

Appendix A Proposed amendment

New definitions to add to Part 1 of the Code

major participant means—

- (a) a **generator**; or
- (b) an **ancillary service agent**; or
- (c) a **direct purchaser**; or
- (d) a **distributor**; or
- (e) a **grid owner**.

quarterly disclosure report means a report provided by a **major participant** under clause 13.2B.

Insert new clauses 13.2B to 13.2F in Part 13 of the Code:

13.2B Submission of quarterly disclosure reports by major participants

- (1) Each **major participant** must submit **quarterly disclosure reports** to the **Authority**.
- (2) Each **quarterly disclosure report** must contain the following information relating to the **major participant's** activities in each quarter beginning 1 January, 1 April, 1 July and 1 October:
 - (a) whether or not it held or was aware of any **disclosure information** to which clause 13.2A(1) applies during the quarter:
 - (b) subject to subclause (4), the means by which it made any such **disclosure information** readily available to the public during the quarter:
 - (c) if during the quarter it decided not to make any such **disclosure information** readily available to the public:
 - (i) the number of times it decided to do so; and
 - (ii) the **disclosure information**; and
 - (iii) the date on which it decided to not make the **disclosure information** readily available to the public; and
 - (iv) the grounds it relied on under clause 13.2A(2) to not make the **disclosure information** readily available to the public; and
 - (v) if it subsequently decided to make the **disclosure information** readily available to the public during the quarter in accordance with clause 13.2A(3), as the ground in clause 13.2A(2) no longer applies, the date on which it decided to make the **disclosure information** readily available to the public:
 - (d) if it decided during a previous quarter not to make any **disclosure information** readily available to the public, and continues to not make that information readily available to the public in the quarter to which the **quarterly disclosure report** relates (“the current quarter”):
 - (i) the **disclosure information**; and

- (ii) the grounds it is relying on under clause 13.2A(2) to not make the **disclosure information** readily available to the public in the current quarter:
 - (e) if it decided during a previous quarter not to make any **disclosure information** readily available to the public but subsequently decided, upon the ground in clause 13.2A(2) no longer applying, to make that **disclosure information** readily available to the public in the current quarter in accordance with clause 13.2A(3);
 - (i) the **disclosure information**; and
 - (ii) the date it made the **disclosure information** readily available to the public; and
 - (iii) the previous quarter or quarters it decided to not make the **disclosure information** readily available to the public:
 - (f) whether or not it complied with clause 13.2A during the quarter:
 - (g) if the **major participant** did not comply with clause 13.2A at any time during the quarter, the details of that non-compliance.
- (3) For the purposes of each **quarterly disclosure report**, each **major participant** must treat any information that came within the definition of **disclosure information** to which clause 13.2A(1) applies at any time during the quarter as **disclosure information**, even if it ceased to be **disclosure information** during the quarter.
- (4) Each **major participant** must provide sufficient information to the **Authority** under subclauses (2)(c)(ii), 2(d)(i) and 2(e)(i) to enable the **Authority** to find the **disclosure information** made readily available to the public during the quarter, including any website addresses.
- (5) The requirement to provide information under subclause (1):
- (a) overrides any legal obligation to keep the **disclosure information** confidential but shall not be deemed a breach of any such obligation; and
 - (b) does not put the **major participant** in breach of any law.

13.2C Timing and form of quarterly disclosure reports under clause 13.2B

- (1) Each **major participant** must submit the **quarterly disclosure report** required by clause 13.2B to the **Authority**—
 - (a) by the end of the month following the expiry of the quarter to which the **quarterly report** relates; and
 - (b) in the form specified by the **Authority**.
- (2) Each **major participant** must ensure that each **quarterly disclosure report** is either—
 - (a) signed and dated by a director, or the chief executive officer, or the chief financial officer, or a person holding a position equivalent to one of those positions, of the **major participant**; or
 - (b) otherwise marked in a way specified by the **Authority** or linked in a way specified by the **Authority** to evidence such a person’s approval of the **quarterly report**.

13.2D Annual report on policies, procedures and provision

- (1) Each **major participant** must report annually to the **Authority** on whether or not the **major participant** has a written policy, procedure and/or process for identifying and determining whether—
 - (a) any information held by the **major participant** is **disclosure information** to which clause 13.2A(1) applies; and
 - (b) there are grounds under clause 13.2A(2) for not making that information readily available to the public.
- (2) Each **major participant** must report under subclause (1) to the Authority—
 - (a) no later than 1 April in each year; and
 - (b) in the form specified by the **Authority** (including that the **Authority** may require the report to be provided with the certification required by clause 13.2E).
- (3) Each **major participant** must ensure that each report provided under subclause (1) is either—
 - (a) signed and dated by a director, or the chief executive officer, or the chief financial officer, or a person holding a position equivalent to one of those positions, of the **major participant**; or
 - (b) otherwise marked in a way specified by the **Authority** or linked in a way specified by the **Authority** to evidence such a person’s approval of the **quarterly report**.
- (4) The first report under this clause is due by 1 April 2022.

13.2E Annual certification of quarterly reports under clause 13.2B

- (1) Each **major participant** must certify to the **Authority** for each year from 1 January to 31 December or part thereof that the board of the **major participant**—
 - (a) has considered each **quarterly disclosure report** provided by the **major participant** under clause 13.2B for the year; and
 - (b) considers, on reasonable grounds and to the best of the board’s belief, that each **quarterly disclosure report** is complete and is a true and correct record of the matters stated in the **quarterly disclosure report**.
- (2) Each **major participant** must submit the certification required by subclause (1) to the Authority—
 - (a) no later than 1 April of the year following the calendar year to which the certification relates; and
 - (b) in the form specified by the **Authority** (including that the **Authority** may require the certification to be provided with the report required by clause 13.2D).
- (3) Each **major participant** must ensure that each certification is either—
 - (a) signed and dated by a director of the **major participant** and either—
 - (i) another director of the **major participant**; or
 - (ii) the **major participant's** chief executive officer, or person holding an equivalent position; or
 - (iii) the **major participant's** chief financial officer, or person holding an equivalent position; or

- (b) otherwise marked in a way specified by the **Authority** or linked in a way specified by the **Authority** to evidence such a person's approval to the **certification**.
- (4) The first certification under this clause is due by 1 April 2022, in respect of the period from the commencement of this clause to 31 December 2021.

13.2F Publication of information in quarterly disclosure reports by the Authority

- (1) The **Authority** may publish any information submitted to it in a **quarterly disclosure report**, information in a report made under clause 13.2D and information in the certification made by a **major participant** under clause 13.2E, provided any such publication does not involve the publication of—
 - (a) any **disclosure information** that the **major participant** did not make readily available to the public by reason of clauses 13.2A(ba) to 13.2A(d), or 13.2A(f) to 12.2A(i); or
 - (b) information from which the nature of any **disclosure information** that the **major participant** did not make readily available to the public by reason of clauses 13.2A(ba) to 13.2A(d), or 13.2A(f) to 12.2A(i), can reasonably be identified by another **participant** or member of the public; or
 - (c) the grounds relied on under clauses 13.2A(ba) to 13.2A(d), or 13.2A(f) to 12.2A(i), by the **major participant** to not make **disclosure information** readily available to the public, where the disclosure of those grounds would enable another **participant** or a member of the public to reasonably identify the **disclosure information**.
- (2) The limitations in subclause (1)(a) to (1)(c) do not apply if the **grounds** under clauses 13.2A(ba) to 13.2A(d), or 13.2A(f) to 12.2A(i), no longer apply to the **disclosure information**.
- (3) If a **major participant** identifies to the **Authority** that the **major participant** is bound by a legal obligation to keep confidential any **disclosure information** provided to the **Authority** in a **quarterly disclosure report** or that disclosure of the **disclosure information** by the **participant** would be a breach of law, the **Authority** is required to keep that **disclosure information** confidential, except that this sub-clause does not prevent the use of the **disclosure information** for the purposes of clauses 13.2G(1)(b) to 13.2G(1)(d).
- (4) The Authority is not required to keep **disclosure information** to which sub-clause (3) applies confidential if it does not consider on reasonable grounds that the **participant** is bound by a legal obligation to keep the **disclosure information** confidential or that disclosure of the **disclosure information** by the **major participant** would be a breach of law.
- (5) The provision by a **major participant** to the **Authority** of **disclosure information** in a **quarterly disclosure report** that is subject to legal professional privilege or privilege against self-incrimination held by the **participant** does not amount to waiver of the privilege in the **disclosure information**.

13.2G Use of information in quarterly disclosure reports by the Authority

- (1) The **Authority** may use the **disclosure information** set out in a **quarterly disclosure report**:

- (a) as provided in clause 13.2F(1); or
 - (b) for the purposes set out in section 16(1)(b), (c), (d), (f), and (g) of the Act; or
 - (c) to provide to any other regulatory agency for a purpose related to that agency.
- (2) The **Authority** may not use any information subject to legal professional privilege for the purposes in sub-paragraphs (b) and (c) above other than for the purpose of monitoring and enforcing compliance with clause 13.2A.
- (3) The **Authority** must comply with section 48(2) and 48(3) of the Act in respect of information that is subject to privilege against self-incrimination.

