



ELECTRICITY

FUTURES & OPTIONS

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**DELIVERING
EXCHANGE TRADED
ENERGY DERIVATIVES
TO THE AUSTRALIAN
MARKET**





D-CYPHATRADE ASX AUSTRALIAN ELECTRICITY FUTURES CONTRACT SPECIFICATIONS

BASE LOAD CONTRACTS

Underlying Commodity

Electrical energy bought and sold in the NSW, Victorian, South Australian and Queensland wholesale pool markets conducted by the Australian Energy Market Operator (AEMO).

Contract Unit

1 Megawatt of electrical energy per hour based on a base load profile. Where the base load profile is defined as the National Electricity Market (NEM) base load period from 00:00 hours Monday to 24:00 hours Sunday over the duration of the Contract Quarter.

For example: the size (in Megawatt hours) of each contract quarter will vary depending on the number of days and base load hours within the quarter, as follows:

- > A 90 day contract quarter will equate to 2,160 Megawatt hours;
- > A 91 day contract quarter will equate to 2,184 Megawatt hours;
- > A 92 day contract quarter will equate to 2,208 Megawatt hours.

Price Quotation

Prices are quoted in Australian dollars per Megawatt hour.

Contract Quarters

March, June, September, December, up to 4 and 1/4 years or 16 - 17 quarters out.

Commodity Code

BN - NSW Base Load Electricity Futures
BV - VIC Base Load Electricity Futures
BQ - QLD Base Load Electricity Futures
BS - SA Base Load Electricity Futures
HN - NSW Base Load Electricity Strip Products
HV - VIC Base Load Electricity Strip Products
HQ - QLD Base Load Electricity Strip Products
HS - SA Base Load Electricity Strip Products

Minimum Price Movement

Minimum price fluctuations of \$0.05 per Megawatt hour.

Note: Cal and Fin Year Strip Products have a minimum price fluctuation of \$0.01, with the ability to allocate futures contracts resulting from Cal and Fin Year Strip Products to \$0.01 increments.

Tick Size

Tick size under a \$0.05/MWh price fluctuation:

- > A 2,160 MWh contract quarter has a tick size of \$108.00;
- > A 2,184 MWh contract quarter has a tick size of \$109.20;
- > A 2,208 MWh contract quarter has a tick size of \$110.40.

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Last Trading Day

The last Business Day of the Contract Quarter. On this day, trading terminates at 4:00pm.

Trading Hours

9:00am – 4:00pm¹

Cash Settlement Day

The Cash Settlement Day of the Contract shall be the fourth Business Day after the expiry of the Contract Quarter.

Cash Settlement Price

The Cash Settlement Price is calculated by taking the arithmetic average of the NEM final base load spot prices on a half hourly basis, rounded to two decimal places over the Contract Quarter. A Provisional Cash Settlement Price will be declared on the first Business Day after expiry of the Contract and shall be later confirmed on the third Business Day after expiry.

Cash Settlement Process

Upon the fourth Business Day after the expiry of the Contract, the Contract will be cash settled at the settlement price confirmed on the third business day of the Contract Quarter. The final settlement price is rounded to the nearest cent, as adjusted by NEMMCO and provided to ASX. All bought and sold contracts in existence as at the close of trading in the Contract Quarter shall be settled by the SFE Clearing at the Cash Settlement Price.

Cash Settlement Value

The Cash Settlement Value is the Cash Settlement Price multiplied by the number of megawatt hours (MWh) in the underlying Contract Quarter.

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¹ Unless otherwise indicated, all times are Sydney times.





PEAK PERIOD CONTRACTS

Underlying Commodity

Electrical energy bought and sold in the NSW, Victorian, South Australian and Queensland wholesale pool markets conducted by the Australian Energy Market Operator (AEMO).

Contract Unit

1 Megawatt of electrical energy per hour based on a peak-period profile. Where the peak-period profile is defined as the National Electricity Market (NEM) peak-period from 07:00 hours to 22:00 hours Monday to Friday (excluding Public holidays, as determined and published by ASX) over the duration of the Contract Quarter.

For example: the size (in Megawatt hours) of each contract quarter will vary depending on the number of days and peak-load hours within the quarter, as follows:

- > A 59 day contract quarter will equate to 885 Megawatt hours;
- > A 60 day contract quarter will equate to 900 Megawatt hours;
- > A 61 day contract quarter will equate to 915 Megawatt hours;
- > A 62 day contract quarter will equate to 930 Megawatt hours;
- > A 63 day contract quarter will equate to 945 Megawatt hours;
- > A 64 day contract quarter will equate to 960 Megawatt hours;
- > A 65 day contract quarter will equate to 975 Megawatt hours;
- > A 66 day contract quarter will equate to 990 Megawatt hours.

Price Quotation

Prices are quoted in Australian dollars per Megawatt hour.

