

Second Consultation on Cancellation of Generating Unit Agreements in Northern Ireland

29 March 2010

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2 EXECUTIVE SUMMARY

The Northern Ireland Authority for Utility Regulation (“**the Authority**”) published a consultation paper on 3 December 2009 in order to:

- Set out its initial thoughts on the type of issues and factors the Authority believes will or should inform its decision making process in relation to the potential cancellation of Generating Unit Agreements (“**GUAs**”) in place between PPB and certain generators; and
- Obtain the views of market participants and interested parties.

Following consideration of the responses to this consultation, and having undertaken detailed economic analysis and sensitivity analysis into the financial position of the GUAs, and after considering all relevant policy considerations, the Authority publishes the following minded-to decisions:

- 1. To instruct the cancellation of the GUAs for the coal/oil fired Kilroot Generating Units No. 1 and No. 2 at the Earliest Cancellation Date of 1 November 2010.**
- 2. Not to instruct the cancellation of the remaining units at the Earliest Cancellation Date of 1 November 2010, but to keep these contracts under review.**

Interested parties are invited to respond to any issues discussed or any aspect of the proposals put forward in this Consultation Paper – which should be addressed (preferably via email) to Paul Bell at paul.bell@niaur.gov.uk and copied to Kenny Dane at kenny.dane@niaur.gov.uk - by 17.00hrs on **26 April 2010**.

3 INTRODUCTION

On 3 December 2009 the Northern Ireland Authority for Utility Regulation (“**the Authority**”) published a Consultation Paper entitled “Consultation on Relevant Considerations in relation to the possible Cancellation of Generating Unit Agreements in Northern Ireland”¹. The Consultation contained a proposed framework via which the Authority would assess whether or not to instruct the cancellation of Generating Unit Agreements (“**GUAs**”) in Northern Ireland.

The Authority has the power - as set out in a licence condition contained within electricity generation licences and the electricity supply licence of NIE Energy Limited (“**the Cancellation Condition**”) - to direct the early cancellation of a GUA. The Authority’s power to cancel a GUA early (“**the cancellation power**”) only applies once it has determined that requisite trading arrangements, which satisfy certain requirements, have been developed. The Authority determined, on 23 October 2007, that the Single Electricity Market (“**the SEM**”) constituted the requisite trading arrangements².

There are currently ten GUAs in force between NIE Energy Limited (effectively its Power Procurement Business (“**PPB**”)) and electricity generators in Northern Ireland. The Cancellation Condition provides that the Authority may give a direction for a GUA to be cancelled at any time on, or after, its Earliest Cancellation Date (“**ECD**”). Eight of the GUAs have an ECD of **1 November 2010**. The other two GUAs have an ECD of **31 March 2012**.

The Authority has issued this second consultation paper in order to:

- Outline its minded-to decisions in relation to cancellation;
- Explain its analyses and rationale for these decisions; and
- Obtain the further views of market participants and interested parties prior to making its final decisions.

In terms of structure:

¹ [GUA Consultation on Relevant Considerations](#)

² [Rationale for Determination that SEM Constitutes Requisite Arrangements](#)

- **Section 4** provides a background to the history and structure of the GUAs;
- **Section 5** describes the content of the previous consultation and summarises the responses;
- **Section 6** describes the economic analysis carried out by the Authority in relation to the GUAs
- **Section 7** provides a summary of the results of this economic analysis;
- **Section 8** describes the policy considerations to which the Authority had regard;
- **Section 9** sets out issues related to jurisdiction of the Authority and the SEM Committee in relation to cancellation;
- **Section 10** sets out the minded-to decisions of the Authority in relation to cancellation of the GUAs at the ECD;
- **Section 11** describes the next steps to be taken before final decisions are reached.

4 BACKGROUND

When the electricity industry in Northern Ireland was privatised in 1992, the generating stations were sold to private companies and Power Purchase Agreements (“PPAs”) were entered into between these companies and Northern Ireland Electricity plc.

The PPAs with each power station comprise two forms of agreement: a Power Station Agreement (“PSA”) relating to the station’s operation and a number of individual Generating Unit Agreements (“GUAs”) relating to each generating unit within the power station. These contracts are managed by PPB – a business unit within NIE Energy Limited. There are 10 GUAs still in force: five for units at Ballylumford Power Station, one for a unit at Coolkeeragh Power Station and four for units at Kilroot Power Station. Further details are set out in the table below.

The GUAs contain provisions relating to the purchase and payment by PPB for a number of services including the availability of capacity, the generation of electricity and the provision of ancillary services from each individual generating unit. The GUAs make provision for two categories of payment, namely (i) energy payments, and (ii) availability payments.

Energy payments represent reimbursement of fuel costs, while **availability payments** represent reimbursement for acquisition costs and operating costs. Availability payments are paid irrespective of whether electricity is actually generated, subject to the unit being available to generate.

Each PSA also contains Change in Law provisions which allow for amendments to payments in the event that a generator’s costs (or revenues) vary as a result of changes in legislation, including environmental legislation. Examples of this are costs incurred by AES Kilroot in the past to install a flue gas de-sulphurisation (“FGD”) plant to comply with more stringent requirements on SO₂ emissions under the Large Combustion Plant Directive (2001/80/EC). Further costs may be incurred by AES Kilroot under this Directive from 2016 to comply with more stringent controls on NO_x emissions. The European Union Greenhouse Gas Emission Trading System (EU ETS), based on EU Directive 2003/87/EC resulted in the granting of free carbon allowances from 2005-2012 to all generators in Northern Ireland. For nine of the GUAs, the parties have accepted that the value of the free carbon allowances reverts to PPB. However, in the case of Coolkeeragh ESB this is, at present, a matter of dispute between the two parties. However it is expected that beyond 2012 no further free allowances will be granted to electricity generators.

PPB sells the energy and capacity purchased from the generating stations through the PPAs in the SEM. PPB also sells ancillary services to the System Operator for Northern Ireland (“**SONI**”).

In any year, PPB will either make a profit or loss on each GUA, i.e. revenues earned in the SEM and from selling ancillary services will either be greater than or less than the costs of the GUAs. In accordance with its licence provisions, PPB passes this profit or loss on to electricity consumers in Northern Ireland as one component of a levy known as the Public Service Obligation (“**PSO**”).

By cancelling a GUA contract, the Authority would be instructing PPB to terminate its commercial arrangement with the generator.

At present, PPB acts as an intermediary between the generating units and the electricity market by bidding into the SEM on their behalf. Under the terms of the GUAs, the generating units receive energy payments and availability payments from PPB, while PPB receive the revenue the generating unit would have received if it had been participating directly in the SEM. Any difference, whether positive or negative, between the amount PPB receives in respect of the generating units and the amount it pays to the generators for energy and availability is levied to all Northern Ireland consumers through the PSO.

If a unit’s GUA were to be cancelled, that unit would no longer impact upon the PSO and its costs would be bid into the SEM by the unit’s owners. Each of the units’ owners already have other generating units which they presently bid directly into the SEM, so the conversion to bidding of the presently contracted units directly into the SEM by the owners should not be problematic. If the unit is economically efficient it would be expected to continue to operate in the SEM. If the unit is not economically efficient, it may exit the SEM.

