



Energy for
generations

ESB Response to:
SEM-Committee Paper on Market
Power and Liquidity (SEM-20-045)

28/08/2020





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1. INTRODUCTION AND EXECUTIVE SUMMARY

The Single Electricity Market Committee (“SEMC”) published a discussion paper (“Discussion Paper”) on the subject of ‘Market Power and Liquidity’ on 7th July 2020 setting out its proposed approach to addressing outstanding matters from 2015 on the same subject, calling for evidence and inviting feedback. Specifically, the outstanding matters concern a review of liquidity; coverage and harmonisation of certain contracts; a review of ring-fencing of ESB; and alternatives for allocation of Directed Contracts. This paper forms the submission of ESB.

ESB’s submission comprises three parts: (1) commentary on the SEMC’s proposed approach to the promised reviews (liquidity, ring-fencing and Directed Contract allocation; (2) responses to the individual questions contained in the Discussion Paper; and (3) a body of evidence on the current market conditions.

For the reasons outlined below, ESB asks the SEMC to undertake a full review.

The Discussion Paper does not properly address either the intended subjects of the review or the impact on competitive outcomes and customers. It improperly reaches the hasty conclusions that neither ring-fencing nor liquidity will be reviewed (and in consequence will continue unaltered); and that only a limited review of pricing and allocation of Directed Contracts will be undertaken. These conclusions are unsafe. The SEMC has not presented any review of evidence and has provided almost no analysis to support its proposed approach. Consequently, the SEMC’s conclusions have not been reached in accordance with good regulatory practice as set out in law, in custom and by bodies such as the OECD.

To the contrary, in our response ESB provides clear evidence that these regulatory measures (Ring-fencing and Directed Contracts) harm customers and are likely to weaken competition. Consequently, they cannot be justified on the grounds of either necessity or proportionality. Moreover, we also demonstrate that the continuation of these measures will unfairly discriminate against ESB.

The measures have become obsolete with the passage of time and the current facts and circumstances of SEM. For example, the ring-fencing was put in place in the lead up to the Republic-of-Ireland only market opening in 2000, 20 years ago. Likewise, Directed Contracts were put in place ahead of SEM opening in 2007, 13 years ago. Today the market has changed dramatically and ESB generation’s market share is just 23%¹. ESB sets out many of the facts and

¹ ESB Generation Market Share measured over the first 6 months of 2020, Day Ahead Market. (Data Sources: SEMO: <https://www.sem-o.com/market-data/> , SEMO <https://www.semopx.com/market-data/>)

circumstances that now obtain in today's SEM and submit that, in light of this evidence, it would be unreasonable for the SEMC not to re-consider their approach and open a wide-ranging review. ESB is confident that such a review will reveal that the ring-fencing and Directed Contracts regulatory measures are no longer required and justified and that the systemic situation with regard to liquidity will be clearly understood and addressed.

Notwithstanding this overarching point about the approach to the reviews, and without prejudice, ESB answers the nine specific questions in the Discussion Document. Of interest, given that SEMC are minded to undertake a narrow review of pricing and allocation of Directed Contracts, is the evidence of the disfunction in the market concentration model (Q5/Figure '1') where ESB's quantum of Directed Contract has counter intuitively *increased* in the face of declining ESB market share.

The final section of ESB's response contains data and evidence on the current situation that prevails in the SEM specifically on market power, hedging products and liquidity.

Electricity Supply Board

2. ESB'S POSITION ON THE SEMC'S DISCUSSION PAPER

The Discussion Paper sets out the intended approach of the SEM Committee (SEMC) in relation to four commitments made in the 2017 I-SEM Forward market decision paper. Those commitments were to review:

- ESB's ring-fencing requirement;
- liquidity in the SEM Forward Market;
- alternatives to the current allocation process for Directed Contracts; and
- further coverage and harmonisation of existing Master Agreements that could facilitate trading and reduce costs where possible.

A review of these measures is timely and important. The current ring-fencing and Directed Contract obligations are obsolete and unfairly discriminatory to ESB. Furthermore, they impose a material cost to ESB, and harm competition and consumers' interests.

However, the Discussion Paper concludes that:

- there will be no review of ring-fencing arrangements at this time;
- while there will be a review of the pricing and allocation process for Directed Contracts, the obligation will remain solely on ESB; and
- no further liquidity interventions are required at this time, as there have been positive developments in forward markets.

While the document is formally a consultation, the SEMC has not undertaken any substantive analysis on which to base this default position. It would appear that the SEM Committee intends not to fulfil its previous commitment to review ESB's ring-fence arrangement. This is wholly unacceptable from a regulatory process perspective.

In particular, the SEMC has not followed due regulatory process in that it has not:

- set out a framework against which any interventions should be assessed;
- set out the theories of harm which ongoing interventions should address;
- set out evidence to demonstrate which theories of harm are credible, and in particular whether the conditions which existed and which (in the regulator's opinion) originally justified the current regulatory interventions continue to exist; or
- justified proposed interventions to address credible theories of harm.

These issues are discussed in more detail below:

2.1 SEMC Decision Making: Legal Obligations and Principles

In the Discussion Paper, the SEMC has outlined strongly worded "minded to" positions on ring-fencing, Directed Contracts and liquidity intervention in the Forwards Market, without any indication that there has been or is to be an evidence-based assessment of the issues. ESB has serious concerns over the compliance of the SEMC's actions to date and proposed decision making on these measures with applicable EU and Irish minimum legal standards, including necessity, proportionality, non-discrimination, transparency and consistency.

We also have serious doubts that the ultimate decision on these measures will meet the requirements of natural and constitutional justice- all of which are applicable to the SEMC as a body making administrative decisions affecting the rights of undertakings.

We outline the relevant legal requirements briefly below and then demonstrate the failures of the SEMC to meet these requirements to date and our concerns in relation to the proposed intervention decisions/measures.

The legal principles in the following section, in particular with regard to the principles of ensuring a level playing field, proportionality, necessity, transparency and non-discrimination, derive from EU law, and in particular the Electricity Directive (which is and will remain applicable in both Ireland and – by virtue of the Withdrawal Agreement – in Northern Ireland), as set out in further detail within the following sections. Further, as the interventions in question (i.e. ring-fencing and the imposition of directed contracts) are implemented through ESB’s licences in Ireland, we also focus on obligations on the SEM Committee under the Irish Electricity Regulation Act 1999, as amended, as this is the applicable legislation when the SEMC is making a decision affecting those licences, in addition to the principles of Irish administrative and natural and constitutional law. However, we believe it is worth noting, for completeness, that these are general principles which- albeit through differing authorities and sources - are equally relevant under Northern Ireland law and note that the Utility Regulator has in several of its publications, including its Enforcement Procedure, committed to the regulatory principles of ensuring actions are targeted, proportionate, transparent, consistent and accountable.

2.1.1 Necessity & Proportionality

- **Necessity:** Pursuant to the Electricity Regulation Act 1999 (as amended) (the “**1999 Act**”)² “*The Minister, the Commission and the SEM Committee shall have regard to the objective that the performance of any of their respective functions in relation to the Single Electricity Market should, to the extent that the person exercising the function believes is practical in the circumstances, be ... targeted only at cases where action is needed...*”. Clearly this requires an articulation of an identified and verified concern or theory of harm before the SEM Committee can determine if the “action is needed”.
- The Electricity Directive also provides that regulatory authorities must have the power to “*to carry out investigations into the functioning of the electricity markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market*”³. This makes clear that any such measures must be both necessary and proportionate- and, importantly, that an investigation into the functioning of the market is a prerequisite for the imposition of such measures. No investigation of the functioning of the market has taken place prior to the issue of the Discussion Paper. The Discussion Paper cites historic reasoning based on outdated market conditions- this cannot be considered evidence of need for continued intervention. The Discussion Paper speaks in unsupported generalities - for example, it states “*the SEM Committee notes that the removal of ESB’s ring-fencing arrangements could create a market power risk in both the wholesale and retail markets, and potentially have negative impacts on liquidity*”. No evidence is adduced to support this assertion- without such evidence, this statement is speculation and cannot be considered an articulation of a “need” for action.

² Section 9BD of the 1999 Act

³ Article 59(3)(b) , Directive 2019/944/EC

- As will be outlined in detail in this submission, no clear theories of harm have been identified by the SEMC and there is no evidence to support any possible theories of harm- both of which would have to exist before a “need” for action could be said to exist.
- **Proportionality** : The 1999 Act requires that:

“The Minister, the Commission and the SEM Committee shall have regard to the objective that the performance of any of their respective functions in relation to the Single Electricity Market should, to the extent that the person exercising the function believes is practical in the circumstances, be ... proportionate ...”⁴.
- As outlined above the Electricity Directive requires that measures by regulatory authorities to promote competition and ensure the proper functioning of the market must be both “*necessary and proportionate*”. In addition, the Electricity Directive provides that: “*Member states shall ensure a level playing field where electricity undertakings are subject to transparent, proportionate and non-discriminatory rules, fees and treatment, in particular with respect to....where applicable, licensing.*”⁵
- The Irish courts have adopted the EU law principle of proportionality: A decision must (i) be rationally connected to its objective and not be arbitrary, unfair or based on irrational considerations; (ii) impair rights as little as possible; and (iii) be such that its effect on rights is proportional to the objective to be achieved.⁶ As confirmed in the recent determination of the Appeal Panel in the Huntstown case, the proportionality principles set out by the Courts in *Heaney v Ireland* apply to decisions of the CRU that affect property rights (including through the imposition of licence conditions).⁷
- An evidence-based assessment is required in order to discharge each of these three limbs and to demonstrate proportionality of intervention. To date this has not occurred, and the “Call for Evidence” falls short of such an assessment. The putting forward of the “minded to” position in the absence of such assessment does nothing to ensure that (i) there is a need for intervention; (ii) that the proposed measures are in fact rationally connected to the objective to be achieved; (iii) that the rights of ESB – being the sole entity against whom the measures are directed- are impaired as little as possible in achieving the necessary objective; or (iv) that the impact on ESB’s ability to do business is proportionate to the objective.
- As will be explained in further detail in this submission, given the changes in market circumstances, the evidence now demonstrates that the imposition of the current ring fencing and Directed Contracts are neither justified nor proportionate.

2.1.2 Non-Discrimination:

- The 1999 Act requires that “*In carrying out any of the functions mentioned in subsection (1) the Minister, the Commission and the SEM Committee shall not discriminate unfairly as regards terms and conditions- (a) between authorised persons...*”⁸ . An authorised person is the holder of a licence

⁴ Section 9BD of the 1999 Act

⁵ Article 3, Directive 2019/944/EC

⁶ *Heaney v Ireland* [1994] 3 IR 593

⁷ *Huntstown Power Company Limited & Anor v Commission for Regulation of Utilities*, 2 July 2018

⁸ 9BC(6), 1999 Act

or exemption under a provision of the 1991 Act relating to electricity or under any corresponding provision of the law of Northern Ireland.

