



genesis



Huntly Firming Options

Genesis Energy Limited
May 2024

Executive Summary

New Zealand is world class in the level of its renewable generation. However, wherever you live or whichever retailer customers buy their power from, coal or gas is still needed to ensure security of supply at certain times.

This paper presents Genesis' new Huntly Firming Options derivative product (HFO). The HFO provides eligible counterparties with greater call profile flexibility to help hedge price risk, tailored to the specific shape of their portfolios. The HFO differs from the previous iterations of swaptions and market security options (MSOs) in that this product can also help mitigate against peak supply risks and shorter duration constraints. The HFO is designed so that generation capacity (backed by a pre-committed fuel supply) may be notionally called upon during periods of both capacity (winter peak related) and energy (dry year and disruption related) scarcity over the next two calendar years.

Genesis has developed the HFO utilising the flexibility of its Rankine units at Huntly partly in response to the increasing winter capacity issues the system has experienced in recent years. Transpower expects that meeting winter peak demand is likely to be challenging through 2025 at least.

While the HFO is backed by coal as the fuel source, we are working hard on biomass as an alternative fuel for our Rankine units (learn more about biomass [here](#)). We are confident a sustainable and financially viable local supply chain is possible and that biomass may replace coal as the fuel source in future iterations of this product.

The HFO is designed to help manage portfolio risk, and in doing so contribute to overall system security. Genesis will run an option capacity allocation process to allow the market to indicate the value that the Rankines provide to the market. If Genesis determines that the allocation process is successful, this will set the annual premium to be paid per MW of capacity by those eligible market participants who receive an allocation. Similar to the electricity spot market, the marginal successful bid price will set the annual premium for all. This will provide transparency on the market's collective valuation of firming and system security. The HFO presents an opportunity for the sector to demonstrate it is up to the challenge of delivering reliable supply, without the need for changes to regulations or market settings. Further details on the allocation process are in this document.

Genesis has researched public views on the use of thermal fuels to generate electricity when renewable sources are insufficient. The findings from 2024 show 75% of 1,000 people surveyed either strongly support or somewhat support Huntly Power Station providing back-up generation with coal or gas. And 61% support some generation by coal/gas to ensure stable pricing and

security of supply, the highest support yet (up from 57% in '23 and 51% in '22).

Late last year when announcing our new strategy, Gen35, we indicated we would develop new products to give market participants the opportunity to manage their supply risks. This is the first product and gives generators, retailers and major energy users the option to notionally secure backup electricity supply from the Rankine units at Huntly Power Station with a stable and transparent pricing mechanism.



Tracey Hickman
Chief Wholesale Officer



Huntly Power Station: Providing security of supply

The 1,200 MW Huntly Power Station was built to provide back-up supply to New Zealand’s highly renewable electricity generation. Back-up generation steps in when the renewable system is unable to deliver, providing the market security of supply and price stability. That role is becoming more important by the day.

Huntly is arguably the best located station in the country. It is close to the largest and fastest growing demand centres, has connection points to the grid, gas lines and access to a skilled local workforce. Huntly Power Station’s location also provides significant North Island energy security in the event of transmission outages, planned and unplanned, that disconnect the North Island from the South Island.

The station has five thermal generating units including three 250 MW Rankine units, a 403 MW combined cycle gas turbine and a 50.8 MW open cycle gas turbine. The dual-fuel Rankines have had four yearly maintenance and recertification outages over their life to date. An independent engineering review concluded at least two of the Rankine units can run to 2040 with continued investment.

The Rankines are currently the only plant in New Zealand capable of delivering long duration generation, with significant energy storage and access to international energy markets. The Rankines are the only plant in the country that can provide sustained cover for days, weeks and longer where additional supply can be provided to New Zealand as needed, such as during peak winter demand and dry years.