The units under GUA with PPB are listed in the table below:

Table 1: Expiry and Earliest Cancellation Dates of the GUAs

Company	Generating Unit	GUA Contracted Capacity (MWs)	Fuel Type	Earliest Cancellation Date (ECD)	Contract Expiry Date (CED)
AES Kilroot	G1	260 (oil), 195 (coal)	Coal/Heavy Fuel Oil	1 November 2010	31 March 2024
AES Kilroot	G2	260 (oil), 195 (coal)	Coal/Heavy Fuel Oil	1 November 2010	31 March 2024
AES Kilroot	GT1	29	Distillate	1 November 2010	31 March 2024
AES Kilroot	GT2	29	Distillate	1 November 2010	31 March 2024
Premier Power	CCGT 10	106	Gas	31 March 2012	31 March 2012 (with two five-year extension options exercisable by PPB with two years notice in each case)
Premier Power	CCGT 20	510	Gas	31 March 2012	31 March 2012 (with two five-year extension options exercisable by PPB with two years notice in each case)
Premier Power	G4	180	Gas	1 November 2010	31 March 2012
Premier Power	GT1	58	Distillate	1 November 2010	31 March 2020
Premier Power	GT2	58	Distillate	1 November 2010	31 March 2020
Coolkeeragh ESB	GT8	58	Distillate	1 November 2010	31 March 2020
Total		1548			

5 PREVIOUS CONSULTATION

On 3 December 2009, the Authority published a consultation paper setting out its initial thoughts and seeking the views and opinions of interested parties on the relevant considerations it should take into account in relation to the possible Cancellation of GUAs in Northern Ireland.

The purpose of this consultation was to:

- Set out the Authority's initial thoughts on the types of issues and factors the Authority believes will or should inform its decision making process (i.e. whether or not it should exercise its early cancellation power at the earliest opportunity); and
- Obtain views of market participants and interested parties.

Nine non-confidential responses to this consultation were received. These can be viewed in full on the Authority's website and are published with this further consultation paper. Summaries of the responses to each of the questions asked are provided below.

5.1 THE PRINCIPAL OBJECTIVE OF THE AUTHORITY AND THE SEM COMMITTEE

AES asserted that cancellation is not a SEM matter because there is no evidence that the GUAs influence or distort SEM scheduling or pricing in any way.

SONI – asserted that cancellation of the GUAs is likely to promote more effective competition, which is a principal objective of both the Authority and the SEM Committee ("**SEMC**").

SONI also consider that early cancellation would lead to simplification of administration and interfacing, e.g. the Northern Ireland Grid Code or the complexity around the provision of Ancillary services to SONI through PPB as Intermediary.

ESBI believes that consumers' interests will be better protected if the GUAs are cancelled. PPB does not have any financial incentive to optimise the operation of these assets, as it passes any profit or loss through the PSO. They added that this will become even more important after 2012, when Phase II of the EU Emissions Trading

Scheme finishes and the ability of generators in this new market environment to fully recover their carbon costs will be all the more uncertain.

SSE – believe at present, customers are the ultimate holders of GUA risk; change-in-law costs, no matter how extreme, are passed directly to customers through the PSO. SSE state that this is an unreasonable imposition on customers and therefore fails to meet the objective of protecting customers' interests.

SSE add that any reduction in GUA running hours increases average energy costs; this cost risk passes directly to customers through the PSO and is an unreasonable imposition on customers and fails to meet the objective of protecting customers' interests.

5.2 EFFECTS OF A DECISION TO CANCEL

The consultation paper stated that there may be particular effects on matters such as:

- Prices paid by consumers;
- The competitiveness of the SEM;
- Security of supply;
- Diversity of supply;
- Environmental sustainability.

Responses to this section are therefore summarised under these headings.

5.2.1 PRICE PAID BY CONSUMERS

AES – believe the impact on price will be driven primarily by the extent to which PPB can earn infra-marginal rent from the market and also any additional GUA costs such as Change in Law. AES argue the GUAs help to protect customers by offering a price hedge against volatile gas prices and by providing liquidity.

SONI – argue the effect of early cancellation on final consumer prices will be better informed by the proposed economic analysis.

SSE – believe changes in running regimes could reverse the recent positive benefit of the GUAs. SSE adds that the GUAs have a blunting effect on economic signals and place a huge risk exposure on customers.

5.2.2 COMPETITIVENESS OF SEM

SONI – argue that cancellation of the GUAs is likely to promote more effective competition by decreasing market concentration in the SEM.

ESBI – state that competition will be enhanced if the different generators will have to face their own financial risk.

5.2.3 SECURITY OF SUPPLY

AES asserted that the GUAs offer SONI clear and consistent processes and procedures for initiating fuel switching to ensure system security is preserved. In the absence of GUAs and a suitable Fuel Security Code (“**FSC**”), there will be significant uncertainty with respect to managing an emergency event under the FSC such that system security and supply to customers could be jeopardised.

SONI don’t foresee any transitional or longer term issues regarding early GUA cancellation. They have already seamlessly facilitated the ending of two GUAs in respect of the Ballylumford ‘B’ station.

IWEA - argue the GUAs successfully encourage very flexible and reliable performance from thermal units; this flexibility will become ever more valuable with increasing levels of renewable development. They state it is important that these incentives are maintained in the future should the GUAs be cancelled.

ESBI believes that the security of supply will be better protected if they own and market the Coolkeeragh GT8 power plant. Because the cancellation condition provides that the Authority may give a direction for a GUA to be cancelled at any time on, or after, its ECD, it introduces huge uncertainty for the generating unit owner if the contracts are retained but are continually under review, making it impossible for the owner to make any decisions about possible upgrading or replacement of the plant. ESBI state that in this uncertain situation the owner will not invest and instead a lot of short term maintenance decisions will be made; each time an expensive generating unit part fails and there is a ‘temporary repair’ or ‘replace’ decision, the owner is forced to take the short term and least expensive repair solution.

If the GUA is cancelled, ESBI would have the freedom to analyse the possibility of an upgrade or new investment in the site. A new investment could contribute to improve security of supply, reducing the time needed to get to full load (which is critical to cover the variability of the wind generators) and also being able to offer voltage control.

5.2.4 DIVERSITY OF SUPPLY

AES made the argument that it is prudent to ensure there is sufficient diversity in fuel type with the generation market to mitigate the effects of a catastrophic failure such as a failure in the gas pipeline supplying the island of Ireland.

SSE – argue that prior to introduction of the SEM, Northern Ireland had to be largely self-sufficient in generation. With the advent of the SEM and increasing development of both renewable and conventionally-dispatchable plant, the interests of customers are now better served by the diversity of plant and sources of supply now available to meet demand on an all-island basis, particularly once the new North-South interconnector is commissioned. They add that Eirgrid's new East-West interconnector will further improve the island's energy security when it is commissioned in 2012. SSE concludes that the GUAs provide no additional assurance that electricity demand can be met.

5.2.5 ENVIRONMENTAL SUSTAINABILITY

In terms of environmental sustainability, **AES** believe that a coal fired plant still has an important role to play so long as it complies with all relevant environmental and emissions legislation.

SONI feel that to the extent that early cancellation of the GUAs would lead to further SEM transparency, it may in turn further encourage renewable generation and/or lower carbon emitting generation to enter the SEM with consequential environmental benefits.

ESBI – argue that after 2012 when the allocation of free CO₂ allowances finishes, optimal plant dispatch to reduce plant emissions as much as possible becomes even more critical. ESBI claim that operating under full SEM conditions is the best way to ensure this happens. They state that if its GUA is cancelled they would have the freedom to analyse upgrades or a new investment in the site. A new power plant would considerably improve the fuel and environmental efficiency assuring a sustainable long term supply.

ESBI further argue that, faced with actual SEM conditions, owners will replace, upgrade or close plant as the market dictates. In an uncertain GUA extension scenario, none of these things are likely to happen and outdated, inefficient and high emissions plant is likely to be left in service.

If the GUA is cancelled, ESBI would also have the freedom to optimise the use of the grid connection and alternative generating technologies would be considered; in

particular the possibility of investment could be considered in new gas aero-derivative peakers, which can quickly respond to sudden decreases or increases of wind-farm load. The wind regime in the North West is particularly attractive but investment opportunities are constrained by connection availability.

ESBI states that possible sharing of the GT8 connection between a wind generator and a peaker might be an option but ESBI is not in a position to begin analysing this without certain access to the connection.

5.2.6 OTHER RELEVANT FACTS OR CIRCUMSTANCES

At present, PPB offer Non-Directed CfDs to suppliers backed by their diverse portfolio of plant. **AES** and **NIE Energy Supply** argued that the cancellation of the GUAs would reduce liquidity in the market by reducing the availability of hedging contracts.

