Acquisition of Premier Power Limited by AES Corporation

Consultation on the requirement for enhanced market power mitigation measures within generation licences

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CONTENTS

1. INTRODUCTION

AES Corporation (AES) owns and operates Kilroot Power Station in Northern Ireland (618 MW). AES recently acquired Premier Power Limited (PPL) who own and operate Ballylumford Power Station (BPS) in Northern Ireland (1,213 MW). The new combined market share (by capacity) of AES in the Single Electricity Market (SEM) is around 18%, making AES the second largest generation participant.

At SEM Committee meeting no. 31 (31 August 2010), the SEM Committee[1] discussed this matter and considered the exercise of any relevant functions by the Utility Regulator in Northern Ireland (UR) consequent on the acquisition to be a SEM matter.

In considering if any action is required, the SEM Committee invites views regarding the implications (if any) this acquisition will have on market power and whether the current licence conditions are 'fit for purpose' in light of the acquisition.

2. MARKET POWER ASSESSMENT

This section sets out a brief assessment of the impact the acquisition will have on market concentration and market power, both in the context of the all-island SEM and also at local level. This impact has been assessed using both market shares and the Herfindahl-Hirschman Index (HHI). Forecast energy volumes are based on unconstrained Plexos forecast modelling.

2.1 SCENARIOS

At both Kilroot and Ballylumford power stations several of the individual generation units are under contract with NIE's Power Procurement Business (PPB). Effectively this means that the commercial activity or bidding of the contracted units in the SEM is handled by PPB and not the power station owner. For this reason two scenarios have been considered:

Scenario 1: All Kilroot and Ballylumford units combined in to a single entity (1,831MW).

Scenario 2: Kilroot and Ballylumford uncontracted units grouped together (900MW) and the contracted PPB units considered separately (931MW).

2.2 LOCAL MARKET POWER BEHIND A CONSTRAINT

One of the most significant constraints that currently exist on the all-island system is that between the transmission network in Northern Ireland (NI) and the Republic of Ireland. In addition the system operator in

[1] The SEM Committee is established in Ireland and Northern Ireland by virtue of Section 8A of the Electricity Regulation Act 1999 as inserted by Section 4 of the Electricity Regulation (Amendment) Act 2007, and Article 6 (1) of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 respectively. The SEM Committee is a Committee of both CER and NIAUR/UR (together the Regulatory Authorities) that, on behalf of the Regulatory Authorities, takes any decision as to the exercise of a relevant function of CER or NIAUR/UR in relation to an SEM matter.

NI maintains three of the large thermal generator units on at all times to provide system stability. Because of these constraints the impact of the proposed purchase is also considered in a local (NI) context.

2.3 MARKET SHARE RESULTS

This is simply the percentage share of either capacity or energy each ownership grouping is forecast to have.

BY CAPACITY

The following table shows the forecast capacity share of the various ownership groups in the SEM in 2012:

OWNER	2010	2012
ESB PG	34%	31%
AES (Total)	18%	17%
Endesa	10%	9%
ESB I	9%	8%
Viridian	8%	7%
Bord Gais	4%	7%
GB I/C	4%	8%
Tynagh	4%	4%
Bord na Mona	2%	2%
Others	7%	8%

This shows the market share of AES in context of other operators in the SEM. The total capacity of both the Kilroot and Ballylumford power stations is reasonably significant and would lead to AES becoming the second largest player by capacity in the SEM. The following table expands on this and shows the forecast capacity share in 2012 for the two scenarios highlighted above for both the SEM and local level.

SCENARIO	SEM	NI
Scenario 1		
AES Total	17%	62%
Scenario 2		
AES (uncontratced)	8%	30%
PPB (contracted)	9%	33%

Under Scenario 1 the total AES portfolio will have a significant capacity share at both SEM and local level but in particular there would be considerable local market power. In terms of the SEM, although an 17% share would lead to the new group being the second largest, this is still lower than thresholds identified for market screening purposes in other markets (e.g. in the US FERC identified a 20% benchmark and in Holland a 30% threshold was identified[2]). Scenario 2 shows the effect of considering PPB, which approximately halves the capacity share. It should be noted that the new AES grouping will have an 80% share of thermal generation capacity at local level, whereas the figures in the above tables include an allowance for both interconnection and wind.

