

Group Briefing
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Overview of the Regulation of the Electricity Sector in Ireland

INTRODUCTION

The principal legislation governing the electricity industry in Ireland is the Electricity Regulation Act 1999, as amended (“**1999 Act**”), which provides for the establishment of a regulatory framework for the introduction of competition in the generation and supply of electricity in Ireland. The 1999 Act also established the Commission for Energy Regulation (“**CER**”) as the national regulatory authority responsible for overseeing the liberalisation of Ireland’s energy sector including granting licences for the generation, transmission, distribution and supply of electricity.

POLICY AND REGULATION

Overall policy responsibility for the electricity sector in Ireland lies with the Minister for Communications, Energy and Natural Resources (the “**Minister**”) and his Department (“**DCENR**”). In this capacity, the Minister is advised by a range of other statutory bodies including the CER and Sustainable Energy Authority of Ireland.

Government policy in the Irish electricity sector is driven principally by the relevant EU directives, for example:

- » the European Communities (Internal Market in Electricity) Regulations 2000 (the “**2000 Regulations**”) completed

the transposition of Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity;

- » the European Communities (Internal Market in Electricity) Regulations 2005 (the “**2005 Regulations**”) were introduced to transpose the requirements of Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC;
- » the European Communities (Internal Market in Electricity) Regulations 2010 (the “**2010 Regulations**”) represent the first step taken in Ireland towards the transposition of Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity. The Directive repeals Directive 2003/54/EC. The 2010 Regulations provide, inter alia, for the strengthening of independent regulation, better levels of consumer protection, the licensing of a public electricity supplier, the designation of a supplier of last resort and the enhancement of security of supply provisions. The European Communities (Internal Market in

Electricity and Gas) (Consumer Protection) Regulations of 2011 give further legal effect to consumer protection provisions of Directive 2009/72/EC; and

- » the European Communities (Renewable Energy) Regulations 2011 (as supplemented by the Sustainable Energy Act 2002 (section 8(2)) (Conferral of Additional Functions – Renewable Energy) Order 2012) have transposed Directive 2009/28/EC on the promotion of use of energy from renewable sources.

Responsibility for day-to-day regulation of the sector rests with the CER. In the context of the SEM, the CER is required to liaise closely with its counterpart in Northern Ireland, the Utility Regulator. All decisions concerning SEM matters must be made by the SEM Committee, a committee of the CER and the Utility Regulator, and comprised of three CER representatives, three representatives of the Utility Regulator in Northern Ireland, an independent member and a deputy independent member.

The CER's roles include establishing arrangements for trading in electricity; determining electricity tariffs; issuing licences and authorisations; approving terms of access to the distribution and transmission systems and resolving disputes in respect of the same; advising the Minister on the effect of electricity generation in relation to sustainability and international agreements and the development of the electricity industry; promotion of competition and renewable energy generation; ensuring security of supply; and protecting the interests of final customers. Recent amendments to the 1999 Act give the CER power to take all actions it considers necessary to participate in the SEM and provide for the CER's objectives and functions as they relate to the SEM. The CER is also the national regulatory authority for purposes of Directive 2009/72/EC (concerning common rules for the internal market in electricity).

The CER is the independent national regulatory authority and is entirely

independent of the electricity market participants, including the state owned Electricity Supply Board (“ESB”).

However, the Minister retains certain reserve powers to give directions to the CER. The Minister may direct the CER to impose public service obligations in relation to the security of supply, regularity, quality and price of supplies, environmental protection (including energy efficiency and climate protection) and use of indigenous energy sources on the ESB or holders of licences to generate or to supply electricity. Extensive use has been made of this power with public service obligations imposed in relation to renewable support, indigenous fuel sources and for security of supply. Historically, only the ESB had been subject to public service obligations. However, since 2008, requirements have been imposed on other suppliers to have available to them and purchase an amount of electricity contracted under the various Renewable Energy Feed-In Tariff (“REFIT”) schemes. The Minister may also give the CER directions in respect of the criteria in accordance with which an application for an authorisation may be determined by the CER and the definitions of combined heat and power, and renewable, sustainable or alternative sources of energy. The Minister may not give policy directions in relation to SEM matters.

Decisions of the CER on the granting of an electricity supply or generation licence under section 14 or an authorisation to construct a generating station under section 16 of the 1999 Act, and decisions of the CER on modification of the terms of such licences or authorisations already granted can be appealed to the Minister within 28 days of the making of the decision.

The Minister must then set up an independent appeal panel that will have all the powers and duties of the CER that are necessary to carry out its function. The panel will have certain powers of the High Court in relation to production of documents and attendance of witnesses and may confirm the refusal to grant a licence or authorisation or direct the

CER to grant a licence or authorisation with or without conditions. In the case of modification of a licence or authorisation the appeal panel may either confirm the modification or direct the CER not to make it.

Provision is also made for application for judicial review through order 84 of the Rules of the Superior Courts. Such an application must be made promptly or in any event within two months of the decision in question. The application for leave to apply for judicial review will only be granted if the High Court is satisfied that there are substantial grounds for contending that the decision is invalid or ought to be quashed. An application for judicial review may be made in respect of decisions of either the Minister or the CER.

ADMINISTRATIVE CONSENTS AND LICENCES FOR A GENERATOR

The key administrative authorisation required to construct a generation facility is an authorisation to construct or reconstruct a generating station issued by the CER pursuant to section 16 of the 1999 Act. The criteria to which the CER may have regard in determining an application for such an authorisation are prescribed under the Electricity Regulation Act 1999 (Criteria for Determination of Authorisations) Order 1999 and the 2005 Regulations (the latter amending section 18 of the 1999 Act). Other authorisations such as planning permission are also required.

The key administrative authorisation required to operate a generation facility is a licence to generate electricity issued by the CER pursuant to section 14(1) (a) of the 1999 Act. Other operational permits in relation to pollution or emissions may also be required.

The CER may modify licences or authorisations with or without the consent of the holder. Standard form licences and authorisations have been published by the CER. On 30 August 2007, the CER published simplified authorisation and licensing procedures for generators with capacities less

than 1MW and less than 10MW. The relevant procedures are set out in the Electricity Regulation Act 1999 (section 16(3a)) Order 2008 and the Electricity Regulation Act 1999 (section 14(1a)) Order 2008 respectively.

GRID CONNECTION

A generator may be connected to the transmission network or the distribution network. Details in respect of each process are set out below.

Transmission and distribution systems licences

Pursuant to section 14(2A) of the 1999 Act only EirGrid may be granted a licence as transmission system operator (“**TSO**”). The licence is issued under section 14(1)(e) of the 1999 Act. Pursuant to section 14(2B) of the 1999 Act only the ESB may be granted a licence as transmission system owner. The licence is issued under section 14(1)(f) of the 1999 Act.

Pursuant to section 14(2C) of the 1999 Act, only the ESB or a subsidiary of the ESB may be granted a licence to act as distribution system operator (“**DSO**”). The licence is issued under section 14(1)(g) of the 1999 Act. ESB Networks Limited has been established for this purpose. Pursuant to section 14(2DA) of the 1999 Act only the ESB may be granted a licence as distribution systems owner. The licence is issued under section 14(1)(k) of the 1999 Act.

Connection offers

Any person is entitled to apply to the TSO or DSO (as appropriate) for connection to the transmission or distribution system. However, if the person is not an eligible customer or does not hold a licence under section 14 of the 1999 Act or an authorisation to construct or reconstruct a generating station under section 16 of the 1999 Act, any offer from the TSO or DSO must be subject to the person becoming an eligible customer or obtaining a licence or authorisation.

The only circumstances in which the TSO or DSO can refuse to make a

connection offer to an applicant are set out in section 34(4) of the 1999 Act and include: where the CER is satisfied that it is not in the public interest; where it would result in a breach of the 1999 Act, the Regulations made under the 1999 Act, the Grid Code or distribution code (as appropriate) or any condition of any licence or authorisation; or where the applicant does not undertake to be bound by the terms of the Grid Code or distribution code (as appropriate).

The 1999 Act requires the TSO and the DSO to offer transparent and non-discriminatory terms for connection to and use of the transmission system. The CER may issue directions to the TSO and DSO specifying connection terms from time to time, including in relation to matters to be specified in a connection agreement or use of system agreement, the terms and conditions of a connection offer, the manner in which costs will be shared between the TSO/DSO and connection applicants and the time for making or refusing to make a connection offer. Following consultation with the TSO and DSO, the CER issued a decision on 6 October 2004 in relation to the terms for connection to and use of the transmission and distribution systems. These terms have evolved over the intervening years, and the CER now approves standard connection documents for access to the transmission and distribution systems.

There are separate agreements: (a) with the DSO for a distribution system connection; or (b) with the TSO for a transmission system connection. In either case the connection agreement is in a standard form approved by the CER and governs connection to the relevant system. Each connection agreement incorporates general conditions which are standard form conditions approved by the CER, and the project-specific offer letter. A connection agreement binds the connecting party to the relevant distribution/transmission codes and governs construction and commissioning of the connection works and ongoing connection to the network.