Without the diversity currently held by PPB, the individual plants would be unable to offer the same volume of CfDs to suppliers; the reduced liquidity could lead to greater tariff disturbance, as prices may need to be reset more often due to the lack of satisfactory hedges. **ESBCS** expressed concern that the timeframe and uncertainty around the availability of hedging products would have on the hedging process for the 2010/11 tariff year.

However, **SSE** contends that if the GUA generators are freed from PPB and able to contract on the basis of normal commercial behaviour, they are likely to develop a portfolio of contract products of varying durations. **SSE** argue that the GUAs actually inhibit the emergence of innovative competitive behaviours that will ultimately benefit customers.

SSE also iterated that factors such as competitive development and market effectiveness should carry at least an equal weight in the Authority's deliberations as the proposed economic factors.

The Authority has a duty to ensure that licence holders are able to finance the activities which are the subject of obligations under their licence. **AES** stated that the GUAs provide a stable and predictable context upon which such financing can take place.

However, **SSE** contends that the Authority does not have an absolute obligation to ensure all licence holders can finance themselves, otherwise all suppliers would be given a revenue guarantee and all market participants would be protected from the consequences of inappropriate investment. Instead, the Authority's obligation is to

provide a stable trading regime, with cost-reflective pricing, in which efficient participants can obtain capital in private capital markets on the prospect of market expectations for risk-adjusted returns on investment.

The Authority also has an obligation not to discriminate between licence holders. **SSE** contends that the existence of GUA Agreements gives these generators an advantage as they are freed from some aspects of normal economics (e.g. the trade-off between scale of change-in-law driven investments and remaining economic life of the generator).

AES – argued that the fuel supply provisions within the GUAs are complex and the Authority must bear in mind any costs and liabilities associated with these contracts in its considerations. The Authority must also consider the ‘market readiness’ of the counterparties to the GUAs, in terms of the transition towards operation in the SEM.

5.3 THE PHASED MODELLING APPROACH

A number of questions were asked in the consultation regarding the economic modelling assumptions and proposed methodology.

ESBI are of the opinion that the decision on GUA cancellation should not be solely based on the results of economic analysis. A broader set of criteria should apply, including impact on the environment, plant age, security of supply and efficiency of the grid connection.

AES accepts that it is appropriate to adopt a phased modelling approach, covering a number of discrete time periods.

SONI state that the modelling should be carried out over the full period from the ECD to the CED to enable the full costs/benefits to be evaluated. Real Options Analysis evaluations (or at least Discounted Cash Flow for multiple scenarios) could be used to evaluate the decision, taking into account the intrinsic risks.

NIE (T&D) welcome the statement that a detailed economic analysis will be undertaken to help inform the decision-making process.

ESBCS encourages the Utility Regulator to proceed with the economic analysis as set out in the consultation and to share the outcomes with the market.

5.4 MODELLING ASSUMPTIONS

AES feels it is important that the Authority take account of the volatility in commodity prices, and undertake sensitivity analysis that addresses such volatility. In addition to variables such as demand, wind profiles and availability profiles, sensitivity analysis must also be undertaken in relation to the potential changes to the Capacity Payment Sum, changes to locational charging (particularly given the current uncertainties around TUoS charging and TLAfs) and also installed plant profiles. It is vital that the Authority include sufficient and appropriate tolerances within their analysis when comparing SEM revenues to GUA payments.

Given the initial broad round of substantive consultation, AES suggested that any further consultation in March 2010 (or thereafter) should be limited to those parties directly affected and other statutory consultees.

SONI consider that the economic modelling should make some attempt to capture the dynamic benefits to consumers of a more competitive overall market environment the appraisal should inform rather than dictate the ultimate decision.

ESBI - A further issue around commodity prices is that for any scenario beyond 4-5 years the level of uncertainty is quite high. ESBI would appreciate it if forecasted scenarios and assumptions are included for levels of future increases in interconnection, and the price assumptions used for the GB market.

5.5 FORECASTING AVAILABILITY AND ENERGY PAYMENTS

AES – believe that the Authority should account for the future effects of plant aging in its modelling. AES also sought information on how TUoS charges will be modelled.

5.6 COST IMPLICATIONS OF THE LARGE COMBUSTION PLANT DIRECTIVE

ESBI - The Coolkeeragh GT8 is a 58MW unit and is subject to the Large Combustion Plant Directive (LCPD). The relatively low running hours of this unit has meant that so far, no SO₂ or NO_x abatement equipment has been required. However, if the GUA running hours of the unit were to increase to the point that capital investment in abatement or monitoring equipment was required, ESBI would seek to be reimbursed.

AES state that they have complied with all relevant environmental and emissions legislation (including the LCPD) and will continue to do so, although no firm decision has been made as to how best to comply with the requirements of the LCPD. This will likely depend on how the likely capacity factor for AES units are driven by market conditions in terms of commodity pricing and dispatch over the long term period.

5.7 ARE THERE ANY OTHER RELEVANT COST CONSIDERATIONS?

SONI – argue that the total cost of financing the PPB business needs to be taken into the economic appraisal. Because PPB represents a portfolio of generation, there are overheads which should be considered in dealing with an intermediary in the SEM, with the Authority and with SONI.

NIE (T&D) – argue that in the event that the Authority should consider that any or all of the GUAs should remain in place after their earliest cancellation date, it should at the same time review, with the intention of removing where possible, NIE’s current obligation to guarantee the payment obligations of NIE Energy Limited under the respective PPA Novation Agreements dated 31 October 2007.

NIEES ascertain that the possible cancellation of the GUAs is highly complex and requires a very thorough analysis of:

- The benefits case for consumers in respect of increased effective competition; and
- The potential risks of not having sufficient diversity, or indeed generation resources, to meet all reasonable demands for electricity going forward.

SSE – argue that the FGD costs are an example of how these contracts can impact customers. A 20-year investment cost was recovered over a quarter of the optimal time, to avoid a stranded cost extending beyond the original cancellation date. SSE pose the questions:

- how would similar future costs be recovered when GUA contracts may operate only year-to year?
- How would such investment be recovered in the event of an old generation plant suffering a significant and permanent failure?

6 ECONOMIC ANALYSIS

The December 2009 consultation described the economic analysis the Authority intended to carry out in relation to the cancellation decision. The key consideration was to be the likely effect on PSO charges to Northern Ireland consumers resulting from cancellation, or otherwise, for each GUA between the earliest cancellation date and the contract expiry date. Upon review of the responses to the first consultation, which were supportive of this concept, the Authority has decided to retain this principle in coming to the minded-to decisions stated later in the paper.

In order to determine the likely effects on the PSO, it is necessary to compare forecast payments under the GUAs with forecast SEM Revenues and forecast ancillary service payments from SONI over the remaining lifetime of the contracts.

If forecast SEM revenues and ancillary services payments (and other net revenues) are greater than forecast GUA payments for any particular generating unit, it would be rational (on an economic basis) to retain that GUA. If forecast SEM and other revenues are less than forecast GUA payments for any particular generating unit, it would be rational (on an economic basis) to cancel that GUA. However, cancellation is not exclusively an economic concern. There are also a number of non-economic policy considerations (discussed in Chapter 8) which must also be taken into account.

The Authority has chosen to carry out analysis to determine the net economic position of these GUAs over the period between the Earliest Cancellation Date and the Contract Expiry Date.

6.1 GUA COSTS

All the payments under this subheading represent a cost to PPB and therefore consumers via the PSO.

6.1.1 AVAILABILITY PAYMENTS

The Availability Payments of the GUAs remunerate the owner of the unit for the provision of generation capacity. For every MWh of availability, a 'base' payment is made, called the Base Availability Credit (BAC).

