**Consultation on Relevant Considerations in relation to the possible Cancellation of Generating Unit Agreements in Northern Ireland**

**Response by AES Kilroot Power Ltd**

**27th January 2010**

## Background

AES Kilroot (AES) welcomes the opportunity to respond to the above consultation paper.

AES has 578 MW of installed generating capacity which is contracted to NIE Energy (PPB) via a Power Purchase Agreement (PPA) comprising the Power Station Agreement (PSA) and four Generating Unit Agreements (GUAs). AES has an additional 84 MW of installed capacity (via two 42 MW Open Cycle Gas Turbine Units) which are bid into SEM on a merchant basis.

For ease of reference we have set out our comments against each relevant section of the consultation document. Please also note that for the avoidance of doubt we are responding primarily in relation to Generating Unit Agreements for AES units G1, G2, GT1 and GT2 (following your nomenclature).

## Executive Summary

1. The AES GUAs will continue to offer significant value to Northern Ireland (NI) customers in terms of providing a price hedge against elevated prices of gas in the near and medium term;

2. The absence of an appropriate fuel stocking payment methodology in the draft Fuel Security Code (FSC) disadvantages plants with fuel switching capability and undermines system security; whereas the GUAs provide a robust operational and commercial framework in terms of managing strategic fuel stocking and fuel switching;

3. The GUAs capture the value associated with dual fuelling in terms of capacity and also offer an important fuel diversity and ancillary service benefit to the Island particularly given the established dominance of gas fired plant and the operational constraints associated with a substantial increase in the penetration of wind;

4. PPB's portfolio of PPA contracted plants facilitates the offering of a comprehensive range of Contract for Difference (CfD) products (in the form Non-Directed Contracts (NDCs)). If the GUAs were to be cancelled, AES would find it difficult to hedge its position in terms of dispatch volume risk and commodity price risk and would likely only be able to offer a limited volume of products. Furthermore, with a diminished portfolio in terms of volume and fuel source, PPB would likely be in a similar position. This would be contrary to the SEM Committee's desire to promote and establish market liquidity via the offering of NDCs to ensure Participants can effectively and efficiently manage price risk within SEM.

5. AES agrees with the Authority's view that the considerations in relation to contract cancellation are SEM matters. PPB acts as an Intermediary within the market and complies with the Trading & Settlement Code, associated Agreed Procedures and the Bidding Code of Practice. There is no evidence that the GUAs influence or distort SEM scheduling or pricing in any way (aside from facilitating market liquidity in CfD products mentioned previously).

6. AES accepts that there are discrete time periods that should be considered within NIAUR's economic analysis and the periods described appear logical.

7. Whilst the approach to forecasting forward commodity prices appears sensible it is vital that due account is taken of the volatility of prices given the uncertain relationship of coal prices to natural gas prices.

8. Sensitivity analysis in relation to demand, wind profiles and capacity profiles is very important but such analysis must also consider the impact of changes to locational pricing (including both Transmission Use of System (TUoS) and Transmission Loss Adjustment Factors (TLAFs) which are currently under review). In addition, the analysis must be sensitive to potential changes in the Trading and Settlement Code (TSC) rules which may be required to address the impact of substantial levels of wind capacity and the commissioning of additional interconnection (both North-South and East-West)

9. Exercising the option to cancel at the Earliest Cancellation Date (ECD) will pose significant contractual and practical difficulties including:

    - Managing existing contractual fuel obligations between AES and PPB and also AES and upstream fuel suppliers; Contracts cannot be managed with a six month rolling cancellation and some short to medium term certainty is required.
    - AES's SEM readiness in relation to IT systems, market modelling and development and implementation of risk management strategies.

   These issues also exist if the option to cancel is not exercised at ECD, but is retained on rolling six month basis.

**Section 3**

Change in Law

We note that the Authority makes detailed reference to the Change in Law provisions within the PSAs. It is important to understand the context of the Change in Law provisions and the fact that they were drafted at the time of privatisation of the NI electricity industry. These provisions were a key part of mitigating risks to potential interested parties who were considering long term investments in reasonably aged generating plant, but at the same time ensure that the UK Government secured substantial revenue from the privatisation process.

The Change in Law provisions of the PSA are drafted on the basis of ensuring that, if a Relevant Change in Law occurs, PPA contracted generators will only be kept in a cost neutral position. The Change in Law provisions are rigorous in defining the circumstances of a Change in Law and established robust provisions to ensure that the costs are appropriate and proportionate and also relevant to the Change in Law in question. Furthermore, a formal dispute resolution procedure exists such that an independent Expert can determine on a range of Change in Law issues if the Generator and PPB cannot agree.