There are two types of works that need to be carried out before a generator connects to the grid:

- » Shallow connection works, which relate to the development of the local connection. Once the shallow works are completed, a generator may export to the grid. However, there is no guarantee of financial compensation if it is constrained off unless all of the deep connection works are completed (i.e. “*non-firm*” access). The cost of shallow connection works are borne by the generator, or shared amongst a group of generators in the same sub-group. Where the TSO or the DSO bear these costs, they are “*passed through*” to the generator.
- » Deep reinforcement works, also known as “*associated transmission reinforcements*” or “**ATRs**” relate to the assets that are required for the network as a whole. Once the ATRs are complete, the generator is entitled to financial compensation where it is curtailed or constrained (i.e. *firm* access). The costs of ATRs are covered by transmission use of system (“**TUOS**”) charges paid by generators. In certain circumstances, the generator will take on the responsibility to construct works that would ordinarily be carried out by the TSO, and are referred to as “*contestable activities*”. Contestable activities may include detailed design, routing, site selection, planning consents, wayleaves procurement and construction (subject to a given set of standards and TSO acceptance) for contestable assets. Where a connection offer is “*non-contestable*”, the TSO will be responsible for constructing all of the transmission works.

It is one of the conditions to accepting a connection offer that the generator has entered into a Transmission Use of System Agreement (“**TUoS Agreement**”) with EirGrid. The TUoS Agreement is a standard form agreement which sets out the terms and conditions upon which EirGrid permits the “*User*” (i.e. the generator) to use the

ESB Transmission System. Under the TUoS Agreement, EirGrid agrees to the User being provided with the use of the ESB transmission system at the Network Connection Points. The User, in turn agrees to pay the generation related generation transmission service TUoS charges under a specified tariff schedule. TUoS tariffs are revised annually. The General Conditions of Connection and Transmission Use of System are incorporated into the TUoS Agreement. It is a condition precedent to the TUoS agreement, inter alia, that the generator be a party to the Trading and Settlement Code.

Policy, charges and group processing

Some elements of transmission connection policy have been harmonised in Ireland and Northern Ireland under the SEM arrangements, including the introduction of a harmonised transmission charging policy and a harmonised treatment of losses. In 2009 the CER approved a number of changes to its Electricity Network Connection Policy. These changes relaxed a number of requirements, including in relation to capacity bonds, for renewable and distribution-connected generators in particular.

In May 2011 the CER approved a joint Connection Offer Policy and Process Paper of EirGrid and ESB Networks Limited setting out some policy and process issues applying to applications for connection to the transmission and distribution networks respectively. The CER issued supplemental guidelines in August 2014 focusing on the challenges facing project delivery where actions of one developer may affect other developers.

The CER may give directions from time to time in respect of the basis for charges for the use of and connection to the transmission system. Section 35 of the 1999 Act provides that the ESB shall (within such time as the CER may direct) prepare a statement setting out the basis upon which charges are imposed for use of and connection to its transmission system or distribution system.

Section 35(4) provides that charges for connection to or for the use of the transmission system or distribution system shall be calculated so as to enable the ESB to recover the appropriate proportion of the costs directly or indirectly incurred in carrying out all necessary work; and a reasonable rate of return on the capital represented by such costs.

The CER conducts a revenue review every five years to determine the revenues that the ESB may earn in order to cover the cost of providing the network. The current review covers the period 2011 to 2015 and sets out the total allowed revenues over that period. Tariffs for the use of the transmission system and distribution system are set annually by the CER.

To facilitate processing of applications for connection of wind generation to the grid, the CER has directed the system operators to operate a group processing procedure. Under group processing, connection applications from prospective renewable generators are processed by the system operators under defined criteria simultaneously in batches or gates, with the eligible applications broken into geographical groups depending on their level of interaction. Applications equating to 1,300MW were processed in Gate 2. On 16 December 2008, the CER published its direction on Gate 3, directing EirGrid and ESB Networks to issue connection offers to a further 3,900MW of renewable generation projects. Applicants are granted firm connection to the network based on EirGrid's overall strategy for development of the grid and its schedule for completing the necessary deep transmission reinforcement works.