There are a number of elements which act to change the Base value, but the most important is the seasonal and time-of-day weighting table. When the contracts were devised it was recognised that there would be an increased need for the units to provide available capacity at times of peak demand (which occurs in Northern Ireland on weekday evenings during the winter months, excluding Christmas and other holidays). As such, the payments are weighted so that they are increased during more intense demand periods, and reduced during low demand periods. The weightings therefore signal to the plant owner that the provision of capacity is more valuable at peak times than at off-peak times.

In the Authority's model the Availability Payments for the GUA units were all forecast using the availability profiles that were produced by the forecast *Plexos* model (described later). These profiles were a function of the forced and planned outage rates for the units, which were taken from historical performance. The weighting algebra was applied to each year and a weight calculated for every trading period in the forecast horizon.

Availability rebates payable by the generator to PPB for plant inflexibility were rolled forward from historic performance.

6.1.2 RELIABLE GT START PAYMENTS

Start failure is a significant operational risk associated with peaking plant operation. To address this, there is an additional availability payment made to the Gas Turbine (“GT”) units for each time they successfully start. Essentially, if the units always succeed at starting when called in a given year the Availability Payments made to the owner of the GT that year are inflated by 100%. If the units successfully start 50% of the time, the Availability Payments are inflated by 50%. If the units always fail to start, then no inflation to the Availability Payments is applicable in that year.

This incentivises owners of peaking plant which are only rarely called on to operate to ensure that their unit is capable of providing generation when it is required.

The assumed start reliability of each GT was taken from the historical performance and rolled forward.

6.1.3 ENERGY PAYMENTS

The Energy Payments of the GUAs recompense the owner of the unit for the fuel-related costs of generating electricity. These payments are calculated by reference to

generally accessible liquid market data and reflect the Opportunity Cost of the fuel. For example, the payments made to AES for coal that is burned will be referenced to the prevailing coal and coal transport prices.

This arrangement has an important and elegant match to the Commercial Offer Data (“**COD**”) that must be submitted by PPB to the SEM for the units; essentially they are based upon the same principle, since COD in the SEM must be submitted to reflect Opportunity Cost.

Because these two variables (COD and Energy Payments under GUA) are notionally equal they generally cancel each other out and as such were not modelled explicitly in this project. Instead, residual effects that can arise between the bids submitted and the costs paid under the GUAs were captured heuristically. The most significant of these are costs related to Variable Operation and Maintenance (“**VOM**”), which is captured implicitly under Availability Payments in the GUAs rather than Energy Payments. As such, this item appears as a mismatch between the Energy Payment revenue and the SEM Energy Revenue taken by PPB.

Note that carbon emissions must be bid in to the SEM so the carbon emission costs faced by PPB are also cancelled out by the bids submitted to the SEM.

6.1.4 OTHER GUA COSTS

PPB pay a suite of other costs, such as Transmission Use of System (“**TUoS**”), Market Operator charges, gas transportation capacity (applicable only at Ballylumford Unit 4), electricity import charges, fuel stocking and testing charges. These contribute only a small amount to the overall cost of the GUAs compared with the three items above.

In the Authority’s model these parameters were forecast by rolling forward historic performance and historic values; TUoS charges were calculated using published rates³.

6.2 SEM REVENUES

There are two main revenue streams that PPB collects from the SEM: Capacity Payments and Energy Payments.

³ <http://www.soni.ltd.uk/upload/CHARGING%20STATEMENT%202009-10%20v1.0.pdf>

6.2.1 CAPACITY PAYMENTS

All generators in the SEM are eligible for Capacity Payments which compensate the participant for the provision of available generation capacity to the market.

In the Authority's model, forecast Capacity Payments for each GUA Unit were calculated by inflating the capacity pot determined for the Annual Capacity Payment Sum for the Calendar Year 2010 by the forecast growth in demand used in calculating the energy payments. Each station's share of capacity payments was then calculated based on plant size, historic availability and taking account of the assumptions of new entry and exit.

6.2.2 ENERGY PAYMENTS

Because the modelling method assumes that the COD submitted by PPB matches the cost paid for any fuel, carbon and VOM under the GUAs, there is a residual component of the Energy Revenue from the SEM which must be captured called the 'Infra-Marginal Rent'. This rent represents the difference between the costs submitted to the SEM, and the System Marginal Price ("**SMP**") paid to the generator when it is scheduled to generate.

For example, if Kilroot faced a £40/MWh cost to generate from coal, PPB would bid a value of £40/MWh in to the SEM. If the unit is scheduled in the SEM, and the SMP is, for example, £50/MWh, then PPB would enjoy a payment of £50/MWh while concurrently incurring a £40/MWh cost under the Energy Payment component of the GUA. As such there is a £10/MWh infra-marginal rent that is retained by PPB.

In the Authority's model, forecast energy payments for each generating unit, used to calculate the infra-marginal rent, are a product of the forecast unconstrained dispatch volume, or the Market Scheduled Quantity ("**MSQ**") and the forecast SMP. A model was constructed based upon a previously validated model used in the wind and dispatch modelling workstream⁴, conducted by the SEM Committee, and run using the forecasting tool *Plexos*. The assumptions within the model were examined in order to ensure they were still reasonable. Parameters which require obvious updates were however overwritten, particularly the forward fuel prices.

⁴ http://www.allislandproject.org/en/renewable_current_consultations.aspx?article=e0c599c8-6b2c-4931-b7cd-d2f818bed836

6.3 CARBON

Under the EU Emissions Trading Scheme, generators in Northern Ireland were allocated a share of the free CO₂ allowances until the end of Phase II which concludes on 31 December 2012.

These allowances transferred to PPB in all cases because of the Change in Law provisions within the GUAs (noting the dispute between Coolkeeragh and PPB mentioned earlier)⁵. Because of this allocation, PPB essentially enjoys a net asset in the form of these allowances because they can be sold or used to offset the cost PPB otherwise have to pay for the emission of carbon by the contracted units. The allowances therefore represent a significant amount of net wealth for consumers in Northern Ireland.

In the Authority's model the value of the free carbon allowances for each unit was calculated by multiplying the number of free allowances by the forward carbon price.

6.4 ANCILLARY SERVICE REVENUE

Ancillary Services include the provision of spinning and replacement reserve, as well as reactive power. Under the GUAs, the units are required to provide this service to a very specific technical standard, but no payment is explicitly made. Instead, the value of the services is accounted for under the Availability Payment.

These services are purchased by the System Operator for Northern Ireland ("**SONI**") and the revenues are retained by PPB. The ancillary service rates can be found on SONI's Website⁶.

6.5 EVALUATING THE VALUE OF THE GUAs

In order to evaluate the value of each of the GUAs, the Authority has subtracted the costs faced by PPB in relation to each contract from the revenue PPB receives in relation to each unit for each year. This subtraction is a direct way of evaluating the net economic benefit of the contracts for consumers.

⁵ Other Change in Law costs are today reflected in the GUAs, most notably the Flue Gas Desulphurisation plant cost at Kilroot. These do not impact the contract costs during the study period however, which commences at 1 November 2010 (FGD payments end on 31 October 2010).

⁶ http://www.soni.ltd.uk/upload/AS%20CHARGING%20STATEMENT_Final_290110.pdf

6.6 MODELLING INPUTS AND ASSUMPTIONS

A Base Case was run in which the Authority configured its *Plexos* market forecasting software with the most up-to-date input assumptions.

Undertaking an economic and sensitivity analysis involves obtaining, assessing, ascertaining and working with a significant amount of data and using that data in various ways to help inform the assumptions required for the purposes of considering the different scenarios.

Given the range of data used, the manner in which it needs to be used, and the complexities involved in undertaking any modelling exercise, the Authority has not attempted to detail in this paper the intricacies of all the data, inputs and assumptions that were used in the economic analysis.

Rather, a description is given of the process undertaken, the sources of data and the key inputs and assumptions which informed the process.

The Authority acknowledges however, that interested parties may wish to examine detailed data assumptions further and review the inputs which informed the modelling process. The Authority will therefore provide, on request, the detail of the calculations undertaken and the specific data used.