Given the robustness of the PSA provisions, incidents of Change in Law have been limited. The example given in relation to Change in Law associated with flue gas de-sulphurisation (FGD) at AES, consistently followed the Change in Law provisions within the PSA. This Statutory Modification was essential to ensure that AES could comply with emissions legislation, recover its costs in accordance with the PSA, ensure that system security was maintained by retaining the Kilroot output and preserve fuel diversity within the NI generation portfolio.

In a similar fashion AES followed the Change in Law provisions in relation to the introduction of the European Union Emissions Trading Scheme (EU ETS) under which AES has been granted a free allocation of carbon allowances of circa 1.6million EUAs per annum. Under the Change in Law provisions, AES will return any value associated with these allowances to PPB and we estimate this value to be in the region of £20 million/year for the period 2010 to 2012. Should the Authority decide to cancel the GUAs prior to the end of 2012, NI customers will lose significant value in relation to the free allocation of carbon. Beyond 2012, UK Government consultations have indicated that it is unlikely that a free allocation of carbon will be granted to electricity generators, however this has yet to be finalised in terms of a formal National Allocation Plan and this uncertainty should be borne in mind by the Authority when considering contract cancellation.

Impact on NI PSO

AES understands the Authority's logic in relation to determining the impact of the profit (or loss) of each GUA on the NI PSO. The Authority has defined the calculation of profit (or loss) on the basis of the difference between PPB's SEM revenue (including ancillary services) and the costs of PPBs' payments under the GUAs. However, we note that in this Section, there has been no mention of the Contract for Difference (CfD) products that PPB has offered to the market since the beginning of SEM. Our understanding is that PPB have offered substantial volumes of CfD products over the period, in the form of Directed Contracts (DCs) and Non-Directed Contracts (NDCs), and these have offered Suppliers and Generators a vital opportunity to manage their price risk within SEM, ultimately to the benefit of customers. We strongly believe that the GUAs are vital in allowing PPB the opportunity to offer such important risk management products, and the value associated with such CfDs is an important consideration for the Authority in terms of contract cancellation. We discuss this point further under Section 5.

Historic Performance of PPAs

We note the Authority's suggestion that the GUAs for the AES coal/oil fired units have not provided net financial benefits to NI customers. We believe that this was not the case during 2008, when gas prices were very strong and AES units G1 and G2 were consistently scheduled by the market. Furthermore we would refer to our point on the ability of PPB to offer CfD products on the back of the GUAs with AES plant, and would also emphasise the point that, if the costs of FGD are excluded, then we believe that the GUAs did deliver further tangible benefits to NI customers.

Whilst we accept that the historic performance of the PPAs is not to be considered relevant for future cancellation decisions, we do believe that 'lessons' can be learned from historical performance and these need to be factored into the modeling of the future costs and benefits of the GUAs by way of appropriate assumptions and sensitivity analysis. For example, in 2008 gas prices were substantially higher than coal prices resulting in AES plant operating as base load plant. A sudden change in the international gas markets in 2009 resulted in the gas-coal spread shifting in favor of gas and as a consequence the AES coal fired units were dispatched as peaking units in the market. This volatility in the gas-coal price spread has again been demonstrated more recently, in the dispatch of the units during December 2009 and January 2010. It is important to realize that this change in merit order running for AES units is not a gradual movement from base load to mid-merit and then to peaking as would typically be the case within an efficient merit-order driven market. This binary change in merit order running is a direct consequence of commodity pricing. The AES units can be base load one day, then peaking plant the next and such dynamic changes must be taken into consideration in the modeling of costs and market scheduling and pricing. We discuss this further in our comments in Section 6.

**Section 4**

Process

AES notes that the Authority determined that the SEM constituted the requisite trading arrangements (as set out in the Cancellation Condition). We note also the process that the Authority has laid out in terms of the consideration of the cancellation of the GUAs with strong reference to the need for ongoing consultation. We have some concerns as to the extent and necessity for such consultation after this initial round of consultation.

