SEM/10/060: Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code – SEM Committee Proposed Position Paper and Request for Further Comment (the "Position Paper")

Dublin Waste to Energy Limited ("DWTE") Response

1. Introduction

1.1 DWTE is a Public Private Partnership between Dublin City Council ("**DCC**"**)** and Covanta Energy Europe Ltd, which has been charged with the development and operation of the Dublin Waste to Energy Facility (the "**Facility**"). DWTE is grateful for the opportunity to respond to this Position Paper.

1.2 DWTE has previously outlined the technical restrictions and environmental and waste management policy objectives that require that the Facility be dispatched consistently and near constantly. As such, Covanta considers that the issue of priority dispatch is of critical importance to the operation of the Facility.

1.3 A failure to operate the Facility in a consistent and constant manner will, within a short period of time, result in a breach by the Facility of its environmental licences (which incorporate performance criteria set out in the Waste Framework Directive[1]) and a failure by Ireland to meet its waste diversion targets set out in the Waste Framework Directive and Landfill Diversion Directive[2], with consequent fiscal penalties.

1.4 Waste to energy is unlike any other renewable energy generation technology operating or proposed in the SEM. It accepts its fuel to fulfil national targets set by the EU. It will not and cannot select its fuel or the composition of same for commercial or other reasons. Therefore its operation should not be determined solely by reference to commercial electricity market imperatives. Rather the unique characteristics of this technology must be acknowledged, in a manner that will facilitate compliance with environmental performance criteria and the achievement of national waste targets.

1.5 The following note sets out DWTE's view that the Facility is eligible for 'mandatory' priority dispatch (as that phrase is used in the Position Paper) as it is a generating installation using renewable energy sources within the meaning of Article 16(2)(c) of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (the "**Directive**").

1.6 It is incumbent on the SEM Committee to ensure that the design of the dispatch rules for the electricity market not only acknowledges this, but moreover does not prejudice the achievement of Ireland's waste targets, and expose Ireland to potentially significant fiscal penalties. We note that the facilitation of waste to energy facilities will benefit the operation of the wholesale electricity market by the addition of a small but significant number of base-load, non-intermittent renewable energy facilities that are 100% indigenously fuelled and will produce electricity close to (and within) major demand centres.

[1] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

[2] Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.

2. Background

2.1 Driven by (non-commercial) policy imperatives

(a) DWTE responded to the 2009 consultation on "SEM/09/073 Principles of Dispatch and the Design of the Market Schedule in the Trading and Settlement Code: A Consultation Paper" (the "**Consultation Paper**") setting out the detailed waste policy imperatives underpinning the development of the Facility. The comments set out in this paper should be considered in addition to and in the context of the 2009 response.

(b) The 2009 response highlighted the specific technical characteristics of the plant and the unique policy drivers which provided a basis for the treatment of the Facility as effectively 'must run' in the SEM. Above all, the 2009 response sought to impress upon the SEM Committee an understanding that energy from waste plant is unlike any other plant on the system. Its primary function is to thermally treat municipal solid waste, and it has a statutory obligation to do so.

(c) In summary, we note in relation to the operation of Waste to energy facilities that:

(i) To fulfil our national waste targets defined by the Waste Framework Directive and Landfill Directive, the Facility must treat waste at near full capacity and constantly over the course of the year.

(ii) To fulfil waste licence conditions derived from the Waste Framework Directive and enforced by the EPA, the Facility must export energy consistently and near constantly. Failure to meet a mandated efficiency target[3] will not only jeopardise the Facility's licence, but will also result in Ireland failing to meet its European waste targets.

(iii) Waste to energy facilities accept their fuel source as it arrives at the gate in order to fulfil national waste targets. They do not select their fuel in response to commercial drivers.

(iv) Waste to energy facilities are designed primarily to treat waste and ensure that Ireland meets binding EU waste targets. Waste to energy technology is not capable of responding to commercial incentives and signals in the same way as other generator units in SEM.