Contract Quarters

March, June, September, December, up to 4 and 1/4 years or 16 - 17 quarters out.

Commodity Code

PN - NSW Peak Period Electricity Futures

PV - VIC Peak Period Electricity Futures

PQ - QLD Peak Period Electricity Futures

PS - SA Peak Period Electricity Futures

DN - NSW Peak Period Electricity Strip Products

DV - VIC Peak Period Electricity Strip Products

DQ - QLD Peak Period Electricity Strip Products

DS - SA Peak Period Electricity Strip Products

Minimum Price Movement

Minimum price fluctuations of \$0.05 per Megawatt hour.

Note: Cal and Fin Year Strip Products have a minimum price fluctuation of \$0.01, with the ability to allocate futures contracts resulting from Cal and Fin Year Strip Products to \$0.01 increments.

Tick Size

Tick size under a \$0.05/MWh price fluctuation:

- > A 885 MWh contract quarter has a tick size of \$44.25;
- > A 900 MWh contract quarter has a tick size of \$45.00;





- > A 915 MWh contract quarter has a tick size of \$45.75;
- > A 930 MWh contract quarter has a tick size of \$46.50;
- > A 945 MWh contract quarter has a tick size of \$47.25;
- > A 960 MWh contract quarter has a tick size of \$48.00;
- > A 975 MWh contract quarter has a tick size of \$48.75;
- > A 990 MWh contract quarter has a tick size of \$49.50.

Last Trading Day

The last Business Day of the Contract Quarter. On this day, trading terminates at 4:00pm.

Trading Hours

9:00am – 4:00pm²

Cash Settlement Day

The Cash Settlement Day of the Contract shall be the fourth Business Day after the expiry of the Contract Quarter.

Cash Settlement Price

The Cash Settlement Price is calculated by taking the arithmetic average of the NEM final peak-period spot prices on a half hourly basis, rounded to two decimal places over the Contract Quarter. A Provisional Cash Settlement Price will be declared on the first Business Day after expiry of the Contract and shall be later confirmed on the third Business Day after expiry.

Cash Settlement Process

Upon the fourth Business Day after the expiry of the Contract, the Contract will be cash settled at the settlement price confirmed on the third Business Day of the Contract Quarter. The final settlement price is rounded to the nearest cent, as adjusted by NEMMCO and provided to ASX. All bought and sold contracts in existence as at the close of trading in the Contract Quarter shall be settled by the SFE Clearing at the Cash Settlement Price.

Cash Settlement Value

The Cash Settlement Value is the Cash Settlement Price multiplied by the number of megawatt hours (MWh) in the underlying Contract Quarter.

² Unless otherwise indicated, all times are Sydney times.





QUARTERLY BASE \$300 CAP PRODUCTS

Underlying Commodity

1 Megawatt of electrical energy per hour on a Base Load profile for the respective States (NSW, QLD, VIC and SA) over the duration of a Calendar Quarter.

Contract Years

A total of 8-11 Quarterly products.

Commodity Code

GN - NSW Base Load Quarterly \$300 Cap Electricity Futures

GQ - QLD Base Load Quarterly \$300 Cap Electricity Futures

GV - VIC Base Load Quarterly \$300 Cap Electricity Futures

GS - SA Base Load Quarterly \$300 Cap Electricity Futures

Trading Functionality

Two Calendar Years of Strip Products will be available with commodity codes as follows:

RN - NSW Base Load Cal Year \$300 Cap Strip Products

RQ - QLD Base Load Cal Year \$300 Cap Strip Products

RV - VIC Base Load Cal Year \$300 Cap Strip Products

RS - SA Base Load Cal Year \$300 Cap Strip Products

Minimum Price Movement

Prices are quoted in Australian Dollars per Megawatt hour. The minimum price fluctuation is \$0.01 per MWh.

Last Trading Day

The Last Trading Day is the last business day of the Calendar Quarter. On this day, trading terminates at 4:00pm.

Cash Settlement Day

The Cash Settlement Day of the Contract shall be the fourth business day after the expiry of the Calendar Quarter.

Formula For Determining Cash Settlement Value Of A Cap

The Settlement Price = $(C - (300 \times D)) / E$, where:

- > C = the sum of all Base Load half hourly spot prices for the Region in the Calendar Quarter greater than \$300.00.
- > D = the total number of Base Load half hour spot prices for the Region in the Calendar Quarter greater than \$300.00
- > E = the total number of Base Load half hour spot prices for the Region in the Calendar Quarter.

Provisional Cash Settlement Value

A Provisional Cash Settlement Value (based on the provisional prices provided by NEMMCO) will be declared on the first business day after the expiry of the Contract and shall be later confirmed on the third business day after expiry.

Cash Settlement Process

Upon the fourth business day after the expiry of the Contract, the Contract will be cash settled at the Cash Settlement Value confirmed on the third business day after the Contract Period. The final Cash Settlement Value is rounded to the nearest cent, as adjusted by NEMMCO and provided to ASX. All bought and sold contracts in existence as at the close of trading in the Contract Period shall be settled by SFE Clearing at the Cash Settlement Value.





D-CYPHATRADE ASX AUSTRALIAN ELECTRICITY OPTIONS CONTRACT SPECIFICATIONS

1ST QUARTER PEAK OPTION CONTRACTS

Underlying Commodity

1 Megawatt of electrical energy per hour on a Peak Period profile for the respective States (NSW, QLD, VIC and SA) over the duration of a Contract Quarter.

Contract Quarters

Options available on futures for the March Quarter up to three years ahead.

Commodity Codes

PN – NSW Peak Period
PV – VIC Peak Period
PQ – QLD Peak Period
PS – SA Peak Period

Minimum Price Movement

Quoted in Australian Dollars per Megawatt hour. The minimum price fluctuation is \$0.01 per MWh.

Exercise Prices

Q1 Peak Period Options are set at intervals of \$5.00 per MWh. New option exercise prices created as the underlying futures contract price moves.

Contract Expiry

Options will cease trading at 12:00pm on the Last Trading Day. The Last Trading Day shall be the day 6 weeks prior to the day immediately preceding the commencement of the calendar quarter for the underlying Futures Contract. If this day is not a business day or is recognised in NSW, QLD, VIC or SA as a Public Holiday then the following business day will be the expiry day. ASX will publish expiry dates in advance of new contracts being listed.

Settlement Method

Options may be exercised on any business day up to and including the day of expiry. In-the-money options are not automatically exercised at expiry. Buyers may exercise in, at and out-of-the-money option positions held, by lodging a notice of manual exercise with SFE Clearing no later than 1:30pm on the day of expiry. Upon exercise, the holder will receive a futures position at the option strike price. The Option Settlement Price will be determined on the day of expiry by taking the mean of the underlying futures quotes (the mid-point of the bid and offer in the underlying futures contract) at 11:45am, 11:50am, 11:55am and 12:00pm rounded up.

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CAL YEAR BASE STRIP OPTION CONTRACTS

Options on Calendar (Cal) Year Base Load Strip Futures Products

Underlying Commodity

1 Megawatt of electrical energy per hour on a Base Load profile for the respective States (NSW, QLD, VIC and SA) over the duration of a Calendar Year.

Contract Years

Options available on 3 Cal Year Strip Futures Products up to three and three quarter years ahead.

Commodity Code

HN - NSW Base Load
HV - VIC Base Load
HQ - QLD Base Load
HS - SA Base Load

Minimum Price Movement

Quoted in Australian Dollars per Megawatt hour. The minimum price fluctuation is \$0.01 per MWh.

Exercise Prices

Set at intervals of \$1.00 per MWh. New option exercise prices created as the underlying futures contract price moves.

Contract Expiry

Options will cease trading at 12:00pm on the Last Trading Day. The Last Trading Day shall be the day 6 weeks prior to the day immediately preceding the commencement of the Contract Year for the underlying Strip Futures product. If this day is not a business day or is recognised in NSW, QLD, VIC or SA as a Public Holiday then the following business day will be the expiry day. ASX will publish expiry dates in advance of new contracts being listed.

Settlement Method

Options may be exercised on any business day up to and including the day of expiry. In-the-money options are not automatically exercised at expiry. Buyers may exercise in, at and out-of-the-money option positions held, by lodging a notice of manual exercise with SFE Clearing no later than 1:30pm on the day of expiry.

Formula For Determining Futures Quarterly Prices Resulting From Strip Option Exercise

Upon exercise, the holder will receive four quarterly futures positions at prices equivalent to the option strike price, after applying the current curve ratio determined from the previous business day's settlement price of the 4 quarterly futures contracts underlying the relevant Strip Futures Product, as outline below:

$FP = A \times B/C$

- > FP = Price allocated to each futures contract resulting from exercised Strip Option.
- > A = the previous day's Settlement Price for the Contract Quarter for each individual futures contract.
- > B = Exercise Price.
- > C = Previous Day's Implied Strip Price, calculated as follows:
Implied Strip Price = F/G
 - > $F = a + b + c + d$
 - > a = Q1 previous day's Settlement Price x MWh for Q1
 - > b = Q2 previous day's Settlement Price x MWh for Q2
 - > c = Q3 previous day's Settlement Price x MWh for Q3
 - > d = Q4 previous day's Settlement Price x MWh for Q4
 - > G = Total number of MWh of all four Futures Contracts

Options Settlement Price

The Option Settlement Price will be determined on the day of expiry by taking the mean of the respective Cal Strip Futures product quotes (the mid-point of the bid and offer in the underlying strip futures product) at 11:45am, 11:50am, 11:55am and 12:00pm rounded up.

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