We welcome the initial consultation on the various relevant considerations in relation to the possible cancellation of the GUAs. The consultation should ensure that the Authority has the broadest possible range of views and input from across the industry and other interested parties. However, ultimately this important decision involving complex economic, technical and market dynamics rests with the Authority and given that the option to cancel is irreversible the Authority, and the Authority alone must carefully consider all relevant factors within the objectives and duties set out in Article 12 of the Energy (NI) Order 2003. Given this initial broad round of substantive consultation, we would suggest that any further consultation in March 2010 (or thereafter) should be limited to those parties directly affected and other statutory consultees.

AES would like the authority to be cognisant of the fact that operation of a business against a rolling 6 month cancellation is detrimental to the efficient running of that business and in the event that no determination is made to cancel then the rolling cancellation provisions should be extended to 1 year minimum to allow any prospective market participant to prepare themselves for market readiness.

Role of SEM Committee

AES concurs with the SEM Committee's initial assertion that the cancellation of any GUA is not a SEM matter.

The existence of the legacy GUAs in NI have in no way hindered the development or operation of SEM, and PPB (in its role as Intermediary for GUA contracted units) has complied with all the requirements of the Trading and Settlement Code, Agreed Procedures, Bidding Code of Practice and its electricity Supply Licence. Furthermore, as indicated previously, the presence of the GUAs has actually promoted market efficiency in terms of improving the liquidity of CfD products within the SEM to the benefit of all Participants.

The only SEM issue that we are aware of in relation to AES units G1 and G2 relates to the inability of the Market Scheduling and Pricing (MSP) software to accurately model the technical characteristics associated with the dual rated nature of the units. This modeling artifact within the MSP software will be an issue whether the units are under contract or not. We also understand that this issue has been addressed via a recently approved Modification to the Trading and Settlement Code.

In terms of all-island system operation AES is a User of the NI Grid Code and complies with all the provisions and obligations of this important document. The Grid Code operates 'hand in glove' with GUAs and both together have delivered a strong level of operational performance by GUA contracted plant and very high levels of Grid Code compliance compared with plant in the Republic of Ireland, as acknowledged by CER, NIAUR, SONI and Eirgrid.

If subsequently, the Authority consider that the cancellation (or otherwise) of the GUAs is a SEM matter we would welcome an early opportunity to discuss this in more detail, on a bilateral basis.

**Section 5**

Given that the SEM Committee has determined that cancellation is not a SEM matter our comments in relation to Section 5 are focused on the principle objectives and duties of the Authority as defined under Article 12 of the Energy (NI) Order 2003.

The consultation paper helpfully summarises the key objectives and duties of the Authority. We paraphrase the objectives and duties as follows:

- Protecting the interests of electricity customers;
- Securing all reasonable demands for electricity are met;
- Securing that licence holders are able to finance their activities;
- Securing a diverse, viable and environmentally sustainable energy supply; and
- Non-discrimination between electricity companies,

When considering the early cancellation of the GUAs, the Authority must take a balanced view across this range of objectives and duties. AES believes in the near term (1 November 2010 to 31 December 2012) that with little volatility in fuel prices the GUAs offer real value to NI customers. Cancellation of the GUAs in this period would be counter to the objectives and duties of the Authority.

In the medium term (1 January 2013 to 31 December 2015) and long term (1 January 2016 to 31 March 2024) the PSO value of the AES GUAs will increasingly depend on the spread of commodity prices in relation to gas and coal and also the impact of complying with environmental legislation under the Change in Law provisions. There is much uncertainty in the medium term and even more in the long term time horizon and given the benefits offered by the GUAs in the near term, we would strongly suggest that any decision to cancel the GUAs should be deferred to the medium term time period to allow a more relevant assessment of the long term benefits of the GUAs beyond 2016. This would ensure customers would access the PSO benefits in the near term and allow all interested parties the opportunity to re-examine the various factors to be considered (commodity prices, changes to market structure and rules, demand, capacity etc) at a more appropriate time.

The following elaborates AES's views in relation to each of the above bullet points.

Protecting the interests of electricity customers

Typically this could be taken to mean minimising the price paid by customers for electricity. However, customers also need protection against volatility and price shocks that can occur within energy markets. From a regulatory and government policy perspective, the main way of delivering these points has been by promoting effective competition through the introduction of the SEM. All generators (above 10MW) must sell to the SEM pool whilst all suppliers must buy from the pool, prices being set by the System Marginal Price. As stated previously in Section 4 the existence of legacy GUAs do not in any way diminish the efficient and effective operation of SEM or out-turn market scheduling and pricing.

