



Hedge Disclosure Code Review

Submission to the Electricity Authority

February 2024

1 Introduction

We welcome the opportunity to make this brief submission and to contribute positively to the debate over the hedge disclosure provisions in the Code. Questions on this submission can be directed to Greg Sise, Managing Director, Energy Link Ltd.

2 Responses to Questions

Submitter: Energy Link Ltd

Questions	Comments
Q1. Do you agree with the proposal to retain the existing categories of risk management contract (CfDs, fixed-price physical supply and options contracts), with the proposed changes to ensure these contract categories remain fit-for-purpose? If not, please explain why?	Yes.
Q2. Do you agree with the proposed disclosure approach regarding the novel contracts? If not, please explain why?	No. We think any and all contracts disclosed under the new Code should be published on the hedge disclosure web site, at least in some form. If the Authority receives information about a novel contract, then by definition this will not occur often. But in the interests of full disclosure, we propose the Authority publish a brief description of the novel contracts disclosed. This could be as simple as, to pick a random example, "Call option on a spark spread for calendar 2026". It would be useful for market participants to know that such contracts do exist and are traded.
Q3. Do you support the proposal to exclude ASX-traded contracts from the hedge disclosure obligations, if it means losing access to detailed data at the individual contract level for these contracts? If not, please explain why?	Yes. Effectively disclosing ASX contract data twice (for its main use, which is to get a forward curve) seems pointless and wasteful.
Q4. If you do not support excluding ASX-traded contracts from the hedge disclosure obligations, please describe what additional value this data holds compared with the aggregated insights available on the Authority's EMI website. If not, please explain why?	n/a

Questions	Comments
<p>Q5. Do you agree with the proposed approach to the disclosure of contract details including price, quantity, contract characteristics, contract profile, fuel type, trading period and location?</p> <p>If not, please explain why and outline what you consider to be a more appropriate approach.</p>	<p>Yes.</p>
<p>Q6. Are there any other datapoints you think should be disclosed for each contract?</p>	<p>For options, the underlying asset should be disclosed, which for a cap (as typically used) is cash, but for a swaption would be a swap (CFD).</p> <p>Currently, there are a lot of contracts disclosed which are well below the threshold for inclusion in the indexes we publish, because they are less than the 1 MW or 0.25 MW thresholds for FPV and CFD, respectively. Some of these could be disclosed in error, but we believe most are where a multi-node contract is disclosed. For example, an FPV contract might be greater than 1 MW in total, but at 20 nodes, so less than 1 MW in some grid zones. Each contract will have its own ID.</p> <p>So, it would be useful to know (and disclosed) how contracts are aggregated, e.g. there could be a master ID XXXXXX with all its nodal components allocated a sub-index XXXXXX-1, XXXXXX-2, and so on. That would allow us to decide whether or not to include a small contract in the index, and to report correctly on the actual number of contracts disclosed. At present, if we included all small contracts, then we would dramatically over-report the number of index-included contracts traded in each month.</p>
<p>Q7. Do you agree with the proposed voluntary approach to the disclosure of bids and offers?</p> <p>If not, please explain why and outline what you consider to be a more appropriate approach?</p>	<p>No. As a broker, it is difficult to see how a single party could disclose bids and offers, voluntarily or otherwise, especially as Energy Link is not a market participant, and therefore not subject to the HDOs.</p> <p>Considering the contracting process, this can be long and complex. In some cases, there could be an initial approach to market, with 6 or 8 responses, followed by several more approaches to one or more preferred bidders before a deal is done. How would all of this information be captured in a manner which is accurate and consistent? Would a phone call where an offer or bid is discussed be captured? Collecting all of this information would also add significantly to the cost of contracting, e.g. it could add 5% to 10% to the total cost (fee as a broker, for example).</p> <p>Collecting this information might also deter some parties from making an offer or bid, as parties would want to know beforehand if their offer or bid would be disclosed, which could lead to an overall reduction in the efficiency of the OTC market.</p> <p>Taken overall, we believe that collecting information on all bids and offers would be impractical, expensive, and could lead to a</p>

