



Consultation on Dispatch, Redispatch and Compensation Pursuant to Regulation (EU)2019/943

INTRODUCTION

Indaver welcomes the opportunity to respond to the *Consultation on Dispatch, Redispatch and Compensation Pursuant to Regulation (EU) 2019/943*.

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 has two additional 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. WtE differs from other forms of electricity generation as its primary objective is to treat waste and any proposals must allow WtE facilities to treat waste in a manner that is in line with licence obligations and pursuant to the Industrial Emissions Directive and applicable national regulations. Whilst this consultation does not directly address the priority dispatch hierarchy, we are concerned that the proposals in SEM-21-026 (and SEM-21-027) may have the effect of not adequately compensating existing WtE. In order to ensure that existing WtE (non-market redispatch) is not subject to *unjustifiably low* levels of compensation when constrained, and in order to adhere to Article 13(7) of the Regulation, the bidding rules in the BMPCOP may have to be amended for priority dispatch plants like WtE. Furthermore, the REFIT rules may need to be reconsidered in relation to the retention of compensation.

1. Definition of Dispatch and Redispatch

1a. In the SEM, dispatch relates to the scheduling and dispatch of units to meet the energy requirements of the market, noting the complexity of identifying dispatch and redispatch separately in the central dispatch system with an integrated scheduling process, which is carried out through the identification of energy and non-energy actions as part of the flagging and tagging process.

Response: Notwithstanding the nuance of discussing dispatch and redispatch separately in a ‘centrally dispatched’ market, whereby the terminology may be more applicable in ‘self-dispatch’ power markets whereby the dispatching of power generating facilities are determined by the scheduling agents of those facilities.

In the ‘centrally dispatched’ market, it can be difficult to identify what will be considered ‘market based’ or ‘non-market based’ for redispatch and to ensure the rules around the allocation of Energy Balancing, constraints and curtailment are adhered to in real time.

1b. Energy balancing in the SEM aligns with the definition under the Electricity Balancing Guideline as ‘energy used by TSOs to perform balancing and provided by a balancing service provider. Dispatch and energy balancing are aligned to the existing concept of ‘energy actions’ in the SEM

Response: Indaver agrees that dispatch and energy balancing are aligned to the existing concept of energy actions and should be considered as energy actions going forward.

1c. A complexity to this interpretation is that priority dispatch wind and solar units cannot be dispatched for energy balancing purposes. This issue is considered further in Section 2.1 and updates may be required to SEM-13-011 in terms of the distinction between constraints, curtailment and energy balancing. This issue is also considered in the SEM Committee’s Proposed Decision Paper on the treatment of new renewable units in the SEM (SEM-21-027), which has been published along with this paper.

Response: By virtue of the fact that priority dispatch wind and solar cannot be dispatched for energy balancing purposes, they are exempted from price based competition during energy balancing. However, given that SEM-21-027 proposes that non-priority dispatch wind and solar (non-dispatchable but controllable units) will be required to be treated as dispatchable under the new arrangements, Indaver would question how these units will interact with the market from a systems perspective (i.e. EDIL vs SCADA) and the impact on existing dispatchable priority dispatch such as WtE.

1d. Redispatch in the SEM relates to deviations from the market schedule for generation for both local network and broader system reasons, including TSO-instructed reduction in generation due to localised network issues (constraints) and reduction in non-synchronous generation due to other system-wide reasons such as levels of System Non-Synchronous Penetration (curtailment).

The Regulatory Authorities acknowledge that future market developments may include new forms of dispatch and redispatch at the distribution level.

Response: Indaver understands that further market developments may include new forms of dispatch and redispatch at the distribution level.

1e. As part of this Consultation, the Regulatory Authorities welcome feedback on whether decremental actions taken on priority dispatch units can be considered either dispatch and redispatch (energy and non-energy actions) or as forms of redispatch only (non-energy actions)

Response: While priority dispatch units which submit COD and TOD may be in a position to provide Energy Balancing services, demand is likely to exceed all available priority dispatch plants in the coming years, and all other available resources will be dispatched down first.

1f. As set out in the SEM Committee’s Building Blocks Decision Paper (SEM-15-064), priority dispatch generation should not be able to set the imbalance price. In a situation where the sum of available priority dispatch renewable generation exceeds the demand to be served in a particular 5-minute period and all available non-priority dispatch units have been dispatched down to their Lower Operation Limit, priority dispatch units are dispatched down according to the priority dispatch hierarchy, one option is to reflect this by implementing a Modification to replace the decremental bids of such units with zero for Imbalance Pricing.