SEM

The Irish electricity sector underwent fundamental reform with the establishment on 1 November 2007 of a single electricity market (the "**SEM**") encompassing Ireland and Northern Ireland. The Energy (Miscellaneous Provisions) Act 2006 and the Electricity Regulation (Amendment) (Single Electricity Market) Act 2007 amend the

1999 Act to provide the legal basis for the SEM in Ireland, including establishment of the SEM Committee of the CER.

The wholesale market of the SEM is operated by Single Electricity Market Operator ("**SEMO**"). SEMO is a contractual joint venture between EirGrid, the transmission system operator in Ireland, and its Northern Ireland counterpart, System Operator Northern Ireland ("**SONI**"). EirGrid holds a SEMO licence under section 14(j) of the 1999 Act and is exempted from the need to hold a licence in Northern Ireland. SONI holds a corresponding licence in Northern Ireland and an exemption under section 14(2F) of the 1999 Act. SONI was acquired by EirGrid in March 2009. The market rules are set out in the Trading and Settlement Code, agreed procedures and approved modifications.

One of the key features under the SEM rules is the mandatory gross pool (the "**Pool**"). The sale and purchase of electricity is conducted on a gross basis, with all generators/suppliers receiving/paying the same price for the electricity sold into/bought via the Pool (the "**System Marginal Price**" or "**SMP**"). All generators with a Maximum Export Capacity ("**MEC**") over 10MW are required to participate in the Pool either directly or through an appointed intermediary. An intermediary is a quasi-agent peculiar to the SEM. Because all electricity must be traded in the Pool above a de minimis level, contracts for physical power are in principle prohibited. However, an intermediary registers in the market as the generator unit and sells physical power into the SEM and receives the revenues associated with the generator unit (energy payments and capacity payments). In order to sell physical power into the Pool, the intermediary must have title to the power and therefore above de minimis generators will enter into Power Purchase Agreements ("**PPAs**") with their intermediaries.

While participation in the Pool is compulsory, certain generators are permitted to operate outside the pool ("**Non-Participating Generators**").

Any generator with a MEC below 10MW falls below the de-minimis threshold for participation in the SEM and so can choose to be a Non-Participating Generator.

A de-minimis generator can enter into a PPA with a supplier and is treated by the Meter Registration Service Operator (“**MRSO**”) as negative demand for that supplier. Effectively, in any Trading Period, the output from the generator is deducted from the aggregate load of that supplier’s customers. In this way, the supplier avoids the cost of purchasing from the SEM pool that volume of electricity that is generated by the de-minimis generator. Typically a de-minimis generator will always choose to net its output against a Supplier Unit rather than appoint a supplier as Intermediary to sell into the pool. The reason for this is because the avoided cost of a supplier purchasing electricity from the pool is greater than the revenues received by a generator for the same volume of electricity in the same timeframe (due to avoided charges etc.). This results in greater revenue for the supplier and the ability for the generator to negotiate a more favourable PPA.

Generation is scheduled and dispatched by the TSOs based on offers to generate, taking into account constraints, interconnector trades and priority dispatch. Conventional generators in the SEM (“*price makers*”) compete through commercial offers. Renewable generation benefits from priority dispatch, which means that they will be turned on first in the order of generation, subject to any system constraints or curtailment. The rationale for priority dispatch is to reach Ireland’s binding renewable energy targets under the EU Renewable Directive 2009/28/EC. Renewable generators are known as “*price takers*” as they impact the market price only by their effect on the demand to be met by price makers and will receive payment based on their generation availability.

There are two loss factors in the SEM, the distribution loss adjustment factor (“**DLAF**”) and the transmission loss adjustment factor (“**TLAF**”), which result

in change to the traded volumes in the SEM. A generator’s energy metered at the site will be multiplied by the applicable DLAF and TLAF prior to settlement in the SEM.

The spot price of wholesale electricity in Ireland is a single marginal (pool) price determined by reference to an unconstrained unit commitment and production schedule, the objective of which is to set prices to minimise the cost of production. The single electricity market operator calculates half-hourly market prices, in accordance with the market trading rules, which were developed by the CER in conjunction with its Northern Irish counterpart under section 9BA(1) of the 1999 Act.

Since the implementation of the SEM, reserve prices for auctions of Directed Contracts (contracts for differences, which hedge the system marginal price) have been used as benchmark forward prices for electricity. The quantity and pricing of directed contracts are set by the regulators.

I-SEM

EU Member States have been tasked with implementing electricity markets that are consistent with the EU Target Model by 2014. The SEM faces certain challenges in this regard, in particular insofar as it does not provide for an ex ante price nor does it permit widespread intra-day trading. However, a two year derogation has been granted to implement the necessary SEM reforms. The CER in Ireland and the Utility Regulator in Northern Ireland (together the “**Regulatory Authorities**”) have now sought to extend that date further to late 2017.