Questions	Comments
	<p>reduction in OTC market efficiency.</p> <p>We predict that if disclosure is voluntary, that none will ever be disclosed – why would you?</p>
<p>Q8. Do you agree with publishing the proposed data-points in Table 8 for individual contracts on the hedge disclosure system?</p> <p>If not, please explain why and outline what you consider to be a more appropriate approach?</p>	<p>Yes.</p>
<p>Q9. What other insights and analysis on the risk management information do you think would be helpful to publish on the hedge disclosure system or EMI?</p>	<p>For the purposes of the index (see below) it would be useful to have quantity and price by quarter (or failing that by calendar year), for all multi-quarter contracts. This would allow us to calculate the index by quarter to match the ASX forward curve, and to report on quantity and trends, etc.</p>
<p>Q10. Do you agree with the proposed approach to improving the hedge disclosure system?</p> <p>If not, please explain why and outline what you consider to be a more appropriate approach?</p>	<p>This is not particularly relevant to Energy Link, as we only ever download data. The current download process is OK, but manual. An API would streamline this process for us, but it's not a pressing need.</p>
<p>Q11. Do you support the option of using API to disclose risk management information, even if doing so requires investment and upgrade in your systems?</p>	<p>Yes, for downloading data.</p>
<p>Q12. Do you agree with the objectives of the proposed amendment? If not, please explain why?</p>	<p>Yes.</p>
<p>Q13. Do you agree that the benefits of the proposed amendment outweigh its costs?</p>	<p>It's not clear to us that requiring disclosure of a lot of additional information provides a net benefit, given the data disclosed already provides indexes that are useful guides to price movements.</p>
<p>Q14. Do you agree that the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's main statutory objective in section 15 of the Electricity Industry Act 2010.</p>	<p>In terms of the indexes we publish, and the general usefulness of the disclosed data, the main areas for improvement would be able to publish the index by quarter or year.</p> <p>The reality is that liquidity (trading volume) is low in the OTC market, so getting more granularity in the indexes is difficult. For example, once you move away from zone A, the number of contracts traded each month falls off, to the point where having indexes for each grid zone, for example, is impractical.</p>

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	<p>In our view, the key issues in the OTC market are liquidity, and the lack of innovation in contract type. For example, in 2019 and 2020 we promoted a CFD with flexible volume, specifically suited to small and growing independent retailers.</p> <p>The Authority's focus on the futures market is all well and good, but this hasn't led to great improvements in the OTC market, which is where smaller participants need to focus their trading to (a) avoid margin calls that are out of sync with spot market settlements and (b) lodge hedges with the Clearing Manage, which helps to smooth changes in (and calls on) Prudential Requirements.</p>
Q15. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	Yes.
Q17. Do you have any comments on the drafting of the proposed amendment?	No.

3 Additional Comments

The following may not fit into the question boxes in the table in section 2.

It would be very useful for electricitycontract.co.nz users to have the following included in the disclosure data, or as a feature of the enhanced web site.

1. Notifications of any changes to the HDO system, e.g. by subscribing to notifications;
2. Notifications of new contracts on the HDO system, e.g. by subscribing to notifications;
3. The number of parties trading each contract type: we suspect some contract types are specific to just one or two related parties, and may not be particularly relevant to the market as a whole. So having a field which shows the number of parties that traded the same type of contract in the last year would be very useful to identify where most of the trading is concentrated. A decision would need to be made about what 'type' means, and it would also need to allow for the splitting of contracts across nodes (see response to question 6 above) to ensure the numbers are not overstated.

4 Energy Link Electricity Contract Index

Energy Link has a particular interest in the HDO because since February 2009, we have published the *Energy Link Electricity Contract Index* each month, free on our web site at our [Blog](#) page. We actually publish three indexes: the main index, consisting of FPVV and CFD contracts; the FPVV index; and the CFD index. The methodology is attached to this submission, and may be disclosed along with this submission if appropriate.

The original objective of the index was to provide stakeholders (primarily larger consumers who do not have access to the same level of expertise and analysis as retailers, but increasingly the market as a whole) with a picture of how the price of larger electricity contracts for (nominally) the next 3 years are changing month-by-month.

We would like to provide more detail in the index, but the small number of contracts, along with the low resolution of the disclosed data, makes it impractical or impossible to do so in most months; the OTC market for electricity in NZ is, after all, not a particularly liquid market. The original target audience is mainly interested in the price it might expect to pay if it were to go to market to recontract, which is typically for a term of between two and five years. Ideally, we would compose an index for CFD and FPVV contracts for each year starting today and out to 10 or more years, where the data is available.

But since Oct-10 an average of only 5 CFD contracts and 7 FPVV per month have term of six months or more. As a result of this, we apply a high level of aggregation to these contracts (refer to the methodology).

What is perhaps a surprise out of all of this, is that the index has performed as well as it has.

