentives whereby necessary or useful modifications may be overlooked in the event that a new connection agreement would be required.

Indaver trusts that the requirement for change of a connection agreement should relate to the full or partial repowering of the power generation facility or a significant change to the overall generation technology triggering a change in Maximum Export Capacity (MEC). Modifications and improvement to a generation facility should not fall under the scope of a significant change.

In an effort to make use of energy that would otherwise be wasted during times of dispatch down, Indaver will lodge a planning application for a hydrogen electrolyser at its facility at Meath. Depending on the end-user market, new Maximum Import Capacity (MIC) may be required if the electrolyser needs the ability to run when the generator is off-line. Even if there is no change to MIC, clarification is needed on whether a modification to a connection agreement may still be required if equipment is materially changing. If this was deemed to result in a cessation of eligibility for priority dispatch, it could lead organisations to forgo investing in projects that have the potential to decarbonise other energy sectors should as heat and transport.

Notwithstanding the installation of new equipment, discussion and guidance is necessary on the categorisation of energy efficiency projects in the plant that may have the effect of increasing the efficiency of the plant, or may modify the house-load/onsite consumption.

As noted in response to question 9 above, WtE facilities also fulfil waste policy objectives. By treating waste that cannot be reused or recycled , they serve an important function in diverting waste from landfill or the need to export it for treatment abroad. Furthermore, they treat polluted/contaminated substances in an environmentally sound way while recovering energy and materials in the process. Therefore, in the event that increased tonnage is required, and the corresponding electricity output from the plant increases, the potential removal of priority dispatch removes the incentive to treat more waste.

Consultation Question 12: Do you agree with the RAs' interpretation of Article 13(5)(b) whereby downward redispatching of electricity produced from renewable energy sources or from high-efficiency cogeneration (i.e. the application of constraints and curtailment) regardless of priority dispatch status, should be minimised in the SEM? Under this interpretation, the only difference between renewable generators and HECHP eligible for priority dispatch will be how they are treated in terms of energy balancing.

See response to question 13.

Consultation Question 13: Do you agree with the RAs' interpretation of Article 13(6) and the introduction of a new hierarchy for the application of non-market-based downward redispatching?

Response: In the application of non-market based down redispatching, WtE facilities should have the same shared priority as all renewables for downwards redispatching on a non-market basis.

However the description of the Regulation's non-market based redispatch hierarchy is incomplete, leaving out the protection for dispatchable / controllable renewable and HE CHP power that does not export. While there are limited circumstances where this occurs in the SEM, both rules should reflect the regulation.

Consultation Question 14: Do you agree with the RAs' interpretation of Article 13(7) and the view that the provision of financial compensation to firm generators subject to curtailment based on net revenues from the day-ahead market including any financial support that would have been received represents an unjustifiably high level of compensation?

Response: As is noted in the consultation paper, Article 13(7) requires that financial compensation should be provided by the System Operator to units with a firm connection which are subject to non-market based redispatching. In terms of new connections, ECP-2 has provided some clarity on the situation for ECP-2 contracted projects (initially be issued on a non-firm basis as per ECP-1, TSO to develop new methodology to schedule Firm Access Quantities for contracted projects based on network development plans). The situation in Northern Ireland is yet to be clarified.

Notwithstanding the issue prospective connections, the function of Article 13(7) is to ensure that when generators are subject to non-market based redispatch they are fully compensated for the opportunity cost of redispatch. In cases of non-market based redispatch, the intent of Article 13(7) is to ensure that the compensation received by a generator at times of non-market based dispatch is not less than the remuneration received by a generator that is subject to market based dispatch.

However, in the consultation paper, it is suggested that the proposed level of financial compensation for generators subject to curtailment (based on net revenues from the day-ahead market including any financial support that would have been received in the absence of this intervention) represents an unjustifiably high level of compensation. It is reasonable to interpret Article 13(7) that if the compensation equals what would have been received, it could be concluded that the generator has been adequately compensated for the opportunity cost and has not been unduly overcompensated.

Consultation Question 15: Which of the options on compensation for curtailment presented above do you view to be most appropriate to adopt in the SEM? Are there additional options that the RAs should consider around compensation for curtailment?

Response: As is noted in the CEWEP response, this needs further consultation. It is not actually possible to respond to this section on the basis that we are unsure what aspects relates to WtE. For the avoidance of doubt, we disagree with any outcome where compensation for all forms of downward or upwards redispatch are limited or reduced arising from the integration of non-Priority Dispatch renewables.

In line with the CEWEP response:

- With regards to our existing facility, the connection agreements is firm and as such is entitled to compensation at the full level of financial support offered under REFIT, i.e. the REFIT rate for non-market redispatched down energy.
- For market-based redispatch, WtE have their offer highly regulated in line with the BMPCOP. The BMPCOP considers a very narrow non-subsidised avoided cost formulation, which does not recognise either the level of subsidy foregone, nor the wider issues in relation to costs associated with waste energy policy non-compliance. It seems paradoxical for market based redispatch to not allow recovery of lost opportunity costs on a market basis.
- We acknowledge that REFIT rules will need to be reconsidered in relation to the retention of such compensation.