2.2 Scale of Waste to Energy in the SEM Generation Portfolio

(a) In light of the peculiar incentives underpinning the operation of waste-to-energy facilities, it is perhaps useful to note that scale of penetration of such facilities in the SEM is likely to be limited. The economics of waste to energy and future availability of residual waste are such that it is unlikely that the island would ever be capable of supporting in excess of 1,800,000 tonnes of thermal waste recovery capacity. There are currently four energy from waste facilities planned in Ireland with a combined MEC in the region of 105MW.[4]

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[3] The 'R1 Criterion' is set out in Annex II of the Waste Framework Directive, and is an efficiency formula, wherein the level of efficiency is a function of the electricity generated by the facility. Unless the requisite efficiency is achieved, the facility will not be classified as a recovery operation for the purposes of the Waste Framework Directive.

[4] These comprise the Facility, two Indaver facilities in Cork and Meath, and the South East facility.

A further three facilities are planned in Northern Ireland with a combined MEC of less than 45MW. It is unlikely that the installed energy from waste capacity on the island would exceed 160MW.

(b) As such, from the perspective of the SEM, the scale of penetration by energy from waste will be relatively limited by reference to the size of the installed all-island electricity capacity. However this should not detract from the significance of the role played by these units in the context of the achievement of Irish and Northern Irish waste targets. Waste to energy plays a key and irreplaceable role in the delivery of our national waste targets.

3. **Priority Dispatch**

3.1 We note and support the view of the SEM Committee that the application of priority dispatch is effectively a legal issue, and that SEM Committee is obliged to provide precedence to units with 'mandatory' priority dispatch under Directive 2009/28/EC. We further accept and support the view that priority dispatch should be afforded irrespective of cost, and should only be limited by reference to issues of system security.

3.2 In this context we would reiterate that the obligation on Member States under Article 16(2)(c) is to:

> "ensure that when dispatching electricity generating installations, transmission system operators shall give priority to generating installations *using renewable energy sources* in so far as the secure operation of the national electricity system permits and based on transparent and non-discriminatory criteria". (Our emphasis)

3.3 Waste to energy, as a matter of fact, uses renewable energy sources (within the meaning of the Directive) in generation. The Directive specifically defines 'energy from renewable sources' to include biomass, and biomass, in turn, is defined to mean:

> "the biodegradable fraction of products, waste and residues from biological origin from agriculture (including vegetal and animal substances), forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of industrial and municipal waste".

3.4 As such we unequivocally consider waste to energy to qualify for "mandatory" priority dispatch within the meaning of the Directive. The Directive does not distinguish between plant that is 'part renewable' and fully renewable. Instead it specifically refers to generating installations using energy from renewable sources. Nowhere does it specify the rate of such utilisation.

3.5 We understand that the SEM Committee may have some concern that, in extremis, this may allow a unit with 1% renewable feedstock to avail of priority dispatch. We note this concern, and think any potential for gaming in this area should be carefully guarded against. That being said however, as a matter of interpretation, the wording of the Directive should be given its plain meaning. Just as priority dispatch is unqualified (save in respect of system security) and is 'a de facto exception to the principle of economic precedence generally applied in the context of the internal market in energy', the inclusion of 'energy from renewable sources' is unqualified in the Directive.

3.6 With this in mind, it is of some concern to DWTE that there is no express acknowledgement of the position of waste to energy facilities in the discussion of priority dispatch in the Position Paper. We note that SEM Committee sets out a hierarchy of re-dispatch to be applied under normal circumstances. It is of some concern that waste to energy does not feature in this order of priority. This is particularly so in light of the ability of waste to energy to provide secure and non-intermittent base-load renewable electricity to the system.

4. Hybrid Plant

4.1 The Consultation Paper defined 'hybrid' generation as generation that is part renewable, and sought the views of industry participants as to the level of priority that should be afforded to hybrid generators. In this context DWTE expressed the view that, to the extent that the Facility fell within the 'hybrid' category (waste to energy is inherently part-renewable), it should nevertheless be afforded full priority dispatch. DWTE is firmly of the view that irrespective of the categorisation of energy from waste it must be provided with full priority dispatch in accordance with the Directive.