AES accepts that the legacy GUA arrangements do have a separate impact on prices for NI customers in terms of the PSO. This impact will be driven primarily by the extent to which PPB can access infra-marginal rent from the market and also any additional PSA/GUA costs such a Change in Law. It is important to note therefore that whilst there may be a PSO cost burden to customers there is also opportunity for customers to be in a beneficial position in terms of PSO.

Specifically in relation to the AES units (and taking on board the position of gas as the predominant generation fuel in NI and ROI – as discussed below) the GUAs for units G1 and G2 offer an important price hedge to NI customers. In addition to the AES GUAs, PPB also hold GUAs with Premier Power Ltd (PPL) for 780 MW of gas fired capacity. Our experience of the SEM since the 1 November 2007 is that once the gas price moves against coal price (taking into account the heat rate and efficiency of AES units) then the market quickly schedules the AES units on as base load units. In such circumstances, PPB will be accessing significant levels of infra-marginal rent from SEM which can offset the costs paid to AES under the GUAs. Of course the converse is true when gas price moves below coal commodity prices, when typically SEM schedules PPL's gas fired CCGTs ahead of the AES units G1 and G2, which become peaking units. With such a portfolio of GUA contracted plant PPB are in a strong portfolio position to manage commodity price risk to the benefit of NI customers.

Specifically in relation to the AES GUAs the value of the contracts to customers will depend primarily on price volatility within underlying commodity prices which drive SMP and ultimately the infra-marginal rent secured by PPB. While there may be a view of forward power prices today, this view can shift substantially. Even a short look at history shows how radically commodity prices can move in the near term. We believe that there is likely to be significant volatility in the future market price of gas as there has been in the past creating value for customers under the PPA. We therefore believe that to determine to cancel the AES GUAs at the ECD would act against the objective to protect the interest of NI customers.

In Section 3 we raised the issue that the consultation paper is silent on the benefits of PPB's CfD product offerings within SEM. In their paper SEM-09-015 "Contracts for Differences (CfDs) in the Single Electricity Market (SEM)", the SEM Committee states that:

> *"Risk management is an integral element of the efficient and effective operation of the SEM. To date there have been offerings of a substantial volume of 2-way Contracts for Differences (CfDs) which have enabled generators and suppliers to manage price risk in the SEM. The availability of CfDs is also an important means of delivering both wholesale and retail competition to the ultimate benefit of final customers"*

We agree with this assertion and we understand from various industry workshops that other participants remain concerned as to the market liquidity of CfD products.. As stated previously in Section 3, we strongly believe that the GUAs are vital in allowing PPB the opportunity to offer CfD products in line with the statement and ambitions detailed above. In relation to AES, if the GUAs were cancelled, AES would find it difficult to hedge its position in terms of dispatch volume risk and commodity price risk and would likely only be able to offer a limited volume of products. Furthermore with a diminished portfolio in terms of volume and fuel source, PPB would likely be in a similar position. This would be contrary to the SEM Committee's desire to promote and establish market liquidity via the offering of NDCs to ensure Participants can effectively and efficiently manage price risk within SEM.

The value and benefits associated with PPBs CfD offerings must be taken into account in any cancellation decision, particularly as this benefit not only accrues to NI customers but other SEM participants.

<u>Securing all reasonable demand is met</u>

Within Northern Ireland natural gas fuels in excess of 1500MW of installed generation capacity whilst in RoI the figure is significantly higher. The gas required to fuel this capacity is currently supplied via three pipeline interconnectors – the Scottish Northern Ireland Pipeline (SNIP) and the two Scottish Ireland Interconnectors (IC1 and IC2). It is important to note whilst there are three interconnectors they all exit the UK National Transmission System (NTS) at a single point at Moffat, Scotland and share a common pipeline for at least part of its route between Moffat and Twynholme. A recent South-North pipeline has been constructed but this has been limited to system security use and is not in commercial operation. This current arrangement of transporting and shipping gas to the island of Ireland is vulnerable to a common mode failure (e.g at Moffat and/or Twynholme) and in such circumstances both the electricity and gas markets will be in substantial distress. Furthermore the NI and ROI energy markets operate at the end of a long gas supply chain, easily impacted by the changes and dynamics of other international gas markets and transportation constraints. It is therefore prudent that there is sufficient diversity in fuel type within the NI and RoI generation markets to mitigate the effects of such a catastrophic failure.

The FSC is currently under review however AES believes that given PPB's current contracted position across a portfolio of generation (which includes, gas, coal and heavy fuel oil (HFO), that the GUAs offer significant value to NI customers in relation to a tangible fuel diversity benefit.