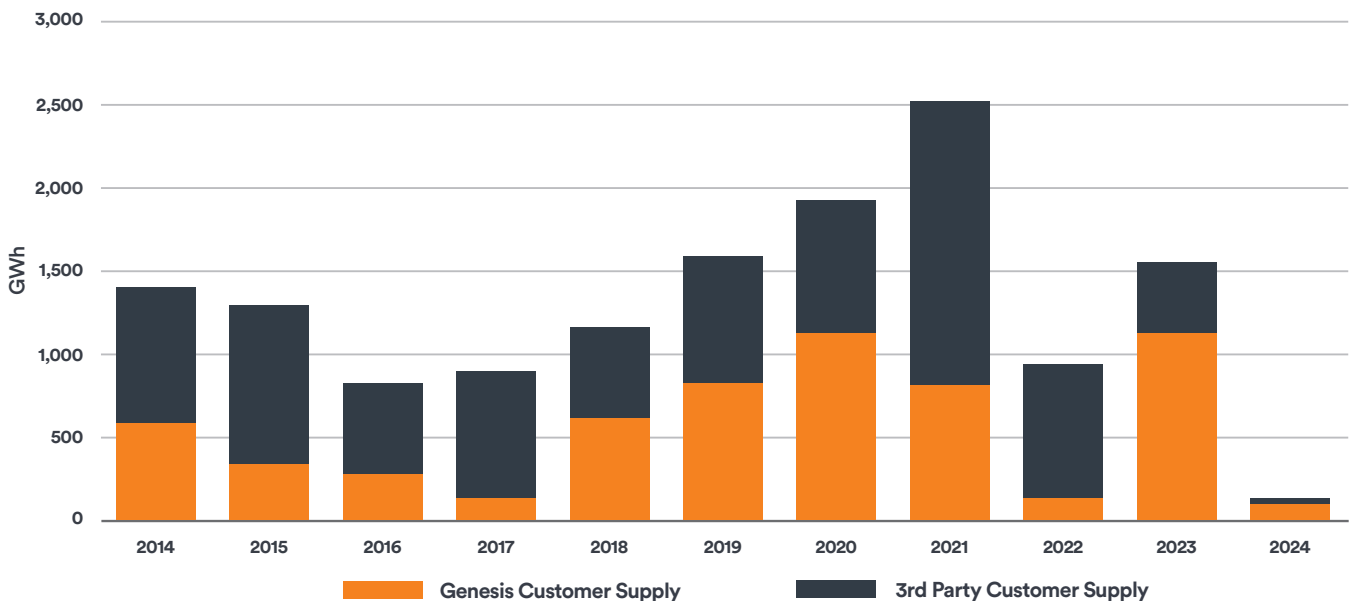
Delivering for third parties

Since 2014, Huntly Power Station has delivered total generation of 38,769 GWh, enough to power more than one million homes for five years. Over the same 10-year period, the Rankines have generated 14,046 GWh. Of that volume, around 57%, 8,023 GWh, has been supplied to third parties - enough to power more than 224,600 homes for five years, nearly equivalent to the combined households in Dunedin, Wellington City, Hamilton and Tauranga.

Transpower has noted concerns for security of supply over the medium term, which is expected to be challenging from a peak, and potentially an energy, perspective. A combination of factors contribute to security of supply concerns, including on-going demand growth, uncertainty around renewables during peak demand periods, the availability of firming generation due to outages, and insufficient fast-start peaking capacity or dispatchable demand response in the system.

The Electricity Authority has also raised concerns that the winter of 2025 could pose more challenges than either last year or this year. This is partially due to the planned retirement of the ageing gas-fired Taranaki Combined Cycle Power Station.

Rankine Generation

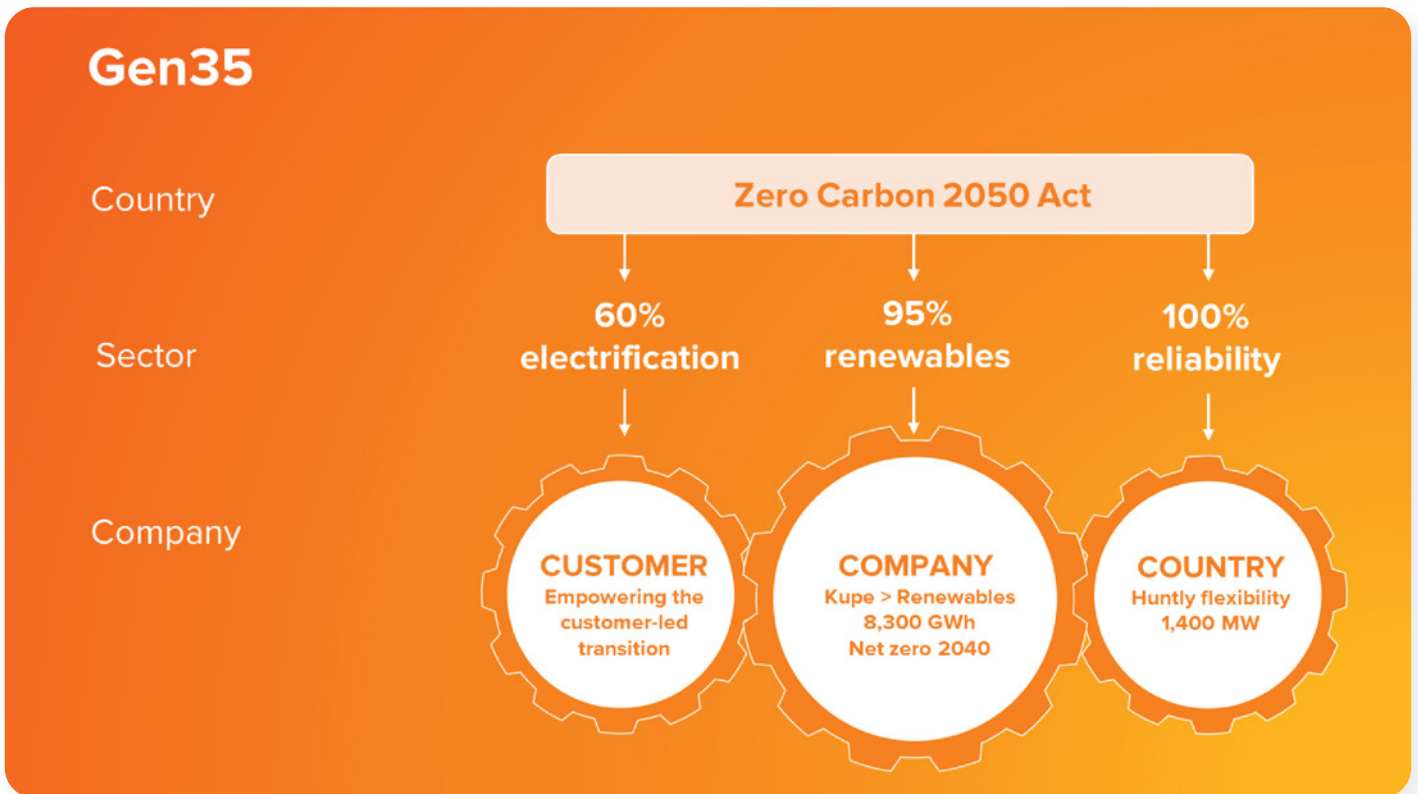
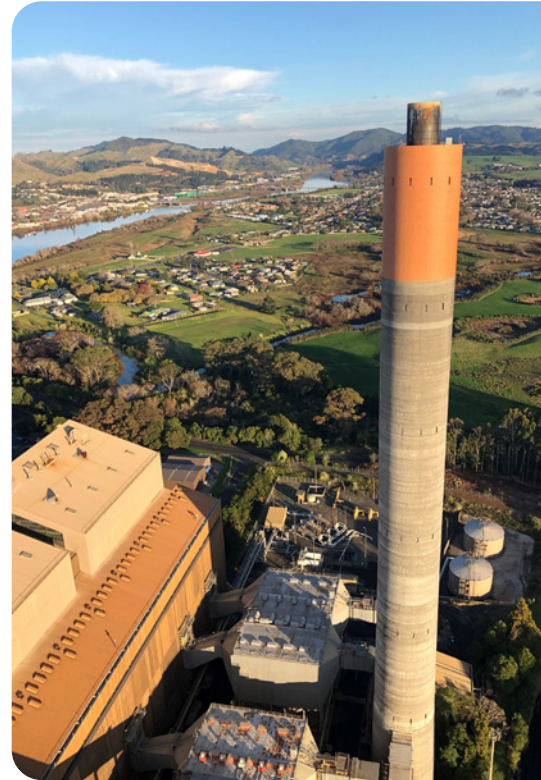