It should be noted however that the provision or disclosure of any such information may in some cases be subject to the propriety rights of any third party from whom the data or information was obtained.

Fuel prices

Forward fuel price inputs were taken from the Authority's *Platts* data service. These were also cross-checked where available with data from the Intercontinental Exchange ("**ICE**"). Quarterly prices were used until the end of 2013, with annual prices used beyond. The data was frozen for modelling on 17 February 2010. Exchange rate data was taken from O&A and was also frozen on 17 February 2010.

Carbon prices

Forward carbon price inputs were taken from the European Climate Exchange website and were also cross-checked where available with data from the ICE. The forward price assumptions were frozen for modelling on 17 February 2010.

Generation and Demand

Assumptions around demand growth and new generation build were taken from a recent model built by *Redpoint* (after consultation with the System Operators with regard to entry of wind and new generation) for the Authority for simulation of various policies relating to wind and dispatch.

Demand is forecast to grow at the following rates:

2010	0.9%
2011 – 2018	2.6% p.a.
2019 – 2025	1.9% p.a.

Wind growth averages 13% p.a. until 2020, with approximately 5,900MW installed by 2020.

Assumptions around plant commissioning are as follows:

2010	2 CCGTs (Whitegate & Aghada, 800MW);
2010	2 OCGTs (Edenderry, 100MW);
2012	East-West Interconnector (500MW);
2013	2 CCGTs (800MW);
2016	1 CCGT (400MW) & 2 OCGT (100MW);
2018	1 CCGT (400MW);
2020	1 OCGT (50MW);

Assumptions around plant decommissioning:

2010	300MW Poolbeg gas units;
2014	340MW (Ballylumford Unit 5 & 6);
2016	1200MW (Tarbert and Great Island oil units, Aghada Gas Unit 1)

Unit Technical Characteristics

Details such as heat rates, Transmission Loss Adjustment Factors (“**TLAFs**”), and Variable Operation and Maintenance were based on recent validated model configurations provided by the Authority’s consultants, *Redpoint*, in late 2009.

Change in Law

No Change in Law elements were included in the model other than the termination of the allocation of free carbon allowances on 31 December 2012. The LCPD is likely to be complied with either by capital investment in NO_x abatement technology or by a restriction in running hours. It was therefore unnecessary to model this. Any other risks from Change in Law costs were ignored.

6.7 OFFER FROM AES KILROOT

The licence of PPB and most of the generators' licences allow for the Authority to amend the earliest cancellation date of each of the GUAs by substituting it for a later date, upon a request from either party to do so.

Cognisant of this provision, AES Kilroot presented PPB with an offer that comprised a reduction in the Base Availability Credit for all four units, and a 'risk sharing' aspect whereby the net contract value (i.e. the difference between PPB's costs and revenues in relation to that unit) at the end of each year would be shared with consumers, subject to caps and floors, in return for an alteration of the earliest cancellation date of those GUAs to the end of 2015. The offer is split in to two phases, the first ending at the end of 2012, the second ending at the end of 2015. Because any amendment to the GUAs must be made with the Authority's consent, PPB shared the details of this offer with the Authority.

The offer is a proposed adjustment of the monetary arrangements in the GUAs for the contracted units at Kilroot and has no effect on the market outcomes in the SEM model, regarding price (SMP), generation schedule or the revenues received by other participants. This is because the COD submitted by PPB to SEM is not affected by the content of the contracts.

The Authority evaluated the offer by re-calibrating its 'Base Case' model to reflect the proposed arrangements. All the sensitivity analyses were run with reference to the offer. PPB have also conducted modelling of the offer, the results of which were presented to the Authority.

6.8 SCENARIOS

The Authority ran several scenarios on a number of key variables in order to test the sensitivity of the results to changes in these variables. These are summarised below:

Base Case (prior to the AES Kilroot Offer)

This case represented what the Authority sees as the 'most likely' scenario, based on the inputs and assumptions described above. The GUA elements were not adjusted to reflect AES's offer to PPB.

Base Case (Post AES Kilroot Offer)

This case used all the same assumptions as described above. However, the GUA component of the model was adjusted to reflect AES's offer to PPB. ***All remaining scenarios were run taking account of the AES offer.***

High Gas Price Scenario

It was identified that the contribution of infra-marginal rent to the favourability of the GUAs for the coal-fired units could be very sensitive to the relativity of gas and coal prices. If the coal price is only marginally above the gas price (normalised into short-run marginal costs), it results in the coal units being 'behind' all the CCGTs on the island in the merit order. As such they will not be scheduled to run very often and will be unlikely to earn significant sums of infra-marginal rent. If however, the coal price / cost is even marginally below the gas price / cost, the coal units will typically be chosen to run ahead of all the CCGTs and will earn rent on the difference between the coal price and the SMP.

To test this effect, the forward gas price was increased by 15%. The other fuel prices and all other inputs were kept the same as per the Base Case.

High Carbon Price Scenario

If the price of carbon is high, it increases the relative cost of coal (as it is very carbon-intensive compared to other fuels), so that coal units are less likely to run and therefore will earn less infra-marginal rent. However, the value of the free carbon allowances which are retained by PPB will increase, potentially offsetting the effect.

The Authority therefore ran a scenario whereby carbon prices were inflated by 20% to test this effect.

Slow Investment Scenario

The Base Case described above is based on a number of assumptions around new entry of plant. The Authority tested the effect of reduced new build and the supply margin was therefore tighter than under the Base Case. This was achieved by removing one of the 400MW CCGTs set to commence in 2013 from the investment profile, and delaying the commencement of the other by one year.

When the supply margin tightens SMP tends to increase. The increase can be significant if the margin tightens sufficiently. An increase in the SMP usually translates directly to an increase in the infra-marginal rent earned by plants in the SEM. Such an increase would be expected to have a positive impact on the favourability of the GUAs. The tightening also has the effect of increasing all CPM revenues for all the GUA units.

7 MODELLING RESULTS

7.1 OVERVIEW

The modelling was carried out by extracting the SEM Revenues and running schedules from the *Plexos* model, and then applying the algebra in the GUAs to calculate the GUA related costs. This was carried out over six whole separate years for each scenario. The first three years examine the short-term and cover November 2010 to October 2013. The final three years look further out, covering calendar years 2016, 2020, and 2024.

It should be noted that all results are shown on a whole-year basis, even if the year is only partially captured by the contracts. This is to enable a like-for-like comparison across the years.

7.2 BASE CASE (PRIOR TO AES KILROOT OFFER)

All monetary values shown in the tables that follow are in thousand of pounds and in 2010 real terms. They represent the net contract value or impact on the PSO i.e. positive figures mean the contract is to the benefit of consumers, while negative figures mean the contract is a cost to consumers.

Table 2: Base Case (Prior to AES Kilroot Offer)

Period	Impact on PSO (£'000s)							
	B4	K1	K2	BGT1	BGT2	CGT8	KGT1	KGT2
Nov 2010 – Oct 2011	£1,966	-£9,796	-£11,962	£353	£299	£820	£682	£662
Nov 2011 – Oct 2012	£2,322	-£9,889	-£11,179	£411	£406	£874	£826	£791
Nov 2012 – Oct 2013	-£639	-£19,019	-£19,993	-£856	-£849	(-£34)	-£158	-£169
Calendar 2016	£1,033	-£18,598	-£18,880	-£243	-£312	£348	£83	£1
Calendar 2020	£742	-£18,906	-£20,236	-£379	-£417	£223	£4	(-£64)
Calendar 2024	£1,012	-£18,325	-£18,446	N/A	N/A	N/A	£103	£36

The results of this case predicted that the coal units at Kilroot would be a significant burden to customers in both the short-term and long-term. It should be noted that the calculations were made without reference to possible future 'Change-in-Law' costs such

as compliance with the LCPD which, if included, would push the units further out of economic viability.

The results suggest that the other contracts are good value for customers in the short term at least.