It is difficult to quantify this benefit. Nonetheless, the value is important and whilst in relation to the AES GUAs, it may seem that such fuel diversity will exist whether a GUA is in place or not, the GUA provisions do offer contractual certainty to PPB (and NI customers) in terms of how such diversity is paid for. In addition (given the linkage between the GUAs and Grid Code) the GUAs offer SONI clear and consistent processes and procedures for initiating fuel switching to ensure system security is preserved. We understand that the GUAs for generating units owned by PPL have similar provisions in relation to switching to back-up fuel (oil and distillate in PPL's case) and how such fuel switching is paid for. In the absence of GUAs and of suitable a FSC, there will be significant uncertainty (in terms of process, procedure, payment etc) with respect to managing an emergency event under the FSC such that system security and supply to customers could be jeopardised.

We therefore would strongly argue that the GUAs offer significant value in terms of delivering and managing system security on a clear, consistent and cost effective manner. It therefore must be an important factor within the considerations of the Authority with respect to cancellation of any GUA and for the Authority to satisfy themselves that they are not in breach of this duty to secure demand can be met.

<u>Securing that licence holders are able to finance their activities</u>

In terms of financing our activities, having access to a wide range of credit is absolutely vital in terms of financing the business on a day-to-day basis and also in relation to capital investment. The PPAs provide a stable and predictable context upon which such financing can take place, increasing the number of sources of finance available and improve the terms on which finance can be secured.

Merchant operation introduces significant market and regulatory risk, with much higher levels of unpredictability in terms of revenue. This will have an impact on AES's finance and credit operations.

<u>Securing a diverse, viable and environmentally sustainable energy supply</u>

We have detailed our views in relation to the need for a diverse energy supply previously and emphasised the benefit that GUA contracted plant delivers in relation to this issue.

In terms of environmental sustainability we 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. To date AES have complied with all relevant environmental and emissions legislation (including the LCPD) and will continue to do so in the future. The role of coal fired generation is important within the overall NI fuel mix, particularly as the UK government seeks to commission nuclear capacity over a timescale which may yield a capacity deficit within the UK market.

AES acknowledges the cost neutrality obligations which are set out in the Change in Law provisions of the PSA. AES is not aware of any significant changes in legislation in the near/ medium term and in relation to the low NOx modifications required by 2016 as detailed in the Authority's consultation paper, no firm decision has been made as to how best to comply with the requirements of the LCPD. This will very much depend on how the likely capacity factor for AES units driven by market conditions in terms of commodity pricing and dispatch over the long term period. Consequently we do not believe that the objective of Article 12 (5c) is best served in the near term by cancelling the GUAs at the ECD.

Non-discrimination between electricity companies

The legacy GUAs offer no issue with respect to non-discrimination in terms of the operation of SEM. As indicated previously PPB acts as an Intermediary in relation to the GUAs and complies with all obligations and requirements of the TSC, Agreed Procedures and Bidding Code of Practice.

In relation to the Authority's contract cancellation considerations we assume that any factors and analysis under consideration will be applied consistently and transparently across all GUA counter-parties.

Other Issues to be Considered

The ECD provisions within the GUAs were established back in 1992 and could not possibly consider the structure of any future electricity market. The SEM is a complex, IT intensive market which requires Participants to have a very firm grasp of how the market operates and the associated market risks. AES already has two OCGT peaking units participating within the market providing a solid grounding in SEM operation, however if the GUAs were to be cancelled on 1 November 2010, then this would create significant issues in relation to managing GUA obligations with PPB and also general market readiness issues for AES.

In terms of the GUAs a key element is the fuel supply provisions in relation to the purchase, delivery and supply of coal. The original 1992 GUA provisions have been updated on a regular basis by a number of supplemental agreements. Typically these supplemental agreements and corresponding coal supply contracts cover a two year period and include a base annual tonnage plus a number of call and put options. Should the GUAs be cancelled at ECD, or indeed at any other time within a period covered by a Supplemental Agreement, then PPB may be liable for costs to AES, and AES could be liable for costs to its coal supplier. We have not undertaken a comprehensive legal review of the obligations between PPB and AES, however the fuel supply agreements are complex and the Authority must bear in mind any costs and liabilities associated with these contracts in its considerations.

It is important to point out, that AES and PPB must start negotiating the terms of a new coal supplemental agreement for the period beyond 2010 and these terms have to be agreed by end of June 2010. It is vital that both parties have certainty with regards to the Authority's position in relation to cancellation, beyond the ECD.

