

SEM-20-028

**"Implementation of Regulation
2019/943 in relation to Dispatch and
Redispatch"**

A Submission by
Dublin Waste to Energy

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Dublin Waste to Energy - Key Points

- Dublin Waste to Energy's primary business is waste processing
- Dispatch down of the facility has major consequences for the waste industry in Ireland
- Minimising dispatch down of WTE has comparatively very limited consequences for the energy system
- If a hierarchy is justifiable, then Waste to Energy should be treated with high priority due to the need to process waste - an essential service (as determined during the current COVID-19 pandemic)
- Dublin Waste to Energy's day ahead participation should not be limited by system constraints
- Not all renewable energy is non-synchronous. WTE provides one of the few sources of synchronous renewable energy in the market. WTE is therefore not subject to curtailment.
- Article 13 does not offer the flexibility to reduce curtailment at the expense of other renewable generation sources which are not subject to curtailment, save for reasons of network security.
- In the event re-dispatching should occur, it is unclear if and when market or non market re-dispatching would apply for a WTE plant
- Should Dublin Waste to Energy be subjected to re-dispatching, then it should be put back to the same economic position before re-dispatch, either through commercial offers or an alternative mechanism

Executive Summary

Dublin Waste to Energy's primary business is waste processing

Dublin Waste to Energy ("DWTE") is deemed an essential service for both waste processing and energy production. The facility is a critical part of National Waste Infrastructure (processing 35% of the residual waste produced in Ireland).

The facility is an R1 recovery facility which is paramount for Ireland to meet its recovery rates for waste management. The requirement to meet Article 12 & 13 of the Electricity Regulation must align with requirements to meet other EU legislation. In addition, the Regulatory Authorities must avoid interpreting Articles 12 & 13 in a way that could put Ireland in breach of other obligations under EU law.

Dispatch down of the facility has major consequences for the waste industry

Currently:

- to make way for non-synchronous renewables, Dublin Waste to Energy is dispatched down *despite itself being primarily renewable*; and
- can be further dispatched down to make way for a handful of CCGTs in the Dublin region to meet the TSO's local reserve requirements, *despite being connected to Dublin*.
- **DWTE is not aware of any other technologies that are treated in this way.**

Downward dispatch of a Waste to Energy facility is significantly different from dispatch down of other plant on the system, in that it hinders the processing of another essential service.

The consequence to the waste industry of dispatch down is far greater in magnitude to the impediment to the power generation industry to facilitate baseload operation of WtE.

To that end, dispatch down of WTE plant must be minimised if not prevented.

Waste to Energy should be considered high priority within the proposed hierarchy

DWTE concur with the RA's assessment that on-site processes should continue unaffected by dispatch down requirements. This may be reflected appropriately as per T&SC definition of autoproducer

- **The TSO's recommendation for priority dispatch:**
 - is a product of a narrow scope definition by the RAs, which may prompt inconsistencies with EU law and domestic Waste policy, with resulting significant impacts on the Irish waste management industry
 - the RA's valid queries of the TSO proposal are being addressed at the same time as the industry is providing its response. A second round of consultation is thus warranted.
 - makes storability of fuel a rationale for losing priority. The ability to store fuel cannot be a factor for to determining priority
 - may attempt to solve the SNSP limitation at the Day Ahead Stage. Any mechanism to apply explicit consideration of a system limitation before the market can determine an economic solution is not in alignment with the intent of Article 12 and is impossible to implement either practically or fairly.
 - omits Peat and Interconnection without clear rationale
 - does not adequately define 'autoproducer' or 'minimum generation' for autoproducing.
 - may lead to supremacy of one essential service over another, placing 'R1' status of WtE under threat (which could lead to financial penalties levied on WtE and the State)

As additional waste capacity becomes necessary (due to increased population etc.), then additional Waste to Energy capacity would be required, even if Ireland met its recycling targets. A likely increase in generation to meet this will force a surrender for all priority dispatch currently allocated to such facilities. For waste processing plant, the implementation of this regulation will create uncertainty for growth in this area and potentially create a barrier to entry.

Should this circumstance arise, for Waste to Energy to play a role in delivering waste processing capacity, a derogation from Article 12(6) is warranted.

Market and Non-Market Redispatch actions are unclear

While DWTE agree with the SEM Committee's view that curtailment in the SEM represents non-market based redispatch within the meaning of Regulation 2019/943, it is unclear what other technologies will be subject to non-market redispatch actions.

DWTE, and Waste to Energy plant in general are not subject to curtailment.

Article 13 does not offer the flexibility to reduce curtailment at the expense of other renewable generation sources which are not subject to curtailment, save for reasons of network security.

In the event of market based redispatch actions, priority dispatch plant (including Waste to Energy) should be able to pursue a bid strategy to return to pre-redispatch economic position. **It seems paradoxical for market based redispatch to not allow recovery of lost opportunity costs on a**

market basis. In the event of non-market based redispatch actions, the Article is clear that compensation must be afforded to the generator.

Introduction

Dublin Waste to Energy Ltd (“DWTE”) welcome the opportunity to comment on the consultation “Implementation of Regulation 2019/943 in relation to Dispatch and Redispatch” (the “Consultation”) in which the Regulatory Authorities (the “RAs”) present their proposals to implement Articles 12 & 13 of the Clean Energy Package (the “CEP”).