13.2H Authority may require independent audit of disclosure requirements or certification

- (1) The **Authority** may, in its discretion, require an audit of whether a **major participant** has complied with any or all of clauses 13.2B to 13.2E.
- (2) If the **Authority** requires an **audit** under subclause (1), the **Authority** must require the **major participant** to nominate an appropriate **auditor**.
- (3) The **major participant** must provide that nomination within a reasonable timeframe.
- (4) The **Authority** may direct the **major participant** to appoint the **auditor** nominated by the **major participant** or to nominate another auditor for approval.
- (5) If the **major participant** fails to nominate an appropriate **auditor** within 5 **business days**, the **Authority** may direct the **major participant** to appoint an **auditor** of the **Authority's** choice.
- (6) The **major participant** must appoint an **auditor** in accordance with a direction made under subsection (4) or subsection (5).

13.2I Carrying out audit

- (1) A **major participant** subject to an **audit** under clause 13.2H must, on request from the **auditor**, provide the **auditor** with such information as the **auditor** reasonably requires in order to carry out the **audit**.
- (2) The **major participant** must provide the information no later than 10 **business days** after receiving a request from the **auditor** for the information.
- (3) The **major participant** must ensure that the **auditor**:
 - (a) produces an audit report on whether the major participant has complied with clauses 13.2B to 13.2E (as specified by the Authority) under clause 13.2H(1); and
 - (b) submits the audit report to the Authority (within the timeframe specified by the Authority).
- (4) Before the audit report is submitted to the Authority, any failure of the **major participant** to comply with clauses 13.2B to 13.2E must be referred back to the **major participant** for comment.
- (5) The comments of the **major participant** must be included in the **audit** report.

- (6) The **major participant** may require that the **auditor** does not provide the **Authority** with a copy of any information that the **major participant** has provided to the **auditor** in accordance with subclause (2).

13.2J Payment of auditor's costs

- (1) If an **audit** establishes, to the **Authority's** reasonable satisfaction, that the **major participant** has not complied with clauses 13.2B to 13.2E (whether or not the **Authority** appoints an investigator to investigate the alleged breach), the **major participant** must pay the **auditor's** costs.
- (2) Despite subclause (1), if an **audit** establishes, to the **Authority's** reasonable satisfaction that any non-compliance of the **major participant** is minor, the **Authority** may, in its discretion, determine the proportion of the **auditor's** costs that the **major participant** must pay, and the **major participant** must pay those costs.
- (3) If an **audit** establishes to the **Authority's** reasonable satisfaction that the **major participant** has complied with clauses 13.2B to 13.2E, the **Authority** must pay the **auditor's** costs.

13.3K Requirement to provide complete and accurate information

- (1) In addition to the requirements of clause 13.2, the **major participant** must take all practicable steps to ensure that the information that the **major participant** is required to provide to any person under clauses 13.2B to 13.2E is complete and correct.
- (2) If a **major participant** becomes aware that any information the **major participant** provided under clauses 13.2B to 13.2E does not comply with subclause (1) or clause 13.2, even if the **major participant** has taken all practicable steps to ensure that the information complies, the **major participant** must, as soon as practicable, provide such further information as is necessary to ensure that the information provided complies with clauses 13.2B to 13.2E and clause 13.2.

Q26. Do you have any comments on the drafting of the proposed amendment?

Appendix B Format for submissions

Submitter	
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Question	Comment
Q1. Do you agree with the Authority’s problem definition: “The key outcome for an effective wholesale market is confidence in efficient prices, and currently there is a widespread view that prices are not as efficient as they could be because some useful thermal fuel information is absent from the market?”	
Q2. Do you agree that there are concerns with both what thermal fuel information is disclosed and the ability to access, interpret and use thermal fuel information that is disclosed?	
Q3. Do you agree that thermal fuel information disclosure is the most pressing wholesale information disclosure issue?	
Q4. Of the other information disclosure issues listed in Appendix E, which are the priority issues? Are there any issues missing from this list?	
Q5. Do you agree with the Authority’s stocktake of current thermal fuel information disclosure? Has the Authority missed any information in the stocktake or misrepresented disclosure?	
Q6. Are you aware of disclosure information where one of the exclusions in clause 13.2A(2) has been relied on to not make the disclosure information publicly available? If so, what exclusion(s) were relied on?	
Q7. Do you agree with the factors leading to non-disclosure of thermal fuel information? Are these factors leading to inefficient prices in the wholesale market?	
Q8. Do you agree with the barriers to accessing and interpreting thermal fuel information? Are these barriers leading to inefficient prices in the wholesale market?	
Q9. Do you agree the proposed Code amendment captures the appropriate players in the market?	
Q10. What requirements in the proposed Code amendment will assist participants to be freely able to disclose the information requested?	
Q11. Are there any unusual situations (whether arising out of contract, law or otherwise) that the Authority needs to consider in amending the current disclosure regime?	
Q12. Please provide any feedback on the approach proposed to privilege given the powers (and	

	<p>protections) that exist under sections 46 – 48 of the Electricity Industry Act and the limitations proposed on the use and publication of the information.</p>	
Q13.	Please provide any feedback on the limitations proposed in relation to the use of the information requested.	
Q14.	Please provide any comments on the proposed audit power.	
Q15.	Do you agree with proposal 1: a Code change to require quarterly reporting of disclosure activities, provision of an annual directors' declaration and an annual report on policies? Please explain why or why not.	
Q16.	Do you agree with proposal 2: to update the Guidelines regarding thermal fuel disclosure? Please explain why or why not.	
Q17.	Do you agree with proposal 3: to raise awareness and utilisation of existing disclosures through a disclosure reference webpage? Please explain why or why not.	
Q18.	Do you agree with proposal 4: that thermal fuel information disclosures under clause 13.2A should be made to a central location? Please explain why or why not.	
Q19.	Do you agree that the current Code clearly spells out the disclosure obligations to market participants? If not, why not?	
Q20.	Do you have any comments on the validity of the exclusions in clause 13.2A(2)? Do you consider there are benefits of removing the confidentiality exclusion in clause 13.2A(2)(c)?	
Q21.	Do you believe the currently available penalties and remedies are sufficient?	
Q22.	Do you agree with the objectives of the proposed amendment? If not, why not?	
Q23.	Do you agree the benefits of the proposed amendment outweigh its costs?	
Q24.	Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	
Q25.	Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	
Q26.	Do you have any comments on the drafting of the proposed amendment?	

Appendix C Who holds or consumes thermal fuel information

C.1 The relevant parties are holders of disclosure information and consumers of disclosure information. The Authority's Guidelines³⁰ provide some guidance on who the relevant parties are. It uses the term 'interested parties' as meaning those "*parties with a key interest in the wholesale market including, for instance:*

- (a) *existing and potential participants*
- (b) *medium to large electricity users and other consumers who are directly and materially affected by prices in the relevant markets*
- (c) *owners of electricity generating fuels (or holders of fuel contracts)*
- (d) *providers of market services such as trading or demand aggregation*
- (e) *current and potential investors in wholesale electricity market assets and services*
- (f) *market commentators and analysts*
- (g) *regulatory bodies such as the Authority, the Gas Industry Company, and the Commerce Commission*
- (h) *Government agencies and officials."*

Holders of thermal fuel information

C.2 The key holders of thermal fuel information are predominantly thermal fuel generators, but could also include importers, producers, explorers, transporters, and major users, of thermal fuel.

C.3 Table 6 sets out the key parties with thermal generation capacity in New Zealand. These generators have a mix of combined-cycle gas turbines, open-cycle gas turbines, dual fuel (coal/gas) units, diesel-fired thermal stations, and cogeneration. Cogeneration mainly runs to provide heat for associated industrial plant and does not typically provide flexibility to the system. However, cogeneration can also be affected by any thermal fuel disruption, and this can have flow on impacts to the electricity system.

Table 6: Parties with coal and gas-fired units to generate electricity ³¹

Generator	Thermal generator capacity (MW)	Generating station(s)	Fuel types
Genesis	954	Rankine Units - coal-fired (Units 1, 2 & 4), Combined Cycle (Unit 5), Open Cycle (Unit 6), Huntly, Waikato	Gas, coal, diesel
Contact	786	Taranaki Combined Cycle, Stratford peakers, Whirinaki, Te Rapa	Gas, diesel
Todd	281	Junction Rd, McKee, Whareroa, Kapuni, Edgecumbe, Mangahewa	Gas
Alinta/ NZ Steel	112	Glenbrook	Gas

³⁰ Section 6.17, Guidelines for participants on wholesale market information disclosure obligations, May 2018

³¹ This table is not exhaustive. There are several small thermal generators not included in this table. Where a station has multiple owners, the generation capacity figure is based the ownership share for that party.