Response: With regards to WtE and decremental bids, in order to reflect the costs associated with dispatch down instructions, WtE should be allowed to submit negative decremental bids.

1g. Alternatively, it is proposed that a new flag for priority dispatch units could be introduced to the flagging and tagging process to ensure that in such instances, priority dispatch units are not price setting and are settled on the basis of their complex bids.

Response: As outlined in the consultation paper, these actions will be used to address system issues and hence will be non-market in nature. With this in mind, at times of downward redispatch, compensation measures must adhere to Article 13(7) of the Regulation.

1h. The interaction between this discussion and related Consultations on the Electricity Balancing Guideline and Articles 3, 6 and 10 of the Electricity Regulation has been discussed in this section and a decision on the Modification referenced here will not be taken until this suite of Consultation and decision-making processes are complete

Response: Whilst recognising the challenge of updating the electricity market in order to align with the evolving nature of environment, energy and climate policy/legislation/guidelines, the protracted nature of the consultation and decision-making process is in danger of stymying the investment needed to continue the decarbonisation of the electricity sector.

2. Definition of Non-Market Based Redispatch

2a. Curtailment in the SEM is currently a form of non-market based redispatch, as it is applied to all non-synchronous units (regardless of priority dispatch status) and is not based on any merit order or the bids and offers of units

Response: Indaver agrees that curtailment in the SEM is a form of non-market based redispatch, and continues for all renewables without reference to submitted prices, and is *pro-rata* for renewables and applied to non-synchronous units. Synchronous generation such as WtE, however, is not considered curtailed but constrained on a non-market basis. According to SEM-21-027, curtailment will continue

to be applied on a *pro-rata* basis across all wind and solar generation regardless of its priority dispatch status.

However, it must be pointed out that the dispatch down of WtE often occurs during periods of non-synchronous curtailment where there is a requirement to keep a minimum number of must run generators synchronised to the Grid for system stability.

2b. Constraints as applied to all non-priority dispatch units are a form of market based redispatch.

Response: According to the consultation, at times of constraints, non-priority dispatch units will compete with conventional generators on a regulated merit order (short run marginal cost bidding) for being turned down, ahead of priority dispatch plant. This is considered market based redispatch.

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 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 or changes to the BCOP/BMPCOP.

2c. Constraints as applied to priority dispatch units and non-priority dispatch units should be remunerated based on the different mechanisms for compensation already in place in the SEM that are based on decremental prices submitted by non-priority dispatch units and the deemed decremental prices applied for priority dispatch units. The Regulatory Authorities do not propose any change to the current market mechanisms of remuneration for constraints.

Response: Existing 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*.

As previously discussed, priority dispatch constraints are considered non-market based redispatch for WtE, as is curtailment. Non-priority dispatch constraints are market based, while curtailment is non-market based. The consultation proposes that the existing compensation mechanisms should continue during times of constraints.

While new renewables (non-priority dispatch) get dispatched down for constraints in merit order with conventional generation, the requirement to be firm and traded to receive compensation at Day-Ahead Price, will likely be insufficient to provide financial certainty. If current policy indicators regarding the non-firm status of new connections, constraint will result in a significant imbalance risk, and ultimately negate the business case for new generation. With respect to WtE, the proposals contained in this paper, and SEM-21-027, will prevent the investment in much needed waste treatment infrastructure on the island of Ireland. WtE facilities cannot function appropriately without some form of priority dispatch. Notwithstanding the economics of frequent levels of dispatch downs, the plants are not designed to be ramped up and down.

A WtE facility must operate with the turbine and generator set in frequency control mode, meaning that the speed of rotation of the turbine blades modulates with the actual steam outflow from the superheaters. Hence the turbine “follows” the amount of steam produced by the plant and this is because the fuel being burned is not homogeneous. In a conventional power plant, the turbine and generator set will typically operate in power control mode where the electrical output is set and the

correct amount of fuel is burned to generate the required amount of power. The fuel is waste but is very variable in calorific value by nature. Mixing of the waste prior to feeding to the furnace helps to homogenise the fuel but is not perfect.

