

10 March 2008

Louise Dwyer
Group Manager Regulatory Affairs
Energex Limited
GPO Box 1461
QLD 4001

Dear Louise,

REVIEW OF ENERGEX DISTRIBUTION LOSS FACTORS FOR 2008/09

Intelligent Energy Systems Pty Ltd (IES) has undertaken a review (audit) of the Distribution Loss Factors (DLFs) for 2008/09 financial year calculated by Connell Wagner PPI (Connell Wagner) for Energex. The IES audit examined the proposed DLFs with regard to their consistency with Energex's published methodology which is the published methodology operating in Queensland as at 31 December 2007.

For its 2008/09 DLF calculations, Energex commissioned engineering consultants Connell Wagner. Connell Wagner has followed the methodology implemented by Energex in previous DLF reviews. It makes use of a well structured set of spreadsheets that clearly show the application of the approved methodology, the inputs, intermediate values and final DLF numbers. Energex provided IES with a document titled "2008/09 Distribution Loss Factor Review ENERGEX Distribution Loss Factor Study", dated 19 February 2008, outlining its proposed DLFs for 2008/09. The report also included the methodology for the calculation of DLFs, discussion of results and outcomes of its reconciliation of losses for 2006/07. Energex's submission was clear and concise, the calculations consistent with the published methodology and, DLF values correctly determined.

Energex has submitted proposed DLFs for 2008/09 that have changed slightly from those for 2007/08. The proposed DLFs for tariff class customers are shown in Table 1 and for Independently Calculated Customers (ICCs) in Table 2 along with the existing DLFs and the percentage changes based on the new calculated 2008/09 values.



The changes in the DLFs proposed for tariff class customers compared to the current DLFs vary from between -0.01% and -0.1% and so are not significantly different from the 2007/08 values. All variations are decreases in DLFs which will reduce customer costs slightly. The largest decrease, that is -0.1%, is for the Low Voltage Line tariff class. The proposed tariff class DLFs to apply in financial year 2008/09 should not have a significant impact on Energex's customer costs.

Any significant increases or decreases in DLF values for ICCs (greater than 1%) from last year's DLFs were explained by Energex to the satisfaction of IES. The changes in the main related to increases in forecast demand and energy resulting in an increase in load factor for the particular ICC.

IES has examined the data provided by Energex (in the form of spreadsheets) and are of the opinion that they have estimated their projections in accordance with the published methodology.


Energex uses a forward looking approach in the calculation of its DLFs. The forward looking approach uses projected loads and generation for the year the DLFs are to apply in, and these projections are based on the most recent historical and generation data available for a consecutive 12 month period, as specified by the Rules. For its current calculations, projections are based on historical data for 2006/07.

Energex states that "sales are forecast using a 'bottom-up' approach, which is based on the application of econometric and time series analysis to forecast energy consumption by large individual customers and market segments", employing a range of macro-economic and demographic factors, and that "purchases are forecast using a 'top-down' approach, which is based on an analysis of energy purchases from Powerlink". It states that the "two approaches are reconciled to ensure they meet certain reasonableness criteria with respect to a range of variables and output measures".

The increase in projected system losses for 2008/09 from actual losses for 2006/07 is 4%, this increased loss projection is significantly less of an increase or decrease than the previous two year's reviews. In the March 2006 review (for 2006/07 DLFs) the increase in projected losses was 23.3%, and in the March 2007 review (for 2007/08 DLFs) the decrease in projected losses was 18%. IES considers the 4% increase in projected losses for 2008/09 to be reasonable due to the substantial investment in infrastructure combined with a slightly smaller increase in energy used.

In summary IES are of the opinion that the DLFs calculated by Energex for 2008/09 as shown in Tables 1 and 2 are consistent with the published methodology and, thereby correctly determined.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'B. Whitlock', with a long horizontal stroke extending to the right.

Bryan Whitlock

Senior Energy Analyst

Table 1		Energex proposed 2008/09 DLFs for tariff classes		
Non-ICC Connection Categories	DLF Code	Existing DLF	Proposed DLF	Change in DLF (%)
		2007/08	2008/09	
110 kV connected	FSSS	1.0047	1.0046	-0.01
33 kV connected	F3CL	1.0145	1.0142	-0.03
11 kV bus connected	F1ZH	1.0198	1.0194	-0.04
11 kV line connected	F1CH	1.0285	1.0282	-0.03
LV bus connected	F1CL	1.0503	1.0497	-0.06
LV line connected	FLCL	1.0797	1.0786	-0.10

Table 2 Energex proposed 2008/09 DLFs for ICCs and Embedded Generators

DLF Code	NMI	DLF Applied In 2007/2008	DLF To Be Applied In 2008/2009	Change In DLF (%)
FCAL	QB03674681	1.010171	1.01146	0.13%
FICT	QB03675327	1.018596	1.01260	-0.59%
FAPM	QB02572591	1.020496	1.02095	0.04%
FBCC	QB00703630	1.014021	1.01384	-0.02%
FBOC	QB13786415	1.043538	1.05435	1.04%
FBAC	QB07156049	1.056652	1.04182	-1.40%
FAPB	3116941403	1.029143	1.03103	0.18%
FQCL	QB03187888	1.048681	1.07518	2.53%
FCRL	QB00011835	1.036920	1.06758	2.96%
FRBH	QB03674151	1.014052	1.01129	-0.27%
FNST	3117239826	1.008269	1.00470	-0.35%
FQG	QB03674177	1.010088	1.01708	0.69%
FQBH	QB09709916	1.001499	1.00144	-0.01%
FQB	QB09750568	1.001967	1.00500	0.30%
FQBW	QB05850851	1.000383	1.00277	0.24%
FQCB	QB07417373	1.002727	1.00421	0.15%
FQC	QB03187390	1.000058	1.00006	0.00%
FQL	QB07480580	1.000827	1.00131	0.05%
FQR	QB12757888	1.000287	1.00068	0.04%
FQT	QB08485399	1.002602	1.00269	0.01%
-	3115820840	N/A	1.00000	N/A
FSWP	QMRGW00156	1.009945	1.01242	0.25%
FSC	QB09455507	1.008677	1.00576	-0.29%
FSTC	QB07047011	1.007472	1.01648	0.89%
FACI	QB08144664	1.064962	1.07274	0.73%
-	Unknown	N/A	1.00861	N/A
FUQ1	3116852575	1.006087	1.00825	0.22%
FUQ2	3116852583	1.008972	1.00874	-0.02%
FVP	QB12021814	1.018659	1.00886	-0.96%
FRPT	QB14097800	1.004222	1.00083	-0.34%
FHPR	QB10995285	1.132490	1.14785	1.36%