The movements between 2012 and 2016 in the modelling outcomes are caused by a combination of:

- Termination of free carbon allowances on 31 December 2012 (decreasing the value of the GUAs);
- Squeezing of capacity margin in 2016 as Tarbert, Great Island and several other plants in the SEM retire (this increases CPM revenue to PPB, hence increasing the value of the GUAs);
- Infra-marginal rent for the Kilroot K1 and K2 units disappears by Spring 2016 as the units fall out of merit.

The first two effects result in Ballylumford Unit 4 appearing unfavourable in 2013, before recovering by 2016. The difference between the results for the Ballylumford GT units and the other GT units is largely explainable by the low carbon allowance given to those units compared to the other peakers, as well as a higher Base Availability Credit Value.

7.3 BASE CASE POST AES KILROOT OFFER

The Authority reassessed the Base Case, taking account of the offer made by AES Kilroot. Because of the risk-sharing arrangements, which operate across the four Kilroot units simultaneously, the results for each scenario hereafter are split into two tables: an 'AES Kilroot' table and an 'Other Units' table.

The table below shows the Base Case results for each AES unit, updated to take account of the AES offer. The final two columns show the net economic value of the summed Kilroot units before and after the AES offer is taken into account.

The 'Coal Rent' column shows the infra-marginal rent that each coal unit is expected to earn in each year. Note this is already built in to the K1 and K2 columns and should therefore not be 'added back in' when reconciling the 'Total Kilroot post-offer' column. The rent is unaffected by whether or not the offer by AES Kilroot is accepted.

Table 3: (Post AES Kilroot Offer)

Period	Impact on PSO (£'000s)							
	K1	K2	KGT1	KGT2	Rebate	Total Kilroot pre-offer	Total Kilroot post-offer	Coal Rent
Nov 2010 – Oct 2011	-£6,543	-£8,671	£864	£841	£3,000	-£20,414	-£10,509	£2,559
Nov 2011 – Oct 2012	-£6,634	-£7,947	£1,002	£965	£3,000	-£19,451	-£9,614	£1,556
Nov 2012 – Oct 2013	-£11,015	-£12,127	£289	£269	£6,258	-£39,339	-£16,326	£324
Calendar 2016	-£9,171	-£9,340	£611	£535	£5,473	-£37,394	-£11,892	£0
Calendar 2020	-£9,360	-£10,321	£548	£483	£5,730	-£39,202	-£12,920	£0
Calendar 2024	-£8,807	-£8,928	£630	£564	£5,308	-£36,632	-£11,233	£0

While this offer reduces the cost of the coal unit contracts to consumers, they appear to remain materially adverse for consumers. It is not necessary to include a table for the other units, as they are unaffected by the AES Kilroot offer.

7.4 HIGH GAS

Table 4: AES Results – High Gas

Period	Impact on PSO (£'000s)						
	K1	K2	KGT1	KGT2	Rebate	Total Kilroot post-offer	Coal Rent
Nov 2010 – Oct 2011	-£1,740	-£2,823	£901	£803	£1,430	-£1,430	£11,587
Nov 2011 – Oct 2012	£302	-£1,424	£956	£888	-£361	£361	£12,619
Nov 2012 – Oct 2013	-£5,352	-£6,496	£292	£260	£4,259	-£7,037	£11,828
Calendar 2016	-£5,648	-£6,306	£611	£535	£4,162	-£6,646	£5,219
Calendar 2020	-£9,360	-£10,321	£548	£483	£5,730	-£12,920	£0
Calendar 2024	-£8,807	-£8,928	£630	£564	£5,308	-£11,233	£0

The results of this scenario suggest that the value of the Kilroot 1 & 2 unit contracts depends very heavily on the price of gas relative to the price of coal. The results from the other units are identical to those from the Base Case – Prior to AES Kilroot Offer scenario (Table 1 above).

The results of this scenario suggest that, even if the gas price were to increase by 15% relative to the other fuels and relative to all other variables, the four AES units taken together still appear unfavourable even after the AES offer is taken in to account.

7.5 HIGH CARBON

Table 5: AES Results – High Carbon

Period	Impact on PSO (£'000s)						
	K1	K2	KGT1	KGT2	Rebate	Total Kilroot post-offer	Coal Rent
Nov 2010 – Oct 2011	-£5,275	-£6,804	£1,090	£992	£3,000	-£6,997	£1,460
Nov 2011 – Oct 2012	-£4,770	-£6,212	£1,154	£1,085	£3,000	-£5,743	£219
Nov 2012 – Oct 2013	-£11,042	-£13,089	£326	£293	£6,351	-£17,161	£16
Calendar 2016	as Base	as Base	as Base	as Base	as Base	as Base	£0
Calendar 2020	as Base	as Base	as Base	as Base	as Base	as Base	£0
Calendar 2024	as Base	as Base	as Base	as Base	as Base	as Base	£0

Increasing the price of carbon has the effect of making the Kilroot 1 & 2 units less favourable for dispatch (decreasing their infra-marginal rent), while simultaneously increasing the value of the free carbon allowances.

This sensitivity makes the AES units collectively appear more favourable than under the Base Case up until 2012. This is because the increased value of the free carbon allowances more than offsets the reductions in infra-marginal rent received by the coal units. This effect is only relevant up to the end of 2012 when the allowances are expected to terminate. Despite this, the contracts still appear to be unfavourable to consumers.

The non-AES units (noting the ongoing dispute between Coolkeeragh ESB and PPB in relation to entitlement to the allowances) all see an increase in economic value under this sensitivity. This is because the value of their free carbon allowances increases, while their infra-marginal rent remains the same at zero.

Table 6: Other Results – High Carbon:

Period	Impact on PSO (£'000s)			
	B4	BGT1	BGT2	CGT8
Nov 2010 – Oct 2011	£2,643	£542	£625	£987
Nov 2011 – Oct 2012	£2,686	£648	£675	£1,140
Nov 2012 – Oct 2013	-£292	-£780	-£764	-£161
Calendar 2016	as Base	as Base	as Base	as Base
Calendar 2020	as Base	as Base	as Base	as Base
Calendar 2024	as Base	as Base	as Base	as Base

7.6 SLOW INVESTMENT

The slow investment results are similar to the Base Case results, with increased Capacity Payments making the contracts all appear slightly more favourable, and slight variations in ancillary services revenue making a contribution to small changes in the final contract values.

Table 7: AES Results – Slow Investment:

Period	Impact on PSO (£'000s)						
	K1	K2	KGT1	KGT2	Rebate	Total Kilroot post-offer	Coal Rent
Nov 2010 – Oct 2011	-£6,543	-£8,671	£864	£841	£3,000	-£10,509	£2,559
Nov 2011 – Oct 2012	-£6,634	-£7,947	£1,002	£965	£3,000	-£9,614	£1,556
Nov 2012 – Oct 2013	-£8,769	-£11,210	£405	£373	£5,860	-£13,340	£2,498
Calendar 2016	-£8,577	-£8,746	£683	£607	£5,207	-£10,827	£0
Calendar 2020	-£8,773	-£9,734	£619	£554	£5,467	-£11,868	£0
Calendar 2024	-£8,208	-£8,329	£702	£636	£5,040	-£10,159	£0