The following document outlines DWTE’s response to the key issues raised by the Consultation that impact on the operation of the Facility as a ‘must-run’ unit. DWTE is satisfied that the contents of this response will be published in full.

This consultation response is divided into three sections and one appendix.

- Section 1 outlines the DWTE facility, Waste to Energy policy and consequences of downward dispatch
- Section 2 provides a response regarding Article 12
- Section 3 provides a response regarding Article 13

Section 1: Overview of Dublin Waste to Energy

The Facility

DWTE is a critical part of Ireland’s waste management infrastructure.

Dublin Waste to Energy Ltd is a Waste to Energy (“WtE”) facility, operated by Covanta, located on the Poolbeg Peninsula in Dublin City. It is a PPP with the four Dublin Local Authorities. The facility entered commercial operation in 2017. The plant can be described as a dual utility facility providing both a waste treatment service and renewable energy to the grid. Waste to Energy provides non-intermittent, indigenously fuelled, renewable energy generation capacity, offering many advantages both as a source of reliable base-load renewable generation capacity and in terms of the achievement of national and EU energy and environmental policy objectives.

The DWTE facility is Ireland’s largest Waste to Energy plant, treating 600,000 tonnes of residual municipal solid waste (“MSW”) per annum. This is equivalent to 35% of Ireland’s residual MSW. As a result, the plant is considered a critical part of Ireland’s waste management infrastructure.

DWTE qualifies for Priority Dispatch on the basis of the renewable fraction its processed residual waste

Waste to Energy has several unique technical and regulatory restrictions on its operation, which require that it operates as a ‘must-run’ generator unit. DWTE considers that the issues raised by the Consultation, particularly concerning the classification and treatment of Waste to Energy

generators and treatment of priority dispatch generators, are of critical importance to the efficient operation of the facility, and indeed implementation of waste policy in general.

Integration of Waste and Energy Policy

DWTE is subject to a number of EU policies, which should be complementary for the establishment of a circular economy.

Waste to Energy is multi-purpose by its nature and therefore, adheres to at least three main policies in the EU:

- Waste Management
- Energy Policy
- Air quality & climate change.

In addition, the European Commission has adopted a new Circular Economy Action Plan - one of the main blocks of the European Green Deal, Europe's new agenda for sustainable growth.

Energy Policy

Even though Waste to Energy is subject to different EU policies and legal frameworks, all these policies are largely intertwined. These three policies are essential for the establishment of a 'circular economy' and directed towards the achievement of a sustainable European future. Waste to Energy, while being a single technology, can provide a solution to different EU policies and has an important role to play, in that it 'injects' waste back into economy as secondary raw materials. Therefore, it reduces the environmental footprint of production and consumption and increases the security of supply of raw materials, one of the main objectives of *energy policy*. While the RAs have a domestic policy responsibility for energy rather than waste, as emanations of their respective Member States, EU Directives and Regulations are binding on and directly enforceable against them. This means that in interpreting EU law, the RAs must have regard to a different range of matters than those which are prescribed under domestic legislation.

Regarding Waste to Energy, the Circular Economy Action Plan articulates that Waste to Energy can "play a role and create synergies with EU energy and climate policy". Along similar lines, the European Commission's Energy Union Strategy defined in 2015 also aims to "further establish synergies between energy efficiency policies, resource efficiency policies and the circular economy", which should also include exploiting the potential of Waste to Energy.

Waste Policy

It is important to note the requirements of meeting the Waste Frame Directive, which:

- puts measures to improve waste management systems in the Member States ensuring that waste is valued as a resource.
- contains stricter targets to ensure that by 2030 waste (especially MSW) suitable for recycling or other recovery will not end up in landfills.
- The Member States also must ensure that they will meet the target set by the EU. Failure to meet these targets will result in significant fines.

Similarly, the Waste Management industry should aim for regional self-sufficiency in managing waste. The environmental costs of waste management should not be passed to communities which are not responsible for its generation. Furthermore, exporting the waste for disposal in another jurisdiction is not a responsible policy. Sustainable waste management is central to ensuring public health and therefore ensuring that energy policy responds to public health and safety considerations is no less important in the waste sector than it is in the case of safe managed release of water from hydro dams.

In addition, it is incumbent on states in the EU to have a sustainable waste management policy. Currently Ireland is exported c. 20% of its waste to other European countries who convert this waste to energy. Reducing the output of WTE plant in Ireland only compounds this situation and makes Ireland more dependent on export resulting in a less sustainable waste management system.

Energy Independence

Waste to Energy is not just about waste management. Waste to Energy helps to make Europe less dependent on fossil fuel imports and contributes to security of renewable energy supply, a major goal of the Energy Union policy alongside sustainability and competitiveness. In 2013 the Waste to energy plant contributed to c.1.5% of the total energy requirement of Europe.

'Waste' can cease to be a problem and become a valuable resource. The inclusion of the organic portion of MSW in the definition of potential sources of renewable energy has enabled the Member States to meet their national renewable energy targets via the Waste to Energy industry.

