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Top Energy Loss Factors

In accordance with the Electricity Industry Participation Code, Top Energy has reviewed the Loss Factors applicable to ICP's on the Top Energy Electricity Distribution Network.

Top Energy's customers are metered at low and medium voltage. For each of these voltages a Loss Factor Code is calculated. Table 1 below indicates the Loss Factor values applicable to each Loss Factor Code from 1 April 2023. These have been derived from load-flow modelling of the distribution network including power transformers, sub-transmission circuits, high voltage feeders, distribution transformers and low voltage distribution reconciliation losses.

We have received a number of applications from solar generators to connect large scale solar generation. Prior to commissioning a loss factor will be calculated and this table will be updated.

Table 1 Loss Factor Codes and Loss Factors for Top Energy's Network April 2023 to March 2024

Loss Factor Code	Registry Loss Code	Applied to Customer Connected to	Loss Factor Consumption	Loss Factor Generation
RLF D	GLV	LV Network 230/400V	1.1234	1.0000
RLF I1 (JNL)	IND1	JNL	1.0273	1.0000
RLF I2 (AFFCO)	IND2	AFFCO	1.0464	1.0000
RLF G1 (NGA)	GEN1	Ngawha Generation A (25 MW)	1.0000	1.0000
RLF G2 (NGB)	GEN2	Ngawha Generation B (31MW)	1.0000	1.0000
KSF	KSF	Lodestone Kaitaia Solar Farm	1.0169	1.0127

Table 2 Losses on Top Energy Network 2023-2024 forecast

	ACTUAL			CURRENT		NETWORK	BUDGET
	24 Month to Sept 22	Less IND 24 months	Network for 24 months	12 mths to Sep 22	12 mths		
kWh							12 mths to Sep 22
Total Energy Injected into Network	735,448,554.98	94,157,834.43	641,290,720.55	370,107,627.57	47,843,379.48	322,264,248.09	392,259,458.59
Total Energy Sold to Customers	657,949,823.60	91,287,378.99	566,662,444.61	328,269,401.47	46,386,731.52	281,882,669.95	349,171,674.02
Total Losses (kWh)	77,498,731.38	2,870,455.44	74,628,275.94	41,838,226.10	1,456,647.96	40,381,578.14	43,087,784.57
Loss percentage	10.54%	3.05%	11.64%	11.30%	3.04%	12.53%	10.98%
TLF for Entire Network (Reconciliation) Including ICC	1.1178	1.0314	1.1317	1.1275	1.0314	1.1433	1.1234