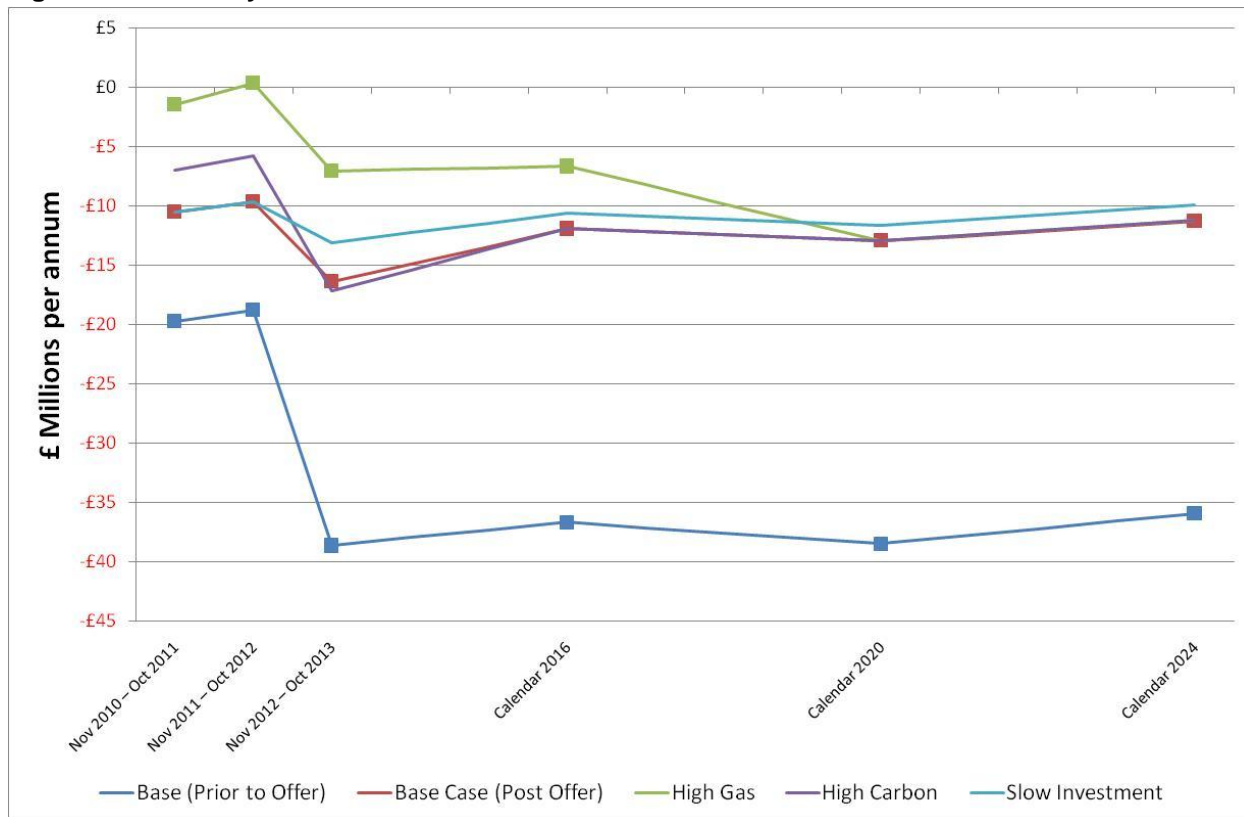
Table 8: Other Results – Slow Investment:

Period	Impact on PSO (£'000s)			
	B4	BGT1	BGT2	CGT8
Nov 2010 – Oct 2011	£1,966	£353	£299	£820
Nov 2011 – Oct 2012	£2,322	£411	£406	£874
Nov 2012 – Oct 2013	-£387	-£822	-£806	-£195
Calendar 2016	£1,383	-£102	-£172	£478
Calendar 2020	£1,093	-£241	-£279	£352
Calendar 2024	£1,362	N/A	N/A	N/A

7.7 MODELLING SUMMARY

The economic considerations tend to argue strongly in favour of cancellation at the Earliest Cancellation Date for the Kilroot coal units K1 and K2. An overview of the results for the AES Kilroot units under each scenario is provided in Figure 1. Please note that this chart is represented in millions of pounds.

Figure 1 – Summary of Results for AES Units



The GUAs for AES Kilroot Units are forecast to be a cost to consumers in each year modelled, in almost all scenarios. The GUAs will only provide a marginal benefit under the high gas price scenario over the 12-month period November 2011 to October 2012. Under this scenario, the GUAs are a cost to consumers in all other periods modelled.

The remaining contracts appear favourable economically in the short term although it is recognised that a form of continuing monitoring will be required in order to assess whether cancellation at the end of 2012 may be preferable for consumers, as indicated in the modelling.

8 POLICY CONSIDERATIONS

The last section considered the likely economic effect, in terms of the price impact on customers, resulting from contract cancellations. However, these decisions cannot be based solely on economic analysis. There are also a number of policy considerations which must be taken into account by the Authority in determining whether any or all of the GUAs should be cancelled.

In the exercise of its functions, the Authority is guided by its statutory principal objective and duties. These are set out in full in Appendix 1.

The principal objective of the Authority is to:

“protect the interests of consumers of electricity of supplied by authorised suppliers wherever appropriate by promoting effective competition between persons engaged in or in commercial activities connected with the generation, transmission or supply of electricity”

In furthering this principal objective, the Authority must have regard to:

“The need to secure that all reasonable demands for electricity are met”, and

“The need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under Part 11 of the Electricity (Northern Ireland) Order 1992 or the Energy Order (Northern Ireland) Order 2003”.

The Authority may or must also have regard to a number of additional matters including securing a diverse, viable and environmentally sustainable long-term energy industry.

Finally, the Authority shall not discriminate between electricity companies in the exercise of its functions.

The Authority has considered the likely effects of GUA cancellation on:

- The promotion of effective competition,
- Security of supply,

- Diversity of supply; and
- Environmental sustainability.

Each of these is considered in turn below.

8.1 THE PROMOTION OF EFFECTIVE COMPETITION

The NIE PPB business was established back in 1992 as the “single buyer” in a new industry structure following privatisation of the industry in Northern Ireland. Under the SEM, this business remains regulated. Whilst it has been deemed necessary to ring-fence the PPB business from its affiliates in the Viridian group, unlike the ESB Power Generation business, PPB has not been required to provide Directed Contracts as part of the market power mitigation strategy.

Nonetheless, PPB has a significant market share in the SEM and the GUAs can be viewed as providing a shield for Generators from market risk. Clearly cancellation of GUAs would therefore help to promote effective competition.

Responses to the consultation made the Authority aware of the effect cancellation of the Kilroot contracts would have on contract liquidity in the SEM, at least in the short term. PPB presently offer, on a voluntary basis, contracts for difference (CfDs) in the form of base load, mid-merit and peaking products. PPB’s ability to offer these products is enhanced by the ‘portfolio effect’ resulting from having access to both coal units from AES Kilroot and a CCGT from Premier Power. This ability would be reduced if some of these GUAs were cancelled. However the Authority has considered that the market may continue to recognise this portfolio value and cancellation could trigger subsequent merger or acquisition activity, such that this portfolio value may be restored.

8.2 SECURITY OF SUPPLY

The constraint on imports across the North-South Interconnector means that the Kilroot coal/oil-fired units are currently necessary to serve supply in Northern Ireland. If cancellation of the GUAs for the coal/oil-fired units at AES Kilroot resulted in those units exiting the market, there could be an effect on security of supply, particularly in advance of the commissioning of the second North-South interconnector.

The Authority has considered the likely revenues which these units would earn in the SEM, compared to avoidable costs, and concluded that market exit is unlikely prior to 2016.

The economic viability of the AES Kilroot units may however become more problematic from 2016 onwards due to the NO_x abatement requirements of the Large Combustion Plant Directive (LCPD). This is likely to require a significant capital investment in abatement technology or a cap on operating hours. However the implications of the LCPD from 2016 across Europe is common knowledge in the industry and there is adequate time for the construction of significant replacement plant in the market, in the event that these Kilroot units exited the market at this time.

8.3 DIVERSITY OF SUPPLY

The coal/oil-fired units at Kilroot, with the exception of wind and interconnection, are the only non-gas units presently generating electricity in Northern Ireland. If cancellation of the GUAs for these units was to lead to market exit, Northern Ireland would become very dependent on gas-fired generation.

However, as explained above, the Authority does not believe that these units will exit the market prior to 2016. Furthermore, diversity is expected to improve in the medium term with further interconnection, wind generation, and possibly generation from biomass.