These facilities are designed to operate at baseload. When WtE is instructed to dispatch down, the plant switches from frequency control (all steam goes to the turbine) to power control. Under power control, the maximum power output is limited to a predetermined setpoint as set out in Technical Offer Data. When our facility switches to power control it continues to treat waste at the same rate as before, and the steam required to maintain setpoint goes to the turbine with the balance diverted to the air-cooled condenser (ACC) where the energy in the steam is destroyed.

With this in mind, where the production of electrical energy is a secondary by-product of a wider industrial process such as thermal waste treatment, Grid Code derogations or different treatment in dispatch more generally will be required if new WtE facilities are to be built and remain viable.

3. Financial Compensation Under Article 13(7)

3a. The RAs recognise that the issue of the difference between the ex-ante market schedule and feasible dispatch requires further consideration. The RAs intend to further assess these issues as part of a range of measures being considered to mitigate curtailment in the SEM.

Response: Proposals to limit access to *ex-ante* markets for non-synchronous generation in order to mitigate curtailment and address other operational issues mark a significant change in market design, and require comprehensive consultation. The consultation should address the alternatives to limiting access to the Day-Ahead market, as well as compensatory measures for affected units.

3b. The RAs propose provide financial compensation for non-market based redispatch associated with curtailment based on a different compensation regime for priority dispatch and non-priority dispatch units. This is based on the value of priority dispatch and to provide a potential incentive for units to voluntarily give up priority dispatch, which may in turn reduce levels of curtailment where units are not run to their availability.

Response: Firstly, it is difficult to envisage how the proposal to incentivise the surrendering of priority dispatch will materially impact existing units with priority dispatch.

As addressed in the consultation, the proposed compensation for curtailment of priority dispatch, considered as non-market dispatch, provides no change to compensation for wind and solar in tie break situations. The situation for WtE is clear under the SEM Committee proposals – that is compensation will continue, in line with the compensation for constraints.

The proposed compensation for non-priority dispatch curtailment is at the value of *ex-ante* trade, dispatched down pro-rata with priority dispatch generation. According to the consultation (and the Regulation), a firm connection offer is required in order to be compensated.

Therefore, it is hard to determine the value of priority dispatch, or indeed the cost/benefit of voluntarily surrendering priority dispatch for priority dispatch dispatchable plant.

Secondly, while the purpose of the increased compensation for non-priority dispatch curtailment is to incentivise generators to surrender priority dispatch status, there may be unintended consequences for the waste industry. By implementing these proposed compensatory principles, it will have the effect whereby non-priority, non-synchronous generation is granted preference in the hierarchy to priority dispatch synchronous facilities such as WtE. This de-facto hierarchy, during times of curtailment, fails to address a number of areas specifically relating to the implementation of waste and environment policy and to enable the efficient operation of WtE facilities.

Whilst we accept that it isn't the function of priority dispatch to enable the efficient operation of the waste industry in order to treat waste and assist Ireland in meeting EU mandated targets, its removal will have the effect of negatively impacting the provision of nationally important strategic waste infrastructure. The issues associated with the erosion or removal of priority dispatch were comprehensively addressed in Indaver's submission to [SEM-20-028](#). These include, but are not limited to:

- Plant has experienced **technical difficulties** following period frequent instructions to dispatch down. Asides from wear and tear, the plant is not operating as originally designed.
- Danger of impacting the **recovery status** of the plant. The **EU R1 energy efficiency threshold** relates to the efficiency of recovering energy from waste. 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 ability to meet **waste targets**. Failure to meet these targets could lead to material fines from Europe for non-compliance. Asides from the issue of the recovery status of the facility when instructed to dispatch down, the process of continuing to treat fuel while diverting steam to the ACC where the energy in the steam is destroyed. This results in the generation of CO² in the absence of energy use.

3c. Under this proposal, all units that are currently eligible for priority dispatch would receive compensation for non-market based redispatch (in relation to curtailment), where firm, up to the level of their additional operating costs caused by redispatching pursuant to Article 13(7) (a).

Response: In determining the applicability for WtE, Article 13(7)(a) points to the possibility of receiving compensation up the level of additional operating cost caused by the redispatching or net revenues from the sale of electricity on the day-ahead that would have been generated without the redispatching request or to the level of financial support where applicable. While it is understood that the SEM Committee is trying to introduce an incentive for surrendering priority dispatch, the metric of additional operating costs would not work for WtE under the current iteration of the BMPCOP given that operating cost are calculated at zero. A change to the BMPCOP is therefore necessary so that the facility can either reclaim the higher (or a blend of) the additional operating costs or/and the financial support that would have been received.