Therefore, Waste to Energy enables the use of waste as a valuable domestic source of energy contributing to energy security, transforming waste management into sustainable material management with the embedded principles of the circular economy, the diffusion of renewable energy, energy efficiency, improved economic opportunities and long-term competitiveness.

Air quality & climate change.

Waste to Energy can significantly reduce the contribution of MSW to GHG emissions through avoiding the release of methane (CH₄) from landfills, since CH₄ has is a much more potent GHG than CO₂ and the global warming potential from CH₄ is 28 times higher than from CO₂.

To conclude, Waste to Energy as a key to the circular economy, apart from its position in waste management, has strong synergies with the other EU objectives on climate and energy, especially in the context of resources and energy efficiency. It is also instrumental in supporting the EU's commitments on sustainability and its transition to a low carbon economy simultaneously meeting the principle of the protection of the environment, human health and combating climate change.

Implications of downward dispatch on Waste to Energy

WtE plant are designed to operate continuously (input driven rather than output driven) as base load plant at the top of merit order.

Downward dispatch of a Waste to Energy facility is significantly different from dispatch down of other plant on the system, in that it hinders the processing of another essential service, and in Ireland, it is a critical piece of waste infrastructure. Indeed, the impediment to the waste industry of dispatch down is far greater in magnitude to the impediment to the power generation industry to allow baseload operation¹.

To facilitate large penetrations of non-synchronous renewables, synchronous plant must be dispatched down. To make way for non-synchronous renewables, Dublin Waste to Energy is dispatched down despite itself being primarily renewable², and can be further dispatched down to make way for a handful of CCGTs in the Dublin region to meet the TSO's local reserve requirements, despite being connected to Dublin. **DWTE is not aware of any other technologies that are treated in this way.**

Aside from the critical nature of the facility, from a waste management viewpoint, the effect of being dispatched down has a negative impact on plant operations and maintenance, and in addition, may have a significant detrimental repercussion for its renewable energy status. The ramifications of this are outlined in a later section, however at a high-level, dispatch-down may impact on the ability to qualify for capacity revenue but also its classification under the Waste Framework Directive.

Section Two & Three: Preface

Under **Article 12**, new renewable generators with contracts concluded after 4 July 2019 will no longer be subject to priority dispatch, except for:

- renewable energy generating facilities with an installed capacity of under 400KW (200ke from 2026); and / or
- generators, energy storage facilities and other demand-side response units that demonstrate innovative technologies, subject to approval from the relevant Regulatory Authority.

The current dispatch order for the SEM will need to be updated, as all renewable generation and peat is currently subject to priority dispatch in the SEM.

Under **Article 13**, this regulation requires compensation for non-market based redispatching of firm generation, energy storage and demand response facilities.

¹ To illustrate this, at one point in 2018, there was only c.1,000 tonnes of spare waste treatment capacity. Thus, a continuation of the current dispatch down regime will likely create waste bottlenecks and if the dispatch down MW set point is set to a low level, will likely give rise to an alarming shortage of waste processing capacity in this country¹.

² The plant produces c.54% renewable energy into the grid based on the audited biogenic content of the feedstock. With the predicted level of dispatch down, the loss in renewable energy (at minimum generation), would be equivalent to a 17MW windfarm while at zero output it would be equivalent to a 26MW windfarm.

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?

DWTE provide its comments in the sections below.

Section Two: Requirements Under Article 12

- **Dispatch down of the facility has major consequences for the waste industry**
- **Downward dispatch of a Waste to Energy facility is significantly different from dispatch down of other plant on the system, in that it hinders the processing of another essential service.**
- **The consequence to the waste industry of dispatch down is far greater in magnitude to the impediment to the power generation industry to facilitate baseload operation of WtE.**
- **To that end, dispatch down of WTE plant must be minimised if not prevented.**
- **Waste to Energy should be considered high priority within the proposed TSO hierarchy**
- **DWTE concur with the RA's assessment that on-site processes should continue unaffected by dispatch down requirements.**
- **The ability to store fuel cannot be a factor that it is relevant to determining priority**
- **An explicit consideration of a system limitation before the market can determine an economic solution is not in alignment with the intent of Article 12**
- **The TSO proposed hierarchy may lead to supremacy of one essential service over another, placing 'R1' status of WtE under threat**

DWTE's response is focused on Sections 3.2 and 3.4

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

Any project that has progressed to the stage where a connection offer; a REFIT letter of offer or PPA offer has been made likely meets the criteria consistent with the intent of the legislation. Where a generator has received a connection offer ahead of the 4th July 2019, assuming no further increases in MEC are applicable, then that unit should be eligible for priority dispatch.

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.

DWTE supports the principle of balance responsibility as outlined in Article 5 of the CEP. In this instance, a unit which overestimates its likely output and submits FPN to that effect, would not face any adverse financial consequence (in the form of day ahead/imbalance spread) if all volume traded is settled at the imbalance price.

It is entirely feasible for a unit to bid plant at elevated volumes, which would be one extreme measure used to ensure a favourable market position if curtailment is then executed pro-rata from ex-ante position.

Consultation Question 9: Do you agree with the TSOs' proposal for a revised priority dispatch hierarchy?

In Section 3.4 of the consultation, ("Proposed Revisions to the Priority Dispatch Hierarchy"), the TSO makes a proposal for a revised dispatch hierarchy. This is an area which will likely require a further round of consultation. This is the first of two hierarchies presented in the consultation - the other relating to non-market redispatch as outlined in Article 13.

