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**Subject: Correction to Backcasting Results used for Determination of Discount Factor for 2009/10 Directed Contracts**

Dear David,

At the Industry Workshop on 17 April 2009, it was highlighted that KEMA's backcasting exercise with PLEXOS this year was provisionally indicating sufficiently systematic and material over forecasting of SMP against outturn SEM data for March 2008-December 2008. Furthermore, on this basis it was highlighted that KEMA was proposing the adoption of Discount Factors in setting of Directed Contracts prices; specifically to adopt Discount Factors of 14% for the Baseload contract, 16.5% for the Mid Merit contract and 17.5% for the Peak Contract. Subsequently, KEMA formally confirmed this view, within its Validation Report provided to the RAs.

Since the Industry Workshop, KEMA conducted further modelling, analysis and review examining the drivers for the occurrence and materiality of the backcasting results efforts. However, KEMA was unable to identify changes which would alter its observations and conclusions as put forward at the Industry Workshop; and subsequently confirmed within its Validation Report provided to the RAs, KEMA's view of the need for and level of Discount Factors which should be applied within the 2009/10 Directed Contracts process.

In parallel to KEMA's work following the Industry Workshop, the CER contacted Elan (who support PLEXOS users within Europe) to seek their view of potential drivers and remedies in relation to the results observed in KEMA's backcasting exercise. Elan identified three detailed errors in the model settings for PLEXOS as applied by KEMA in the backcasting exercise, which were passed to KEMA by the RAs yesterday for its consideration and response. KEMA has

carefully reviewed these Elan observations and regrettably have to confirm that these errors were present within its final backcasting results. These errors are as follows:

- (i) The stochastic setting for Forced Outages had not been “turned off”; which thus overly reduced plant availability against actuals seen for March 2008 – December 2008. The impact of, in the original backcasting exercise was to overstate SMP when these stochastic outages were unduly occurring.
- (ii) In the SEM, bid prices already include self-adjustment for Transmission Losses by generators embedding Transmission Losses Adjustment Factors (TLAFs) within their bid submissions. In PLEXOS, by default bid prices are adjusted by any present TLAFs in the model. This adjustment of bid prices by explicit TLAFs had not been “turned off”. Consequently TLAFs were essentially applied twice which exacerbated price differentials created by the TLAFs for generators bid prices and also bid price levels. The impact of this, within the original backcasting results, was to overstate SMP particularly at peak times in the backcasting exercise; when the most expensive plant is operating.
- (iii) Similarly, in the SEM, Start Up prices implicitly account for required Start Up Energy (i.e. fuel offtake to start) and the price for meeting that energy requirement (i.e. the cost of the required fuel) within the price value submitted by generators. Again, in PLEXOS, this is by default an explicit calculation in the model and thus, Start Up costs were essentially overstated within PLEXOS; as applied in the backcasting exercise. The impact of this, within the original backcasting results, was to overstate the SMP particularly at peak times when units were being brought onto the system to help meet demand peaks.

KEMA has adjusted the backcasting model to correctly treat these three PLEXOS model setting issues; and this has led to a substantial fall in the observed over-forecasting of SMP by PLEXOS.

KEMA recognise the materiality of the impact for Directed Contracts auctions for 2009/10 and the unfortunate timing of events. However, we feel it is most appropriate to ensure backcasting results have been correctly derived and are appropriately accounted for within the Directed Contract process. It is our belief that it would be inappropriate to proceed with the auctions on the basis of the original backcasting results. It would also be our recommendation that further validation and review is conducted in conjunction with the RAs to determine how best to proceed.

KEMA acknowledges (a) the presence of these errors in its backcasting model; (b) the consequences for both the backcasting results submitted by it to the RAs and the associated

recommendations regarding the use of Discount Factors; and thus (c) the impact this will have on the RAs' 2009/10 Directed Contracts process. Furthermore, we would like to extend our apologies for any inconvenience that this has caused and re-assure you that the KEMA are committed to ensuring all further action and support required by the RAs will be given the utmost priority and will be subject to a rigorous quality process.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Liz Parminter', with a stylized initial 'L' and a wavy line extending to the right.

Liz Parminter  
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KEMA Ltd