- The SEMC’s non-discrimination obligation in EU law derives from Article 9 of the Electricity Directive which states “*Member States ... shall not discriminate between [electricity] undertakings as regards either rights or obligations*”. In addition, the Directive requires that Member States ensure a level playing field where electricity undertakings are subject to non-discriminatory rules including, where applicable, with respect to licensing⁹. The Directive requires that the measures taken pursuant to the Directive to ensure a level playing field must be “*proportionate, non-discriminatory and transparent*”¹⁰.
- The European Court of Justice has stated, “*Member States are required to refrain from all discrimination in regard to the rights and obligations of electricity undertakings.*”¹¹ The Court has explained: “*The prohibition of discrimination... requires that comparable situations are not treated differently unless such difference in treatment is objectively justified.*”¹² In summary, the principle of non-discrimination requires a regulatory body to assess (i) the comparability of the situation of operators and (ii) to objectively justify any difference in treatment between operators who are found to be in a comparable situation.
- It is indisputable that the interventions are obligations which negatively impact ESB (including its property rights), and that only ESB is so impacted. It is also clear that the interventions were imposed at a time when ESB was the dominant generator in the market, with a view to creating an open, competitive marketplace. As demonstrated in this paper [(and as the SEMC should in any event be aware)], ESB’s current position in the market is entirely different- its market share has fallen significantly, it no longer has material market power and it now finds itself in a comparable position to other operators (including vertically integrated ones) such that the measures are clearly discriminatory.
- Yet, no account is taken of this in the Discussion Paper. There is nothing to suggest that, prior to arriving at its “minded to” position, the SEMC assessed the situation of ESB vis-a-vis other operators and, even if it did such an assessment, that it has sought to objectively justify the clear difference in treatment between ESB and comparable operators. Rather, the SEMC has treated the interventions as the baseline market operating position. Regulatory measures which single out an operator and which negatively impact its ability to operate on the market can never be so treated, and a regulator must be alive to their discriminatory potential.
- To be clear, this is an entirely separate concern to the fact that the markedly different market circumstances do not support the interventions in the first place.
- Throughout this submission, we highlight how the continuation of Directed Contracts and ring-fencing, without a full evidence based review (including a review of liquidity if necessary) cannot meet the principles of necessity, proportionality and non-discrimination.

⁹ Article 9, Directive 2019/944/EC

¹⁰ Article 65, Directive 2019/944/EC

¹¹ Case C-17/03 VEMW (para 46).

¹² Case C-17/03 VEMW (para 48). When interpreting Article 3(1) of Directive 96/92/EC, which finds its equivalent provision in Article 9(1) of the Electricity Directive. See also Case C-300/04, Eman and Sevinger, para 57 and Case C-280/93, Germany v Council , para 67.

2.1.3 Transparency, Accountability and Consistency

- The 1999 Act states: “*The Minister, the Commission and the SEM Committee shall have regard to the objective that the performance of any of their respective function in relation to the Single Electricity Market should, to the extent that the person exercising the function believes is practical in the circumstances, be ... transparent, accountable... consistent...*”¹³
- As referenced above the Electricity Directive imposes transparency obligations on Member States in respect of rules regarding licensing and measures taken to ensure a level playing field, respectively.
- The proposed approach outlined in the Discussion Paper is neither transparent nor consistent with the commitments made by the SEMC in the 2017 I-SEM Forward market decision paper. The Discussion Paper effectively amounts to a reversal of those commitments. Relying on the 2017 Decision Paper, ESB had fully anticipated that the SEM Committee would be proceeding to review ESB’s vertical ring-fencing obligations as it had committed to doing. The proposed approach is fundamentally inconsistent and lacking in decision making transparency.

2.1.4 Natural and Constitutional Justice

- In making an administrative decision and exercising its powers, SEMC must meet all requirements of natural and constitutional justice:
 - As with all administrative bodies, SEMC must consider all relevant evidence and must not consider irrelevant information when coming to its decision.
 - ESB, as a party affected by a regulatory decision, has the right to have its submissions fully considered.
- Importantly, “*the product of consultations must be conscientiously taken into account in finalising any ... proposals.*” Following such consideration, the mere “*pro forma recitation of the matters which are contained in [a] decision*” does not amount to compliance with the obligation to give reasons.¹⁴
- There has been no consideration of relevant evidence by the SEMC prior to the issuing of its “minded to” position. The “Call for Evidence” exercise in the Discussion Paper cannot amount to a gathering of all relevant evidence, as would be required by natural and constitutional justice. In the first instance, there is a bias in the formulation of the exercise given the strongly worded “minded to” positions outlined in the Discussion Paper. These raise serious concern for ESB of a pre-determined outcome.
- Second, ESB is conscious that its’ competitors may have an interest in the ring-fencing being maintained without any further review (and have no incentive for such review), and for this reason it is important that this should be taken account by the SEMC in considering responses received. The High Court has previously determined that in assessing responses of competitors it is necessary to have regard to incentives for responses and caution must be exercised “*as to the inherent probative value of responses ... when regard is had to the fact that the question is posed by a competition authority to operators in a sector which may have become accustomed to the critical scrutiny of regulatory authorities.*”¹⁵ This is particularly true here where the vertical integration and Directed Contracts measures are the product of such scrutiny, and have been

¹³ Section 9BD, 1999 Act

¹⁴ *Deerland Construction Ltd v The Aquaculture Licences Appeals Board* [2008] IEHC 289

¹⁵ *Rye Investments v The Competition Authority* [2009] IEHC 140, paragraph 9.68.

presented in the Discussion Paper as the baseline position rather than an exceptional regulatory intervention which require continued objective justification if it is to be maintained.

- In addition, it is our view that the Decision Paper is a “pro forma recitation” of matters contained in historic decisions of the SEMC. In no way can it be said to meet the obligation to give reasons for the continued imposition of the regulatory interventions of vertical separation and Directed Contracts. Moreover, as is made clear in this paper, the historic reasoning for these measures (which ESB has also queried) is no longer applicable. Accordingly, such a basis does not take account of all relevant evidence and indeed, is based on now irrelevant evidence.

A full, independent and impartial evidence-based assessment of the issues is required to meet the SEMC obligations.

2.2 The SEMC has not set out potential theories of harm

The SEMC’s objectives are to:

- protect the interests of consumers of electricity; and
- promote effective competition in the SEM.

Regulatory intervention in the market, such as vertical ring-fencing and/or Directed Contracts, should only be contemplated if such interventions further the SEMC’s objectives of promoting effective competition and protecting consumers.

Standard regulatory practice is to clearly and explicitly set out the theory of harm, or theories of harm, behind any competition concern. That is, absent regulatory intervention, how could anti-competitive behaviour harm consumers, and what is the required evidence to substantiate such a concern? Without an articulated theory of harm, it is not possible to discern how a proposed regulatory intervention is supposed to enhance consumer welfare or promote competition.

ESB is extremely concerned that the Discussion Paper does not explicitly set out the theories of harm which could justify ongoing regulatory intervention. In turn, this leads to:

- a lack of clarity on the objectives of the regulatory interventions; and
- a lack of a framework for any meaningful analysis or assessment of the evidence to support the intervention.
- Therefore, we summarise the SEMC’s apparent concerns below, before articulating those concerns into theories of harm that will allow for a more rigorous assessment of the evidence.

The SEMC states that regulatory ring-fencing arrangements can “*facilitate competition in both the retail supply and wholesale markets through*”:

- *reducing the potential for anti-competitive behaviour (e.g. by preventing vertically integrated companies from internally hedging forward contracts, while foreclosing this market to other market participants);*
- *prohibiting cross subsidies and sale/purchase of contracts between generation and supply activities of vertically integrated companies, other than those which are on an arm’s length basis on normal commercial terms;*

- *facilitating price formation in the interface between the generation and supply activities, while also providing regulatory oversight (e.g. RAs can view Non-Directed Contract prices); and*
- *preventing vertically integrated companies from having informational or pricing advantages with respect to their competitors, which could deter competition and new entry, both in the wholesale and the retail market.”*

The SEMC also states that its position on maintaining regulatory ring-fencing is consistent with that set out in 2017, namely that¹⁶:

- there were concerns over the impact vertical integration may have on competition;
- the CRU remained concerned in relation to the level of competition in the retail market in Ireland;
- changes to ring-fencing should be made in the light of actual experience of the new SEM market; and
- it would not be prudent to propose a “significant increase in vertical integration” (which we assume refers to a removal of the ring-fence) which could have an adverse impact on liquidity absent evidence on the state of competition in the relevant markets and without countervailing regulatory measures to promote liquidity.

The SEMC finally states that:

- given it does not intend on intervening further in the forwards market, it does not intend further reviewing ESB’s ring-fencing arrangements at this time; and
- the removal of ESB’s ring-fencing arrangements could create a market power risk in both the wholesale and retail markets, and potentially have negative impacts on liquidity in the SEM.

The SEMC does not make any case in relation to the perpetuation of Directed Contracts. It simply states that “[a]s a core pillar of the SEM market power mitigation strategy, the RAs impose forward contracts (Directed Contracts) on ESB generation such that market concentration is reduced below a certain HHI (Herfindahl-Hirschman Index) threshold, thus mitigating the incentive on ESB to engage in market power in the spot market”.

While not explicitly stated, taking the SEMC’s statements together, it seems that the SEMC may have one or more of four potential concerns from a regulatory perspective.

1. **ESB’s potential market power in the wholesale energy market:** This potential concern must be premised on whether removing ESB’s vertical ring-fencing and Directed Contracts could result in ESB having the ability and incentive to increase prices through leveraging market power in the wholesale market, thereby increasing costs to other retailers and softening competition in the retail market.
2. **ESB’s potential market power in the sale of power hedges:** This potential concern must be premised on whether removing ESB’s vertical ring-fencing and Directed Contracts could result in ESB having the ability and incentive to increase the price of power hedges through withholding supply of power hedging products thereby increasing costs to other retailers and softening competition in the retail market.

¹⁶ SEMC, *SEM-17-015 Measures to Promote Liquidity in the I-SEM Forward Market Decision Paper*, section 8.3

3. **ESB's potential market power in the purchase of power hedges:** This potential concern must be premised on whether removing ESB's vertical ring-fencing and Directed Contracts could result in Electric Ireland having the ability and incentive to withhold demand for power hedging products, thereby limiting the ability of other generators to hedge and hence increasing their costs.
4. **The general level of liquidity in the market:** This potential concern relates to a view that the general level of liquidity in the SEM is low, and that the removal of ring-fencing and Directed Contracts could have negative impacts on the liquidity which exists. This theory of harm does not relate to a concern about potential anti-competitive behaviour from ESB; but rather is concerned with the fundamental conditions in the market that may impact on liquidity.

The SEMC has also not considered the potential consumer benefits of removing vertical ringfencing. Removing vertical ring-fencing – which would be akin to a vertical merger – would result in no direct loss of competition, but would have significant scope for pro-competitive efficiencies that would benefit consumers. The potential for such benefits from vertical mergers is widely recognised. These potential benefits include:

- increased incentive to seek to decrease prices as the company would benefit from reduced upstream prices through increased demand in downstream markets;
- reduced transaction costs;
- coordination benefits; and
- the ability to leverage these capabilities to support the development of new innovative products for consumers.

In ESB's view, the SEMC needs to set out the theory of harm, or theories of harm, that may necessitate ongoing regulatory intervention. That is, absent regulatory intervention, how could anti-competitive behaviour harm consumers, and what is the required evidence to substantiate such concerns? Without such an explicit articulation of the SEMC's concerns, it is not possible for the SEMC to logically and fully assess the evidence, and therefore not possible to deduce whether its interventions are harmful or beneficial to consumers and the competitive process.

As set out below, ESB considers that if the SEMC goes on to fully review ring-fencing and Directed Contract obligations, then the evidence against such potential theories of harm will show that these interventions cannot be justified.

2.3 The SEMC has not set out evidence to demonstrate which theories of harm are credible

In ESB's view, a full review of the market evidence would have revealed that ring-fencing and Directed Contracts no longer address any credible theories of harm, and so cannot be justified. Furthermore, it is clear from the market evidence that the only credible theory of harm is that relating to the general level of liquidity in the market, and that a liquidity solution imposed on only one market participant is unfair, discriminatory and unlikely to properly address the issue of market liquidity.

2.3.1 Theory of harm 1: market power in the wholesale energy market

ESB does not have significant market power in the generation market.