The Gen35 strategy: An overview

Under our Gen35 strategy, between now and 2035, Genesis is committed to playing a unique and vital role in the energy transition of our customers, company and country. This will include helping customers electrify their lives, investing \$1.1 billion in new renewable generation, and setting a clear future for Huntly Power Station as part of the Huntly Portfolio, New Zealand's grid scale peaking and firming facility for new renewable generation that will be developed over coming decades. This will transition Genesis to 95% renewable generation by 2035. To reach the legislated net zero target by 2050, New Zealand needs to achieve 60% electrification using 95% renewable electricity, and it needs to be reliable 100% of the time.

As a starting point for the Huntly Portfolio, this means the staged installation of up to 400 MW of battery storage and continuing the work to replace coal with biomass as a fuel for the Rankine units.

We will activate Gen35 across three horizons: Horizon 1 (FY24) Future Fit; Horizon 2 (FY25-28) Accelerating our Transition; and Horizon 3 (FY29 and beyond) Future State. Horizon 1 focuses on the things we can do to impact earnings and shareholder value right now; Horizon 2 will focus on things we need to do to lift growth and build shareholder value in a lower carbon future; and Horizon 3 will see us create optionality to maximise the opportunity of our future state.





Biomass update

The combustion trial last year demonstrated it is technically feasible for black pellets to be a drop-in replacement for coal.

We are now detailing the activities required to support the longer-term availability of the Rankine units using biomass, including a work schedule and an investment plan.

We are making good progress in assessing the viability of establishing a sustainable and financially viable local biomass supply chain. We are in advanced discussions with a variety of potential suppliers who offer a range of volumes from different locations. Typical lead times for a large biomass production facility is 24 months; however, we are hopeful that a smaller scale option might be available before the end of 2024.

If this eventuates we will conduct a further combustion trial with domestically produced fuel. We will then work on further configuration of our plant to develop our understanding of how we best scale up the supply chain solution(s). Genesis expects that coal will remain the fuel of last resort until a storable biofuel replacement becomes commercially viable at scale.

The Huntly Portfolio

Historically, firming timeframes required by the grid have been for days, weeks, and months which were filled by hydro and thermal. New renewables will predominantly come from solar and wind and their firming requirements will skew toward minutes, hours, days, and weeks. This will make prices more dynamic, with both micro and macro scarcity periods across all timeframes.

60% electrification is the sector and the country's impact zone for net zero 2050. Solar and wind will contribute significantly but they can't do it securely without some thermal firming and peaking. Every home, business, and consumer in New Zealand will benefit from that.

The sector estimates it will need around 3,100 MW of additional supply and demand-side firming this decade alone, with another 2,500 MW required in the 2030s. Firming will become a greater portion of the final price customers pay in a high renewables grid over coming decades.

Huntly Power Station provides more reliability now than any other station in the country. Subject to appropriate commercial support from the market, we will invest to increase this over coming years to 1,400 MW and more, offering new asset-backed firming products for solar, wind and hydro operators, across hours, weeks and months. As part of this we will seek to add up to 400 MW of battery storage in a staged manner with financial close on the first 100 MW expected in coming months. Learn more about the Huntly Portfolio [here](#).

[An independent life assessment of the Rankines in 2021 determined that the current operational performance can be maintained to 2030 and could be extended out to 2040.](#)



Volatile international prices and stockpile management

The Rankines can run on gas and coal, but in the New Zealand context coal is the most reliable fuel for providing certainty in times of shortage or in acute peaks. International coal prices were already rising steeply for more than a year before the war in Ukraine started in February 2022, due largely to increasing Chinese demand. The benchmark Indonesian coal price averaged USD58 per tonne in calendar 2020 and rose to a peak of USD331 in October 2022 as a result of increased coal demand and reduced exports of Russian natural gas to Europe. As of February 2024, the benchmark price has reduced to USD125 per tonne mainly due to natural gas prices returning to 2020 levels on the back of alternate sources of supply coming to market. The movement of the international coal price from here is uncertain and could be impacted by Russian sanctions, the slowdown of the Chinese economy, domestic coal consumption in Indonesia, and a myriad of other factors.

The simple and approximate formula for converting the cost of carbon to electricity pricing is each additional \$1 per unit of carbon adds \$1 per MWh of electricity from a Rankine unit generating on coal.