Generator	Thermal generator capacity (MW)	Generating station(s)	Fuel types
Fonterra	50	Whareroa, Te Awamutu, Waitoa, Edendale	Gas, coal
Oji	49	Kinleith, Tasman, Whirinaki	Gas, biofuel

C.4 Other holders of gas information may include major players in the gas industry such as explorers and producers, transporters, and major gas users. Figure 5³² illustrates the major market players in each segment of the gas industry.

Figure 5: Major market players in the gas industry

		OMV	Todd	Beach	NZOG	Greymouth	Genesis	First Gas	Powerco	Vector	Methanex	Ballance	Fonterra	Contact	Alinta	Mercury	Trustpower	GasNet	Refining NZ	NZ Steel	Oji Fibre	
EXPLORATION & PRODUCTION		✓	✓	✓	✓	✓	✓															
WHOLESALE		✓	✓	✓	✓	✓	✓															
STORAGE								✓														
TRANSMISSION								✓														
MAJOR USERS	INDUSTRY										✓	✓	✓							✓	✓	✓
	ELECTRICITY GENERATION		✓				✓						✓	✓	✓							
DISTRIBUTION			✓					✓	✓	✓									✓			
RESIDENTIAL, COMMERCIAL & INDUSTRIAL USERS			✓			✓	✓										✓	✓				

C.5 Regulatory oversight on information disclosure by the upstream gas players involved in the production and processing of thermal fuels falls within the functions of the Gas Industry Co. The Authority has been working collaboratively with the Gas Industry Co to jointly address issues on information disclosure.

Holders of coal information

C.6 Genesis Energy is a key holder of coal information because it is the main electricity generator that uses coal for this purpose. It uses coal at its remaining Huntly Rankine units predominantly to meet short supply and winter or peak demand.

Holders of diesel information

C.7 The use of diesel for electricity generation is largely limited to peaker units during periods when other sources of generation are constrained, such as in a dry year. The largest of the diesel units is Contact's 150MW at Whirinaki.

³² Source: <https://gasindustry.co.nz/about-the-industry/industry-participants>

Appendix D Existing thermal fuel information disclosure

Source	Type of information	Disclosure Frequency	Period
Genesis	Closing balance of coal stockpile at the Huntly plant	Quarterly	Historical
	Coal use and purchases	Quarterly	Historical
Contact	Gas storage	Monthly	Historical
First Gas	Gas transmission outages	Current outages	Historical
	Gas storage	Monthly (published on Gas Industry Co website)	Historical
MBIE	Gas use	Annual and quarterly use by sector	Historical
	Gas production	Annual and quarterly production by field	Historical
	Gas field deliverability	Maximum, minimum and average deliverability by field	Historical
	Gas storage	Quarterly, included under 'Stock change' with other items	Historical
	Gas prices	Average pricing for residential, commercial, industrial and wholesale groups	Historical
	Forecast field production	Projected production by field by year	Forward looking
	Reserves/ resources	Reserves by field (1P, 2P, 3P) and contingent resources (2C) ³³	Historical
	Permit data	Permit data published after 5-year lag Annual activity data (incl. seismic acquired, wells drilled (number, metres, cost), permits granted and surrendered, etc.)	Historical
Open Access Transmission Information System (OATIS)	Gas production	Hourly/daily data by gate/meter for open access pipelines	Historical
		24 hour forecast of scheduled quantities for Maui system gates (no data for non-Maui system)	Forward looking
	Gas use	Hourly/daily data by gate/meter	Historical
		24 hour forecast of scheduled quantities	Forward looking
Listed companies	Gas prices	Contract price information (occasionally)	Historical
	Future gas supply	Information on gas purchase rights ³⁴	Forward looking
EmsTradeport	Gas prices	Volume and price data for spot transactions	Historical
Field operators disclose	Information on current and planned outages of gas production facilities	Various (Gas Industry Co publishes notices received)	Forward looking
Various –	International coal prices	Monthly average coal prices for benchmark coal (eg, Newcastle (World Bank) or Indonesia (Argus))	Historical
Various e.g. Intercontinental Exchange (ICE)		Newcastle Futures contract prices for benchmark coal for 5+ years ahead	Forward looking

³³ 1P, 2P, and 3P are measures of reserves, which are known accumulations of oil and gas that are anticipated to be both technically and commercially recoverable with today's technology. 1P are 'proven' reserves (90 percent probability of recovery exceeding 1P), 2P are 'proven' plus 'probable' reserves (50 percent probability of recovery exceeding 2P), and 3P are 'proven' plus 'probable' plus 'possible' reserves (10 percent probability of recovery exceeding 3P). 2C is the best estimate of contingent resources, which are estimates of oil and gas that are technically recoverable with today's technology, but not considered commercial at present.

³⁴ Some information available but not comprehensive.

Appendix E Other concerns with information disclosure (unrelated to thermal fuels)

- E.1 Some stakeholders have raised wholesale information disclosure concerns not related to thermal fuel information directly. We intend to consider these concerns in a second phase of the wholesale market information disclosure project.
- E.2 Concerns raised include:
- (a) a lack of enforcement of the current rules (submissions on the EPR Options Paper by Contact, Haast, and the ENA³⁵)
 - (b) the guidance in the guidelines about information on the wholesale information trading system (WITS) being “readily available to the public”, while information on the NZX or the ASX is not considered “readily available to the public” (Contact’s submission on the EPR Options Paper³⁶)
 - (c) that parties only need to disclose information about themselves and not information that is not about them but impacts on their operations (and likely to impact on price) (NZ Steel’s submission on the EPR Options Paper³⁷)
 - (d) poor disclosure by major users of their demand response intentions
 - (e) uncertainties around the interaction of clause 13.2A and Schedule 8.3, Technical Code D disclosure obligations
 - (f) the lack of standardisation and clarity around reporting of hydrological spill data
 - (g) that the disclosure period for contracts on the Hedge Disclosure System needs to be shorter and/ or the Hedge Disclosure System needs to be updated
 - (h) inaccuracies in the system operator demand forecast
 - (i) that an explicit prohibition on insider trading is required.
 - (j) the need for a centralised database (for improving transparency and enhancing market participation (Genesis’ submission on the EPR First Report).³⁸

³⁵ *ibid.* Refer to Contact submission, p5-6; Haast submission, p3; ENA submission, p14.

³⁶ *ibid.* Refer to Contact submission, p5-6.

³⁷ *ibid.* Refer to NZ Steel submission, p4.

³⁸ Genesis Energy, Genesis Energy’s submission on the electricity price review first report, October 2018, p20. Genesis submission, p20.

Appendix F Assessment of options

High-level options for addressing information gaps

F.1 We considered eight high-level options for addressing thermal fuel information gaps. These high-level options are set out in Table 7 below. Table 7 also sets out what concerns each high-level option would help address. These are the four broad concerns with thermal fuel disclosure that were introduced in Figure 3 of Section 2.

Table 7: High-level options and the concerns they address

High-level option	Examples	Concern(s) addressed
A: a prescriptive Code change	<ul style="list-style-type: none"> requiring public disclosure of specific thermal fuel information requiring disclosure to the system operator of specific thermal fuel information 	1: some useful information not required to be disclosed 2: some useful information required to be disclosed isn't disclosed
B: changes to the principles-based Code	<ul style="list-style-type: none"> changing or removing one of the exclusions in clause 13.2A(2) 	1: some useful information not required to be disclosed
C: Code change to require quarterly reporting on disclosure activity, annual certification and report on policies	<ul style="list-style-type: none"> to encourage compliance with the existing Code and facilitate monitoring and enforcement activity 	2: some useful information required to be disclosed isn't disclosed 3: difficult to access some information that is disclosed
D: making the Guidelines more prescriptive	<ul style="list-style-type: none"> eg, providing guidance that a coal-fired generator's estimated coal stockpile should be disclosed when it falls below a certain level 	2: some useful information required to be disclosed isn't disclosed
E: educating participants about the existing rules and Guidelines	<ul style="list-style-type: none"> providing guidance on whether specific thermal information is likely to meet the definition of disclosure information 	2: some useful information required to be disclosed isn't disclosed
F: educating stakeholders about existing disclosure	<ul style="list-style-type: none"> developing a signposting website republish information on a centralised platform standardising information formats 	3: difficult to access some information that is disclosed 4: difficult to interpret some information that is disclosed
G: increasing awareness of existing disclosure activity	<ul style="list-style-type: none"> auditing participants' information disclosure 	3: difficult to access some information that is disclosed

High-level option	Examples	Concern(s) addressed
H: increasing level of monitoring and enforcement	<ul style="list-style-type: none"> increased prioritisation and resource availability for the Authority's monitoring and enforcement functions implementation of greater information gathering powers increase penalties available for Code breaches 	2: some useful information required to be disclosed isn't being disclosed

F.2 The options that are appropriate for addressing each thermal fuel information gap will depend on the reason(s) for that information gap existing, as outlined in Table 8.