The implementation of these hierarchies will take place simultaneously, so this presents a challenge in formulating a coherent policy across both Article 12 and 13.

On the proposed TSO hierarchy for Article 12, Dublin Waste to Energy has identified several areas of concern with this proposal. These are detailed below:

1. Scope of the TSO's analysis

In formulating their submission, the TSO was asked to make a submission based on the following four key factors:

- The requirement to maintain the reliability and safety of the system;
- Security of supply
- Costs to customers, including constraint costs and costs arising from the application of losses
- The requirement for transparency and objectivity.

As outlined in Section 1, the RAs are bound by all EU law, not just that in the energy sector, and participants must comply with all policy areas, not just ones directly associated with the CEP. The scope in this instance is narrow and has the unintended consequence of creating potential for non-compliance in other important areas of European policy making. By placing a sole focus on such a narrow scope, the response overlooks how Waste to Energy can create synergies with other EU policies, such as waste and climate policy. This appears to contradict the goals of the *Circular Economy Action Plan*, which aims to strengthen those synergies.

2. RA's queries of the TSO recommendation

The RA's have several questions on the TSO submission, some of which are shared by DWTE and are outlined below. It is problematic that these queries are being addressed through the consultation process, and as a result, respondents must apply judgement on several items that are unclear when formulating a response. Consequently, a second round of consultation may be warranted to give participants a right to reply.

3. Health and Safety Implications

While the scope of the TSO's response includes a provision for 'safety of the system'; DWTE contends that TSO dispatch patterns can have wider public health ramifications. The requirement to process waste and the maintenance of waste processing capacity is an essential service (a position that has been clearly illustrated during the ongoing COVID-19 pandemic), and any action to limit this capacity is clearly not in the public interest.

4. Level 1 Dispatch Down: Market Position Allocation

In the TSO's proposal, it is stated that in the first order:

"Market position allocated based on cleared ex-ante and balancing market trades for all participants that solves energy balancing and SNSP restrictions"

This statement is unclear. DWTE assume that this refers to

- (a) a situation where the aggregate of market trades meets all energy balancing and SNSP restrictions; therefore, no dispatch down measures are required on the part of the TSO

rather than

- (b) energy balancing and/or SNSP restrictions should be tackled at the day-ahead stage

If (b) is the correct interpretation, then a further consultation would be required given the implication of this change. For (b), DWTE would assert that:

Article 12(1) states:

"The dispatching of power-generating facilities and demand response shall be non-discriminatory, transparent and, unless otherwise provided under paragraphs 2 to 6, market based"

Dublin Waste to Energy would argue the implementation is clear, that market-based dispatching is prioritised, followed by market-based and non-market based redispatching as covered by Article 13. Any mechanism to apply explicit consideration of a system limitation before the market can determine an economic solution is not in alignment with the intent of the article and is likely impossible to implement either practically or fairly.

Indeed, the market already has a mechanism to limit financial payment to ex-ante trades in the form of firm access. To layer in some additional limitation at the day ahead or

intraday stage would mark a fundamental change to the market. How exactly such a change could be implemented using the EUPHEMIA algorithm is unclear. In addition, it is also unclear how an SNSP forecast would be applied. If market participants, who have invested in forecasting capability, be subsequently prevented from gaining access to the market (perhaps due to poor forecasts administered centrally), then that participant would have legitimate grievance.

DWTE would argue, that as a renewable, synchronous generator it should not be subject to any limitation of this sort in the day ahead or intraday markets.

5. Level 2 dispatch down: HE Cogen, Biomass and Waste to Energy

Following the consideration around market position, the proposal is to dispatch down High Efficiency Cogeneration, Biomass and Waste to Energy plant to minimum generation (the level considered to be autoproducing). The order omits conventional plant, although this apparent error is corrected later on in the proposal.

Furthermore, this ordering also omits peat stations and interconnectors. There is no clear rationale for this omission, and some clarity on this area is warranted. Given EU legislation takes supremacy over national policy, any omission for peat stations would appear contrary to the goals set out in EU legislation.

6. Level 2 dispatch down: Definition of an Autoproducer

The TSO state:

“Where there is a need in operation to dispatch down from these market quantities then dispatch down High Efficiency Cogeneration / Biomass/ Waste to Energy to minimum generation (level where they are considered autoproducing: if they are not an autoproducer turn off)”

The definition of an autoproducer is absent in the TSO response, and it is left to the respondent to speculate on the intended application. As per the Trading and Settlement Code definition outlined below, the autoproducer ‘level’ should **not** be simply the house-load *consumption* of the plant. As previously outlined in CRU decisions, autoproducing is generation for its own *use* rather than *consumption*.

“an Auto-producer shall be a natural or legal person who consumes and generates electricity in a Single Premises, where such generation is essentially for its own use in that Single Premises”.

In addition, the Trading and Settlement Code Glossary defines this term as follows:

“Autoproducer Site means 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”

and

“Autoproducer Unit means a Generator Unit within an Autoproducer Site, as described in section B.9.4.”