Genesis cannot be expected to subsidise the market with back-up generation and the products on offer will reflect the actual price of the fuel when physical generation is notionally called. The flow on effects of

the 'new normal' in international fuel and energy markets will flow through to the cost of ensuring security of supply for New Zealand.

The HFOs

Genesis is presenting options on capacity provided by the Rankine units at Huntly backed by a reliable storable fuel source.

In return for an annual premium (which helps cover the ongoing maintenance of the Rankines), the buyers will have the option to call on the generation (notionally) as and when they need and in a shape tailored by them. In this way buyers will be able to manage risk in a way that is not currently possible with other products available in the hedge market.

At the time of exercising the option, buyers can tailor the generation profile shape to meet the risk profile on their requirements. This is achieved by combining the available call profiles (short and long duration baseload, peak, and super peak) and by adjusting the trading periods to which those profiles apply (eg, under the peak profile swap, a 15 hour generation period can commence at any selected trading period, provided the generation period starts and finishes within the same day and starts at the same time in each day during the term). Exercising the option must be notified on the business day prior to the day of the call.

It is not anticipated that buyers would use HFOs to cover their full generation requirements. The flexibility to call on the HFO based on a precise unhedged portion of demand should lead to better trilemma outcomes:

1. **Sustainability:** The HFO allows the buyer to balance their variable requirements during the specific times when coal generation is notionally needed. This balancing optimisation reduces the total amount of coal notionally used to only what is needed to balance consumption at the margin.
2. **Affordable:** The typical volume of hedging noise between firm hedges and variable consumption is reduced by the flexibility of combining and adjusting multiple calls at once, reducing the cost of risk that typically remains unhedged using standard hedging instruments.
3. **Reliability:** Security of supply is more assured than would otherwise be the case as the product aids in making unit commitment decisions.

In a similar process to Genesis' existing MSO product and reflecting the real life supply chain, buyers will need to notionally pre-order coal before any generation calls can be commenced.



The process for entering into an HFO

The mechanism for participating in the offer is a two-stage process. In stage 1 interested eligible market participants will provide expressions of interest. This stage will be followed by a screening process to allow Genesis to engage only with interested and eligible parties on the subsequent steps. Screened parties will then have the opportunity to assess the detailed mechanics of the HFOs and the terms underpinning them. Screened parties will then be invited to apply for an HFO allocation by submitting binding bids in stage two.

If Genesis determines that the allocation process is successful (including taking into account the bid prices and volumes, Genesis' cost recovery assessment as described below and counterparty credit assessments), the lowest successful bid in this application stage will set the price for all applicants that receive an allocation.

Genesis will allocate the total volume of offered capacity in its absolute discretion. As part of its decision-making process, Genesis will assess each applicant's creditworthiness in the context of its application and the HFO. Subject to any adjustments made following these credit assessments (and without limiting Genesis' overall discretion), as a general guideline, Genesis intends to allocate the total volume of offered capacity to applicants in order of rank, starting with the highest bids first.

While Genesis expects to prioritise the bid allocation process, Genesis is not restricted from entering into an HFO on a bilateral basis outside the process described above on any terms it sees fit, which may reduce the volume of capacity offered under the above process.

Volume allocation and cost recovery assessment

Genesis maintains discretion over the total volume to allocate to successful applicants in order to maximise cost recovery and therefore maximise unit reliability and life expectancy of the Rankine fleet.

Genesis has undergone an in-depth review to compare the costs associated with maintaining and running a Rankine fleet to solely serve our business vs the projected requirements of offering HFOs to the broader market.

This difference is the basis for Genesis' cost recovery assessment. This does not translate to a set premium per MW of capacity, but is the product of the total capacity sold and the premium achieved per MW. This will allow Genesis to accept a lower priced clearing bid should the volume be sufficient, and vice versa.

Timing

The target date for the contracts to be executed is June 2024 with generation options covering calendar 2025 and 2026.

The product

The product provides the opportunity to eligible market participants to manage some of their portfolio risk through owning options on Huntly Power Station's Rankine generation units and the fuel required to meet their contracted requirements (on a notional basis).

Similar to the existing MSO product, the updated version will seek to notionally replicate the process Genesis undertakes to purchase, ship, process, and combust fuel to deliver electricity to the grid. Energy commitments will still need to be made prior to generation calls becoming available.

The key difference in the HFO is that the buyers will now have significantly greater flexibility in how they call to notionally utilise the Rankine capacity to generate in different profiles, allowing the HFO to be a more effective hedge for both energy and capacity scarcity, and bespoke shaping requirements.

The HFOs allow four different swap profiles, each with its own implications for cost and risk. The profiles can be nominated in any combination on a day by day basis by the HFO buyer, provided the buyer's maximum option capacity will not be exceeded in any trading period. The swap profiles can be combined to create residential shaped generation, timing of peak periods can be adjusted to suit individual books or the variability of different days of the week or months of the year, and baseload running can be made more efficient by calling for longer durations.

The four call profiles are:

Baseload long duration (00:00 to 23:59 \geq 5 days duration)

Baseload short duration (00:00 to 23:59 \leq 4 days duration)

Peak (any 15 hour block during a day)

Superpeak (any two non-contiguous 3.5 hour blocks during a day)

Introducing the option to run Rankines for very short durations introduces fuel inefficiency that was not a part of the existing MSO product. To this end we have introduced the concept of an "Efficiency Modifier" which varies the fuel consumption required depending on the call profile. This increased fuel consumption is a real-world impact of starting and stopping units which results in higher fuel costs per MWh of generation and will be reflected through an adjusted strike price for each option exercise based on the modifier of the profile nominated.