Table 8: Options to address different information gaps

Reason(s) for information gap	Options to close information gap
Information gaps where existing disclosure requirements are insufficient	A Code change to require disclosure or to clarify an existing requirement for disclosure
Information gaps where disclosure requirements are sufficient, but information is not being disclosed	<ul style="list-style-type: none"> a Code change that clarifies an existing requirement for disclosure (falls under high-level option A or B) providing more guidance to participants on the existing information disclosure requirements (high-level option D or E) increase the consequences of non-disclosure when a participant does not comply with disclosure requirements (high-level option H)
Information gaps where disclosure information is not being utilised effectively	<ul style="list-style-type: none"> improve awareness of disclosed information (high-level option F or G) improve the usefulness of disclosed information (high-level option F)

Principles used to assess options

F.3 We assessed each of the possible options for enhancing information disclosure against a range of factors. Any option for enhancing information disclosure needs to be consistent with the Authority's statutory objective:

*To promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers.*³⁹

F.4 In addition we also:

³⁹ Section 15 of the Act.

- (a) had regard to the Code amendment principles (to the extent that they are applicable⁴⁰) for options that require a Code change
- (b) considered whether the option is likely to have a positive net present value (ie, the benefits outweigh the costs)
- (c) assessed the extent to which the option:
 - (i) provides information necessary to support efficient pricing in forward and spot markets and/or support reliability and security of supply
 - (ii) is in the public interest (not only providing private interest)
 - (iii) does not unfairly disadvantage a party
 - (iv) preserves innovation
 - (v) is compatible with balancing the minimum information disclosure to (adequately) reduce asymmetry and relevant information not being disclosed until proven material
 - (vi) presents low or mitigated risk of unintended consequences
 - (vii) is adaptable, flexible, and fits with our approach of generally increasing the level of disclosure over time
 - (viii) is enforceable.

Options assessment

- F.5 For each of the high-level options outlined in Table 7, we considered how each could be used to enhance:
- (a) 1 – general thermal fuel information
 - (b) 2 – gas information
 - (c) 3 – coal information
 - (d) 4 – diesel information
 - (e) 5 – security of supply information.
- F.6 The following sections provide some commentary on how different options could be used to address specific information gaps identified within each of these areas.

1 – General thermal fuel information enhancement options

Establish disclosure requirements through Code amendments

- F.7 Where existing disclosure practices are not sufficient to deliver efficient market outcomes, the Code’s disclosure requirements could be amended. These amendments could introduce prescriptive requirements or they could refine the existing principles-based requirements.

⁴⁰ The Authority’s consultation charter requires that when considering amendments to the Code, the Authority have regard to the Code amendment principles to the extent that the Authority considers they are applicable in each case. The consultation charter is one of the Authority’s foundation document and is available at: <http://www.ea.govt.nz/about-us/documents-publications/foundation-documents/>.

- F.8 For example, an exclusion in clause 13.2A(2) of the Code could be changed or removed. Options include removing the confidentiality exclusion⁴¹ or refining the grounds under which information may be withheld if it is “insufficiently definite”⁴².

Communication and clarification of existing requirements

- F.9 Updating the Guidelines as the market evolves and as issues are raised is one way to communicate expectations around existing disclosure requirements in the Code. Specific changes could involve making the Guidelines more prescriptive, incorporating additional examples, or noting that non-disclosure of specific information may be a breach. Guidelines, however, are guides only and have limited enforcement value.
- F.10 One area which could be clarified is the requirements around disclosure of information that is secondary to other information already disclosed. For example, a gas producer may publicly disclose a gas production outage which could have some impact on the ability of a gas-fired generator to generate. The generator may have information on the specific impact of the outage on its ability to generate that is not contained within the gas producer’s announcement. The generator may be required to disclose this information if the information could be reasonably expected to have a material impact on prices in the wholesale market.

Increased consequences of non-disclosure

- F.11 Enforcement activities such as the use of ‘please explain’ letters and the development of precedent through breach investigations and Rulings Panel findings can accelerate participant understanding of existing requirements.
- F.12 Engagement with stakeholders has revealed some parties believe that some information required to be disclosed under clause 13.2A of the Code is not being disclosed. Perceived lack of enforcement and limited consequences of breaching the Code were cited by some stakeholders as a contributing factor to incomplete disclosure.
- F.13 When deciding whether to disclose information, a participant may weigh up the benefits of not disclosing information against the expected costs (or risks) of non-disclosure. This risk versus benefit consideration will be influenced by the:
- (a) cost to the participant of the disclosure information becoming known to the market (eg, increased hedge costs)
 - (b) cost of disclosing the information (eg, checking accuracy of the information, publishing the information, costs of associated systems)
 - (c) probability that non-disclosure of the information would be detected
 - (d) probability that a detected non-disclosure would face enforcement action
 - (e) magnitude of penalties or enforcement actions.
- F.14 Enhanced monitoring and enforcement will increase the costs of non-disclosure (by impacting the factors listed in F.13(c) - F.13(e)). For example, enhancing the capability, prioritisation, and resource availability of the Authority’s monitoring and enforcement functions will increase the probability of detection and enforcement action being taken for non-disclosure. This should increase the likelihood of disclosure information being disclosed.

⁴¹ Clause 13.2A(2)c of the Code.

⁴² Clause 13.2A(2)g of the Code.

- F.15 Enhanced monitoring and enforcement may also:
- (a) improve confidence that robust disclosure is happening in the market (if it is only a perception that disclosure information is not being disclosed)
 - (b) increase incentives for information holders to actively consider regularly disclosing potentially material information as part of normal business practices.
- F.16 Monitoring of compliance with disclosure obligations can be difficult, especially for principle-based regimes. In the case of clause 13.2A, the Authority may not have good visibility on the level of compliance because it may not know what information participants hold that meets the definition of disclosure information. This could potentially be improved by implementing greater information gathering powers or requiring participants to self-report on their own compliance with the disclosure obligations. Alternatively, prescriptive rules and some forms of voluntary disclosure can simplify monitoring requirements.
- F.17 Stakeholders have suggested that the penalties available if a breach is upheld are not a sufficient deterrence to prevent non-disclosure. Current penalties assessable by the Rulings Panel are outlined in Section 44 and 46 of the Act with pecuniary penalty orders limited to \$200,000, although other remedies including compensation to another participant are available. Any penalty assigned by the Rulings Panel “must take into account its own previous decisions in respect of any similar situations previously dealt with by the Authority or any predecessor of the Authority”⁴³. An increase in penalties would require a change to the Act and therefore is not within the Authority’s powers. However, if we considered the penalty limit needed to be increased we could suggest that the penalty limit is reviewed.

2 – Gas information enhancement options

Communication of existing requirements

- F.18 The Authority has identified a diversity of views among stakeholders about what information is subject to existing disclosure obligations. In particular, there are differing opinions on what needs to be disclosed about the availability of gas-fired generation, both in the near term and over the medium term. It is this availability, and the physical and commercial characteristics of the gas supply chain, that impact prices in the wholesale electricity market. Participants with gas-fired generation may have material information relating to the availability of gas and the impact that has on the ability to generate.
- F.19 For example, if a peaking plant is offered into the market for the next 36 hours, but the generator only has enough gas supply contracted to run for eight hours and is unlikely to be able to secure more gas, is the generator required to disclose that information? If not, are there conditions under which it would be required to disclose the information?
- F.20 Providing specific examples in the Guidelines of what information needs to be disclosed (and under what conditions) could support communication of the implications of existing requirements for gas information disclosure.

⁴³ Act s45(2)

Increased awareness of existing disclosure information

- F.21 Some parties who have requested gas contract disclosure were unaware of the extent to which listed firms disclose their cost of gas. The Authority could improve awareness of this information through education. In addition, the Authority could establish a disclosure reference webpage or republish this information in a centralised place to make it easier for interested parties to find the information that is already available.
- F.22 In addition, the dynamics of the gas market may not be readily understood by non-gas market participants. Education may assist with helping electricity market participants understand more of the physical and economic characterisations of the gas supply chain and its impact on electricity markets.

3 – Coal information enhancement options

- F.23 Stakeholders have suggested that the efficiency of the wholesale electricity market could be improved by:
- (a) more timely disclosure of coal stockpiles at an increased frequency
 - (b) more information on planned coal shipments from overseas or domestic suppliers.
- F.24 The availability of Huntly Rankine units to generate with coal is material to the market, especially over winter or in dry (or potentially dry) conditions. That availability can be dependent on (among other things) a supply of coal. The availability of coal for coal-fired generation at Huntly in the present and into the future is dependent on Genesis' coal stockpile, consumption, and shipments. Each of these factors will be managed by Genesis commercially, with shipments subject to the greatest potential disruption.

Increased awareness of existing disclosure information

- F.25 Some parties who have requested greater coal disclosure were unaware of the extent of the existing disclosure of coal stockpiles. This can be readily resolved through education.
- F.26 Analysis of the disclosed stockpile information can provide some information of the capability of the Rankine units when combined with running information and heat rate assumptions.⁴⁴
- F.27 In addition, most of the time coal stockpile information is unlikely to have much impact on electricity price formation. This is because New Zealand can import additional supply if needed at relatively short notice. The exception would be a situation when the stockpile is so low there is a risk of running out before further deliveries can arrive. In our view, there would be benefits in improving the availability of coal stockpile information in situations where the stockpile is low.