One of the mechanisms we use on this small sample of contracts, is to apply a location factor adjustment to reference all contracts to Haywards, using forecast location factors¹ for each grid zone relative to Haywards. Unless the number of contracts increases substantially, this will likely be required for the foreseeable future, because some grid zones trade infrequently.

But there is certainly room for improvement, starting with price disclosure by month or by year, which would allow us to publish an index by quarter, for example, to match the futures forward curve, and annually beyond that.

Our methodology excludes contracts that are not for all trading periods, despite the fact there would be value in providing stakeholders with better information about the time structure of electricity contracts. For example, there are two contracts particularly relevant to small, independent retailers: the peak and super-peak contracts. The former is a contract with two time zones during each business and non-business day in a month, the former with three time zones during each business and non-business day. These two contracts are sufficiently well known, and of high value to a large subset of hedge market participants, that they should be disclosed as such, and not just as CFDs.

¹ The forecasts are extracted from our latest long-term Price Path. Forecast location factors are used instead of historical location factors because hedge prices are based on expectations of future spot prices (along with premiums).

Updated: 21 May 2018

Subject: Energy Link’s NZ Electricity Index

The Energy Link electricity index (“ELL Index”) is Energy Link’s calculation of an aggregated, country-wide index of the prices of larger electricity contracts of medium and longer term duration.

The objective of the index is to provide stakeholders (primarily larger consumers who do not have access to the same level of expertise and analysis as retailers, but increasingly the market as a whole) with a picture of how the price of larger electricity contracts for (nominally) the next 3 years are changing.

The index is made up from newly signed contracts which fall roughly into a 36 month window starting from the current month. Before the index is calculated, eligible contracts are first selected and their disclosed contract prices divided by the forecast location factor of the relevant grid zone reference node relative to Haywards, i.e. the index is reference to Haywards. The adjusted prices are then used to form the volume-weighted average price over all of the eligible contracts in each window.

The index is called the *Energy Link Electricity Contract Index* and can also be referred to as *Energy Link Index*.

5 Relevant Data

The index is based on data which is processed and disclosed on www.electricitycontract.co.nz pursuant to Subpart 5 of Part13, Trading Arrangements, of the Electricity Industry Participation Code. The threshold for inclusion of contracts is 0.25 MW for CFDs and options and 1 MW for FPVV. The rules and guidelines from the EA contain quite specific provisions about how the data is to be calculated, formatted and disclosed. The EA also has the ability to audit the data submitted, so taken overall the data should be accurate and therefore highly credible.

The relevant fields in the disclosed data are listed below:

- contract type: CFD or FPVV are the two types relevant to the index (options are also provided for);
- trade date: the date on which the contract is signed (or otherwise become binding on the parties);
- effective date: the date of the first trading period (half hour) to which the contract applies
- end date: the date of the last trading period to which the contract applies
- grid zone: from A – E – refer table below;
- quantity: for a CFD or an options contract the total volume in MWh of electricity to which the contract relates: or for an FPVV contract, the volume in MWh of electricity reasonably likely to be supplied under the contract;
- price: the time-weighted average contract price for contracts with terms of less than ten years – refer below for the formula;
- traded on EnergyHedge: whether the contract was traded on EnergyHedge;
- traded on ASX: whether the contract is an ASX futures contract;
- for all trading periods: whether or not the contract applies to all trading periods within its term;
- contract status: whether the contract information is verified, pending verification, not disputed, or in dispute.

5.1 Contract Price Calculation

The price disclosed is the time-weighted average price over the life of the contract. Where adjustment clauses are included in the contract only the starting (unadjusted) prices are used. Once submitted and verified (or not disputed), the prices are not re-submitted if and when an adjustment actually occurs.

The single disclosed contract price, CP, is

$$CP = \frac{\sum_{i=1}^n P_i TP_i}{\sum_{i=1}^n TP_i} \times \frac{1}{LF \times LAF}$$

where

- n is the number of time zones within the contract, each time zone having a unique price;
- P_i is the price specified in time zone i;
- TP_i is the number of trading periods in time zone i;
- LF is the location factor between the grid node relevant to the contract and the reference node within the relevant grid zone, as published by the EA;
- LAF means a loss adjustment factor, which is 1 if the contract price for the contract is referenced to a point of connection on the grid or for all other contracts, 0.937 (being the difference between 1 and the average losses of 6.3%.)

The intention of the location factor adjustment (LF) is to reference all contracts to the reference node in their grid zone, as shown below as the “normalisation node.”

The intention of the loss factor adjustment (LAF) is to ensure that all contracts are referenced to the grid, and not to a generator or, more particularly, a consumer’s meter. By definition, CFDs are referenced to grid nodes and hence $LAF = 1$. Most FPVV contracts, however, are referenced to meter readings and require losses (between the meter and the relevant GXP) to be added to the metered consumption. Hence for FPVV contracts the $LAF = 0.937$ is applied to the CP as shown above, increasing the CP by a factor of approximately 1.0672.

5.2 Grid Zones

Grid Zone	Description	Grid Zone area	Normalisation node
GZ1	Northland	Zone A	Otahuhu OTA2201
GZ2	Auckland		
GZ3	Hamilton	Zone B	Whakamaru WKM2201
GZ4	Edgecumbe		
GZ5	Hawkes Bay		
GZ6	Taranaki	Zone C	Haywards HAY2201
GZ7	Bunnythorpe		
GZ8	Wellington		
GZ9	Nelson	Zone D	Islington ISL2201
GZ10	Christchurch		
GZ11	West Coast		
GZ12	Canterbury	Zone E	Benmore BEN2201
GZ13	Otago		
GZ14	Southland		

Location factors between the grid zone normalisation node and each node within the zone will be published by the EA.

5.3 Participation

Participation is mandatory for all contracts which has at least one participant under the Code as a party to the contract, and threshold for CfDs and options contracts is 0.25MW, for physical contracts (FPVV and FPFV) the threshold is 1 MW.

5.4 Other Data

There are a number of other fields which have an indirect bearing on the index (including text quoted directly from the Code):

- adjustment clause: means a clause in a CFD or FPVV supply contract under which the price or prices of a specified volume of electricity may be adjusted, including an adjustment relating to the Consumer Price Index, the Producers Price Index or any other index;
- force majeure clause: means a clause in a contract under which some or all obligations may be suspended and/or the contract may terminate due to events beyond the control of the party and that could not reasonably have been foreseen:
 - including any event or circumstance occasioned by, or in consequence of, any act of God (being an event or circumstance:
 - due to natural causes, directly or indirectly and exclusively without human intervention; and
 - which could not reasonably have been foreseen or if foreseen, could not reasonably have been resisted); or
 - including strikes, lockouts, other industrial disturbances, acts of public enemy, wars, blockades, insurrections, riots, epidemics, or civil disturbances; or

- including the binding order of any court, government or a local authority beyond the control of the party;
- but not including an event specified in a suspension clause;
- suspension clause: means a clause in a contract under which some or all of the obligations may be suspended due to an event directly relating to the supply (including transmission) or generation of electricity or the price at which electricity is supplied, including an inability to inject electricity into the grid as a result of an outage of or damage to the grid or a grid injection point or the price of electricity exceeding a level specified in the contract;
- special credit clause: means a clause in a CFD that specifies that, in the event that a party defaults during the term of the contract, the party that is not in default will be paid a specified amount or that on execution of the contract, the party that is not in default, is provided with a guarantee that payment will be made when the settlement amount reaches a certain threshold;
- other clauses: whether there are any other clauses providing for the pass-through of certain costs, levies or tax or some form of carbon-related cost;
- isda schedule used: whether the standard ISDA contract for swaps and options is used;
- volume type: whether the volume of electricity, in respect of which payments are required to be made by the floating-price payer, is flat or varies for different trading periods

5.5 Forecast Location Factors

The rule data is available by grid zone, but the index is referenced to Haywards. The index calculation requires each contract be referenced to Haywards, which in turn requires adjustment by location factor between the zonal reference node and Haywards. The index uses Energy Link's forecast location factors for this purpose.

Forecast location factors are extracted from the Energy Link price path forecasts available immediately prior to publication of the index in each month. Where a price path does not match the start of the index period, the previous location factor will be retained.

Forecast location factors will not be disclosed unless an order is received for forecast location factors in the usual manner.

The contract prices are averaged over the term of the contract so the forecast location factors are also long term – one value for each grid zone for the 1 – 36 month index period window.

5.6 Seasonal Adjustment Factors

Any contract that is not a multiple of 12 months in length is likely to have a contract price either higher or lower than an annual average price due to seasonality in prices. The monthly average prices at Haywards taken from the first 36 months of the latest price path are used to give a seasonal profile and these profiles are applied to all contract prices to give a seasonal adjustment.

6 Calculating the Index

This methodology assumes that the index is calculated in the middle of each month using data from contracts signed in the immediately preceding month. For example, if it is issued mid April 2009 then it will include all contracts traded up to and including contracts signed early April².