Term Sheet

Huntly Firming Option Term Sheet

This term sheet (**Term Sheet**) sets out the indicative key terms and conditions of a Huntly Firming Option confirmation (**Confirmation**) between Genesis Energy Limited (floating price payer) (**Genesis**) and the buyer / fixed price payer (**buyer**). This Term Sheet is not legally binding and is not an offer capable of acceptance. No legal obligation arises in relation to the subject matter contained herein. This Term Sheet is only available to persons who are “wholesale investors” as that term is defined in clauses 3(2)(a), (c) and (d) of Schedule 1 to the Financial Markets Conduct Act 2013. This Term Sheet may only be published, delivered or distributed in or from any country or jurisdiction under circumstances which will result in compliance with all applicable laws and regulations. Genesis has not and will not take any action which would permit possession or distribution of this Term Sheet or any other related material in any country or jurisdiction where action for that purpose is required.

The final terms and conditions will be contained in the Confirmation prepared by Genesis.

Option and Transaction terms	
Confirmation Term	1 January 2025 to 31 December 2026.
Maximum Option Capacity	The relevant number of MWs to be agreed between Genesis and the buyer.
Premium	<p>The annual Premium will be determined by Genesis following engagement with potential buyers. For each buyer, the annual Premium will be calculated as a fixed amount multiplied by the relevant number of MWs in that buyer’s Maximum Option Capacity (and subject to CPI adjustment in relation to the second year of the Confirmation Term).</p> <p>The annual Premium will be payable on 20 January of each calendar year during the Confirmation Term, commencing 20 January 2025.</p> <p>The Confirmation includes a Premium rebate mechanism in the event that a Generation Suspension Event (excluding due to river heating) or a Startup Suspension Event occurs.</p>
Exercise Period	Any day during the Confirmation Term.
Grid Reference Point for the Floating Price	HLY2201.
Transaction Profiles	<p>Long Duration Baseload Transaction: Term of 5+ days and a baseload swap profile.</p> <p>Short Duration Baseload Transaction: Term of \leq 4 days and a baseload swap profile.</p> <p>Peak Period Transaction: Term of 1+ days and a single Generation Period (equal to 30 Calculation Periods) in each day during the term, as selected by the buyer.</p> <p>Super Peak Period Transaction: Term of 1+ days and two non-contiguous Generation Periods (each equal to seven Calculation Periods) in each day during the term, as selected by the buyer.</p> <p>Each Transaction will commence at 00:00:00 on the Effective Date and end at 23:59:59 on the Termination Date (each as specified in the Notice of Exercise, which must comply with the relevant term profile above).</p> <p>Multiple Transactions are permitted at the same time, provided the Maximum Option Capacity will not be exceeded in any Calculation Period.</p>

Term Sheet (continued)

Huntly Firming Option Term Sheet (continued)

Fixed Price	
Fixed Price	In respect of each Transaction, the Fixed Price per MWh is the product of (a) the Weighted Average Price and (b) the relevant Efficiency Modifier.
Weighted Average Price	In summary, the Weighted Average Price means, in respect of a Transaction, an amount determined on the date on which the Notice of Exercise is delivered in accordance with the following formula: $\frac{\Sigma(\text{Commitment Amount} \times \text{Coal Price}) - \Sigma(\text{Exercised Amount} \times \text{Fixed Price} / \text{Efficiency Modifier})}{\Sigma(\text{Commitment Amount}) - \Sigma(\text{Exercised Amount})}$ <p>The Confirmation includes adjustments to the above formula to address the circumstances in which a Transaction is knocked out or amended as a result of a Startup Suspension Event or a Generation Suspension Event.</p>
Efficiency Modifier	<p>Long Duration Baseload Transaction: 0.54.</p> <p>Short Duration Baseload Transaction: 0.60.</p> <p>Peak Period Transaction: 0.65.</p> <p>Super Peak Period Transaction: 0.85.</p>
Commitment Amounts	
Commitment Amounts	<p>In order to exercise the Option, the buyer must have an available number of MT (defined below as the Total Net Available Amount) to support the relevant Transactions. For this purpose, the buyer must deliver one or more Notice of Commitments to Genesis. Each Notice of Commitment must specify the number of MT (which must be in multiples of 100 MT) subject to that Notice of Commitment (the specified number of MT being the Commitment Amount).</p> <p>The buyer may only give a Notice of Commitment if the Option will remain capable of being exercised in one or more Transactions on terms (which comply with the Confirmation) that will reduce the Total Net Available Amount to zero by the end of the Exercise Period.</p>
Availability Date of each Commitment Amount	A Commitment Amount will become available (the Availability Date) and therefore added to the buyer's Total Net Available Amount at 00:00:00 on the date that is 90 days after the date on which the Notice of Commitment is delivered (the Availability Date is subject to adjustment under the Confirmation if a Coal Suspension Event occurs).
Coal Price	<p>In summary, in respect of a Commitment Amount, the Coal Price is an amount in \$/MT, as determined in accordance with the following formula:</p> <p>((Coal Futures Price x 0.72) / NZD-USD FX Rate) + (Carbon Price / 0.54) + Fixed Fee</p> <p>Where:</p> <ol style="list-style-type: none"> "Coal Futures Price" means the daily settlement price of the globalCOAL Newcastle Coal Futures t+1-month contract, stated in U.S. dollars. "NZD-USD FX Rate" means the daily settlement price for the New Zealand Dollar CME quarterly future contract (the contract period of which includes the same calendar month as the Coal Futures Price). "Carbon Price" means the daily closing price for a unit (as defined in the Climate Change Response Act 2002). "Fixed Fee" means an amount equal to \$145.29/MT (subject to annual CPI adjustment). <p>Genesis will determine the Coal Price on the business day on which the buyer delivers the Notice of Commitment (this date is subject to adjustment under the Confirmation if a Coal Suspension Event occurs).</p>