Communication of existing requirements

- F.28 Current disclosure of coal stockpile information is provided to satisfy financial market requirements. There may be some potential enhancements to the information disclosed in quarterly reports which may benefit the market with minimal impact on the costs to Genesis. These enhancements could include improving the timeliness or frequency of coal stockpile disclosure. In the past, Genesis has increased the frequency of its reporting of stockpile information during times when the stockpile was low.

⁴⁴ In essence, the current stockpile level can be inferred from the previous quarterly disclosure minus estimated coal use, with the latter calculated from daily electricity and gas data. However, this calculation will not account for new deliveries to the stockpile.

- F.29 One option is for the Authority to clarify, through changes to Guidelines, situations which are likely to have a material impact on wholesale electricity market prices and specific disclosures which would satisfy the disclosure requirements.
- F.30 In the case of coal stockpiles, we note that Genesis commenced regular communication with the market about its coal supply in mid-October 2018 when the its coal stockpile fell below 200 kt. From 13 November 2018, Genesis started disclosing the estimated quantity of coal in its Huntly stockpile on a weekly basis.⁴⁵ However, Genesis stopped these weekly disclosures once the size of its stockpile increased. The Guidelines could be changed to recommend weekly disclosure of the estimated coal stockpile quantity when the stockpile is estimated to be less than 200kt, regardless of the time of year or market conditions.

4 – Diesel information enhancement options

- F.31 Diesel information is less likely (than gas or coal information) to have a material impact on prices in the wholesale electricity market. However, a shortage of diesel could be material if it means that a diesel-fired generating station will not be available after a period of running. Similarly, if fuel is rationed through adjustments to offers, that may have a material impact on prices in the wholesale market, especially in times of market stress.

Communication and enforcement of existing requirements

- F.32 In our view, no new disclosure requirements are needed in relation to diesel fuel. Communication of existing requirements around disclosure, combined with any general adjustments to monitoring and compliance should be sufficient to address any gaps in diesel information disclosure.

5 – Security of Supply information enhancement options

- F.33 The system operator currently relies on the voluntary disclosure of thermal fuel information, including anticipated availability of fuel over winter, for security of supply assessments and ensuring reliable supply. While voluntary disclosure is generally working well, there are some potential concerns.
- F.34 First, because disclosure is voluntary, there may be a lower duty of care implicit in the disclosures, which may affect the effectiveness of system and security of supply planning.
- F.35 Second, the process by which the system operator obtains voluntary disclosure of thermal fuel information can be laborious and inefficient. For example, the system operator may make an assumption about the operation of a thermal generating station and use this in their modelling. This modelling and the assumptions is then published for review. The generator may then inform the system operator that the assumptions it made are no longer correct (for example, due to thermal fuel supply constraints).
- F.36 Lastly, the system operator is reluctant to publish both the thermal fuel information it has been provided voluntarily or the details of the security of supply assessments derived from the voluntary information due to the risk the information source might stop. This can make it difficult for other parties to assess the reasonableness of the system operator's security of supply assessment.

⁴⁵ Refer: <https://www.genesisenergy.co.nz/about/media/news/managing-huntly%E2%80%99s-coal-stockpile>

Prescriptive Code change to require disclosure to the system operator

- F.37 There are two potential options for requiring disclosure of information (including thermal fuel information) for security of supply purposes.
- F.38 The first option is to require participants to disclose information to the system operator when requested (by the system operator) for the purposes of assessing system reliability or security of supply. This information would be mandated for use exclusively by the system operator. We anticipate this option would improve the speed, efficiency, and reliability of the system operator's security of supply assessments. However, the system operator may need to limit how much information it shares in its assessments.
- F.39 The second option would not only require the disclosure of information to the system operator, but would also:
- (a) require public disclosure, or
 - (b) limit the ability of the disclosing party to restrict what findings and assumptions (based on information disclosed) the system operator can disclose.
- F.40 While both options will enhance security of supply outcomes, this may come at a commercial cost to disclosing parties.

Proposal 4: possible locations for centralised thermal fuel disclosures

- F.41 The fourth proposal (see Section 4) is to add detail to the guidelines or Code to make clear where and when we expect thermal fuel generators, predominantly gas and coal, to disclose information on how their generation capacity will be impacted by current or expected fuel constraints. There are a number of potential options, for which an initial high level assessment is provided in Table 9. Requirements and further assessment of the most suitable location would be conducted during Phase 2 of this project.

Table 9 Assessment of options for where parties could disclose information about their availability being impacted by fuel constraints

Option	Advantages	Disadvantages
1. Wholesale Information Trading System (WITS) or associated website	Pre-existing platform that lists a variety of information relevant to trading decisions. Website already has functionality to be available 24/7 and updated regularly.	Some costs to add this function.
2. Planned Outage Co-ordination Process (POCP)	Pre-existing centralised platform for outage disclosures.	A new type of information disclosed here could limit the clarity of existing information.
3. Authority website	Authority could design website to suit monitoring and compliance functions; potentially advantages to a more 'impartial' location.	No existing parallel functionality (eg, a website that serves a 24/7 information provision function). Could be costly to develop and maintain.
4. Notification to System Operator	Precedent when Genesis disclosed coal stockpile in this manner.	Places and increased obligation on the System Operator.

Option	Advantages	Disadvantages
	Could allow the SO to know more information relevant to security of supply than is publicly disclosed.	
5. Company webpages (various)	Information holders already use their own websites to do this so development cost limited. Information holder can adjust format to suit each piece of information.	Information continues to be in disparate locations.
6. Gas Industry Co gas notification webpage	Pre-existing functionality so development cost limited.	Publication from non-gas thermal players (coal, diesel) could be confusing to parties making use of this webpage.

Appendix G Cost benefit assessment

Problem definition

G.1 In Section 2 we characterised the problem definition addressed in this paper as:

***Problem definition:** The key outcome for an effective wholesale market is confidence in efficient prices, and currently there is a widespread view that prices are not as efficient as they could be because some useful and important thermal fuel information is absent from the market.*

G.2 The absence of some useful and important information creates asymmetries between market participants and puts some parties at a disadvantage compared to other parties who have more, or better access, to thermal fuel information.

G.3 The less-informed parties may make inefficient decisions that are reflected in less efficient prices. If information asymmetry is left unresolved, market participants will perceive that prices are not efficient and this would reduce confidence in the wholesale market. In the long-term, lack of market confidence would discourage the entry of new players into the market and reduce competitive pressure on incumbent players.

Description of the counterfactual

G.4 The counterfactual is used to compare the expected impacts of the recommended options to a 'no change' scenario. In this analysis, the counterfactual is a continuation of the current disclosure regime adjusted for the recent improvements observed in certain information areas, as further explained below.

G.5 The current information disclosure obligations are found in clause 13.2A of the Code. This clause is kept unchanged in the counterfactual. Moreover, no revisions or further detail will be added to the current guidelines on wholesale market information disclosure. In the counterfactual the existing information disclosure platforms including EMI, POCP and WITS are not expected to be upgraded and no other platform or website will be developed. In the counterfactual, we have assumed that the level of monitoring and compliance undertaken by the Authority will be maintained.

G.6 Recent and planned information disclosure initiatives have improved information about planned gas production outages and gas storage levels, as described in Section 2. In the counterfactual we have assumed these improvements are maintained. There have also been recent improvements with emsTradepoint publishing information on the daily spot and monthly and quarterly volume weighted average prices on its website. The Gas Industry Co is also considering whether there are net benefits in publishing average price information derived from gas supply agreements. We have assumed that both these information disclosure improvements will occur in the counterfactual.

Recommended options

G.7 The recommended options are described in detail in Section 4 and are summarised as follows:

1. Code change to require quarterly reporting of disclosure activities and compliance including use of exclusions. An annual directors' declaration to confirm the quarterly reports and an annual report on policies.

2. Update the current guidelines to include recommended disclosure approaches and further examples of coal and gas fuel disclosure.
 3. Authority to raise awareness and utilisation of existing disclosures through a disclosure reference webpage and interpretation document.
 4. Authority to clarify where parties should disclose information about their availability being impacted by a fuel constraint eg, via a centralised website (in phase 2 of this project).
- G.8 These options are not mutually exclusive and one or more options could be implemented concurrently. In this analysis, we have assumed that all the recommended options will be implemented and therefore, their costs and benefits have been evaluated together.
- G.9 The costs and benefits are assessed relative to the counterfactual and therefore represent the incremental impact from implementing the recommended options to improve the current thermal fuel information disclosure regime.

Estimated cost of the recommended options

- G.10 The starting premise for evaluating the cost of the options is that the current disclosure obligations have been in place for several years and market participants should already have most, if not all, of the administrative setup and internal processes in place to ensure compliance. Some market participants also have other information disclosure obligations such as NZX's continuous disclosure obligations, and it is reasonable to assume that a similar setup and processes apply to thermal fuel information disclosure.
- G.11 Hence, the recommended options described in Section 4, excluding the proposed Code amendment (Option 1), are expected to impose minor additional administrative costs on participants, and these costs would largely involve strengthening the existing internal processes and training personnel to better identify disclosure information.
- G.12 The proposed Code amendment could involve a higher cost to some participants because it would mandate quarterly reporting to the Authority along with an annual declaration signed by the company's director. This may require some participants to setup or review their management and certification⁴⁶ processes, and this would incur some additional costs. Participants who already have good disclosure processes and practices will incur smaller additional costs.
- G.13 Regarding the other three proposals, some would impose costs to the Authority or some other party other than the disclosing participant. The costs incurred to raise awareness and facilitate accessibility of disclosure information would vary and are largely depend on the specifics of the option that is implemented.
- G.14 It is difficult to quantify a cost figure for each of these options at present. Where possible, we have consulted our existing suppliers to better understand the likely cost range for some of the recommended options. Table 10 provides an indication of the magnitude of the cost to implement the recommended options.

⁴⁶ Some market participants would already have this setup in place to adhere with the Authority's stress testing regime.

Table 10: Estimated cost of implementing the recommended options

Recommended Options	Estimated Cost (\$)	
	To the Information Holder	To the Electricity Authority or other entities ¹
1. Code change to require quarterly reporting of disclosure activities	Small to moderate ²	Small to moderate
2. Authority updates the electricity wholesale market information disclosure guidelines [§]	-	Small to moderate ³
3a. Authority hosts 'a reference' webpage with links to relevant information sources [§]	-	Small to moderate ⁴
3b. Authority publish educational information to explain information sources [§]	-	Small to moderate
4. Develop an appropriate centralised location for disclosure information ^{5§}	-	Moderate to high ⁶

Note 1: these entities could be the Gas Industry Co (hosts the Information Disclosure board), Transpower (hosts POCP) or NZX (hosts WITS), depending on the option.

Note 2: it is assumed that reporting systems and processes are largely expected to be in place

Note 3: this cost was estimated to range between \$15,000 and \$20,000 depending on the length and graphical design of the revised guidelines

Note 4: the reference webpage was estimated to require around 5 hours to setup and develop.

Note 5: this option is to be further considered in Phase 2. It was assumed that participants would upload the information using a standardized reporting form.

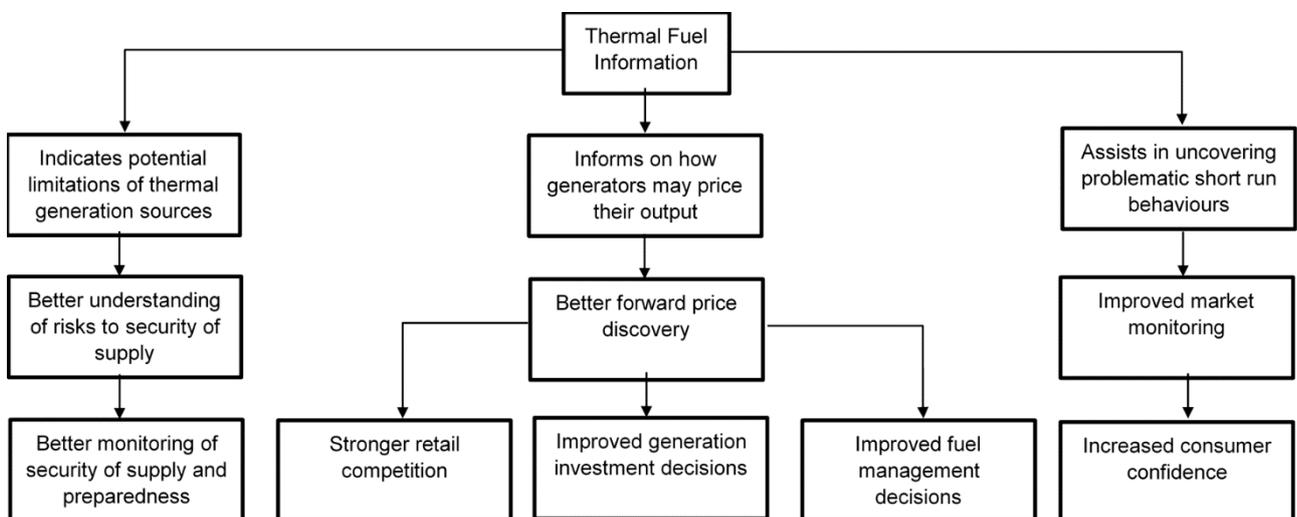
Note 6: the cost largely depends on the centralised location that is upgraded. The cost to upgrade the WITS was estimated to be around \$51,000.

Note §: these options are expected to result in compliance cost savings to the disclosing participants

Estimated benefits of the recommended options

G.15 Implementation of the recommended options is expected to markedly improve the availability, accessibility and quality of thermal fuel information to market participants. These benefits are a direct consequence of narrowing information asymmetry between market participants but also tend to be indirectly observed through incremental improvements in one or more aspects of the market including price discovery (and operational decision-making). Figure 6 illustrates the benefits obtained from improving thermal fuel information disclosure.

Figure 6: Benefits of improving thermal fuel information disclosure



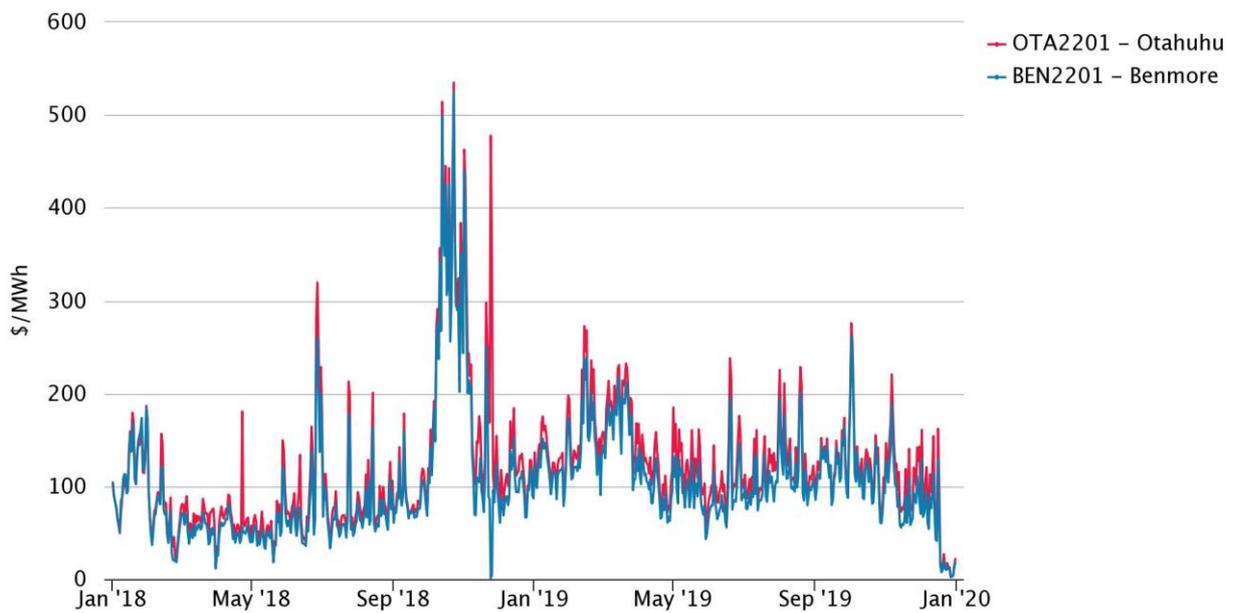
Source: Adapted from WAG Discussion Paper, 08 March 2018

- G.16 The benefits illustrated in Figure 6 are expected to have various positive outcomes on market outcomes:
- (a) **Build confidence in the electricity market by reducing risk and uncertainty:** market participants need information to make decisions about the future. Poor information can lead to increased risk and uncertainty. Potential consequences may include mistaken decisions and increased costs. For example, if parties had poor information about the effect of planned gas outages on thermal generation, this could lead to less reliable supply and/or unnecessarily high costs to maintain stand-by resources;
 - (b) **Improve trust in the market:** unequal access to relevant information can discourage participation in the market, facilitate market manipulation and reduce entry and new investment. Providing more uniform access to information may increase trust in the market, and hence improve liquidity. This is the primary justification for provisions that prohibit insider trading in financial markets;
 - (c) **Facilitate market monitoring:** market monitoring can assist in the uncovering of problematic short run behaviours. Improved market monitoring can therefore provide increased assurance to consumers and their representatives about market outcomes and reduce the risk of ad hoc intervention.
 - (d) **Improve security of supply:** by helping to avoid unserved energy at times of scarcity in cases where this scarcity results in part from fuel constraints on thermal generation and avoid the need for various dry-year measures in cases where the dry year is exacerbated by fuel constraints on thermal generation.
- G.17 Quantifying the benefits of incremental⁴⁷ improvements in thermal fuel information disclosure is difficult and relies on assumptions that may not be adequately supported by direct evidence. Moreover, it is difficult to disentangle future benefits from concurrent disclosure improvements undertaken by the Gas Industry Co.
- G.18 Notwithstanding, the potential benefits from enhancing thermal fuel information disclosure are not insignificant given the impact that even small market improvements would have on improving market efficiency and the resultant benefits to consumers.
- G.19 For example, improved disclosure is expected to reduce instances where market inefficiencies and unexpected price spikes have occurred, in part, due to information asymmetries between market participants. Two recent occurrences are:
- (a) the Pohokura gas field outages in late-2018⁴⁸, which caused disruptions to gas suppliers and created uncertainty for thermal electricity generators. This uncertainty was reflected in very high wholesale prices, as shown in Figure 7.

⁴⁷ Incremental relative to the counterfactual

⁴⁸ UTS decision, 14 February 2019, paragraphs 9.69 and 9.72.

Figure 7: Wholesale price trends (January 2018 – January 2020)



Source: www.emi.ea.govt.nz

- (b) the Taranaki Combined Cycle fuel constraint in early 2019, where there were strong indications that (at least) one hydro generator was surprised by undisclosed thermal fuel constraints. A more conservative water management strategy could have been adopted if participants were made aware of the constraint in a more timely fashion – and this could have resulted in better overall fuel management and lower price volatility

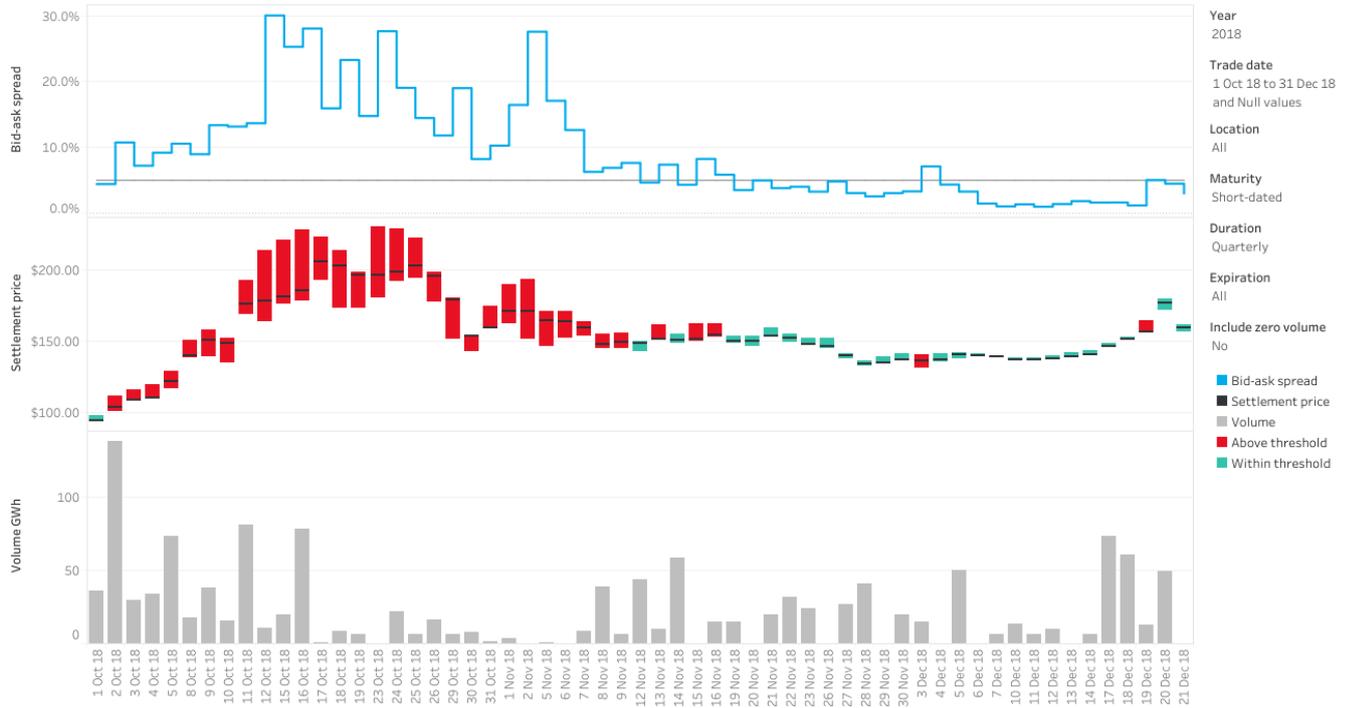
G.20 Another way of gauging the magnitude of the potential benefits is to observe market efficiency improvements when thermal fuel information has been disclosed in the past. For example; in November 2018, Genesis Energy voluntarily increased the frequency of its coal stockpile disclosures for its Huntly facility. Although we cannot be certain, it seems likely that this (in combination with other factors) contributed to tighter spreads in the futures market which fell from 15% in October 2018 to around 5% by December 2018⁴⁹, as shown in Figure 8.

⁴⁹ Although other factors contributed to narrow the price spreads including the rainy weather observed that December

Figure 8: Daily average bid-ask spread, high-low range, settlement price and trade volume GWh by trade date (October 2018 – December 2018)

Market made contract trends

Daily average bid-ask spread, high-low range, settlement price and trade volume GWh by trade date



Source: www.emi.ea.govt.nz

G.21 A similar conclusion was derived from the Authority’s analysis on hedge market enhancements. The discussion paper⁵⁰ states that;

“the criteria used by each market maker when they relied on the portfolio stress provisions was opaque, both to other market makers and the wider wholesale market. That two of the market makers had direct involvement in the gas market and two did not added very significantly to the perceived risk of market making for the two without gas involvement as they feared parties with better gas related information could use this to their disadvantage. The outcome was wide spreads for most market made future contracts, but particularly for the near-term contracts. This can be seen in Figure 9, which shows average end of day bid-ask spreads across all market made contracts”.

⁵⁰ Pg.5-6, Hedge Market Enhancements discussion paper, Electricity Authority, November 2019

Figure 9: Bid-ask spread – baseload futures⁵¹

BID-ASK SPREAD FOR BASELOAD FUTURES

ASX daily closing snapshot data Oct 17 to Sep 19

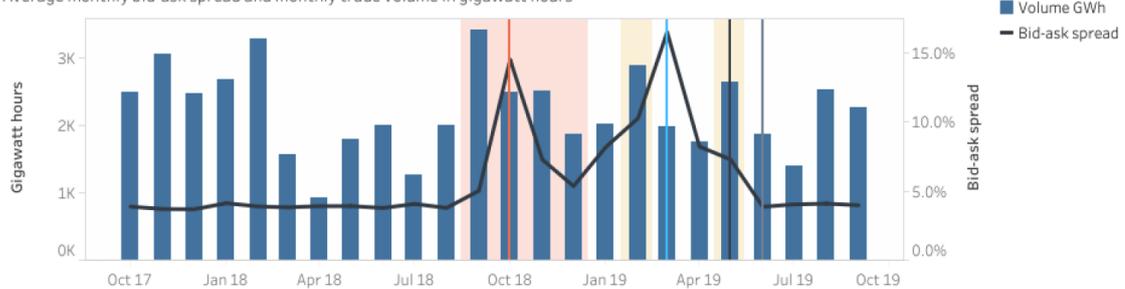
Important dates

- Pohokura unscheduled outage
- Pohokura scheduled outages
- Unscheduled outage announcement
- Hydro storage increases
- Quarterly bid-ask spreads tighten
- Monthly bid-ask spreads tighten

The bid-ask spread is the amount by which the price to buy a contract exceeds the price to sell a contract. The bid-ask spread is essentially the difference between the highest price that a buyer is willing to pay for a contract and the lowest price that a seller is willing to sell a contract.

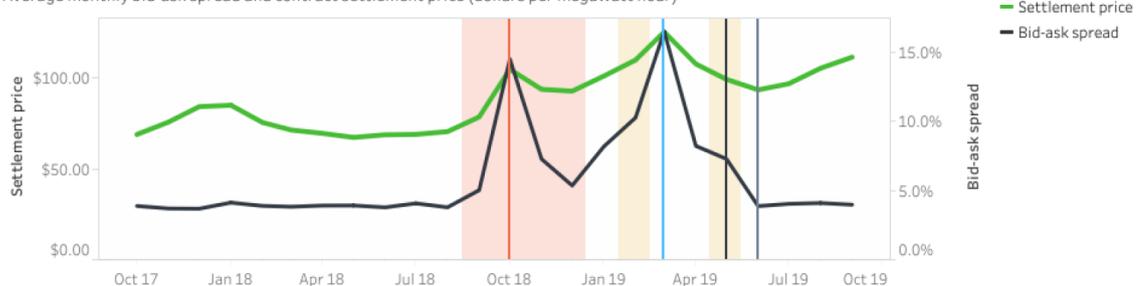
Bid-ask spread and trade volume

Average monthly bid-ask spread and monthly trade volume in gigawatt hours



Bid-ask spread and settlement price

Average monthly bid-ask spread and contract settlement price (dollars per megawatt hour)



Source: www.emi.ea.govt.nz

Conclusions

- G.22 The above analysis shows that although both the costs and benefits from implementing the recommended options are uncertain, the nature of the options themselves pose a low risk of unexpected large costs incurred by the disclosing parties. The expected costs to the disclosing party would largely involve the need to setup or strengthen the administrative and internal processes to meet the existing Code disclosure obligations.
- G.23 The Authority would need to carefully design the recommended options to avoid incurring large costs, particularly in the case of option 4.
- G.24 On the other hand, the potential benefits from enhancing thermal fuel information disclosure could be substantial, and we therefore consider the proposals will have a significant net benefit for consumers, because reducing information asymmetries between market players would be likely to;
 - (a) reduce the frequency of instances when the market operated inefficiently
 - (b) reduce the scale and persistence of unexpected price spikes
 reduce the risk premium to market participants and narrow the bid-ask spreads in the futures market.

⁵¹ An interactive version of this figure is available at: <https://public.tableau.com/profile/electricity.authority#!/vizhome/Hedgemarketenhancementproject/Bid-askspread>

Appendix H Comparison of international approaches to information disclosure

- H.1 We have considered what the information disclosure requirements are in the wholesale gas and electricity markets in Australia and Europe (including the United Kingdom).
- H.2 The information disclosure requirements in Europe (for both electricity and gas) follow a similar format to the clause 13.2A disclosure requirements in New Zealand—energy market participants are required to disclose ‘inside information’, which is information that is likely to significantly affect the prices of one or more wholesale energy products.
- H.3 In Australia, electricity and gas participants are required to disclose information to the Australian Energy Market Operator (AEMO). However, what happens to this information differ between the electricity and gas markets:
- (a) the AEMO uses electricity market information to develop short-term and medium-term assessments of projected system and energy adequacy. Information required to be disclosed by electricity participants to the AEMO includes maintenance scheduling, intended plant availability, energy constraints, and other asset conditions which could impact security and reliability of supply. Information must be provided weekly.
 - (b) the AEMO publishes information provided by gas participants on a bulletin board. Information required to be provided to the AEMO for disclosure on the bulletin board includes capacity outlook, nominated and forecast use of gas storage facilities, delivery information for gas pipelines, and daily production information.
- H.4 The following paragraphs provide more detail on the information disclosure requirements in Australia and Europe.

Information disclosure in Australian electricity markets

- H.5 The National Electricity Rules (NER) require the AEMO to collect and analyse information from generators (greater than 30MW), transmission-connected customers, and network service providers in the National Electricity Market (NEM). The information must be collected weekly and includes maintenance scheduling, intended plant availability, energy constraints and other asset conditions which could impact security and reliability of supply, and significant changes to load forecasts previously notified to the AEMO. The AEMO uses this information to develop short-term (the next six trading days) and medium-term (24 months ahead) projected assessment of system adequacy processes (PASA).
- H.6 The AEMO also publishes an Energy Adequacy Assessment Projection (EAAP) at least once year. The EAAP models different scenarios and reports on potential energy constraints and their impacts over a two-year period. This modelling focusses on the ability to generate electricity, including constraints on fuel availability. Thermal fuel and water for hydro generation are included. The AEMO uses information provided for the PASA, as well as information from generators that describes the energy constraints (including fuel availability constraints) that affect the ability of its generating units to generate electricity.

Information disclosure in Australian gas markets

East Coast Gas Markets

- H.7 The National Gas Rules (NGR) require the AEMO to maintain a bulletin board to make information available to parties to facilitate trade in natural gas and natural gas services, informed and efficient decisions in relation to the provision and use of natural gas and natural gas services, and negotiations for access to pipelines.
- H.8 The Gas Bulletin Board (GBB) was established in 2008 as a gas market and system information website covering all major gas production fields, major demand centres and natural gas transmission pipeline systems of South Australia, Victoria, Tasmania, NSW, ACT and Queensland. GBB facility operators provide AEMO with information as required under the NGR for publication to the GBB in standard reports and displayed on a GBB map.
- H.9 The NGR set out the information that gas facilities need to disclose on the GBB. Information includes:
- (a) short-term (usually next 7-days) and medium-term capacity outlook for each gas facility
 - (b) linepack capacity adequacy for the next two days
 - (c) nominated and forecast:
 - (d) use of gas storage facilities
 - (e) delivery information for gas pipelines
 - (f) use of production facilities
 - (g) daily production and storage data
 - (h) daily flow data for gas pipelines
 - (i) pipeline bid and offer summary for secondary pipeline capacity available for sale.

Western Australia Gas Market

- H.10 The Western Australia Gas Bulletin Board (GBBWA) was established in 2013 under the Gas Services Information (GSI) Act, Regulations and Rules. The GBBWA is a website on which information about short- and near-term natural gas supply, transmission, storage, and demand in Western Australia is published. The GBBWA participants include gas producers, gas storage facility operators, pipeline operators, shippers, and large users.
- H.11 Information required to be disclosed on the GBBWA includes:
- (a) capacity outlook information including a linepack capacity adequacy flag for the current and next two days, a 7-day capacity outlook, and a medium-term capacity outlook
 - (b) nominated and forecast flow data
 - (c) daily actual flow data
 - (d) daily actual consumption information
 - (e) gas specification data.

Information disclosure in Europe/Great Britain

- H.12 Regulation on wholesale energy market integrity and transparency (REMIT) is EU-wide regulation that requires (among other things) that energy market participants publicly disclose 'inside information'. Article 2(1) of REMIT defines inside information to be "information of a precise nature which has not been made public, which relates, directly or indirectly, to one or more wholesale energy products and which, if it were made public, would be likely to significantly affect the prices of those wholesale energy products."
- H.13 The information disclosure obligations in REMIT are principle-based—it is up to the market participant to determine whether the information they hold meets the definition of inside information. However, REMIT does state that inside information should include information relating "to the capacity and use of facilities for production, storage, consumption or transmission of electricity or natural gas or related to the capacity and use of LNG facilities, including planned or unplanned unavailability of these facilities" .
- H.14 REMIT requires that inside information must be disclosed "in an effective and timely manner". In its guidelines on the application of REMIT, the Agency for the Cooperation of Energy Regulators (ACER) notes that it "believes that, in order to achieve effective disclosure according to Article 4 of REMIT, the information shall be disclosed using a platform the disclosure of inside information (Inside Information Platform (IIP))". ACER facilitates compliance with the inside information disclosure obligations by providing a list of IIP available for disclosure of inside information on its REMIT Portal.

Glossary of abbreviations and terms

ACER	Agency for the Cooperation of Energy Regulators (Europe)
Act	Electricity Industry Act 2010
AEMO	Australian Energy Market Operator
ASX	Australian Securities Exchange
Authority	Electricity Authority
Code	Electricity Industry Participation Code 2010
EAAP	Energy Adequacy Assessment Projection (used in Australia's NEM)
EMI	Electricity market information website: www.emi.ea.govt.nz
emsTradeport	A commodity trading exchange who have a spot market for trading natural gas in New Zealand
EPR	Electricity Price Review
First Gas	First Gas operates more than 2,200 kilometres of high-pressure gas transmission pipelines and stations that supply natural gas from Taranaki to industrial consumers throughout the North Island. First Gas also operates more than 4,800 kilometres of gas distribution networks across the North Island.
Flex Gas	A First Gas affiliate that owns and operates the Ahurora gas storage facility in Taranaki.
FTR	Financial transmission right, which is a financial risk management product that protects against price risks arising from transmission losses and constraints
Gas Industry Co	Gas Industry Company
GBB	Gas Bulletin Board (used in Australia's gas market (excluding Western Australia))
GBBWA	Western Australia Gas Bulletin Board
Guidelines	The Authority's <i>Guidelines for participants on wholesale market information disclosure obligations</i>
MBIE	Ministry of Business, Innovation and Employment
NEM	National Electricity Market (Australia)
NER	National Electricity Rules (Australia)
NGR	National Gas Rules (Australia)
NZX	New Zealand stock exchange
PASA	Projected assessment of system adequacy processes (used in Australia's NEM)
POCP	The Planned Outage Co-ordination Process, agreed between the system operator and industry to assist with outage

disclosure arrangements under Technical Code D of Schedule 8.3 of the Code

Regulations

Electricity Industry (Enforcement) Regulations 2010

REMIT

Regulation on wholesale energy market integrity and transparency (REMIT) (Europe)

UTS

Undesirable Trading Situation, is a situation that threatens, or may threaten, confidence in, or the integrity of, the wholesale market that cannot otherwise be resolved satisfactorily under the Code

Wholesale market

The spot market, hedge market and ancillary services market

WITS

Wholesale information and trading system