- ESB's share of this market has fallen significantly and is 23% in 2020 (year to date). It is now less than half¹⁷ of what it was the last time the SEMC considered market power evidence in detail in 2015, and is below any reasonable threshold where material market power could be presumed.
- There has been significant entry and expansion of other generators. For example, both SSE and Energia Group, have seen significant expansion in their day ahead market generation shares with their generation increasing by 80% and 84% respectively in that period, illustrating the competitive dynamics in this market.
- Industry concentration has reduced significantly. The HHI in the day-ahead market has fallen from around 2,900 in 2015 to 1,100 in 2020¹⁸. For reference, the CCPC considers the threshold for a highly concentrated market to be 2,000¹⁹.
- The Residual Supply Index shows that ESB is no longer the pivotal generator that the SEMC considered it once was. We estimate that fewer than 2% of half-hourly time periods in 2020 have been below the SEMC threshold RSI value of 1.2²⁰, which is significantly below the 5% proportion of half-hourly periods previously targeted by the SEMC market power mitigation threshold²¹. By the preferred RSI measure of the SEMC, ESB is unlikely to have material market power in the market for wholesale energy.
- ESB's behaviour is also constrained by other market design and regulatory features, which were incorporated into the SEM to ensure a competitive market. At the time, the SEMC were cautious about removing other regulatory interventions as the ISEM design and operation bedded in. But, ISEM market design is now more settled, with a history of successful operation, and no evidence has been presented to suggest that these measures have not been effective at promoting competitive outcomes. In particular, REMIT places legal requirement on all market participants to not manipulate the market. Therefore, withholding of capacity – as required for this theory of harm – would require ESB to breach those requirements.

Therefore, historic concerns about ESB's market power in the generation market, including worries about ESB's ability and incentive to profitably leverage generation market power and increase other retailers' costs are no longer relevant.

2.3.2 Theory of harm 2: market power in the sale of power hedges

In assessing ESB's share of the market for sale of forward power hedges, it is not appropriate to consider the current share of supply of these hedges. This is because the market is significantly distorted by the SEMC's ex ante regulation of ESB through:

¹⁷ See Annex A Figure 6; Day Ahead Market (Sources SEM: <https://www.sem-o.com/market-data/>, I-SEM <https://www.semopx.com/market-data/>).

¹⁸ Based on the first six months of 2020. HHI is calculated on the basis of volumes supplied in the day-ahead market. This replicates the analysis that SEMC undertook as part of the 2015 review. However, it contrasts with HHI calculation done as part of the Directed Contracts volume process which is for a different purpose and which is based on potential competitive capacity.

¹⁹ CCPC, Guidelines for Merger Analysis, 2014. Note that the CCPC consider a threshold of 1,000 to regard a market as concentrated; but given the nature of electricity markets – and the essence of economics of scale – it would be wrong to assume that a competitive electricity market would necessarily be below this safe harbour threshold.

²⁰ This is based on the first six months of 2020. 1.2 represents 120% of the required capacity to meet demand in any given period, and therefore can be seen as a conservative measure for whether a generator is pivotal. Data for 2019 and 2020 presented in Annex A 2.3.

²¹ See, for example, SEM-12-002 and SEM-10-084a.

- the Directed Contract obligation, which requires ESB to provide power hedges based on the level of market concentration, rather than based on ESB's proportionate ability to provide those hedges; and
- the regulatory ring-fencing of ESB, which results in material (though declining) volumes being traded via the market.

A better approach is therefore to consider what ability participants have to supply hedges. As a result of ESB's loss of generation market share, ESB's ability to supply power hedging products has significantly decreased. Therefore, the share of total demand for power hedges that is met by ESB's generation has also significantly decreased since 2016. Other players are now equally well placed to supply hedges to the market. ESB therefore has no ability to materially change the price of hedges by withholding supply from the market.

Moreover, ESB is now significantly structurally short. That is, ESB's downstream business has a greater demand from the market for forward power hedging products than ESB's upstream business can supply to the market. In 2016 ESB's volume of day-ahead market generation was 24% higher than the volume demanded by Electric Ireland. However, by 2019, ESB's volume generated was 22% less than that demanded by Electric Ireland. Therefore, ESB is now a net consumer of power hedges. Quite simply, this means that an increase in the price of power hedges would increase ESB's overall cost and leave ESB at a competitive disadvantage. Therefore, ESB has no incentive to withhold supply of power hedges. Additionally, the current vertical ringfencing restrictions and Direct Contract obligation on ESB further compound the net short position for Electric Ireland by comparison to other suppliers who have generation positions.

2.3.3 Theory of harm 3: market power in the purchase of power hedges

Electric Ireland has no ability or incentive to increase forward hedging costs by withholding demand for hedges. This is because the demand for power hedges in SEM is significantly greater than the supply of power hedges²². Therefore, other generators would have a ready market for hedges even if Electric Ireland stopped buying from them. As ESB is net short, so also would Electric Ireland continue to be following the cessation of regulatory ring-fencing.

The evidence also suggests that the retail markets are competitive, with high churn rates, fluctuating market shares, and entry and expansion. As a net consumer of hedges, in the context of a competitive retail market, Electric Ireland is incentivised to increase, rather than decrease liquidity in forward markets. Reduced liquidity would increase its costs, which would be harmful to both its competitive position and to consumer interests.

2.3.4 Theory of harm 4: the general level of liquidity in the power hedges market

Liquidity in the market for power hedges has been low compared to other markets.. While spreads have narrowed somewhat since 2017, traded volumes remain low. Traded volumes of mid merit and peak products are low or non-existent.

²² Many suppliers, Electric Ireland included, rely on the use of proxy hedges (hedges against gas and carbon price risk, but not against risk in the spark-spread) as a substitute for power hedging products, as these products are not available at a reasonable cost.

There are a number of features of the SEM that contribute to lower liquidity. These are market features, rather than being specific to ESB.

- **Small in size:** Even though the size of a market does not necessarily have strong linkages with market liquidity, the availability of price differences is required for speculative trading. The greater the number of price differences available, the greater the level of arbitrage. As an example comparison of market size, the total All-island electricity consumption in 2019 was 35 TWh²³ whilst this was 295 TWh²⁴ and 478 TWh²⁵ for GB and France respectively.
- **Relatively few participants:** The number of participants in the market has direct implications on the bid-offer spread. A market with fewer participants is likely to have a higher bid-offer spread which is indicative of low liquidity. There are 7 large generators in the SEM, compared with 10 in GB.
- **A relatively high proportion of supported wind:** In 2018, wind represented the second largest source of electricity generation in Ireland after natural gas, accounting for 28.1% of all electricity generated and as of 2020 the Republic of Ireland has 3,700 megawatt (5,030 MW all-island) of installed wind power capacity. As a comparison, wind power contributed 18% of UK electricity generation in 2018. This creates a structural limit to the volume of forward contracts generators are incentivised offer to the market as wind generators have little incentive to sell forward given the renewable support arrangements and variability of output, which cannot be accurately predicted in advanced.
- **RESS-supported wind generation is expected to grow further in the coming years.** This is likely to put further downward pressure on the supply of power hedges. A Directed Contract obligation on ESB is an inappropriate solution to this potential problem as ESB's ability to supply hedges has, and is, decreasing.
- **Directed Contract mechanism:** The organic development of liquidity in power hedges in the SEM is hampered by Directed Contracts, which can crowd out other sources of liquidity.

It is these fundamental characteristics, rather than the behaviour of any one participant, which drive the low level of liquidity of power hedges in the SEM.

If the SEMC is concerned with the level of liquidity in the market, then it should undertake a full evidence-based review to establish how liquidity impacts the competitive process, and whether consumers are harmed due to lower liquidity in power hedges. Should material harm be identified, to the extent that intervention may be necessary, then the costs and benefits of any intervention should be carefully weighed. Moreover, any intervention should not be targeted at ESB only; as any substantiated power hedge liquidity concern must be a market wide issue.

2.4 The SEMC has not justified proposed interventions to address credible theories of harm

The SEMC proposes to:

²³ ESB analysis of market data.

²⁴ Gov UK, *Energy Trends: UK Electricity, Supply and consumption of electricity (ET 5.2 – quarterly)*, <https://www.gov.uk/government/statistics/electricity-section-5-energy-trends>

²⁵ RTE, *Electricity Report 2018*, <https://bilan-electrique-2018.rte-france.com/trend-in-consumption/?lang=en#>

- retain ESB's vertical ring-fence;
- retain some form of Directed Contract arrangement in place; and
- make no further intervention in relation to forward market liquidity.

As highlighted above, no evidence whatsoever is put forward to support three of the potential theories of harm that could justify the scale of interventions proposed to be continued by the SEMC.

- Firstly, ESB no longer has significant market power in the wholesale energy market given ESB's market share has fallen substantially since 2015;
- Secondly, given the increased competition from other generators and the ESB group becoming a net consumer of power hedges, ESB no longer has any market power in the supply of hedges;
- Finally, Electric Ireland has no ability or incentive to withhold its demand for hedges as the market is structurally short of power hedges, and Electric Ireland is dependent on other generators' supply of hedges.

Given the change in market conditions, an assessment using an appropriate set of principles for market interventions shows that ring-fencing and Directed Contracts are no longer justified or in the interests of consumers.

- **Necessity:** The evidence shows that ESB no longer has material market power in the relevant markets, and does not have the ability or incentive to leverage vertical market power. This is evidenced by the significant change in market structure since the SEMC last reviewed. The interventions of vertical ring-fencing and Directed Contracts can, therefore, no longer be deemed necessary.
- **Proportionality:** As evidenced, vertical ring-fencing and Directed Contracts go beyond the limits of what is necessary given the significant changes in market structure since the SEMC last reviewed. Moreover, the SEMC has not presented any evidence to suggest otherwise or explained why constraints which already exist in the market for all players, or ex post sanctions are not sufficient. In addition, the SEMC has not considered the pro-competitive benefits that would arise from removing ring-fencing, and therefore the benefits that would arise to consumers from removing such a restrictive regulatory intervention.
- **Non-discrimination:** There is no evidence in SEM that ESB or Electric Ireland has material market power, or materially more market power than other players. The SEM has attracted some of the largest vertically integrated electricity companies in the world with customer bases multiple times the size of Electric Ireland e.g. BGE's parent company Centrica supply over 5 million customers, Iberdrola supply over 30 million customers and SSE have experience of supplying over 4 million customers. The trading and retail expertise afforded to these companies through their scale is a huge advantage in the SEM market where liquidity is an issue and suppliers are dependent on proxy hedges to offset risk. ESB should be treated comparably with other companies. To this end, both the vertical ring-fencing and Directed Contract obligations on ESB should be removed.

The only credible theory of harm which the SEMC can have relates to a general concern regarding market liquidity. Since the overall low levels of liquidity do not result from the behaviour of any one player, an intervention of vertical ring fencing and/or Directed Contracts on a single player is clearly **discriminatory** and absent a full review by the SEMC can only be considered to be unfairly discriminatory

To fulfil the SEMC's criteria for appropriate regulation, dealing with a lack of liquidity would require a full evidence-based review to establish how liquidity impacts the competitive process, and whether consumers are harmed due to lower liquidity in power hedges. Should material harm be identified, to the extent that intervention may be necessary, then the costs and benefits of any intervention should be carefully weighed. Should such a review conclude that regulatory intervention was necessary, then such an intervention should be a market wide. That is, not unduly targeted at ESB. Such an intervention should be consistent with the principles outlined above.

- **Necessity:** the SEMC should clearly evidence and set out the policy objective that it is trying to achieve with any liquidity intervention.
- **Proportionality:** To be proportional, a liquidity intervention should be targeted specifically at improving liquidity across the market and not impose an undue burden on those required to supply liquidity into the market.
- **Non-discrimination:** Any liquidity intervention should apply equally to all players that are able to provide liquidity into the market, whether vertically integrated or not.

2.5 The SEMC should undertake a full review

In the interest of customers, the SEMC should follow due process and fulfil its previous commitment as set out in the SEM Forward Market Decision Paper SEM-17-015. This should start with a thorough analysis of the actual conditions in the market.

As evidenced in this submission, ESB considers that such an evidence-based review would find that:

- ESB's ring-fencing obligations should be removed in the light of the current market structure and conditions;
- ESB's Directed Contracts obligation should be removed given the current market structure and conditions show that ESB does not have generation market power; and
- a separate assessment of power hedging liquidity may be required, including the potential impact on consumers and the competitive process, and that any justifiable intervention needs to be market-wide, rather than unfairly targeted at ESB.

It is in the direct interest of customers that the SEMC undertake such a review. That is, customers would benefit from the vertical ring-fencing and Directed Contract obligations being removed.