Term Sheet (continued)

Huntly Firming Option Term Sheet (continued)

Exercising the Option	
Conditions to exercise	<p>In order to exercise the Option, the buyer must deliver a Notice of Exercise.</p> <p>The buyer may only give a Notice of Exercise if, in respect of the proposed Transaction (and taking into account any other Transaction that will also be in effect in any Calculation Period during the proposed term):</p> <ul style="list-style-type: none"> (a) the proposed Exercised Amount will not exceed the Total Net Available Amount (as determined immediately before that proposed Exercised Amount is deducted from the Total Net Available Amount on the date the Notice of Exercise is delivered); and (b) the Maximum Option Capacity will not be exceeded in any Calculation Period during the proposed Term as a result of the proposed Transaction. <p>The buyer must deliver a Notice of Exercise:</p> <ul style="list-style-type: none"> (a) if the Effective Date falls immediately after a business day, before 10:00 on the business day immediately before the Effective Date; or (b) if the Effective Date falls immediately after a non-business day, before 14:00 on the first business day before the Effective Date.
Total Net Available Amount	<p>In summary, the Total Available Net Amount means, at any time, the number of MT determined in accordance with the following formula:</p> $A - B$ <p>Where:</p> <p>“A” = the aggregate of each Commitment Amount in respect of which the Availability Date has occurred; and</p> <p>“B” = the aggregate of each Exercised Amount.</p> <p>For the purposes of determining the Total Net Available Amount, the Exercised Amount in respect of a Transaction will be deducted in full on the date on which the Notice of Exercise is delivered.</p> <p>The Confirmation includes adjustments to the above definition to cater for circumstances in which a Transaction has been knocked out or amended as a result of a Startup Suspension Event or a Generation Suspension Event.</p>
Exercised Amount	<p>In summary, in respect of a Transaction, the Exercised Amount is the number of MT determined in accordance with the following formula:</p> $A \times B$ <p>Where:</p> <p>“A” = the sum of the Notional Quantity (MWh) per Calculation Period during the term of the Transaction; and</p> <p>“B” = the relevant Efficiency Modifier.</p>
Automatic Exercise	<p>The Total Net Available Amount (if any) not previously exercised will be deemed to be automatically exercised as a baseload electricity swap with effect from the day on which the Option must be exercised in order to reduce the Total Net Available Amount to zero as at the end of the Exercise Period, with a baseload profile that ensures that the Maximum Option Capacity will not be exceeded in any Calculation Period during the term (and applying an Efficiency Modifier of 0.54 to determine the Exercised Amount and the Fixed Price).</p>
Coal Suspension Event	
Coal Suspension Event	<p>In summary, Coal Suspension Event means any event, or series of events, beyond Genesis’ reasonable control, resulting in a material delay or interruption of coal logistics which limits Genesis’ ability to purchase a qualifying specification of coal from its existing sources of supply (Coal Purchase Suspension Event) or to deliver coal purchases to the Huntly Power Station in a timely fashion for whatever reason.</p>

Term Sheet (continued)

Huntly Firming Option Term Sheet (continued)

Coal Suspension Event adjustments	<p>In summary, if a Coal Suspension Event applies:</p> <ul style="list-style-type: none"> (a) the Availability Date of any Commitment Amount (in respect of which the Availability Date is yet to occur) will be deferred by the number of days equal to the suspension period (unless the buyer elects to cancel the pending Commitment Amount); and (b) where it is a Coal Purchase Suspension Event, the buyer may not deliver a further Notice of Commitment during the suspension period.
Startup Suspension Event	
Startup Suspension Event	<p>In summary, Startup Suspension Event means any event, or series of events, beyond Genesis' reasonable control (and taking into account the age and condition of the Huntly Power Station), resulting in:</p> <ul style="list-style-type: none"> (a) any partial or entire failure or interruption of supply of natural gas; or (b) the unavailability of auxiliary steam from an auxiliary boiler or an existing operating Rankine Unit (that has not otherwise been reserved by Genesis for the purpose of commencing generation at Unit 5 of Huntly Power Station), <p>to any available Rankine Unit that is required to commence generation (in connection with a Short Duration Baseload Transaction or a Non-Baseload Transaction), which causes or results in Genesis being unable to commence generation at the relevant time from the selected Rankine Unit.</p> <p>A Startup Suspension Event may only apply in relation to Short Duration Baseload Transaction or a Non-Baseload Transaction. Genesis must give the relevant suspension notice:</p> <ul style="list-style-type: none"> (a) in the case of a Short Duration Baseload Transaction, before the start of that Short Duration Baseload Transaction; and (b) in the case of a Non-Baseload Transaction, before the start of a Generation Period in order for the Startup Suspension Event to apply to that Generation Period
Startup Suspension Event adjustments	<p>In summary, if a Startup Suspension Event applies, the relevant Short Duration Baseload Transaction or Non-Baseload Transaction will be knocked out during the suspension period.</p>
Generation Suspension Event	
Generation Suspension Event	<p>In summary, Generation Suspension Event means any event, or series of events, beyond Genesis' reasonable control (and taking into account the age and condition of the Huntly Power Station), resulting in the reduction of coal-fired generation capability from, or the onsite deliverability of coal to, any Rankine Unit (other than a planned outage or decommissioning of a Rankine Unit), which causes the amount of electricity that Genesis is able to generate to be reduced by:</p> <ul style="list-style-type: none"> (d) between 25 MWh and 50 MWh (inclusive) in any trading period (Generation Suspension Event 1); or (e) more than 50 MWh in any trading period (Generation Suspension Event 2).
Generation Suspension Event 1 adjustments	<p>In summary, if a Generation Suspension Event 1 applies:</p> <ul style="list-style-type: none"> (a) the Maximum Option Capacity during the suspension period will be reduced by 50%; and (b) if the Maximum Option Capacity will be exceeded in any Calculation Period (an affected Calculation Period) as a result of the above reduction, in relation to each Transaction, the MW/MWh per affected Calculation Period of the Transaction will be reduced during the suspension period on a pro rata basis so that the reduced Maximum Option Capacity is not exceeded. <p>The affected volume will be reinstated to form part of the Total Net Available Amount once the Generation Suspension Event 1 ceases.</p>