[2] ETSO Report: A Review of the Monitoring of Market Power, November 2004

BY ENERGY

Both Kilroot and Ballylumford power stations contain units that are rarely run and deemed uncompetitive for most of the time. Because these units are uncompetitive, they have less opportunity to influence market prices and hence are less likely to exhibit market power. The following tables show the market shares by forecast generation volume (or energy) of the largest participants. This gives a better indication of the ability to exercise market power under each scenario; however, this is highly dependent on forecast assumptions such as forward fuel prices.

OWNER	2010	2012
ESB PG	30%	29%
ESB I	18%	17%
Viridian	14%	7%
AES (Total)	10%	8%
GB I/C	7%	11%
Bord Gais	4%	9%
Others	18%	19%

The following table shows the breakdown for the two scenarios for 2012:

SCENARIO	SEM	NI
Scenario 1		
AES Total	8%	30%
Scenario 2		
AES (uncontratced)	3%	12%
PPB (contracted)	5%	18%

The energy figures presented represent the forecast share of unconstrained energy. It would be anticipated that the total AES share, particularly at local level, would be significantly greater if a constrained system was modelled.

To test the sensitivity of coal prices, a 'low coal' scenario was also modelled, with coal prices set to 50% of their forecast values. This gave the total AES group a 13% share of SEM generation, and a 42% share of NI generation.

2.4 HHI ANALYSIS

The HHI is an international standard measure of market concentration. Increases in HHI indicate an increase of market power, whereas decreases indicate the opposite. As a rule of thumb, a market with an HHI below 1000 is considered unconcentrated, and a market with an HHI over 1800 is considered highly concentrated. Between 1000 and 1800 is considered moderately concentrated. The following tables show the HHI results based on modelled share of capacity and energy for 2012.

HHI BY CAPACITY	SEM	Δ	NI	Δ
Pre acquisition	1,404		2,059	
Scenario 1	1,574	*12%*	4,272	*108%*
Scenario 2	1,436	*2%*	2,490	*21%*

HHI BY ENERGY	SEM	Δ	NI	Δ
Pre acquisition	1,620		2,020	
Scenario 1	1,654	2%	2,463	22%
Scenario 2	1,620	0%	2,020	0%

SEM LEVEL:

Overall the proposed purchase has a limited effect on HHI. While the increase by capacity is notable for Scenario 1 at 13%, by energy there is only a small change. Under Scenario 2 the change is small for both capacity and energy.

The HHI in the SEM is largely driven by the HHI contribution of ESB PG hence the effects of the purchase are limited.

LOCAL LEVEL:

The results show that the effect of the purchase is significant behind the North-South constraint, with large increases in HHI suggesting a significant increase of local market power in NI. These results do not account for the system operator's need to maintain three of the large NI units on at all time; if this was included the results would likely appear worse. In particular, for Scenario 1 AES would likely have continuous market power as the Coolkeeragh CCGT is the only large unit not now under AES ownership in NI.

3. OVERVIEW OF EXISTING MARKET POWER MEASURES

In the lead-up to SEM go-live, the Regulatory Authorities (RAs) decided that it was necessary to put in place a specific Market Power and Dominance Strategy as part of the regulation of the SEM. The market power mitigation measures are referred to in consultation AIP-SEM-02-06[3] and decision AIP-SEM-31-06[4] as well as consultation AIP/SEM/07/16[5] and decision SEM/304/07[6].

These measures are summarised below:

- Bidding principles for generators, i.e. a Bidding Code of Practice which states that generators must bid in their Short Run Marginal Cost (SRMC) to the market;
- A Market Monitoring Unit to monitor adherence by generators to the bidding principles and to conduct market abuse investigations as needed;
- Directed Contracts (or DCs) to be offered to the market by incumbent generators with the potential to abuse market power, whose prices are based on the RAs' projected SMP in the SEM. DCs are forward contracts which help ensure that generators with market power do not have an underlying incentive to attempt to abuse their positions in the SEM.
- Ring-fencing arrangements between affiliated generating and supply businesses within the ESB and Viridian groups, provided for in their licences. The main purpose of these arrangements is to ensure that the ESB and Viridian businesses operate independently of each other. They feature separate management, separate accounts, as well as a prohibition of anti-competitive behaviour, cross-subsidies (either to or from their affiliate businesses) and contracts with affiliates other than those which are on an arm's length basis on normal commercial terms. This applies to both the generation and supply arms of the ESB and Viridian groups; and,
- Local power mitigation measures, if deemed necessary.