It is not a sustainable endeavour to maintain waste production in a waste to energy facility without the corresponding power output. With that, the entire operation is a circular process, the inputs are required to produce power, but production of power is required to justify the waste input. As such, power generation is indeed necessary for its own use (as distinct to its own consumption) – to maintain the requirement for waste processing.

Furthermore, the RAs state in the consultation:

“The second point of the proposed hierarchy looks at dispatch down of existing priority dispatch High Efficiency Cogeneration/Biomass/Waste to Energy units to their minimum generation in terms of a level where they are considered to be autoproducing, in order to account for the demand requirements of such units for their on-site processes to continue unaffected by dispatch down requirements”

Furthermore, the RAs acknowledge:

“A number of such units have internal processes which require them to run at a certain level of generation which needs to be considered”

We agree with the RA’s assessment, in that on-site processes should continue unaffected by dispatch down requirements (this may also impact on the status of the plant, considered in point 8 below). However, dispatch down has an impact on Waste to Energy’s ability to process waste at a much higher load level than minimum generation (minimum load is discussed further in the point below).

We contend that given the circular process requirements detailed above, and obligation to meet not just the objectives of the Clean Energy Package but also the Waste Policy Directive, the auto-producer level as referenced by the TSO submission must be considered at *base load*.

Consideration at base load is entirely consistent with the Trading and Settlement code as currently implemented. If autoproducing is considered and implemented at a lower level, then it is unclear how exactly a Waste to Energy facility, and indeed the Waste industry, can meet its varying obligations and operate under this proposed hierarchy.

There potentially scope for the definition of a new, unambiguous term which defines the level of ‘autoproducing’ for WTE and to adequately capture the requirement of the internal processes.

7. Level 2 Dispatch Down: Definition of Minimum Generation

The TSO also makes reference to minimum generation:

“Where there is a need in operation to dispatch down from these market quantities then dispatch down High Efficiency Cogeneration / Biomass/ Waste to Energy to **minimum**

generation (level where they are considered autoproducing: if they are not an autoproducer turn off)³

The use of the phrase minimum generation is unclear. This may or may not be interpreted as the 'minimum stable level' (or 'stable export limit').

As part of TSO mandated Grid Code testing, the minimum stable level is examined for a set number of hours to ensure plant and grid stability is maintained. However, Waste to Energy plant are generally not designed for significant run hours at this load level. Extended operations at minimum stable levels do create plant issues that impact on emissions levels and plant availability as a result.

Again, there is scope for the definition of a new, unambiguous term which helps to define the level of autoproducing as articulated in Point 6 above.

8. Dispatchable versus non dispatchable plant

The TSO's make reference to a preference to dispatch wind and hydro ahead of other forms of renewables due to reliability of the fuel source.

“Where there is no security threat to the system (as otherwise priority dispatch no longer applies) and a choice of priority dispatch units has to be made, this hierarchy is considered to be marginally more secure. This is because not utilising the CHP, biomass or waste to energy resource allows for it to be used later (as against wind, solar or tidal units where utilisation of the resource cannot be deferred) thereby increasing the security of supply of the system in a small way”

The ability to store fuel is not a factor that it is relevant to determining priority and to take this factor into account is a breach of the priority entitlement in Article 12(6) of the Electricity Regulation.

Article 1(20) of the Electricity Regulation defines 'priority dispatch' in a central dispatch market as “the dispatch of power plants on the basis of criteria which are different from the economic order of bids and from network constraints, giving priority to the dispatch of particular generation technologies”. There are certain limited circumstances in which Member States may depart from this priority, such as safety and security of the transmission system. The Electricity Regulation must also be interpreted in a way that is compatible with other EU legislation such as the Waste Framework Directive.

Without prejudice to the foregoing, even from a policy perspective it is perverse that providers of synchronous renewable power who invest in technology that provides a level of certainty are asked to move aside versus those that do not.

The inherent assumption is that waste can be stored forever, increasing security of supply. If waste is not processed there are potential environmental issues as a result of leaving waste for extended periods in bunkers. Furthermore, if the WTE facility cannot / reduce its waste acceptance the resultant solution is to either not collect the waste or

³ <https://www.cru.ie/wp-content/uploads/2002/07/cer0237-1.pdf>

export it to Europe to similar WTE facilities. Hence, Ireland, is not just exporting its waste problem but its renewable energy source while, in the meantime, importing fossil fuels, to produce energy.

A fundamental point is that the proposal makes no reference to the length of time that the unit can be dispatched down for. If implemented, the dispatch down level may continue for a prolonged and indefinite length of time until wind levels abate, which would have serious implications for the facilities ability to process waste. In the event of consistent dispatch down, waste simply must be diverted to landfill and/or export and thus this fuel source is lost.

Indeed, throughout the COVID-19 epidemic, lower demand has led to levels of downward dispatch, despite waste being identified as an essential service. This effectively creates a hierarchy on one essential service (electricity) over another (waste). Household waste volumes increased by c.19% during the pandemic. The DWTE primarily accepts household waste and during the first 3 months of the pandemic had to operate above its normal waste acceptance levels to ensure that waste was collected and adequately treated.

In addition, dispatch down leads to plant issues that inevitably arise, as discussed in the section above.

Furthermore, dispatching down Waste to Energy has consequence for emissions. Emissions of CO₂ and NO_x would be increased per MWh exported, and in addition can drive a requirement to consume oil should the asset be required to shut down or restart.

9. Supremacy of one essential service over another and plant classification

An unintended consequence of the TSO recommendation is, if implemented, that the TSO would be granted a level of control over the level of waste processing capacity and could ultimately drive waste management policy in Ireland. It is entirely possible, that in the event of high level of dispatch down, a re-designation of Waste to Energy plant may occur. We outline the consequences of this below.

The Waste to Energy Communication is written within a spirit of the Waste Framework Directive (“WFD”) to ensure that the waste hierarchy is respected, and that prevention, reuse, and recycling are not averted. However, Waste to Energy can be attributed to different labels, such as ‘disposal’, ‘recovery’ and potentially ‘recycling’ for anaerobic. For instance, Municipal Solid Waste Incinerator (MSWI) have been reclassified to a recovery operation by the revised WFD, provided they generate energy and the plant meet the efficiency thresholds calculated using the ‘R1’ formula. The energy efficiency (EE) of the installation must be greater than 0.65 for facilities in operation since 2009 and greater than 0.60 for facilities in operation before 2009.

Recent calculations for the DWTE indicated that the energy efficiency of the plant is c. 0.66. With the continued or increase levels of downward dispatch, the figure of 0.65 is at significant risk of being breached which would result in the plant being re-designated a D10 disposal facility. This could have significant implications for DWTE and for the Irish State. There are few instances across Europe where dispatch down applies for Waste to Energy facilities.

By not achieving the R1 efficiency criterion, this will constitute a breach of its EPA licence conditions. In addition, the Irish state will be in default for failing to meet the recovery targets for waste set out in EU Legislation and will be fined daily until the recovery targets are met.

Incinerator bottom ash ("IBA") is generated when MSW is incinerated. At the DWTE facility up to 120,000 tonnes per annum is produced. Under the Landfill Levy regulations IBA is levy exempt as long as the IBA comes from an R1 facility, but, not so from a D10 facility. The Landfill Levy, at present is €75 per tonne. Were this to be applied to the IBA from the DWTE facility as a result of it being re-designated as a D10 facility the cost would be c€9,000,000 per annum, which would have to be passed on to the waste collectors and ultimately the consumer.

A further impact of the loss of R1 status is the risk to the loss of the customer base for specific wastes. Many of the blue-chip companies expect that their waste is sent for recovery and not disposal. The impact of the loss of the R1 status to Irish WTE facilities is that these customers will send their waste to other recovery plant abroad leading to lost revenue for these facility. In effect, Ireland will be exporting its waste and renewable energy to facilities abroad performing the same operation as Irish Waste to Energy facilities.

For the numerous reasons outlined above, if a hierarchy can be justified, then WTE's position in the hierarchy must be considered with waste management requirements in mind.

In Section 3.6, ("Cessation of Eligibility for Priority Dispatch")

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 'significant modifications' as mentioned in the CEP are not outlined, rather the significant modification is judged to have occurred in the event of a new connection agreement or if generation capacity is increased. Amendments to a connection agreement (with the exception of generation capacity) should not impact on priority dispatch status.

In the event of additional waste capacity being necessary in Ireland, it is likely that additional Waste to Energy capacity would be the preferred treatment method. That may be in the form of new plant or extension to existing facilities or increase in throughput, however a likely increase in generation capacity will force a surrender for all priority dispatch currently allocated to such facilities.

The implementation of this regulation at best creates uncertainty for growth in this space, and at worst creates a barrier to entry altogether. Should this circumstance arise, for Waste to Energy to play a role in delivering waste processing capacity, a derogation from Article 12(6) is warranted.

Section 3: Implementation of Article 13

- DWTE believes that, a part of a second round of consultation is warranted, specifying a clear definition of what actions are deemed market and non-market redispatch and which technologies will be subject to such actions.
- In the event re-dispatching should occur, it is unclear if and when market or non market re-dispatching would apply for a WTE plant
- In the event of market based redispatch – the unit should be permitted to bid opportunity costs. It is paradoxical for market based redispatch to not allow recovery of lost opportunity costs on a market basis.
- Article 13(6)(a) of the Regulation does not offer the flexibility to reduce curtailment at the expense of other renewable generation sources, save for reasons of network security
- in the event of non-market based redispatch, WTE's lost market revenues, including that of support schemes must be recovered as per 13(7).

DWTE acknowledge that translating the EU terminology into the Irish context is problematic, the term is easier to apply in 'self-dispatch' power markets whereby dispatch is conducted by the producer, with re-dispatch applied by the TSO to prevent system issues. Dispatch should exist to achieve the most economically viable operational schedule; driven by a combination of commercial submissions and market forecasts. Dispatch effectively meets the requirements of the market; re-dispatch effectively meets the requirements of the system.

DWTE agree with the SEM Committee's view that curtailment in the SEM represents non-market based redispatch within the meaning of Regulation 2019/943.

Market based redispatch should be minimised in line with the Article 13(3).

Article 13(3) states the criteria whereby non-market based redispatch may be used. At a high level, the following tests must hold for a unit to be subject to a non-market redispatch action.

- No market-based alternative is available
- All market-based resources have been used
- The number of available power generating facilities is too low to ensure effective competition in the area where suitable facilities for the provision of the service are located
- The current grid situation leads to congestion in such a regular and predictable way that market-based redispatching would lead to regular strategic bidding which would increase the level of internal congestion...

More simply, a useful test for gauging which actions are *non-market based* could refer to dispatch down actions which are system tagged. When the generator is subject to market based redispatch, the generator can bid a price at which it is prepared to be redispatched. In doing so, it will bid the price at which its opportunity cost associated with the redispatch is covered. This will ensure that it is fully compensated for being redispatched.

Downward redispatch of DWTE which occurs at the same time as curtailment appears to be effectively non-market-based dispatch, however the RAs appear to refute this:

“As the only form of non-market based redispatch in the current market arrangements is curtailment applied to non-synchronous generation...”

Any system action on DWTE means the asset cannot receive opportunity cost based compensation, as they are currently bound by the BMPCOP which prevents recovery of opportunity costs. Regardless, the System Operator will dispatch plant as per the priority dispatch hierarchy, rather than on generator offers.

We also note that the SEM Committee's 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. There are limited circumstances where this occurs in the SEM, but the rules should reflect the regulation.

DWTE believes that, as part of a second round of consultation, a clear definition of what actions are deemed market and non-market redispatch and which technologies will be subject to such actions. In either instance, in the event of market based redispatch – the unit should be permitted to bid opportunity costs, and in the event of non-market based redispatch, should be compensated as per 13(7).

Section 4.2 deals with High Efficiency Cogeneration

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.

DWTE agrees that downward redispatching of electricity from renewable sources should be minimised where possible.

Section 4.3 concerns an updated hierarchy of non-market based downward redispatch as outlined in 13(6).

The RAs state:

“As the only form of non-market based redispatch in the current market arrangements is curtailment applied to non-synchronous generation...”

The implication is that localised constraints can be met either through:

- (a) A loss of availability (for 'designated days') or
- (b) through market-based redispatch.

Given the current financial compensation for dispatch down, DWTE is unconvinced of this assertion. Again, any system action on DWTE means the asset cannot receive opportunity cost based compensation, as they are currently bound by the BMPCOP which prevents recovery of opportunity costs.

Furthermore:

“... the main effect of this is to reinforce the provisions under Article 13 (5) to minimise the downward redispatching of electricity produced from all renewable energy sources or

from high-efficiency cogeneration. This means that curtailment should be avoided unless other solutions would result in disproportionate costs or risks to network security.

This necessitates the introduction of a new hierarchy for the application of non-market based redispatch actions by the TSOs now and in the future, whereby they are applied in the following order (taking account of disproportionate costs, risks to network security and available solutions to resolve network and system issues)”

It is very difficult to comment on this hierarchy, without clear indication as to which generators or technology types are subject to non-market redispatch. Not all renewable generators are subject to curtailment. While the reduction of curtailment in general is a credible strategy, Article 13(6)(a) of the Regulation **does not offer the flexibility to reduce curtailment** at the expense of other renewable generation sources, save for reasons of network security:

“power-generating facilities using renewable energy sources shall only be subject to downward redispatching if no other alternative exists or if other solutions would result in significantly disproportionate costs or severe risks to network security”.

It is therefore not lawful to depart from this dispatch priority for reasons such as ability to store fuel, nor to re-dispatch priority dispatch plant which is not contributing to the need for curtailment. The RAs appear to be having regard to domestic policy objectives which, while perhaps understandable and laudable, are not matters that the RAs can have lawfully regard to in interpreting an EU Regulation.

As outlined in DWTE’s response Question 9 above, it is not clear how the hierarchy on non-market re-dispatch interacts with the TSO proposal.

Section 4.4 refers to Article 13(7) and the area of financial compensation

The RAs quote from the regulation:

“Article 13(7) states that ‘financial compensation shall be at least equal to the higher of the following elements or a combination of both if applying only the higher would lead to an unjustifiably low or an unjustifiably high compensation;

(a) additional operating cost caused by the redispatching, such as additional fuel costs in the case of upward redispatching, or backup heat provision in the case of downward redispatching of power-generating facilities using high-efficiency cogeneration;

(b) net revenues from the sale of electricity on the day-ahead market that the power-generating, energy storage or demand response facility would have generated without the redispatching request; where financial support is granted to power-generating, energy storage or demand response facilities based on the electricity volume generated or consumed, financial support that would have been received without the redispatching request shall be deemed to be part of the net revenues”

In the event non-market based redispatching is imposed upon WtE facilities, the following should be considered:

For the above statement, it is clear that (b) **that lost market revenues, including that of support schemes must be recovered. While there is no lawful basis on which the RAs can depart from this if it does not over-compensate generators** (as is the case in the SEM). It is important to stress for (a): whereas traditional power producers have clearly defined means to establish a cost of production, Waste to Energy plant are somewhat different. The input fuel can differ considerably in terms of its organic content, calorific content and indeed renewable content. More fundamentally, is not sustainable to burn waste without a corresponding export power volume, so a dispatch down may lead to a cessation of waste processing. The operating cost of a plant with negative fuel costs is significant.

The cost in dispatch down results in not just a loss of market revenue, but continuous dispatch down takes a severe toll on the machine and gives rise to more frequent plant failure.

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?

Aside from the composition of financial compensation, the overall RA interpretation of what is meant by compensation being “unjustifiably high” is of concern.

Where non-market based redispatch is required, Article 13(7) ensures that the compensation received by a generator that is subject to non-market based dispatch is no less than the remuneration received by a generator that is subject to market based dispatch. This is important for a range of reasons, including that generators are not prejudiced by a failure of a Member State to implement market-based mechanisms for redispatch as envisaged by Article 13(2); Member States are not incentivised to opt for non-market based rather than market based Redispatch mechanisms in breach of Article 13(2); and perhaps most importantly, markets are not designed with structural barriers to development of renewables and achievement of the EU's climate objectives. In order to ensure that these objectives are achieved, it is critical that Article 13(7) is implemented in Ireland as intended.

Article 13(7) requires that where a generator is redispatched up, it is compensated for the cost of such upward redispatch in the form of incremental costs. Where a generator is redispatched down, it must be compensated for the opportunity cost of such downward redispatch the form of foregone net revenues (including renewable supports) or, where higher, incremental costs of such downward redispatch (for example in a HE-CHP plant needed to replace a heat load). Article 13(7) contains a methodology for calculating the minimum level of this level of compensation, allowing that it can be higher but can never be lower than the level calculated in accordance with the Article.

Article 13(7) also contains a saving provision that ensures that if the application of the methodology results in a generator being overcompensated or undercompensated (in each case unjustifiably), the Member State may adopt a blended methodology for calculating the level of compensation. In all cases, Article 13(7) contains an absolute requirement that (i) a generator that subject to non-market based redispatched is compensated by the system operator; and (ii) that the level of compensation is at least equal to the higher of the actual costs associated with the redispatch or the opportunity cost associated with the redispatch, save where this results in unjustifiable over or under compensation to the generator.

In the Consultation Paper, the RAs reach the proposed conclusion the provision of financial compensation to generators subject to curtailment based on the net revenues from the day-ahead market, including any financial support that would have been received, represents an unjustifiably high level of compensation, with undue burden placed on electricity consumers

It is clear from the Consultation Paper that the RAs has had regard to a wide range of policy considerations and obligations under domestic law in proposing its implementation of Article 13(7). It is not permissible to give primacy to domestic law over an EU Regulation. While it is true that SEMC has duties in relation to the discharge of its statutory functions, any such duties are subservient to the provisions of Article 13(7). The RAs are bound by the Regulation in accordance with its terms and must implement it strictly.

Giving the words of Article 13(7) their ordinary meaning, the system operator is obliged to financially compensate producers in the event of non-market redispatch.

The reference in Article 13(7) to “unjustifiably low” or “unjustifiably high” pertains solely to the “compensation” that is required to be paid by the Article. The “compensation” to which this refers is the compensation to be paid by the system operator to the generator to compensate it for the opportunity cost (or cost) of the redispatching. It is therefore clear that the reference to “unjustifiably low” or “unjustifiably high” is a test of whether the generator is overcompensated or undercompensated, not whether the compensation to which the generator is lawfully entitled is, or is not, a unjustifiable burden on anyone else

The overall cost to consumers is not referred to in Article 13(7), nor are any of the other matters to which the RAs have had regard, as indicated by the Consultation Paper. It is therefore clear that “unjustifiably low” or “unjustifiably high” are not associated to a burden on consumers; and any considerations in relation to the characteristics of the SEM or the jurisdictional support schemes are irrelevant considerations and it is unlawful to have regard to them

Sections 4.4 and 4.5 – Curtailment in the SEM

We note the aims of the TSO:

“As noted in Section 4.1, the power systems in Ireland and Northern Ireland are pioneering in relation to the high level of instantaneous renewable penetration (SNSP) managed, with a target of over 90% by 2030.”

Similarly, the RAs state an objective to:

“reduce the overall level of curtailment and facilitate higher levels of renewables”

The ability to accommodate high levels of SNSP is an important tool in the overall facilitation of renewables. However, high SNSP facilitation is not a policy, rather it is a tool to enable higher levels of renewables on the grid. DWTE stress that some synchronous renewable generation is provided by Waste to Energy plant. Promotion of non-synchronous renewables, simply because they are non-synchronous would not be a coherent policy, and does not appear to be aligned with the intent of Article 13.

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?

The balance of section 4.5 concerns compensation arrangements for units subject to curtailment. As argued above, DWTE should not fall into this category as per TSO definition.

To re-iterate, DWTE 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.

Given the lack of clarity as to whether downward redispatch for DWTE is considered market-based or non-market based, DWTE makes the following high-level comments:

- As its connection agreements is firm, DWTE is entitled to compensation at the full level of financial support offered under REFIT (ie. the REFIT rate for non-market redispatched down energy).
- For market-based redispatch, we note that DWTE generators 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 note that there is no specific instance of market power, temporal or locational, in relation to DWTE's facilities' offer during period of curtailment, i.e. the rationale for the general application of the BMPCOP to all non-energy actions is not supported by the level of market power for system wide downward redispatch or curtailment, any more than it is for energy balancing).
- Finally, we understand that REFIT rules will need to be reconsidered in relation to the retention of such compensation.