Term Sheet (continued)

Huntly Firming Option Term Sheet (continued)

Generation Suspension Event 2 adjustments	<p>In summary, if a Generation Suspension Event 2 applies:</p> <ul style="list-style-type: none"> (a) the Maximum Option Capacity during the suspension period will be reduced to zero; and (b) in relation to each Transaction, the Notional Quantity (MWh) per Calculation Period during the suspension period will be reduced to zero. <p>The buyer will have the option to extend the term of an affected Transaction or reinstate the affected volume to form part of the Total Net Available Amount once the Generation Suspension Event 2 ceases.</p>
Other definitions	
Calculation Period	A half hour (commencing on the hour or at 30 minutes past the hour) during the term of a Transaction.
Generation Period	<p>In respect of a Peak Period Transaction, a period equal to 30 contiguous Calculation Periods. A Peak Period Transaction has a single Generation Period in each day during the term.</p> <p>In respect of a Super Peak Period Transaction, a period equal to seven contiguous Calculation Periods. A Super Peak Period Transaction has two non-contiguous Generation Periods in each day during the term.</p> <p>Each selected Generation Period:</p> <ul style="list-style-type: none"> (a) must commence at the same time (being on an hour or 30 minutes past an hour) in each day during the Term; and (b) must commence and end within a single day.
MT	A metric tonne.
Non-Baseload Transaction	A Peak Period Transaction or a Super Peak Period Transaction.
Rankine Units	The 250MW gas/coal units at Huntly Power Station.

Genesis Energy

Expression of Interest (EOI)

Huntly Firming Options

Genesis Energy is requesting Expressions of Interest for Capacity under a **Huntly Firming Option (HFO) on terms summarised in the attached term sheet (Term Sheet).**

Each interested party is required to:

- sign and return the Expression of Interest Information Protocol (attached); and
- provide a response to the following question

Please indicate what Capacity of HFO you would be interested in purchasing if a successful bid application process was to result in a clearing price within the ranges below.

We will consider each range as a standalone response, volumes will not be cumulative across ranges.

Clearing Price Range (\$/MW)	90-110k	111-130k	131-150k	> 151k
Capacity (MW)				

(together, the Proposal) and submit the Proposal to Genesis Energy **by 5.00pm Wednesday 22nd May 2024** (Closing Time), or such later time as Genesis Energy may specify by notice in writing to the recipients of this letter.

Proposals may be submitted by registered mail or email to the addresses outlined below:

Address: The Genesis Energy Building
155 Fanshawe Street
Auckland 1010, New Zealand

Name: Scott Foster
General Manager Trading

Email: hfo@genesisenergy.co.nz

By submitting a Proposal to Genesis Energy, each interested party acknowledges and agrees that Genesis Energy may, in its sole discretion:

- accept any Proposal even though it may vary from the terms set out in this letter
- reject any or all Proposals
- discontinue or vary the process at any time for any reason, whether prior to or following the Closing Time
- waive any irregularities or informalities in the process or a Proposal
- deal with or enter into negotiations with one interested party without notifying the others

Genesis Energy agrees that it will not use the documentation and other information received by Genesis Energy from interested parties in response to this EOI for any purpose other than for evaluating Proposals and shall not disclose the same to any other interested party or other person, except to the extent (a) required by law, (b) necessary to satisfy the requirements of any stock exchange, (c) necessary in relation to any dispute or proceedings in connection with this EOI, (d) that such documentation or other information is made available to Genesis Energy's advisers on a confidential basis or (e) as otherwise specified in this EOI.

CONDITIONS:

Any contract resulting from this EOI will be governed by the provisions of an ISDA Master Agreement with an appropriate Schedule between Genesis Energy and the counterparty.

Respondents not having current ISDA Master Agreements with Genesis Energy should be prepared to engage early in the EOI process to expedite the necessary legal documentation.

Genesis Energy will share the response to a question raised by one interested party with all other interested parties where Genesis Energy considers this is appropriate.

You may only submit a Proposal if you are a "wholesale investor" as that term is defined in clauses 3(2)(a), (c) and (d) of Schedule 1 to the Financial Markets Conduct Act 2013 (FMCA) (or, if Genesis has previously agreed in writing with you, clause 3(2)(b) or 3(3)(a) of Schedule 1 to the FMCA). No action has been taken by Genesis Energy or any other person to permit this EOI, the Term Sheet or any related materials (together, the Materials) to be directly or indirectly offered, sold or delivered to any retail investor, or otherwise under any regulated offer, in terms of the FMCA. In particular, no product disclosure statement or limited disclosure document under the FMCA has been or will be prepared or lodged in New Zealand in relation to the Materials or the HFOs.