4.2 In this regard, the SEM Committee must acknowledge the vital distinction between waste to energy and other forms of 'part-renewable' plant. It is the inherent make-up of the feedstock which determines the part renewable status of waste to energy, and not any commercial decision on behalf of the operator. Waste to energy cannot be classified in the same manner as plant with co-generation capability which makes a commercial decision as to what level of renewable fuel it uses and which is capable of controlling the renewable content of the input fuel. Waste to energy cannot separate the renewable content of its feedstock, nor can it control its make-up for commercial purposes. It 'uses renewable energy sources' by definition, and not by choice.

4.3 In the Position Paper the SEM Committee suggests that there may be merit in providing for a qualification threshold for priority dispatch for 'hybrid' plant where a high proportion of renewable fuel is used.[5] While we recognise the apparent merit in providing a threshold for generating stations which *elect* to use a proportion of renewable fuel, we would strongly argue that such a threshold should not be applied to waste to energy or any other generating installation which *inherently and unavoidably* uses renewable energy sources. As such any 'hybrid' categorisation or threshold should not be applied to energy from waste.

4.4 We note that the SEM Committee summary of the proposed position states that there is 'no legal basis for the provision of priority dispatch for hybrid plant as defined'. As set out above, we consider that the Directive *does* provide such a basis in the context of waste to energy. The Directive provides for priority dispatch for plant 'using renewable sources'. Energy from waste uses renewable sources by definition.

4.5 We note, as a practical consideration, that energy from waste, by virtue of the lack of control exercised by the operator of the Facility over the make up of the feedstock, does not lend itself to the application of a 'threshold' renewable content. The biodegradable fraction of municipal solid waste will vary in line with factors such as consumption trends, levels of household waste recycling and the pre-treatment levels. While at present up to 64% of municipal solid waste is biodegradable, this figure may vary both seasonally and annually. The setting of a specific threshold in legislation,

[5] Although the level at which this threshold might be set is not specified, an illustrative example is provided whereby a co-firing peat unit (which qualifies for priority dispatch for its entire output, albeit on mandatory and non-mandatory grounds) is placed in the order of dispatch by reference to its predominant fuel. In this case a 51% or above test is used.

(which must necessarily be high to avoid potential for gaming by co-generating 'hybrid' units) may in fact create a risk that waste to energy could cease to qualify for priority dispatch on average over a given year. Should this occur, then the plant could be forced to cease treatment resulting in a national failure to meet our binding EU waste targets.

4.6 This risk also creates an unacceptable uncertainty, particular in the context of entering into long-term offtake contracts in order to qualify for REFIT. We refer to paragraphs 4.5 and 4.6 of our 2009 response for a more detailed consideration of the repercussions for REFIT.

5. 'Must Run' Status

We note that the SEM Committee has stated its view that the question of 'must run' in dispatch is primarily a technical matter and is best addressed by in the context of the Grid Code requirements. We accept that such a status would be required to be reflected in the Grid Code[6]. However the system operators, it is argued, should only be permitted to treat the plant as must run where the technical parameters of the plant are such that it cannot be dispatched down or off. It is not, we submit, within the system operator's gift to make the unit must run for reasons of policy such as waste targets etc. As such where the unit is technically capable of being cycled (albeit this is not economic and/or will hamper achievement of landfill targets etc) the system operators cannot make the unit 'must run'. We consider that such a stipulation would need to be supported by the SEM Committee.

6. Tie Breaks

6.1 The Position Paper acknowledges the link between tie breaks and the treatment of priority dispatch plant. The SEMC proposes that the re-dispatch order of priority be applied in the event of a tie-break situation, but that after this de-loading should be instructed on a pro-rata basis in a manner determined by the TSOs.

6.2 This is a relatively unsophisticated approach to tie-breaking (which is likely to become an increasing feature of the SEM). We have already noted that energy from waste (and so the Facility) does not feature in this order of priority and this should be remedied as a matter of urgency. The chief difficulty that we see with the proposed approach to tie breaks is that it does not appear to have regard to system security in that its progressively dispatches down predictable generation until only intermittent (including non-controllable) generation remains. We would have some concern that this approach is illogical and impractical.

[6] We do not consider that a Grid Code derogation would be adequate in this regard.