The vertical ring-fencing weakens Electric Ireland as a competitor, thereby reducing the effectiveness of competition in the retail market and increases prices to customers. This is because vertical ring-fencing prevents Electric Ireland from achieving pro-competitive efficiencies, which other vertically integrated competitors in SEM already enjoy, such as:

- Utilising the existing trading, commercial, analytical and risk management capabilities within ESB to ensure best practice for Commodity Risk Management across the vertical value chain.
- Best manage and price the exposures arising from illiquidity in the SEM forward market.
- Reduce coordination costs in relation to internal trades.
- Optimise trade timings, leverage portfolio benefits and develop innovative hedging products in a structurally short market.

- Reduce collateral and credit cost.
- Avoid the organisational costs of duplicating these capabilities within Electric Ireland.
- Lower transaction costs through internalising a proportion of its trades.
- Leverage trading and hedging capabilities to support the development of new, innovative products for customers.

ESB is concerned that these pro-competitive efficiencies that could be achieved by removing ring-fencing thereby forcing all retail market participants to compete more aggressively on price and product innovation have not been considered, and thus continued ring-fencing will lead to ongoing consumer harm.

Vertical ring-fencing and Directed contracts fail to address issues around low liquidity, which increase transactions costs for all in the market and so increase prices for customers. Moreover, the presence of Directed Contracts crowds out the opportunity for real liquidity to develop, and puts a disproportionate burden on ESB, thus inhibiting its ability to compete effectively.

In the next section, we set out responses to the questions posed in the Discussion Paper. We then go on to provide further evidence in Annex A on market structure and liquidity to support the arguments set out above.

3. ESB RESPONSES TO SEMC QUESTIONS

Market Power

Q1: Is the electricity market sufficiently contestable that market participants are free to enter and exit the market?

The evidence shows that the electricity markets in Ireland are sufficiently contestable such that it is no longer justifiable to impose ongoing ex ante regulation on ESB in the form of:

- vertical regulatory ring-fencing; and
- a Directed Contract obligation.

In the wholesale market we find that:

- ESB's generation market share is now 23%²⁶, less than half of what it was the last time the SEM Committee considered the evidence in 2015.
- Significant entry and expansion of other generators are illustrative of the competitive dynamics and constraining behaviour in this market.
- As a result, the industry concentration (as measured by the HHI) has also reduced significantly.
- Changes in the Residual Supply Index show that ESB is no longer the pivotal generator that the SEM Committee considered it once was.

Entry and expansion by other players has also been facilitated by market interventions to promote competition including:

- competitive capacity auctions; and competitive RES auctions.

With regards to the retail markets, evidence also shows that this is contestable:

- Although both relatively small markets with c.2.4 million customers in the Republic of Ireland (ROI) and c.900k in Northern Ireland (NI) across all sectors, they have attracted high numbers of new suppliers with 19 suppliers licenced in ROI and 8 in NI. Therefore, proportionately significantly more than in GB where 57 suppliers are licenced for a market of approximately 28 million residential customers.
- Residential customer switching levels at 14% in the ROI & 13.5% NI markets are amongst the highest in Europe and electricity supplier customer satisfaction rates at 88% in ROI²⁷ and 68% in NI²⁸ remain high.
- Viewed on an All-Island basis, Electric Ireland market share is 34%²⁹ with competitors gaining significant market share in particular in the business markets sector. Note:- it is important to assess retail market share on an all-island basis in terms of liquidity and access to the wholesale market.

Annex A provides a more detailed overview of market conditions.

²⁶ Measured over the first 6 months of 2020.

²⁷ <https://www.cru.ie/wp-content/uploads/2019/10/CRU19130c-CRU-Residential-Electricity-and-Gas-Combined-2019.pdf>

²⁸ https://www.consumercouncil.org.uk/sites/default/files/2019-11/Electricity%20Suppliers%20Customer%20Satisfaction%20Survey%20August%202019_0.pdf

²⁹ As the SEMC's potential theory of harm relates to the purchase of power hedges in SEM, then it is logical to consider share of retail at the SEM level, rather than individual jurisdictions, whereas when looking at dynamics at the retail level itself, it will also be informative to consider shares within individual jurisdictions.

Q2: Do you agree with the SEM Committee's intended approach of not further reviewing ESB's current ring-fencing arrangements at this time?

ESB strongly disagrees with the proposed approach of not further reviewing ESB's current ring-fencing arrangements.

Ex-ante Intervention

An ex-ante regulatory intervention which treats a market participant entirely differently to its competitors, and with such significant consequences, can be justified only by reference to actual, current market conditions and data, and expected future market conditions. Such an intervention can never constitute the "status quo" which a regulator may assume should continue as a baseline position regardless of actual market circumstances. Absent such a review, there is no basis for the SEMC to satisfy itself that the measure meets any of the principles or standards to which the SEMC is obliged to operate, as outlined in the section above on SEMC decision making. This approach lacks transparency and provides no clear, accountable basis for decision-making.

The vertical ring-fencing obligation was imposed on ESB years before the introduction of the SEM, at a very different time, when ESB was the dominant generator in the market, with a view to creating an open, competitive marketplace. As outlined in the Discussion Paper, the continued requirement for the vertical ring-fence was last substantively considered in detail in 2011/12 when the SEM Committee engaged CEPA to undertake a detailed study of this issue. CEPA recommended that, at that time, it would not be appropriate to remove the ring-fence. The market has changed beyond recognition since that review as detailed further below.

The SEM Committee also considered the issue of ESB's ring-fencing to a lesser degree in its consultation and decision papers on Market Power and Forwards and Liquidity in preparation for I-SEM project. In the 2017 Decision Paper, the SEM Committee observed some continued concerns about allowing ESB to vertically integrate, but without exploring these concerns in any significant detail, concluded that it was not an appropriate time to remove the ring-fence (i.e. at the advent of I-SEM project) and committed to review the issue 18- 24 months after I-SEM started operations.

ESB was disappointed that the 2017 Decision Paper did not remove the ESB ring-fence but, relying on this review commitment, decided not to take any action on foot of it. Naturally then, ESB expected that a full review would be undertaken within the timeframe stated, similar to the review previously undertaken in 2011/12, and had engaged with the SEM Committee early in 2020 regarding the expected commencement of the review. ESB has engaged consultants and has been working with them on preparing its case for vertical integration in anticipation of that review. As such, it is both disappointing and alarming that in the Paper the SEM Committee appears to be proposing that it may not even proceed to undertake the review, contrary to the commitment in 2017 Decision Paper.

New Market Conditions and Evidence

The generation market has changed fundamentally since the substantive review in 2012 and indeed, since the SEMC considerations in 2016/7. These changes include, without limitation the following headline points:

- ESB's generation market share has fallen to 23%, half of what it was in 2016.

- Concentration in the generation market has changed significantly;
- Since 2012 there has been significant new entry by international players in the retail market and switching rates are high;
- The structure of the market has changed fundamentally with the introduction of I-SEM in October 2017 and evidence is now available on the operation of the new market in practice;
- The introduction of increased renewables on the system has changed market dynamics.

The evidence presented in Annex A shows that ESB no longer has material market power in the relevant markets, and would not have the ability or incentive to leverage vertical market power.

Consumer impact of ring-fencing

In particular, ESB notes that retaining the ring-fencing requirement may result in significant consumer harm. This is because vertical ring-fencing prevents Electric Ireland from achieving pro-competitive efficiencies. Without the constraints arising from ring-fencing, Electric Ireland could utilise the existing trading, commercial, analytical and risk management capabilities within ESB to:

- Ensure best practice for Commodity Risk Management across the vertical value chain.
- Best manage and price the exposures arising from illiquidity in the SEM forward market.
- Reduce coordination costs in relation to internal trades.
- Optimise trade timings, leverage portfolio benefits and develop innovative hedging products in a structurally short market.
- Reduce collateral and credit costs.
- Avoid the organisational costs of duplicating these capabilities within Electric Ireland.
- Lower transaction costs through internalising a proportion of its trades.
- Leverage these capabilities to support the development of new, innovative products to customers.

These efficiencies are available to other supply companies in SEM in particularly those vertically integrated utilities with an international presence who have both a significantly larger customer base than Electric Ireland and access to much larger and more sophisticated trading organisation - however due to ringfencing of Electric Ireland competition is dampened and customers are not seeing the real benefit of the competitive market.

There can be no decision without a review

Nowhere in the Discussion Paper has the SEM Committee set out clearly the objectives which the vertical ring-fencing of ESB is intended to achieve in the current and expected market circumstances which are outlined above, nor could it do so without undertaking an evidence-based review, which it has not yet done. The Discussion Paper simply cites historical reasoning without any link to current or expected market conditions. It makes the statement that the removal of the ring-fencing could create “a market power risk in the both the wholesale and retail markets” apparently on a speculative basis without any quantitative review of market power or liquidity.

As such, it is alarming that in the Paper, the SEM Committee appears to be proposing that it may not even proceed to undertake the review, contrary to the commitment in 2017 Decision Paper. This Discussion Paper seeks to justify the proposal *not to review* ring-fencing on the basis that the ring-fencing ‘was to be strictly considered in the context of regulatory intervention in the forwards market.’

This is a flawed and circular argument. It indicates an assumption on the SEM Committee's part that the ring-fence is a "baseline" absent some other intervention, which is not acceptable.

As noted above, any intervention by the SEMC must comply with the principles of necessity, proportionality and non-discrimination. However, a review of current market data will demonstrate that the measure does not comply with any of these principles. In fact, if now being relied upon as a measure to address a liquidity issue (which has not been clearly identified), then this raises serious concerns about discrimination.

In reaching its decision on whether to proceed with the review, we ask the SEM Committee to give due regard to the fact that no harm can be done by undertaking a review prior to making a decision on the continued need for ring-fencing (other than the one-off commitment of resources to this review), but significant, ongoing harm can be done by retaining the ring-fencing without undertaking that review. The latter approach risks undue discrimination against ESB, impeding its ability to compete fairly in the market to the detriment of consumers. The imposition of the ring-fence gives rise to inefficiencies which involves a significant cost to ESB. As set out above, we would also ask the SEM Committee to bear this in mind when reviewing responses of competitors who may have an interest in the maintenance of ring-fencing of ESB without any further review.

Accordingly, ESB considers that the SEM Committee must proceed to carry out the holistic review that it has committed to do, starting with a thorough analysis of the actual conditions in the market.

ESB calls on the SEMC to reconsider its apparent position as presented within the Paper, and to honour its commitment to review ESB's ring-fencing requirement, which was set out in Decision 3 of the 2017 Decision Paper. We expect that this review may require a further consultation, and if that is the case, we request that such consultation should be underpinned by an informed and balanced paper, with reference to current and expected market conditions, including market share data.

Q3: Should the SEM Committee continue to use Directed Contracts as a mechanism for mitigating the potential use of market power in the SEM?

The SEM Committee has not provided evidence that:

- that ESB has market power in the wholesale market, and that it would have the ability and incentive to use exercise such market power without Directed Contracts; and
- Directed Contracts are a necessary and proportionate intervention to mitigate such potential market power.
- ESB is particularly concerned that the consultation paper indicates to other market participants the stance which the SEMC is taking and seeks confirmation from those participants that this stance is right and proper, In our view this is a serious regulatory flaw and consideration needs to be given within the review process to unwind this flaw by engaging independent advice on this matter.

ESB can no longer be considered to have material market power in the wholesale generation market. As detail above, ESB's market share has halved, there has been significant entry and expansion of other generators, ESB is no longer a pivotal supplier in a material number of time periods, and there are numerous other market design and regulatory interventions targeted at mitigating the potential for any market power.

Moreover, ESB is now significantly structurally short. That is, ESB's downstream business has a greater demand from the market for forward power hedging products than ESB's upstream business

can supply to the market. In 2016 ESB's volume of day-ahead (MSQ) market generation was 24% higher than the volume demanded by Electric Ireland. However, in 2019, ESB's day-ahead volume generated was 22% less than that required to meet Electric Ireland customer demand even with Electric Ireland market share continuing to fall. Therefore, ESB is now a net consumer of power hedges. The current vertical ringfencing restrictions and Direct Contracts further compound the nett short position for Electric Ireland by comparison to other suppliers who have generation positions.