² Since there is a delay between signing a contract and getting its data on the hedge disclosure web site, the index is not published at the start of each month.

The disclosed hedge and FPVV contract data is downloaded in a csv file from www.electricitycontract.co.nz and filtered to remove any contract not relevant to the index:

- EnergyHedge contracts – these contracts are no longer traded, and when they were they represented a small percentage of the total contract market, traded on a platform which was limited to the five largest market participants plus the ANZ Bank. They tended to respond to shorter term events much more so than larger contracts traded outside of EnergyHedge;
- ASX futures contracts – these also tend to respond to shorter term events and are also of 3 months duration or less;
- contracts that are in dispute or pending verification (so the index only includes contracts that are either verified or not disputed);
- contracts that do not apply to all trading periods between the effective date and end date;
- contracts of less than six months (180 days) duration, i.e. the index is based only on medium and longer term contracts;
- contracts traded more than 60 days ago;
- contracts with effective (start) date more than 120 days ago³;
- clear outliers: contracts that are so large that the contract price is obviously a function of quantity⁴, or so far away from the rest of the market (and sufficiently large) that they would produce an atypical, out-of-trend one-off change in the indexes.

The index value is calculated quite simply from an underlying monthly average contract price made up from all eligible contracts within a 36 month sliding window.

6.1 Monthly Average Contract Prices

The index applies to the medium term and longer term periods commencing on the first day of the month in which the index is actually calculated. For example, if the index is calculated at the start of Apr-09 then it applies to the medium and long term periods commencing 1st April 2009. The list of new, verified and non-disputed contracts is filtered to find all contracts which include time zones within these two periods. The filtered list is compared to the corresponding list from the previous month's index calculation so as to find all contracts traded since the last index calculation – a contract can only be used once in the index calculations.

The remaining contracts have varying start and end dates, which means that the contracts will not usually line up exactly with the 36 month window of index calculations. All contracts, regardless of term, are now processed to form monthly average prices from which the index is calculated.

The following process is repeated for each month in the 36 month index window:

- the disclosed contract price, CP, for each contract is divided by the relative location factor between its reference node and Haywards;
- the resultant price is then multiplied by the seasonal adjustment factor relevant to the each contract;
- the monthly average price is the 'seasonally adjusted, location-factor adjusted volume-weighted average contract price'. The volume weighting factor for each contract is equal to the disclosed contract volume

³ This exclusion added 18-Feb-14 after we had an instance of contracts with trade date 4th Feb, also created 4th Feb, but effective date 1 November 2013. There appears to be nothing about the contracts that is in violation of the rules, e.g. may have been delays in finalising the contract and getting signed. However, we don't want to include data that is too old.

⁴ This filter was added on 21-May-18 when the latest Tiwai contracts were disclosed at prices in the low to mid \$50s when the index has been sitting above \$70 for months. The contracts are for the 50 MW required to run the fourth pot-line from Aug-18 to Dec-22: Tiwai has more market power than any other purchaser in the market and is this contract is clearly an outlier in terms of price.

divided by the number of days between and including the contract effective date and end date. Volume weighting the contract prices ensures that small loads do not skew the index. Using volume per day ensures that longer term contracts do not contribute proportionally more to the index than shorter term contracts.

If there are N contracts selected as eligible for a month then the monthly average price is given by

$$Index = \frac{\sum_{i=1}^N \left(Volumeperday_i \times \frac{SAF_i CP_i}{LF_i} \right)}{\sum_{i=1}^N Volumeperday_i}$$

Where CP_i is the contract price of the i^{th} contract which has a non-zero price in the month, SAF_i the relevant seasonal adjustment factor and LF_i the relevant location factor.

If there are no eligible contracts ($N = 0$) then the index value will for the month will be zero.

As of October 2010, the index data has also been split out into FPVV and CFD contracts, with a separate index published for each.

6.2 Index Values

With the monthly average prices calculated for all months from month 1 to 36, the index value is just the average monthly price over months 1 to 36.

6.3 Recalculating the Index

It is important that the index is seen to be robust and stable⁵, i.e. that errors are minimised and that it is not revised once issued. Hence if an error is found then the index will not normally be recalculated and reissued.

However, under certain rare circumstances a recalculation and reissue may be justified, e.g. if many contracts were missed and recalculation produces a dramatically different number. The index may only be recalculated and reissued after full discussion within the Wholesale Markets group and agreement by the Wholesale Markets Manager.

⁵ People may be making decisions using the index as an input, so if past values are changed then their confidence in the index will be eroded.