

GeEO Methodology

1 Information

Information on prices and transactions is collected from market participants. By talking to a wide range of players, GeEO is able to cross calibrate price and transaction data to ensure consistency and accuracy.

2 Quotations

Prices quoted are based on the mid-point of the highest bid and lowest offer available in the market for each contract, at 5pm on the day of publication. The bid-offer spread around the mid-point may be increased from the actual observed level to a standard spread to provide consistency along the curve.

The variation shown is with respect to the preceding publication, except in the weekly news review issue when variation shown is with respect to prices published in the preceding news review issue.

Quotations shown for spread products reflect the best prices either for the product itself or for the legs of the transaction.

3 Generation cost assumptions

Spark spreads, dark spreads and fuel oil plant spreads are calculated assuming calorific values and efficiencies as given below. Clean spark spreads and dark spreads include the opportunity cost of CO₂ allowances assuming the CO₂ emission rates included. The GR04 clean spark spread assumes fuel is purchased at the Eni Gas Release 2004 formula price for the relevant period. This is a proxy cost for gas purchased under long term contracts.

All spreads exclude the cost of green certificates, fuel taxes and the cost to transport fuel from the fuel price basis point to the power station.

	Fuel	Fuel Basis	Price Units	Calorific Value (GJ/T)	Plant Efficiency	CO2 production kg/MWh
Coal plant	Coal	CIF ARA	\$/T	25.12	38%	913
Fuel Oil plant	LSFO	CIF Med	\$/T	43.40	36%	726
CCGT spot gas	Gas	PSV	€/MWh	NA	49.13%	400
CCGT contract gas	Gas	Tarvisio	€/MWh	NA	49.13%	400

4 Transactions

Transactions reported directly to GeEO by the buyer, seller or broker involved for a specific product with specified term, quantity and price and executed on a specific date are published as confirmed provided the terms are consistent with trends in market prices.

5 Quotation based Month Ahead Indices

The month ahead quotation based indices are calculated as the simple average of all the mid quotations published for month m during the preceding month m-1.

6 Transaction based Month Ahead Indices

The month ahead transaction based indices are calculated as the weighted average price of all confirmed transactions for month m as transacted in the preceding month m-1. Time spread or other linked transactions are excluded from the index calculation.

GeEO prices on Thursday 5 January

	Bid	Offer	Mid	Ch
Day Ahead	31.70	32.70	32.20	0.10
Weekend	31.20	32.20	31.70	-0.20
WDNW	31.70	32.70	32.20	0.00
BoM	31.70	32.70	32.20	0.00
February	31.60	32.60	32.10	-0.10
March	31.30	32.30	31.80	0.00
April	29.00	30.00	29.50	0.00
Q212	28.60	29.60	29.10	0.10
Q312	28.40	29.40	28.90	0.10
Q412	32.70	33.70	33.20	0.20
Q113	33.10	34.10	33.60	0.20
Summer 12	28.50	29.50	29.00	0.10
Winter 12	32.90	33.90	33.40	0.20
GY12	31.00	32.00	31.50	0.20
Cal 13	31.20	32.20	31.70	0.20

The spot index on working days is the mid quotation for day ahead on the preceding working day

The spot index on non-working days is the mid quotation for weekend on the preceding working day

The February quotation based month ahead index is the average of all February mid quotations published during January

7 Spot indices

GeEO publishes spot gas indices for PSV, Baumgarten, NCG, and TTF. Since expectations of the value of the Gas Release formulae also vary within the month due to spot exchange rate fluctuations, we also publish daily indices for the GR04 and GR07 formulae which represent the expected outturn price for that month on the preceding working day.

As per the example above, for all gas indices, values on working days are equal to the Day Ahead mid quotation on the previous working day and values on non-working days (weekends and

holidays on which GeEO is not published) are equal to the weekend mid quotations on the preceding working day. As Friday 6 January is an Italian holiday, in our example the spot index for the non-working days of 6, 7 and 8 January is the weekend mid of 31,70 €/MWh and the spot index for Monday 9 January is the day ahead mid of 32.20 €/MWh.

Spot gas indices report on 5 January

	PSV	Baum	NCG	TTF	GR04	GR07	PSV/GR07
December Settlement	32.9677	23.2129	22.7387	22.2968	40.5516	40.2290	-7.2613
January rolling	31.67	22.58	21.78	21.51	41.76	41.37	-9.70
1 January 2012	32.30	24.00	21.10	20.00	41.40	41.10	-8.80
2 January 2012	32.30	24.00	21.10	20.00	41.40	41.10	-8.80
3 January 2012	32.50	24.50	21.40	21.00	41.40	41.10	-8.60
4 January 2012	32.10	22.60	21.10	20.80	41.10	40.70	-8.60
5 January 2012	32.10	21.50	21.50	21.30	41.50	41.10	-9.00
6 January 2012	31.70	21.90	21.50	21.20	41.80	41.40	-9.70
7 January 2012	31.70	21.90	21.50	21.20	41.80	41.40	-9.70
8 January 2012	31.70	21.90	21.50	21.20	41.80	41.40	-9.70
9 January 2012	32.20	22.00	21.70	21.40	41.80	41.40	-9.20

Power market spot indices come from the formal exchanges. GeEO publishes spot dark spread (DS) and spark spread (SS) indices based on GME's average day ahead PUN price of baseload Italian power less our quotations for the underlying fuel and CO₂ prices. Coal prices for dark spread calculations are based on front month mid quotation (replacement cost concept) and CO₂ prices for clean spreads are based on the mid quotation for the current year on the preceding working day.

As day ahead power prices for the full weekend are not known on the prior working day, only the first non-working day will be reported on the preceding working day. Spreads for the following non-working days will be reported in the next working day.

Spot spread indices report on 5 January

	PSV SS	Clean PSV SS	GR04 SS	Clean GR04 SS	GR07 SS	Clean GR07 SS	Dark Spread	Clean DS
December Settlement	12.2643	9.1927	-3.1720	-6.2437	-2.5155	-5.5871	47.4636	40.4526
January	14.73	11.94	-5.79	-8.59	-5.01	-7.81	47.72	41.34
1 January 2012	7.81	4.91	-10.71	-13.61	-10.10	-13.00	41.34	34.72
2 January 2012	14.82	11.92	-3.70	-6.60	-3.09	-5.99	48.36	41.74
3 January 2012	15.63	12.73	-2.49	-5.39	-1.88	-4.78	49.57	42.95
4 January 2012	15.46	12.72	-2.85	-5.59	-2.04	-4.78	49.17	42.91
5 January 2012	16.49	13.87	-2.64	-5.26	-1.83	-4.45	49.84	43.86
6 January 2012	5.39	2.73	-15.17	-17.83	-14.36	-17.02	37.49	31.42