Therefore, ESB considers that the SEM Committee should carry out an evidence-based review of whether Directed Contracts should continue as a market power mitigation tool and in addition review the negative impacts of Directed Contracts such as;

- Creating a competitive disadvantage for new suppliers entering the market. The current Directed Contracts process may be considered a barrier to entry in that a new supplier cannot access Directed Contracts in the absence of a pre-existing customer portfolio. They also give a false sense of market liquidity in that the Directed Contracts cannot be considered as being offered to the market at a market reflective price
- Directed Contract prices are based on models thereby omitting qualitative drivers such as market sentiment
- Setting a benchmark for Non-Directed CfD pricing thereby distorting further the perception of a market price.

Such a review would find that ESB's Directed Contracts obligation should also be removed as, again, the current market structure and conditions show that ESB does not have generation market power. As such, the original purpose of Directed Contracts, which was to reduce ESB's incentive to withhold generation, is no longer necessary nor proportionate.

As discussed above, the SEM Committee may consider that Directed Contracts currently support liquidity. However, it should be noted that this was not the stated purpose of Directed Contracts, they were established to address market power rather than address liquidity. Therefore imposing such an obligation on ESB alone to solve a market problem, where it is neither the cause of that problem, or uniquely placed to solve it, is unjustifiable and discriminatory.

Rather, if liquidity is the real concern, then a regulatory intervention should be designed to support liquidity in the market more holistically. ESB would play its part in such an intervention if it were found necessary following a full review. This intervention would need to meet the criteria of being:

- Non-discriminatory: That is, all market participants of a certain size should be obligated to contribute to increased liquidity in the interests of consumers.
- Proportionate: This includes that any forward contract obligation must be priced appropriately, and include the required flexibility for the provider, so that the cost of the obligation can be minimised, which would allow for the most proportionate and cost-effective improvement in liquidity.

Q4: Assuming the SEM Committee's continuation with Directed Contracts, would you be in favour of the Directed Contracts price being determined by a competitive auction?

As discussed above, there is no longer a justification for using Directed Contracts as a mechanism for mitigating market power.

Until a full review of the continued use of Directed Contracts is undertaken, then it is premature to consider the question of Directed Contract pricing. In fact, consulting on Directed Contract pricing leads to the perception that the previous question on the suitability of Directed Contracts to mitigate market power is not in fact a genuine line of inquiry from the SEMC. Rather, as per the Discussion Document, it appears the SEMC is already minded to continue with the Directed Contract obligation despite no analysis whatsoever being undertaken as to whether such an obligation is:

- necessary;
- proportionate; or
- non-discriminatory.

Notwithstanding the above, if the SEM Committee were to continue to obligate ESB or another party to provide Directed Contracts, or if a Forward Contract Obligation of another form was put in place, then we consider it is important that such contracts should be priced fairly and efficiently through market dynamics. The current administrative Directed Contract pricing method does not meet this standard.

Market evidence shows that the current administrative approach to setting the Directed Contract price systematically under-prices Directed Contracts. Over the last 10 years, the Directed Contract price has:

- on average, been ~€2/MWh below the spot price
- has not included a premium, such as might expect in an efficient structurally short market and which would encourage participation by others in selling such contracts.

This systematic under-pricing of Directed Contracts represents a subsidy to suppliers from ESB generation and it diminishes incentives on other parties to offer similar power hedges to the market. The systematic under-pricing of Directed Contracts has been exacerbated by the Directed Contract allocation design which means that:

- **Buyers can benefit when Directed Contracts are under-priced:** When the Directed Contracts are under-priced, buyers *can* take up their full allocation. Buyers can also arbitrage by selling unneeded Directed Contracts (through increase sales of non-directed contracts).
- **Buyers do not take up their allocation when Directed Contracts are overpriced:** While the Directed Contract administrative price systematically under prices Directed Contracts, on average, the forecast error in the model means that occasionally Directed Contracts may be overpriced. When this occurs, buyers *may* not take up their full allocation, but may instead switch to other products such as non-directed contracts (where available) or proxy hedges. When over-priced, there is no obligation to take up Directed Contracts, and we observe demand falls.

This one-way bet for buyers leads to significant costs and risk for ESB, hindering its ability to compete, to the long term detriment of consumers.

How should Directed Contracts be priced?

There is no longer a justification for Directed Contracts as a market power or liquidity mitigation tool. As outlined above, the only credible theory of harm relates to a general lack of liquidity in the market. If the SEMC were to intervene to address that, such an intervention should be:

- necessary;
- proportionate; and
- non-discriminatory

The continued imposition of a Direct Contracts obligation on ESB alone meets none of these criteria. But, if Directed Contracts persist, then they should be priced in a way that mimics a market outcome. An auction process could achieve such outcomes. However, the detailed design of any auction is important, otherwise it could risk the ongoing subsidisation of suppliers by ESB generation.

Such a design would need to ensure the following.

- The Seller could set an appropriate reserve price.
- Sales take place over time, with Seller retaining ability to carry over volumes from one auction to the next.
- Volumes are not set too high in any one auction, such that the price would not be bid up to a competitive level. This is particularly the case if the supplier cannot “walk away”, but the buyer can.
- The seller has flexibility as to when within a period it would auction the Directed Contracts, in order to minimise its costs of the obligation, so long as the seller met its minimum volume obligations.
- No supplier is disadvantaged in its ability to compete and no supplier is treated in a discriminatory way in respect of its access to volumes.

Q5: Assuming the SEM Committee’s continuation with Directed Contracts, do you agree that the Market Concentration Model (as described in SEM-17-06413) is an appropriate mechanism for determining Directed Contracts volumes?

As evidenced above, there is no longer any rationale for Directed Contracts to be used as a tool to mitigate potential market power.

Notwithstanding this, the Market Concentration Model is clearly no longer fit for purpose.. The model is designed to reduce the level of market concentration (as measured by the HHI) by adjusting down the market share of one market participant. The model has various detailed design characteristics that differ from a ‘pure’ HHI calculation. The perverse impact of that detailed design may not have been noticeable when it was first developed and when the one market participant was dominant and contributed the majority of the HHI. However, that is simply no longer the case. As shown above, ESB is now 23% of the market, the actual HHI in 2020 is 1,139 which is less than the ‘design’ HHI at which DCs were no longer supposed to apply and yet ESB continues to be obliged to sell approximately 50% of its power through DCs.

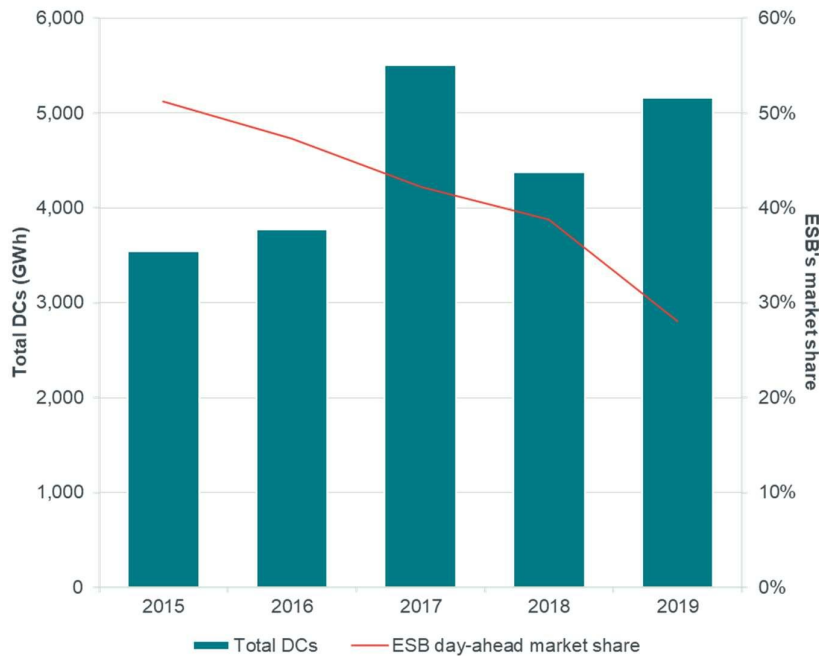
Therefore, in recent years, under the Market Concentration Model the situation has arisen where:

- ESB has lost market share;
- other market participants have gained market share; and
- this has resulted in the perverse outcome of ESB being obligated to provide more Directed Contracts to bring the modelled HHI below the relevant threshold³⁰.

³⁰ A driver of this is that as ESB’s market share has decreased, its contribution to the HHI has also decreased. Therefore, with a smaller market share, any equivalent further change in market share arising from the Directed Contract allocation process, would have a smaller impact on the overall HHI.

As seen in the below chart, ESB's Directed Contract volumes have increased while its market share has decreased.

FIGURE 1 ESB VOLUMES OF DIRECTED CONTRACTS AND MARKET SHARE OF UNCONSTRAINED/DAY AHEAD MARKET BETWEEN 2015 AND 2019



Source: Tullett Prebon and ESB

The above shows that the Market Concentration Model is not fit for purpose. This is because the Directed Contract volume obligation imposed on ESB actually increases significantly as ESB's market share decreases! This is particularly acute in those periods when ESB is no longer the largest generator in the market. In these periods the model continues to require more DC volume from ESB for smaller and smaller impact HHI impact when the largest generator in those periods remains untouched.

The SEMC should no longer use a Market Concentration Model, as it is predicated on the unjustified rationale of:

- ESB having market power in the wholesale energy market; and
- ESB being the only party that materially impacts the level of market concentration, where clearly this is not the case.

Q6: Are there any specific reasons for which a market participant has not taken up their allocated Directed Contracts eligibility for a given period?

There are potentially two reasons why participants would not take up their allocation.

- Vertically integrated companies may not always need access to Directed Contracts as they have their own internal hedge. However, when directed Contracts are under-priced, vertically integrated

companies may still take up their allocation and arbitrage by selling other volumes in forward markets.

- Directed Contracts may occasionally be overpriced due to forecast error in the administrative Directed Contracts pricing model. As discussed above, forecasting error has resulted in Directed Contracts being systematically under-priced on average. However, occasionally directed contracts may also be over-priced. When this is the case, the buyer has the ability to not take up their allocation, and instead purchase other hedges (or, remain unhedged for a proportion of their demand). When volumes are not fully taken up, then those volumes may need to be reoffered at a future time. This leads to both price risk for ESB (as they will likely be fully taken up when the Directed Contracts are priced lower) and volume uncertainty, as it is uncertain to ESB when and if volumes may be taken up.

Forward Contracting & Liquidity

Q7: In the event of no regulatory interventions regarding forward contracting in SEM, how do market participants envisage the forwards market for SEM evolving in the short, medium and long term?

One factor that is inhibiting the evolution of natural liquidity in the market is the current Directed Contract obligation on ESB, which crowds out other liquidity in the market. Therefore, removing Directed Contracts will likely result in some increase in other, non-directed trades.

However, absent other regulatory change, it is unlikely that the increase in Non-Directed Contracts volumes would be sufficient to address any potential liquidity challenges in the SEM.

The fundamental issues in the market – as detailed above - means that there is likely to be lower liquidity in the market compared to other markets in the medium term. These fundamental issues will not change or resolve by themselves, and can be addressed in part by market participants through proxy hedging – see Q8 below. Further interconnection would be helpful in the longer term.

Q8: What actions could be taken by market participants to create greater forward contracting opportunities? Is there scope for natural growth or innovation in the forwards market, and if so, how can this be progressed? Can renewable supported generators offer hedges?

There is scope for natural growth in the power hedges market. However, as discussed above, there are a number of fundamental characteristics of the market that impinge on liquidity, namely:

- small market size;
- relatively few participants;
- a relatively high proportion of supported wind.

Renewable generation supported by a two-way CfD is unlikely to provide sufficient liquidity into the market in the future, as it lacks the incentive to trade forward given it already has certainty about the price it will receive. This may, in turn, reduce demand for hedges in the market. This is because there will be less of a need to hedge the proportion of supply provided by these generators. However, given there is already a liquidity concern in the SEM, it is unlikely to be resolved by renewable generators in the future, without some form of intervention.

Given ESB's reduced market share, and its structurally short position, it no longer has the ability to be the main provider of liquidity into the market.

If the SEMC is concerned about liquidity in the SEM, then ESB considers it should undertake an evidence-based review of liquidity in the market, including evidencing any potential harm to the competitive process or consumers. Furthermore, any intervention should be carefully considered to ensure the benefits outweigh the costs.

The ability to develop new hedging instruments in a structurally short market and leverage these instruments to support the development of new, innovative products to customers, will be influenced by the analytical, risk management and trading capabilities of market participants. Currently Electric Ireland is prevented from leveraging the capabilities of the internal organisation and as such have removed a competitive pressure that would otherwise apply to other retail market participants some of which have access to much larger and more sophisticated trading organisations than ESB.

Q9: On what public interest grounds should the SEM Committee decide to intervene in the forwards market in the future? In the event that the SEM Committee decide to intervene in the future, what impacts should be considered prior to intervening in the market?

Any intervention in the forward markets should be based on the grounds that such an intervention furthers the objectives of the SEMC. The SEMC's principal objective is to protect the interests of consumers of electricity wherever appropriate and promoting effective competition in the SEM. Any such intervention would need to further these objectives. This would include a careful consideration of whether the benefits of any such intervention outweigh the costs.

4. CONCLUSION

ESB has set out in this response its comments on SEMC's proposed approach to the promised reviews of ring-fencing, Directed Contracts and liquidity. ESB disagrees in the strongest possible terms with the SEMC's proposal to not review ring-fencing or liquidity and to undertake a narrow review of pricing and allocation of the Directed Contracts. The SEMC's proposals in this regard have not been arrived at in a proper manner and do not address the harm the continuation of these measures causes to ESB, the industry, the market participants or the customers. ESB calls upon SEMC to re-consider its approach to this review and to engage with industry and set out proposals for a full evidence-based review.

To assist SEMC, ESB has set out answers to the nine questions in the consultation paper (above) and annexed a wide body of evidence on the current situation in the SEM (below).

ANNEX A EVIDENCE ON CURRENT MARKET CONDITIONS

In this Annex, we set out evidence on current market conditions in further detail. First, we provide a brief overview of the market to summarise key features and trends. Then we separately analyse:

- market power in the wholesale energy market;
- market power in the sale of hedging products;
- market power in the purchase of hedging products; and

In each of these sections, we consider the situation for ESB without ring-fencing and without Directed Contracts in order to assess the potential concerns that may arise if these interventions were removed.

In relation to market power, the SEMC last considered how the market was performing in its 2015 Market Power Consultation Paper³¹, with the Decision Paper then published in 2016³². The SEMC looked at Measures to Promote Liquidity in the SEM Forward Market in 2017 finding that the SEM market had not yet had time to fully develop³³. Since the 2015 review, there have been a number of fundamental structural changes to the electricity markets. The key relevant changes are summarised in the market overview below.

A.1 Market overview

A.1.1 Generation Market

The Single Electricity Market (SEM) has changed significantly in recent years. Some of the key changes are summarised in the tables below. There are now seven main players active in the day-ahead generation market, plus numerous smaller independent power producers that have seen their share of total generation increasing over the last five years. Four of these players are vertically integrated companies, active in both the generation and retail market³⁴. Over the last five years, ESB has seen its market share decreasing sharply, moving from 51% in 2015 to 23% in 2020³⁵. At the same time, other players have strengthened their position with independent power producers have increased their combined share of the market by 15% to 26% in 2020. Moreover, SSE, the second largest player in the market has trebled its share of generation in just six years, and now has a 17% share of the market.

³¹ SEM Committee, *SEM-15-094, I-SEM Market Power Mitigation Consultation Paper*

³² SEM Committee, *SEM-16-024, I-SEM Market Power Mitigation Decision Paper*

³³ SEM Committee, *SEM-17-015, Measures to Promote Liquidity in the I-SEM Forward Market*

³⁴ ESB/Electric Ireland, SSE, Bord Gais and Energia(formerly Viridian).

³⁵ 2020 figure is for first 6 months.

Another feature in recent years has been the growth of wind generation in the market. RES capacity in the SEM has doubled since 2014. A large part of this growth comes from entry and expansion of independent power producers.

FIGURE 2 SUMMARY STATISTICS - GENERATION

	2014	2016	2018	2020
Market share - ESB	50%	47%	39%	23%
Market share - SSE (2nd largest player)	6%	11%	15%	17%
HHI	2811	2579	1952	1139
Installed RES capacity	2478	3070	4981	4721

Source: ESB data and CRU, "Energy and Water Report 2019"

A.1.2 Retail Market

The supply markets in ROI and NI have seen a marked growth in competition over the past 5 years with 19 suppliers in ROI and 8 in NI currently operating across the domestic and business sectors. Over that same period Electric Ireland's market share when looked at on an all-island basis has fallen from 38% in 2015 to 34% in 2019. Note: - it is important to assess retail market share on an all-island basis in terms of liquidity and access to the wholesale market.

Figure 3 Summary Statistics – Supply on an All-Island basis³⁶

	2015	2017	2018	2019
Total Markets share – Electric Ireland	38%	35%	33%	34%
Total Markets share – SSE (2nd largest player)	22%	20%	21%	23%
Total Markets Share – Energia Group (3rd largest player)	21%	20%	21%	20%

Business Markets

In the ROI business segments, there is strong competition from the other vertically integrated players with the number of suppliers operating in the business markets sector increasing from 8 in 2014 to 18 currently. Electric Ireland retains the largest overall business market share at 33% with SSE at 29% and Energia Group at 19%. In the small business sector Electric Ireland is the largest supplier with 30% market share. In the medium-sized business segment, Energia has consistently retained a market share of at least 30% over the last 10 years. In the large energy users segment SSE has seen

³⁶ Market Share data derived from CRU retail market reports and NIAUR Transparency reports

significant growth over recent years, expanding from a market share of just over 20% in 2016 to becoming the largest supplier in the segment at 37% in 2019.

In Northern Ireland eight suppliers are currently operating in the business sector. Energia Group (operating as Power NI) have the largest market share across all business segments with an overall business market share of c.40%.

Residential Markets

There are currently 14 players active in the Irish domestic market (11 at the end of 2019), up from 9 prior to the introduction of I-SEM. Electric Ireland remains the largest player in the domestic retail market, with 48% of the market in terms of consumption. However, this share has been steadily declining since 2009, when Electric Ireland represented nearly 80% of the market.

There are currently six active suppliers in the domestic market in Northern Ireland. Energia Group (operating as Power NI) currently maintain the largest market share at 53% with SSE at 22% and Electric Ireland at 12%.

Effective Competition³⁷

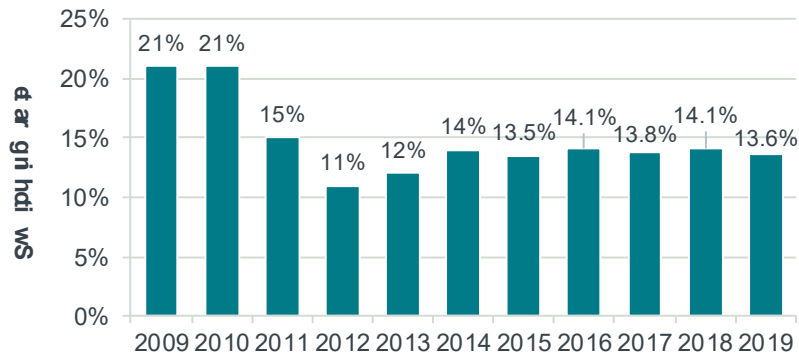
Retail competition in the residential and business markets is effective across Ireland - North and South, with high levels of churn, fluctuating market shares and entry and expansion. As noted above, Electric Ireland has seen increased competition across all retail markets over recent years. This is evident from Electric Ireland's large fall in ROI market share in the domestic market, and an almost equal market share with Energia and SSE in the small and large business segments respectively. As well as market shares, the level of customer engagement is also indicative of the level of competition in the retail market.

Figure 4 shows that there is significant customer switching in the ROI market, which is indicative of a dynamic and competitive market. Although the switching rate has fallen from its peak in 2009/10, the rate has remained around 14%, and the CRU acknowledges that Ireland has a relatively high switching rate relative to other European countries, stating that in 2018 Ireland had the "*fifth highest external switching rate for domestic electricity customers...across European countries*"³⁸.

³⁷ Market Churn rates have been obtained from CRU retail market reports and NIAUR Transparency reports.

³⁸ CRU, *Energy and Water Monitoring Report for 2019*, p.26, <https://www.cru.ie/wp-content/uploads/2020/08/CRU20089-Energy-and-Water-Monitoring-Report-for-2019.pdf>

FIGURE 4 SWITCHING RATE PER YEAR (RESIDENTIAL AND BUSINESS) 2009-2019



Source: CRU 2018 Electricity and Gas Markets Annual Report, CRU Energy and Water Monitoring Report for 2019

Switching rates in Northern Ireland show a similarly competitive market with market churn in the domestic market increasing from 11% in 2015 to 13.5% in 2019

The state of the ROI market and in particular Electric Irelands retail market position remain significantly below the thresholds³⁹ at which it was deregulated notably;

- Below 60% domestic market share
- Switching rates above 10%
- Business market shares below 50%
- Numbers of active suppliers in the market above 3

A.2 Market power in the wholesale energy market

In this subsection we consider evidence as to whether removing ESB’s vertical ring-fencing and Directed Contracts could result in ESB having the ability and incentive to increase prices through leveraging market power in the wholesale market, thereby increasing costs to other retailers and softening competition in the retail market. To do this, we consider:

- structural market power metrics, including
 - market shares;
 - market concentration (i.e. HHI);
 - residual supply index; and
- other constraints including additional regulatory controls.

A.2.1 Market shares

Market shares can be a useful indicator of market power. However, market shares are only an indication. A high market share is not enough to establish a concern in relation to market power. Other

³⁹ <https://www.cru.ie/wp-content/uploads/2010/07/cer10058.pdf>

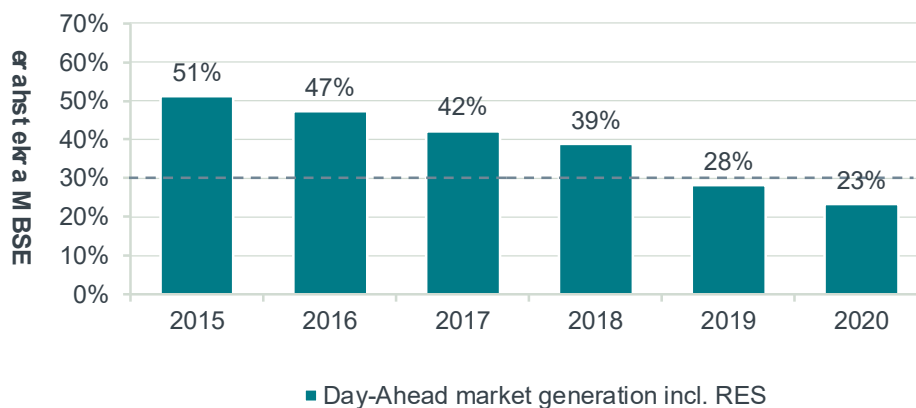
factors would need to be present in the market for market power to perpetuate – such as significant barriers to entry or expansion.

Market shares are often used as an indicative threshold or “safe harbour”, below which a firm could be assumed to not have significant market power, except in exceptional circumstances. The SEMC has not indicated in its “Discussion Paper” a market share threshold below which it would no longer assume that ESB has market power. In the past, the SEMC has put forward an example threshold of 25%, but stated that this was not necessarily its preferred threshold⁴⁰.

A 25% threshold would be considered low by international standards. For example, EC guidelines suggest a threshold of 40% may be more appropriate, i.e. that below 40% a firm is unlikely to be dominant⁴¹.

Figure 5 shows ESB’s share of the day ahead generation between 2015 – when the SEMC last considered the evidence – and now⁴².

FIGURE 5 ESB’S OUTTURN DAY-AHEAD/UNCONSTRAINED MARKET GENERATION SHARE (INC. RES), 2015-2020



Note: The 2020 figure includes the first six months of 2020. Including forecast data for the remaining months of 2020 increases, ESB’s market share by 1%.

Source: ESB

The above chart shows that:

- ESB’s generation market share has fallen significantly. **ESB’s market share is less than half of what it was** the last time the SEMC considered market power evidence in detail in 2015; and
- ESB’s current market share of 23% is below any reasonable threshold where market power could be presumed.

⁴⁰ I-SEM Market Power Mitigation Consultation Paper SEM-15-094

⁴¹ Communication from the Commission: Guidance on its enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, OJ C 45, 24 February 2009

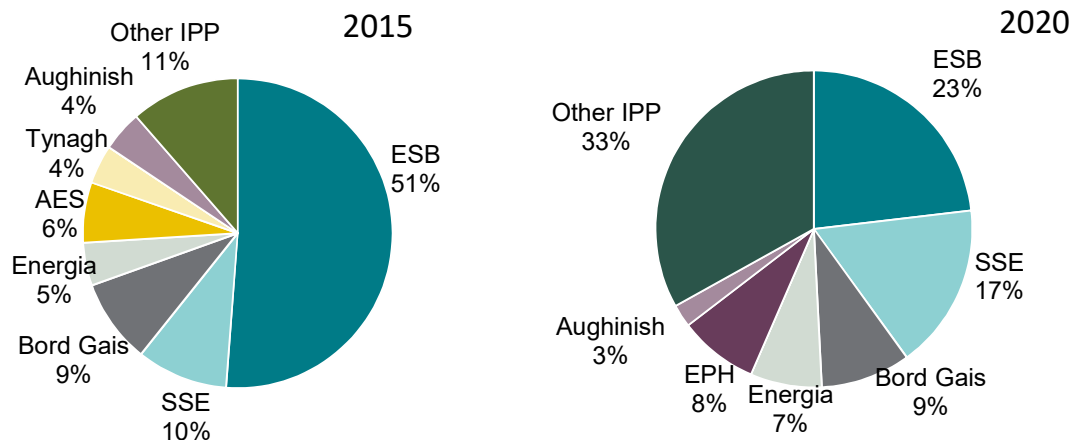
⁴² Evidence is presented from the day ahead market as this accounts for the majority of electricity sold, however using an alternative measure of market shares, such as for metered generation shows the same downward trend, from 46% in 2015 to 27% for the first six months of 2020. We also note that the day ahead market was the focus of the SEMC’s analysis in the 2015 review.

This significant change in ESB's market share is illustrative of the competitive dynamics and constraining behaviour in this market where there has been significant entry and expansion of other generators. For instance, SSE has seen the most significant expansion with its volumes of day-ahead market generation rising by almost 2,400 GWh between 2015 and 2019. Tynagh and Energia Group have also seen significant growth with their generation rising by 800 GWh and 1,200 GWh, respectively. In the same period, ESB has seen its generation fall by 6,400 GWh.

There has also been significant entry and expansion of smaller, independent power producers (IPPs). In 2015, IPPs accounted for 11% of volumes in the day ahead market. This has now grown to 33% in 2020.

ESB has moved from having a market share that was five times larger than that of any other player in 2015, to being comparable to other participants today. Figure 6.6 shows the evolution of market shares between 2015 and 2020⁴³.

FIGURE 6 CHANGE IN RELATIVE MARKET SHARES FROM 2015 TO 2020



Source: ESB (Public RA Data)

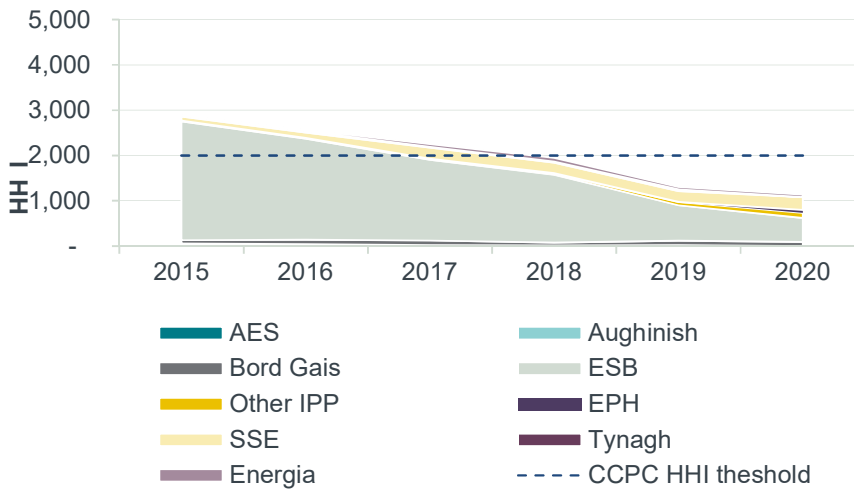
It is clear from the figure that while ESB remains the largest player in the market, its share has decreased significantly since 2015, falling from 51% to 23%. Other players have expanded with SSE now accounting for 17% of the market and other independent power producers (IPP) increasing their share of the market by 22%. In summary, a significant change in market shares has taken place in the last five years, which is illustrative of the competitive dynamics in the market.

⁴³ Shares are calculated based on volumes supplied in the day-ahead market for the first six months of 2020.

A.2.2 Market concentration

It is also informative to consider the trends in market concentration in day-ahead generation – as measured by the HHI – since the SEMC last considered the evidence in 2015. Figure 7 shows the HHI for the day ahead market from 2015 to 2020⁴⁴.

FIGURE 7. HHI FOR UNCONSTRAINED/DAY-AHEAD MARKET (INC. RES), 2015-2020



Note: In calculating the HHI we assume that independent producers' generation is split evenly between 10 producers, which we consider to be a conservative assumption. The 2020 figure considers generation up to June 2020.

Source: ESB

The HHI has decreased from 2,897 in 2015 to 1,139 in 2020. This is primarily driven by the expansion and entry of other competitors, such as the significant expansion by SSE and other independent power producers⁴⁵.

A.2.3 Residual supply index

Another indicator of potential market power is the Residual Supply Index (RSI). The SEMC has previously stated that the RSI is preferable to generation capacity market shares in indicating whether the capacity of a particular player is necessary to meet demand⁴⁶. This is because the RSI is a measure of how 'pivotal' a supplier (in this case a Generator) is as it assesses the ability of the rest of the market to meet market demand in its absence.

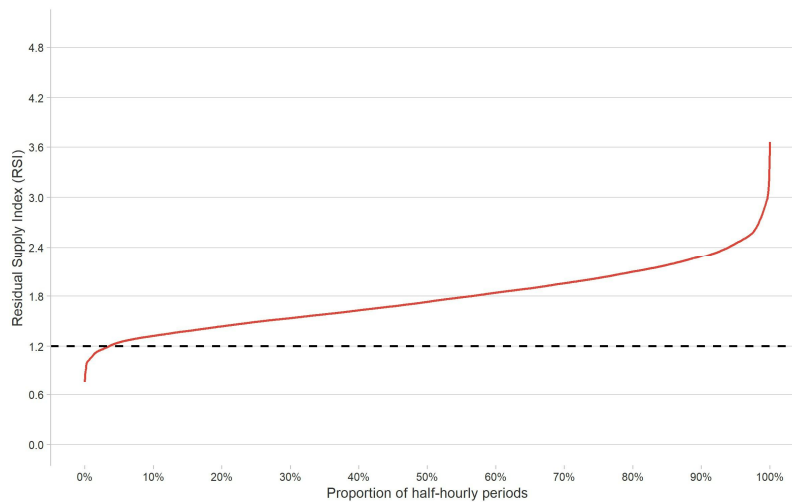
⁴⁴ HHI is calculated on the basis of volumes supplied in the day-ahead market. This replicates the analysis that SEMC undertook as part of the 2015 review. However, it contrasts with HHI calculation done as part of the Directed Contracts volume process which is for a different purpose and which is based on potential competitive capacity.

⁴⁵ Data on the number of "Other IPP" is unavailable to ESB. In order to estimate the HHI, "Other IPP" is assumed to consist of 10 players.

⁴⁶ <https://www.semcommittee.com/sites/semcommittee.com/files/media-files/SEM-15-094%20I-SEM%20Market%20Power%20Consultation%20Paper.pdf>

- The RSI is calculated by summing total market available capacity, subtracting ESB's uncommitted available capacity and then dividing by total system demand⁴⁷. The SEMC has previously used a demand threshold of 1.2, or 120% in its RSI analysis. A supplier (generator) below this threshold in a particular time period is considered to be potentially pivotal to supply (generation)⁴⁸. We use this same threshold in our analysis. Figures 8 and 9 show the RSI curves which demonstrate the proportion of periods for which the RSI was below the SEM-C threshold value of 1.2 in 2019 and 2020 respectively.

FIGURE 8 ESTIMATED RESIDUAL SUPPLY INDEX FOR ESB IN 2019⁴⁹



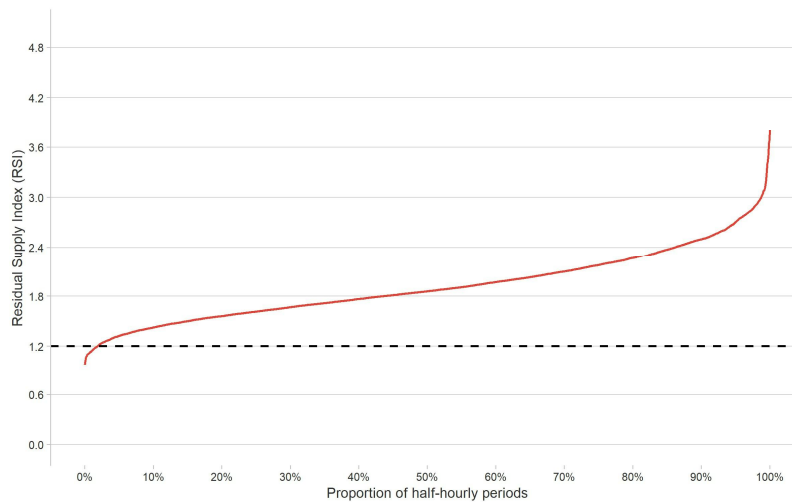
Source: ESB; Eirgrid data

⁴⁷ In this calculation, the total available system capacity, includes available RES capacity and available interconnector capacity. Subtracted from this is ESB's uncommitted available capacity. Excluded from this is ESB's RES capacity, as per the standard approach to calculating an RSI. The result is the total available capacity not including ESB's dispatchable capacity. This is then divided by total system demand. This calculation uses the available data to, as best we can, reproduce the RSI method used by done by the SEMC in its 2015 consultation paper 'SEM-15-094 I-SEM Market Power Consultation Paper' wherein the available capacity of all other generators in the market is added to *all* the output of wind generation and the full capacity of interconnectors which is then divided by total system demand.

⁴⁸ <https://www.semcommittee.com/sites/semcommittee.com/files/media-files/SEM-15-094%20I-SEM%20Market%20Power%20Consultation%20Paper.pdf>

⁴⁹ EirGrid data on the total system capacity for the first 3 months of 2019 features observations with incomplete data. To avoid unrepresentative RSI values, we drop those half-hour intervals from our analysis where the total system capacity is under 3,000 MW (or 6,000 MW on an equivalent hourly basis). This represents just over 4% of the half-hourly periods in 2019.

FIGURE 9 ESTIMATED RESIDUAL SUPPLY INDEX FOR ESB IN 2020



Source: ESB; Eirgrid data

This analysis shows that ESB has been below the 120% threshold for just 1.8% of periods in 2020. In other words, ESB is a pivotal supplier in less than 2% of time periods. This is significantly below the 5% proportion of half-hourly periods previously targeted by the SEMC market power mitigation threshold⁵⁰.

It is clear that ESB can no longer be considered as being a pivotal generator for any significant period of time. By the preferred measure of the SEMC, ESB is unlikely to have material market power in the market for wholesale energy.

A.2.4 Other constraints

The above market structure metrics suggest that ESB is constrained in the wholesale spot market by other generators. Along with other generators, ESB's behaviour is also constrained by other market design and regulatory features, which were incorporated into the SEM to ensure a competitive market. These interventions include:

- **REMIT:** REMIT provides a sector-specific legal framework for the monitoring of wholesale energy markets. This allows regulators to take enforcement action if it detects market manipulation and abuse. This provides protection against anti-competitive practices such as capacity withholding.
- **Market coupling:** Market coupling, through the GB interconnectors, ensures not only security of supply, but also that the all-island market is exposed to competition from the GB wholesale market.
- **Demand side response:** Increasing levels of demand side flexibility mean that demand cannot simply be considered to be a price taker, which limits incentives to increase price through withholding.

⁵⁰ See, for example, SEM-12-002 and SEM-10-084a.

- **Per unit bids:** generation units are required to bid separately (rather than as part of a portfolio), which makes it easier for regulatory authorities to monitor and detect market abuse.

The combination of these legal requirements and market design features are in place to prevent the creation or abuse of market power in the wholesale spot market. In 2016 and 2017, the SEMC may have been cautious about removing Directed Contracts and vertical ring-fencing, and thereby relying solely on these design and regulatory features to mitigate potential market power. However, in 2020, as highlighted above, the market position has changed significantly so that ESB can no longer be presumed to have market power. Moreover, these features have had more time to bed in and the SEMC can be more confident in the effectiveness in constraining any perceived exercise of market power. Therefore, an additional requirement on ESB of vertical ring-fencing is no longer either necessary nor proportionate.

A.2.5 Summary

The evidence shows that ESB does not have material market power in the generation market.

- There has been significant entry and expansion of other generators. For example SSE and Energia Group have both increased their generation by more than 80% from 2015, illustrating the competitive dynamics in this market.
- ESB's generation market share has fallen significantly. It is now less than half of what it was the last time the SEMC considered these issues in 2015, and is below any reasonable threshold where market power could be presumed.
- Industry concentration has reduced significantly with the HHI falling from 2,897 in 2015 to 1,139 in 2020.
- The Residual Supply Index, the SEMC's preferred indicator of potential market power shows that ESB is no longer the pivotal generator that the SEMC considered it once was with less than 2% of half-hourly periods in 2020 below the SEM-C threshold RSI value of 1.2. This is significantly below the 5% proportion of half-hourly periods previously targeted by the SEMC market power mitigation threshold⁵¹. (We note that the SEMC's threshold RSI of 120% is higher and therefore more conservative than that stated by the European Commission Sectoral Enquiry as referenced in SEM-10-84, which uses a threshold of 110%). By the preferred measure of the SEMC, ESB is unlikely to have material market power in the market for wholesale energy.
- ESB's behaviour is also constrained by other market design and legal and regulatory features, which were incorporated into the SEM to ensure a competitive market, and no evidence has been presented to suggest that these measures have not been effective at promoting competitive outcomes.

This evidence shows that ESB can no longer be presumed to have material market power in the wholesale market. Thus, the SEMC's first potential theory of harm justifying vertical ringfencing and Directed Contracts cannot be justified.

A.3 Market power in the sale of hedging products

In this subsection, we consider evidence as to whether removing ESB's vertical ring-fencing and Directed Contracts could result in ESB having the ability and incentive to increase the price of power

⁵¹ See, for example, SEM-12-002 and SEM-10-084a.

hedges through withholding supply of power hedging products thereby increasing costs to other retailers and softening competition in the retail market. To do this we consider:

- ESB’s share of the supply of power hedges; and
- ESB’s structural position.

A.3.1 ESB’s share of the supply of power hedges

In assessing ESB’s share of the market for sale of forward power hedges, it is not appropriate to consider the current share of supply of these hedges. This is because the market is significantly distorted by the SEMC’s ex ante regulation of ESB through:

- the Directed Contract obligation, which requires ESB to provide power hedges based on the level of market concentration, rather than based on ESB’s proportionate ability to provide those hedges; and
- the regulatory ring-fencing of ESB, which results in material (though declining) volumes being traded via the market.

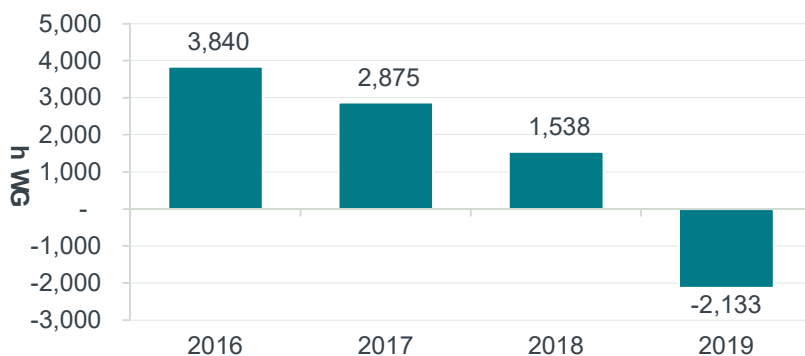
As these interventions distort the market and are likely to crowd out organic growth in liquidity from other providers, it is not appropriate to consider the current share of volumes.

A better approach is therefore to consider what the ability of participants is to supply hedges. As detailed below, ESB is structurally short (as are other some other vertically integrated players).

A.3.2 ESB’s structural position

Figure also makes clear that, as a result of ESB’s decreased share of the wholesale energy market, the ESB group is now structurally short: Electric Ireland’s demand for power hedges is greater than the ability of ESB’s generation business to supply them. Figure 10 shows how ESB’s total generation compared to Electric Ireland’s total demand has evolved over time.

FIGURE 10 ESB’S NET POSITION FROM EI’S DEMAND AND ESB’S SUPPLY



Source: ESB

As can be seen, in 2016, when the evidence was last considered by the SEMC, ESB was structurally long in generation: ESB's generation was higher than Electric Ireland's demand. However, as a result of ESB's decreasing generation output, this is no longer the case.

Electric Ireland estimates that between 2016 and 2020 it relied on proxy hedges to fulfil 20% of its total demand. It would therefore not be in the interests of the ESB group to withhold the supply of power hedges; firstly given that ESB is structurally short and secondly, due to the fact that this would lead to Electric Ireland having a greater reliance on proxy hedges.

It is not conceivable that, as a net consumer of power hedges, ESB would have the ability and incentive to withhold the supply of hedges in a way that would raise rivals' costs. In addition to the fact that ESB would have a very limited share of the supply of hedging products, if power hedges prices increased, ESB's overall costs would increase (or alternatively, ESB's unhedged risk exposure would increase as a result of greater reliance on proxy hedges).

A.3.3 Summary

As a result of our loss of generation market share, our ability to supply power hedging products has significantly decreased. Therefore, the share of total demand for power hedges that is met by ESB's generation has also significantly decreased since 2016. Other players are now equally well placed to supply hedges to the market. ESB therefore has no ability to materially change the price of hedges by withholding supply from the market.

Moreover, ESB is now significantly structurally short. That is, ESB's downstream business has a greater demand from the market for forward power hedging products than ESB's upstream business can supply to the market. In 2016 ESB's volume of day-ahead market generation was 24% higher than the volume demanded by Electric Ireland. However, in 2019, ESB's volume generated was 22% less than that demanded by Electric Ireland. Therefore, ESB is now a net consumer of power hedges. This means that an increase in the price of power hedges would increase ESB's overall cost and leave us at a competitive disadvantage. Therefore, ESB has no incentive to withhold supply if that would lead to an increase in the price of power hedges.

Therefore, in relation to the SEMC potential theory of harm relating to withholding power hedges, there is no longer a rationale for any discriminatory ex ante regulation.

A.4 Market power in the purchase of hedging products

In this subsection, we consider evidence as to whether removing ESB's vertical ring-fencing and Directed Contracts could result in Electric Ireland having the ability and incentive to withhold demand for power hedging products, thereby limiting the ability of other generators to hedge and hence increasing others' costs.

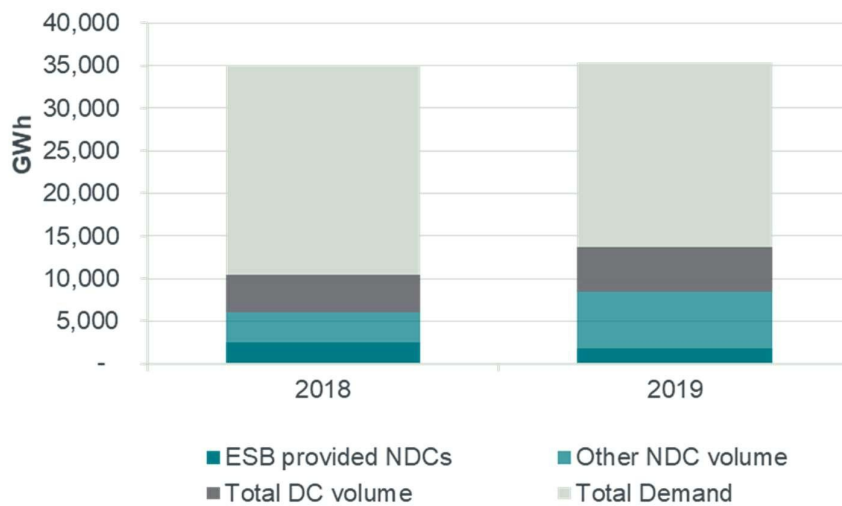
To do this we consider:

- the supply of power hedges in the SEM; and
- the nature of competition in the retail market.

A.4.1 The supply of power hedges in the SEM

The overall demand for power hedges in the SEM is greater than their supply. It is for this reason that Electric Ireland, as well as other retailers, rely on proxy hedges to cover a proportion of their risk position. Figure 11 shows the significant shortage of power hedges in the market. The total supply of Non Directed Contracts and Directed Contracts accounted for 30% and 39% of total market demand in 2018 and 2019 respectively.

FIGURE 11 SUPPLY OF NON DIRECTED CONTRACTS AND DIRECTED CONTRACTS VERSUS TOTAL DEMAND IN THE MARKET



Source: Data on NDC volumes provided by Tullet Prebon

As well as the distortionary effect of Directed Contracts, the low liquidity also appears to be driven by a number of fundamental characteristic of the market that impinge on liquidity, namely:

- small market size;
- relatively few participants;
- a relatively high proportion of supported wind.

The overall shortage of power hedges means that if Electric Ireland reduced its demand, generators seeking to sell them would continue to find a ready market, probably displacing the use of proxy hedges by other players.

A.4.2 Summary

Electric Ireland has no ability or incentive to increase forward hedging costs by withholding demand for hedges. This is because the demand for power hedges in the SEM is significantly greater than the

supply of power hedges⁵². Therefore, other generators would have a ready market for hedges even if Electric Ireland stopped buying from them.

The evidence also suggests that the retail markets are competitive. As a net consumer of hedges, in the context of a competitive retail market, Electric Ireland is incentivised to increase, rather than decrease liquidity in forward markets. Reduced liquidity would increase its costs, which would be harmful to both its competitive position and to consumer interests.

Furthermore, Electric Ireland has seen a net loss in customers over 2017 and 2018. This further suggests that Electric Ireland is not in a position to exploit market power in the retail market.

Therefore in relation to the potential theory of harm relating to Electric Ireland's potential market power in the purchase of power hedges, there is no rationale for any discriminatory ex ante regulation.

⁵² Many suppliers, Electric Ireland included, rely on the use of proxy hedges (hedges against gas and carbon price risk, but not against risk in the spark-spread) as a substitute for power hedging products, as these products are not available at a reasonable cost.