8.4 ENVIRONMENTAL SUSTAINABILITY

In regard to environmental sustainability, the Authority considers that it may not be appropriate to retain any financial support mechanisms (in the form of “out of market” GUAs) for generating units which have an adverse effect on climate change, relative to other technologies which are less carbon intensive. This is particularly the case for the AES Kilroot coal/oil fired units.

8.5 OTHER FACTORS

In determining whether or not any particular GUA should be cancelled, the Authority has also taken into consideration:

- Its general duty to have regard to the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed under the Electricity Order or their licence.
- Its statutory (and public law) duties, in exercising its functions, not to discriminate between electricity companies.

There are no specific statutory or licence obligations which impose requirements or standards on generators with regard to their performance in the generation sector or which impose compliance with obligations which may be dealt with, or set out, in a GUA.

Therefore with regard to financing of activities, the Authority is of the view that cancellation of the 2 Kilroot GUAs from 1 November 2010 would not have an impact on or adversely affect the ability of any licence holder (including AES) to finance any obligation to which it is subject by virtue of the Electricity Order or its electricity licence.

Discrimination considerations arise only if the Authority were to treat like cases on a different basis or different cases in the same way. There is no discrimination in dealing with different cases differently and particularly where a distinction is necessary (and proportionate) in order to deal with the different circumstances of the case.

The Authority is mindful that where it decides to cancel any one or more GUA, there is the potential for a generator whose GUA is to be cancelled to be concerned that it amounts to discrimination and for a generator who would prefer for its GUA to be cancelled to consider that it is discriminatory for the Authority not to cancel the GUA.

However, it is not discriminatory to distinguish between GUAs if there are justifiable reasons for cancelling some but not others. The Authority is therefore of the view that it would not be discriminating were it to conclude, having given full and proper consideration to the matter, that only those GUAs which result in a significant cost to customers should be cancelled.

The Authority is also mindful that it must have regard to the position of those generators which are not party to GUAs but which must compete in the market with those which are. A GUA which is significantly adverse to consumers is likely to have the effect of providing a subsidy to the generator which holds it, giving it a commercial advantage over other generators and therefore, arguably, discriminating against them. Cancelling a GUA which has the effect of providing a subsidy to a generator in such circumstances may therefore serve to avoid discrimination which would otherwise exist without justification.

9 JURISDICTION FOR DECISIONS

Before any direction to cancel a GUA can be issued, the Authority must ensure that the direction is being issued by the relevant authority. It is important that there is clarity in relation to whether the early cancellation decision is one that should be made by the SEM Committee or by the board of the Utility Regulator.

Article 6(2) of the SEM Order provides that “any decision as to the exercise of a relevant function of the Authority in relation to a SEM matter must be taken on behalf of the Authority by the SEM Committee”.

Article 6(3) of the SEM Order confirms that “a matter is an SEM matter if the SEM Committee determines that the exercise of a relevant function of the Authority in relation to that matter materially affects, or is likely materially to affect, the SEM”.

The SEM Committee considered this jurisdiction issue at its meeting on 27 October 2009 and took the view that the cancellation or otherwise of the GUAs is not a SEM matter, but noted the difficulty of assessing the materiality of impact of a wide range of possible cancellation decisions at different dates. The SEMC agreed that the Authority should take the matter forward but that the SEMC would review the question of jurisdiction again once the Authority has concluded what action it proposes to take, and before cancellation powers were exercised.

At its meeting on 25 March 2010, the SEM Committee considered the responses to the first consultation, the results of the economic analysis and the minded-to decisions, as presented in Chapter 7 and Chapter 9 respectively of this paper. The SEM Committee decided that cancellation is not a SEM matter.

10 DRAFT DECISIONS

Having undertaken detailed economic analysis and sensitivity analysis into the financial position of the GUAs, and after considering all relevant policy considerations, the Authority publishes the following minded-to decisions:

- 1. To instruct the cancellation of the GUAs for the coal/oil fired Kilroot Generating Units No. 1 and No. 2 at the Earliest Cancellation Date of 1 November 2010.**
- 2. Not to instruct the cancellation of the remaining units at the Earliest Cancellation Date of 1 November 2010, but to keep these contracts under review.**

11 NEXT STEPS

With regard to the GUAs which are the subject matter of this paper the Authority can direct the cancellation of the GUA at any time on or after 1 November 2010 so long as it has given at least 180 days' notice of the cancellation.

Respondents to the December 2009 consultation stressed and the Authority acknowledges some of the difficulties posed (to the parties to a GUA) by this position particularly in terms of forward planning and other commercial considerations.

The Authority is therefore aware that timing considerations are an important factor in the decision making process, and that there is benefit in moving quickly to give the parties clarity and certainty as to the position at least in the short term. AES in particular has indicated that from its perspective it needs certainty on the cancellation issue by at least June 2010.

In addition to the extent that any of the GUAs have a significant adverse impact on consumers without any counterbalancing justification, it is obviously desirable that this is addressed as soon as practicable.

Interested parties are therefore invited to respond to any issues discussed or any aspect of the proposals put forward in this Consultation Paper – which should be addressed (preferably via email) to Paul Bell at paul.bell@niaur.gov.uk and copied to Kenny Dane at kenny.dane@niaur.gov.uk - by 17.00hrs on **26 April 2010**.

The Authority will also invite interested parties - including for example PPB, DETI, the Consumer Council and counterparties to the GUAs - to meet with it during the consultation period.

Parties wishing to receive more detail on the data used for the modelling exercise should submit their request at the earliest opportunity.

Subject to its consideration of responses received, the Authority envisages making the final decision as soon as possible thereafter.

**APPENDIX 1 – ARTICLE 12 OF THE ENERGY (NORTHERN IRELAND) ORDER
2003 THE PRINCIPAL OBJECTIVE AND GENERAL DUTIES OF THE
DEPARTMENT AND THE AUTHORITY IN RELATION TO ELECTRICITY**

- (1) The principal objective of the Department and the Authority in carrying out their respective electricity functions is to protect the interests of consumers of electricity supplied by authorised suppliers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the generation, transmission or supply of electricity.
- (2) The Department and the Authority shall carry out those functions in the manner which it considers is best calculated to further the principal objective, having regard to:
 - (a) the need to secure that all reasonable demands in Northern Ireland or Ireland for electricity are met; and
 - (b) the need to secure that licence holders are able to finance the activities which are the subject of obligations imposed by or under Part II of the Electricity Order or this Order.
- (3) In performing that duty, the Department or the Authority shall have regard to the interests of –
 - (a) individuals who are disabled or chronically sick;
 - (b) individuals of pensionable age;
 - (c) individuals with low incomes; and
 - (d) individuals residing in rural areas;but that is not to be taken as implying that regard may not be had to the interests of other descriptions of consumer.
- (4) The Department and the Authority may, in carrying out any electricity functions, have regard to the interests of consumers in relation to gas and in relation to water or sewerage services.
- (5) Subject to paragraph (2), the Department and the Authority shall carry out their respective electricity functions in the manner which it considers is best calculated –

- (a) to promote the efficient use of electricity and efficiency and economy on the part of persons authorised by licences or exemptions to supply or participate in the transmission of electricity;
- (b) to protect the public from dangers arising from the generation, transmission or supply of electricity;
- (c) to secure a diverse, viable and environmentally sustainable long-term energy supply;
- (d) to promote research into, and the development and use of, new techniques by or on behalf of persons authorised by a licence to generate, supply or participate in the transmission of electricity; and
- (e) to secure the establishment and maintenance of machinery for promoting the health and safety of persons employed in the generation, transmission or supply of electricity;

and shall have regard, in carrying out those functions, to the effect on the environment of activities connected with the generation, transmission or supply of electricity.

- (6) In carrying out their respective electricity functions the Department or the Authority shall not discriminate between persons whose activities consist of or include generating, supplying or transmitting electricity as regards either rights or obligations.

- (7) In this Article –

“electricity functions” means functions under Part II of the Electricity Order and functions under this Order relating to electricity; and

“environmental sustainability” includes the need to guard against climate change.