3d. All new units, which are no longer eligible for priority dispatch, based on the criteria outlined in SEM-20-072, would be subject to compensation under Article 13(7), where firm and subject to non-market based redispatch (in relation to curtailment) up to the level of the DAM price at the time they are curtailed.

All units would have the opportunity to avail of compensation up to the level of the DAM price in exchange for surrendering their priority dispatch rights. This is linked to the implementation of market changes to facilitate non-priority dispatch renewables set out in SEM-21-027.

Response: Firstly, when it comes to a WtE facility, it is highly questionable that any facility with priority dispatch would voluntarily surrender it for the reasons outlined previously (i.e. WtE facilities are designed to operate as baseload).

However, if units without priority dispatch are to be compensated to the level of the DAM, it is puzzling how this is *not* considered to be a form of *market based intervention*, given that it is subject to an energy traded position, and the requirement to submit physical notifications, COD and TOD. It is therefore questionable that this proposal for compensating new units without priority dispatch would align with the definition as per Article 13(7).

3e. There are set targets in place to increase the level of SNSP to 75% by the end of 2021 and the TSOs plan to operate the system at SNSP levels of up to 95% in future in order to accommodate significantly higher levels of renewables. This may entail some enduring level of curtailment and a continued issue of alignment of the market with operational and system security requirements. On this basis, the RAs are also considering whether a limit on compensation under Article 13(7) could be included in future to account for the higher targets of SNSP and levels of non-synchronous generation which can be physically accommodated on the system.

Response: Notwithstanding the aspiration for SNSP levels of 95% in order to accommodate significantly higher levels of renewables, one would expect the levels of curtailment to also reduce.

3f. The RAs are of the view that constraints applied to priority dispatch units and non-priority dispatch units should only be remunerated based on the mechanisms for compensation already in place in the SEM. Units which benefit from priority dispatch should not be overcompensated for the non-market based nature of constraints applied to them, which is driven by the way in which priority dispatch is implemented in the SEM.

Response: Notwithstanding the issue of prospective connections and firm access, and the threat of limited (or no) compensation when non-firm, the function of Article 13(7) is to compensate for the opportunity cost of redispatch. As addressed in Indaver's response to SEM-21-027, it is acting as a significant deterrent to much needed waste treatment infrastructure.

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. However, the proposed compensation measures could actually have the effect of resulting in *unjustifiably low levels* of compensation. Any dispatch down of synchronous renewables that is non-market based is therefore eligible for compensation under Article 13(7). Currently, WtE facilities are not being fully compensated since the only market compensation under the Trading and Settlement Code is then offset against the REFIT scheme. As is outlined in the CEWEP response to this consultation, the Article offers no subjectivity on the matter of compensation, and does not permit the RAs to opt out of payment of compensation through a perceived value of priority dispatch.

3g. The RAs propose to only compensate firm generators for non-market based redispatch associated with curtailment

Response: “Redispatch” under the Regulation does appear to include redispatch for congestion and “system” reasons, and Article 13(7) states that there is no obligation to compensate for non-market redispatch where a connection agreement grants no rights for firm delivery of physical power. We believe this compensation is therefore within the gift of the SEM Committee to offer compensation for non-firm curtailment. As WtE facilities are not subject to curtailment, we have no direct comment on this SEM Committee position. It would be a matter for the SEM Committee to balance the need for predictable investment in new renewables, against incentivising renewable generation which cannot be utilised by the consumer or contribute to renewable targets.

4. Application of proposals from 1 January 2020

- **The SEM Committee has outlined two proposals for an ex-post payment mechanism and welcomes feedback on this from interested stakeholders, including alternative proposals.**
- **It is expected that under either mechanism, no change would be required to the treatment of Curtailment within the Trading and Settlement Code.**

Response: On the assumption that there is a change to the level of compensation payable to WtE facilities from that receivable prior to 1 January 2020, Indaver supports the principle of generator making an individualised claim for increased compensation to the TSO based on its own trading, dispatch and market settlement data. While not a matter for the SEM Committee, it is important that the operation of the REFIT subsidy does not recover any Article 13(7) compensation, whether it be at the level of the Day-Ahead trade or the level of financial support.