In September 2014, a final decision paper was published by the SEM Committee in respect of the design of the I-SEM alongside a detailed impact assessment. It should be noted that this is a high level design (“**HLD**”) decision only, and its purpose is to set out a series of recommendations which may be ultimately incorporated into binding legislation. The decision paper provides

that the I-SEM will be focused on liquid and transparent markets, while ensuring security of supply, meeting environmental requirements and maximising benefits for consumers in the short-term and the long-term.

The I-SEM will offer four timeframes/markets to trade: (i) the forward market; (ii) the day-ahead market (“**DAM**”); (iii) the intra-day market (“**IDM**”); and (iv) the balancing market (“**BM**”).

Forwards market

For in-zone trading, only financial trading will be permitted (with no right for physical settlement) in the forwards timeframe. Trading is expected to be by way of contracts for differences (“**CfDs**”) struck against a reference market, expected to be the DAM, allowing for hedging. The HLD provides that this will support the formation of robust and transparent prices in the DAM and IDM and ensure liquidity in those markets is not reduced. Cross-zonal trading, subject to further discussions and agreement with neighbouring markets, will be supported by financial transmission rights - effectively a CfD with payments based on the difference between the day-ahead price in the zones.

DAM

The European Day Ahead Market will be the ‘exclusive’ route to a physical contract nomination at the day-ahead stage and the only route to take a forward position in the DAM. Entry into the DAM is not mandatory, but the delivery of a liquid DAM is an important focus for the detailed design. The SEM Committee expects participation to be incentivised to provide robust reference prices for forward trading and to facilitate efficient trading across interconnectors.

The HLD provides that there will be unit-based participation for generation, save for portfolio aggregation arrangements for demand-side units, demand and specified variable renewable generation (to be specified in the detailed design phase). Even where aggregation is allowed, gross portfolio bidding means that ordinarily separate bids must be

submitted for demand, demand side units and for generation.

IDM

Continuous intraday trading will be the exclusive route to intraday physical contract nominations, although there will be scope to introduce periodic implicit auctions if these develop at the European level. Making a matched trade in the European intraday price coupling mechanism, where a first come first served basis is used to allocate cross-zonal capacity to match bids and offers in different zones, is specified in the HLD as the only route by which a market participant can update their physical contract nomination at the intraday stage. As with the DAM, there will be unit-based participation for generation in general, with gross portfolio aggregation arrangements for demand-side units, demand and specified variable renewable generation.

Balancing market

The HLD provides that the starting point for dispatch is detailed and feasible physical nominations required for all market participants following the DAM. This will be updated to reflect developments in the intraday stage. TSOs will be responsible for ensuring a feasible dispatch of plant that delivers a safe and secure system, including having sufficient reserve. Market participants will be responsible for converting a contractual schedule for any generation allowed in a gross portfolio into a schedule for individual units and the detailed design phase will determine rules and responsibilities for converting the contractual schedules into a more granular nomination profile.

The HLD provides that all market participants will be responsible for balancing, meaning that they are responsible for the difference between actual generation or load and the volumes traded. Participation in the BM will therefore be mandatory after day-ahead stage and in general will be unit-based with a single imbalance price. Participants will submit incremental and decremental bids. The HLD indicates that there will be marginal pricing for

unconstrained energy balancing actions and pay as bid for non-energy actions (possibly combined with local market power mitigation measures).

I-SEM HLD: Capacity remuneration mechanism

The HLD determines that the I-SEM will include an explicit CRM on the basis that an energy-only market will not deliver long term generation adequacy due to perceived risks of missing money in a small island market with increasing variable renewable generation. It is acknowledged that the CRM will need to be implemented in a way to avoid distorting cross border trade and wider European developments on public interventions ensuring adequacy, whilst remaining compatible with EU State Aid rules. The explicit CRM does not preclude targeted contracting mechanisms as a back stop measure to address specific security of supply or other concerns (such as the proposed DS3 mechanism). However, the HLD notes that this would not be sufficient to address the broader issues for generation adequacy.

The CRM will take the form of reliability options (“ROs”), being quantity based financial call options issued by a central party through a competitive auction. The quantity of capacity will be set centrally and the price by the competitive process. Holders of ROs will receive an annual payment in return for the TSO having the right to call on the holder to provide energy at the pre-determined strike price. Where the market reference price is above the strike price, holders of ROs must make a payment equal to the difference. The ROs will be pay-as-cleared and all successful bidders receive the same price for the same option. The HLD provides that equitable treatment of different capacity resources (including cross border participation) will be determined during detailed design. The ROs must be backed up with physical capacity.

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