In terms of SEM readiness the Authority will understand the need for a potential Participant to have IT systems in place which allows them to interface efficiently and effectively with market systems in terms of bidding, settlement and accessing other relevant market data. It is our experience that such IT systems can take some time to specify, tender, test and commission and whilst we would expeditiously pursue the installation of any required IT system, six months is a very demanding and challenging timescale. In parallel with such IT work, AES would also have to be modelling the market and assessing a range of risk management and hedging strategies, which may ultimately require negotiations with third parties (e.g. banks) to facilitate appropriate commodity hedging. We would suggest that six months is not a sufficient period to accommodate this work, in parallel with trying to establish IT systems and also continue to manage PPA settlement.

We genuinely believe that these issues are exceptionally challenging in the near term period and could have a material impact on AES's financial and commercial performance. It is therefore vital that, as per Article 12 (3) the Authority bear such issues carefully in mind as they consider any determination in relation to GUA cancellation.

**Section 6**

<u>SEM Revenues</u>

We have noted the Authority's comments in relation to forecasting energy and capacity payments and also ancillary service payments. We note also the proposal to adopt a phased modelling approach, covering a number of discrete time periods.

AES accepts that it is appropriate to adopt a phased approach, particularly given that the option to cancel any GUA is irreversible. In relation to the AES contracted units we would suggest three key periods (as detailed previously):

- 1 November 2010 to 31 December 2012 (near term);
- 1 January 2013 to 31 December 2015 (medium term); and
- 1 January 2016 to 31 March 2024 (long term).

The proposed commodity indices are all sensible however it is imperative that the Authority considers a degree of volatility in relation to such prices in the near, medium and long term. Our analysis has indicated that volatility can range considerably across the periods. It is vital that in terms of appropriately valuing the GUAs in the different time periods, the Authority must undertake sensitivity analysis that also addresses commodity price volatility.

In addition to variables such as demand, wind profile 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. The Regulatory Authorities (RAs) last year consulted on potential issues associated with scheduling and dispatch within the TSC due to much higher levels of wind penetration, indicating that market rules may need to be changed, impacting on access to infra-marginal rent and constraint running. In addition, the RAs have also indicated that the commissioning of the new East-West electricity interconnector may also necessitate revised market rules. Given this uncertainty it is vital that the Authority include sufficient and appropriate tolerances within their analysis when comparing SEM revenues to GUA payments – we would welcome an early opportunity to discuss such tolerances with the Authority.

In relation to ancillary service income this has been a contentious issue within the market over the past eighteen months. Our understanding of the ancillary service payment rates is that they will be reviewed on an annual basis by the TSOs, each jurisdiction having its rates set separately. However, given the substantial penetration of wind capacity and the impact on the requirement for additional ancillary services, it is likely that each jurisdiction's ancillary service pot is likely to change in the near future. Any analysis of such ancillary revenue must be cognisant of any impact on the capacity pot and AES would suggest that ancillary service revenue should form part of any sensitivity analysis.

Bearing in mind the uncertainties detailed above, we believe that in terms of transparency and consistency, the Authority must publish for interested parties the assumptions in relation to:

- Capacity Payment Sum;
- Ancillary service revenue;
- Demand;
- Wind profile;
- Availability profile;
- TUoS and TLAF charging;
- Installed plant profiles;
- Changes to TSC rules;

Finally, in relation to forecasting SEM revenues we note that the Authority proposes to use the Plexos forecasting tool. This is a well established tool used by many Participants, however like all modelling software the forecasts are only as good as the assumptions and data that are entered into it. Given the errors associated with the 2009 Plexos validation exercise in relation to the Directed Contract process, we would suggest that it is imperative that some form of independent robust validation is undertaken.

<u>GUA Payments</u>

In relation to forecast availability payments we would like to understand how the Authority will determine the "likely future effects of aging". The AES plant has continued to deliver exceptionally high levels of performance with regards to availability and we would want to understand the basis for any assumptions you may make in this regard.

Our previous point in relation to the uncertainty associated with TUoS charging applies and we would like to understand the Authority's assumptions in relation to how TUoS charges are to be modeled.

In relation to Change in Law we have already indicated that, whilst units G1 and G2 will have to comply with LCPD in relation to NOx emissions, how this is best achieved in the context of having a GUA or otherwise, has yet to be determined. There are a number of options to be considered and we would welcome an opportunity to discuss these at your earliest convenience.