The SEM Committee is mindful that an existing review of market power and liquidity within the SEM could have a potential impact on these measures and the outcome of this consultation[7].

DIRECTED CONTRACTS:

Currently both ESB and NIE Energy (PPB) have conditions within their licences[8] that give the relevant regulator explicit powers to direct each company to offer Directed Contracts. This provision is not current contained within the licence for either AES Kilroot or Ballylumford Power Limited. As the AES group could potentially be deemed to have sufficient market share to be required to offer Directed Contracts, the SEM Committee is minded to amend the relevant licences to include a similar Condition to that contained within the ESB and NIE Energy (PPB) licences.

[3] http://www.allislandproject.org/GetAttachment.aspx?id=5987ff76-0e0a-4d85-ad49-eb43dfe16dbf
[4] http://www.allislandproject.org/en/market-power-decision.aspx?page=2&article=4cab0a1e-2e65-47a2-9585-67fca34ef586
[5] http://www.allislandproject.org/GetAttachment.aspx?id=e816446b-4653-4a9c-9522-ce528c727710
[6] http://www.allislandproject.org/GetAttachment.aspx?id=1f6c8708-b0a4-4db0-9afc-ce3722fc7aca
[7] http://www.allislandproject.org/en/market_decision_documents.aspx?article=dcda0d63-660c-4b28-b71f-9896f306e6cc
[8] http://www.allislandproject.org/en/licenses-4.aspx?article=80422e60-c8a8-4ccf-90f4-deda1162fd33; http://www.uregni.gov.uk/uploads/publications/Electricity_Licensees_for_UR_Website_10_09_10.pdf

4. SUMMARY

At a high level any additional market power concerns resulting from the merger in the unconstrained all-island market appear relatively small. However due to constraints on the system, AES now has significant local market power in NI, owning over 60% of NI capacity.

There are already a number of existing measures in place that deal with market power at both the SEM and local level. These include the BCoP, market monitoring and Directed Contracts. In addition, about 50% of the combined AES capacity remains contracted to NIE PPB (who bid this capacity in the SEM). These contracts could be cancelled at some point in the future. At the same time, AES retains the ability to withhold capacity as they still control the operation of both power stations. This could affect prices and security of supply in Northern Ireland. The impact of AES's local market power will be reduced to some degree if and when a second north-south interconnector is built.

The SEM Committee is minded to amend the relevant licences to include a Condition giving the relevant regulator explicit powers to direct AES to offer Directed Contracts. A potential candidate for further market power mitigation could be 'ring-fencing' to ensure generation business separation, similar to that imposed between ESB PG and ESBI. This would require a further license modification.

The legal framework for making changes to generation licences in Northern Ireland is contained within the Electricity (Northern Ireland) 1992 Order[9] (Articles 14 to 18).

[9] http://www.legislation.gov.uk/nisi/1992/231/contents/made

5. COMMENTS REQUESTED

The SEM Committee requests comments from interested parties on the following:

- The impact the acquisition of Ballylumford Power Station by AES will have on the ability of AES to exercise market power, both in the SEM and behind system constraints locally in Northern Ireland.

- Whether the existing relevant licences are 'fit for purpose' in light of this acquisition. Currently there are separate licences for AES Kilroot and Ballylumford Power Limited[10].

  In particular:

  - Do you agree that the relevant licences should be amended to include a similar Condition relating to Directed Contracts to that contained within the ESB and NIE Energy (PPB) licences?
  - Is there a need for any additional market power mitigation measures such as the 'ring-fencing' of generation businesses now or in the future?

- Is there a need to introduce any other additional local market power mitigation measures?

Please submit comments, preferably in electronic format, **by 1700hrs on Monday 29 November 2010** to the following:

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[10] http://www.uregni.gov.uk/uploads/publications/Electricity_Licensees_for_UR_Website_10_09_10.pdf