Expression of Interest (continued)

Huntly Firming Option (continued)

GENERAL:

This letter does not constitute an offer, but merely an invitation to interested parties to express their interest in the HFOs.

The descriptions and details of the HFOs set out in the attached documentation are for information purposes only and Genesis Energy does not give any warranty (express or implied) as to the accuracy, content, completeness, value or otherwise of such descriptions or details. Each interested party acknowledges if it submits a Proposal in response to this EOI, that it does so in reliance solely on its own judgment and not in reliance on any representations made by Genesis Energy.

By participating in the EOI process, each interested party acknowledges that Genesis Energy has reserved to itself certain rights and discretions in this letter and agrees that Genesis Energy may at any time exercise any of these rights and discretions.

For the duration of the EOI, each interested party agrees to keep the EOI strictly confidential and not make any public statement to any third party in relation to any aspect of the EOI, the EOI process or the acceptance or rejection of any Proposal, without Genesis Energy's prior written consent. Each interested party must not attempt to influence or provide any form of personal inducement, reward or benefit to any representative of Genesis Energy in relation to the EOI.

Genesis Energy may rely on the information provided by an interested party (e.g. in correspondence). In submitting a Proposal and communicating with Genesis Energy, each interested party represents and warrants to Genesis Energy that all information it provides to Genesis Energy is true, accurate and complete and not misleading in any material respect.

Each interested party agrees that it shall not have any rights and further waives any rights it may have against Genesis Energy or any other person arising from the exercise by Genesis Energy of its rights and discretions and agrees not to make any claim, bring any action, or otherwise seek to recover from Genesis Energy, or any other person associated with Genesis Energy, any of the costs incurred by that interested party in respect of its Proposal or involvement in the EOI process or any lost expectation of profits or other benefits which that interested party may expect to accrue from any acceptance of its Proposal.

We look forward to receiving your Proposal.

Yours sincerely

Tracey Hickman
Chief Wholesale Officer
Genesis Energy Limited

Information Protocol

Introduction

- I. Genesis Energy Limited (**Genesis**) and Counterparty (together the parties) are proposing to discuss a potential Huntly Firming Option arrangement for 2025 and 2026 (**Proposal**). Prior to entering into the HFO, Counterparty is required to share certain information with Genesis to determine the annual premium and to determine Counterparty's participation in the HFO ("**Process**").
- II. Genesis and Counterparty are mindful of their obligations under the Commerce Act 1986 (**Commerce Act**). The purpose of this information protocol (**Information Protocol**) is to ensure that the parties comply with the Commerce Act when discussing or negotiating the Process and/or the Proposal.

Information Protocol

1. The parties agree to comply with this Information Protocol when discussing, negotiating or corresponding in relation to the Process or Proposal (collectively, the **Communications**) and when dealing with any commercially sensitive information of the other party gained as a result of the Communications.
2. The parties agree the following matters outlined in (a) to (h) below, in relation to the Communications:
 - a. the Communications (and the fact of the Communications) will remain confidential;
 - b. the parties will only engage in the Communications to the extent necessary for evaluating and negotiating the Process and/or Proposal (permitted topics of discussion include the volumes that the parties are seeking to secure, the price of the option(s) and other key terms and conditions, such as necessary credit information);
 - c. the parties will involve in the Communications only those individuals strictly required for the purposes of evaluating and pursuing the Process and/or Proposal (Specified Representatives). Each party must retain a list of **Specified Representatives** and share it with the other party upon request;
 - d. each Specified Representative must agree to comply with the terms of this **Information Protocol**;
 - e. the Specified Representatives will not (unless such information is publicly available and is strictly necessary for the purposes of the Process and/or the Proposal that it be discussed), discuss or share information in relation to:
 - i. either party's current or future prices, production volumes or capacity;
 - ii. future generation strategy;
 - iii. the potential impact of proposed hedging contracts on market prices or generation decisions;
 - iv. expectations of future market (e.g. supply/demand) scenarios occurring;
 - v. negotiations or agreements with other counterparties;
 - vi. underlying costs, margins or margin expectations;
 - vii. matters relating to specific customers; or
 - viii. any other matters which would result in a reduction in competitive uncertainty as to the future actions of either party in the market, without both parties first taking specific competition law advice in relation to such matters.
 - f. prior to any discussions in relation to the Process or Proposal, a high-level agenda will be circulated. The first item on the agenda will be a reminder that the Communications are subject to this Information Protocol;
 - g. the parties will keep appropriate records of any Communications (including brief minutes or file notes). These will be headed Confidential – subject to agreement and legal review;
 - h. if any Specified Representative is in doubt as to whether information should be exchanged or discussed, they must confirm with their legal advisors beforehand.
3. Any information obtained from the other party as a result of the Communications shall not be construed as seeking to enter or entering into, or giving effect to, a contract, arrangement or understanding between the parties, and must be:
 - a. used only for the purpose of evaluating and pursuing the Proposal;
 - b. shared only with Specified Representatives;
 - c. stored securely such that it is not accessible by individuals other than Specified Representatives; and
 - d. returned or destroyed should the Proposal not proceed or Counterparty is not successful in its application for an HFO.

Information Protocol (continued)

Information Protocol (continued)

By signing this Information Protocol, each party agrees to be bound by its terms.

Signed for and on behalf of

Genesis Energy Limited

By its duly authorised signatory:

Name:

Position:

Date:

Signed for and on behalf of

(Counterparty)

By its duly authorised signatory:

Name:

Position:

Date: