



20 August 2012

Manager, Financial Markets Unit
Corporations and Capital Markets Division
The Treasury
Langton Crescent
PARKES ACT 2600

Attention: Percy Bell

Submitted by e-mail: financialmarkets@treasury.gov.au

Dear Mr Bell

CORPORATIONS LEGISLATION AMENDMENTS (DERIVATIVE TRANSACTIONS) DRAFT BILL

Origin Energy (Origin) appreciates the opportunity to provide comments to the Commonwealth Treasury (Treasury) on the Draft Bill to reform Australia's over-the-counter (OTC) derivative market framework. We understand these proposed reforms relate to outcomes being sought through the G20 forum.

Origin is particularly interested in these proposed changes as OTC derivatives are a key instrument in our energy portfolio for hedging market risk. Market stability in Australia's energy markets, particularly the National Electricity Market (NEM) relies on the use of hedging products traded in financial markets.

Concerns around the framework's application to energy markets

Origin Energy is very concerned that the proposed legislative changes inadvertently threaten the stability and efficiency of the NEM. By reducing the flexibility and functionality of OTC derivatives as a risk management tool, the proposed legislation can increase the cost of managing risk in the energy market. Consequently, this can lead to increased energy prices.

These inadvertent outcomes arise because the Draft Bill captures derivatives used by participants in the energy sector and treats them in the same way as derivatives traded in purely financial markets. Energy market participants, however, use derivatives as a key risk management tool to manage a physical market exposure; they are not purely speculative products. These participants also have a core interest in promoting market efficiency and stability.

The driver behind the proposed legislation is to reform financial markets. However, if commodity markets - like the energy market - are inadvertently captured, these reforms will impose poorly suited regulatory obligations on commodity market participants and could increase risks in the energy sector rather than reducing them.

The existing energy market framework already encourages market participants to make efficient and prudent decision making around trading energy derivatives. This is because the majority of participants who trade electricity derivatives also participate in the underlying electricity market. The primary function of these financial instruments is therefore to hedge market risk. As such, these principal players have a core interest in maintaining stability promoting competition in the electricity markets. As such, they operate, transact and invest in a manner that, we consider, promotes efficient and sustainable market outcomes.

The Australian Energy Market Commission (AEMC) is currently preparing advice for the Standing Council on Energy and Resources (SCER) to assess the financial resilience of the NEM. The AEMC's view to date is that the existing arrangements are robust:

“the existing risk management practices of prudent generators and retailers and existing regulatory requirements provide a framework that should mitigate the risk of financial contagion in many circumstances.”¹

If the proposed framework were to apply to energy derivatives, Origin would expect the costs of meeting its customers' energy demand to increase, ultimately translating into higher electricity prices. As we discuss in this submission, we consider the consequences of the proposed framework are likely to:

- constrain the effectiveness of existing risk management practices and thereby reduce market efficiency and stability; and
- increase regulatory compliance costs, which ultimately increase electricity costs for consumers.

Suggestions to improve the operation and application of the Draft Bill

While we appreciate the Draft Bill introduces enabling legislation, Origin is concerned with the absence of detail around how the Minister and ASIC will make their decisions and the content and practical application of those decisions. The wide powers provided under the legislation leave open the very real possibility that decisions impacting on the energy sector could be made without adequate consultation with industry or energy market institutions. Given the complexity of the energy market, this lack of consultation increases the likelihood of decisions being made that reduce energy market stability. Consequently, we consider additional checks and balances are necessary to ensure that the appropriate level of energy sector expertise informs decisions made under this legislation that affects energy markets.

Origin considers the Commonwealth Minister for Energy (as Chair of the Standing Council on Energy and Resources) should have a key decision-making role with respect to hedging products used by participants in the energy sector - including energy derivatives. As such, we recommend that, in addition to the decision-making power proposed for the Minister for Financial Services and Superannuation, the Chair of the SCER be a joint decision-maker for any decision under this legislation relating to an energy market derivative class. This process can help minimise the risk of a decision leading to unintended consequences for the energy sector.

We have also suggested some ways to improve the certainty, predictability and transparency of the proposed OTC derivatives framework. These include:

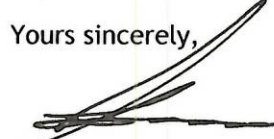
- introducing a consultation process prior to a Minister's decision to declare a derivative class captured;
- formalising the consultation process for ASIC, including a requirement for ASIC to consult with the AEMC for rules covering energy market derivative class;
- clarifying the process around ASIC making urgent rules and the Minister's decision on those rules; and
- confirming the treatment of confidential information provided to a trade repository.

¹ AEMC 2012, *NEM Financial Market Resilience*, Issues Paper, 8 June 2012, Sydney, p.21. Available: www.aemc.gov.au

Further discussions

Origin would welcome the opportunity to work through any questions or outstanding issues you may have. Please contact Hannah Heath (Manager, Regulatory Policy) on (02) 9503 5500 or hannah.heath@originenergy.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Anthony Lucas', with a horizontal line underneath.

Anthony Lucas
General Manager
Energy Risk Management

1. The regulatory framework needs to cater for the different relationships between derivatives and their underlying markets

Principally, the concerns arising from the global financial crisis (GFC) relate to the high level of speculation in OTC derivative markets. The framework set out in the proposed Bill is focused on improving the regulatory arrangements for managing and monitoring speculative trading in financial markets, in particular. The nature of risk in these more speculative markets is very different when compared to the risk arising from physical commodity markets, like energy markets.

In the energy market, the primary function of a derivative is to hedge market risk. While there are speculative traders in energy markets, the large majority of counterparties of OTC derivatives are physical market participants. The risk profile of the energy market therefore depends on the ability of participants to access flexible and quality derivatives, including OTC products.

As the principal players in the energy market, physical participants have a core interest in ensuring that both the derivative and physical markets are sustainable. These players have significant capital invested in the market. Origin, for instance, has significant investments in both physical generation plant as well as an energy retail portfolio. As such, we - and other market participants - operate, transact and invest in a manner that we consider promotes a financially robust energy market that is sustainable in the long term. These efficiencies are crucial to be able to deliver competitively priced energy to customers.

From an energy sector perspective, there does not appear to be a pressing problem with the existing risk management frameworks. The commercial incentives to promote sustainable business decisions are inherent in the capital already invested and the significant prudential collateral provided to the Australian Energy Market Operator. In addition, the AEMC - an independent energy market regulatory body - finds the existing frameworks are robust from the perspective of managing financial contagion. It therefore appears unlikely that applying the proposed reform framework to the energy sector would deliver any measurable benefit; in fact, it is more likely to impose net costs.

As such, when making a decision on what derivative classes to apply the proposed framework to, it is important that the Minister actively considers the underlying function of the derivative class. Regulating the derivatives themselves cannot be considered in isolation of the operations of the markets of the underlying commodities to which those derivatives relate. It is important to ensure the nature of regulation for the derivative class does not limit their functionality and attractiveness for managing risk.

2. The role of derivatives in managing energy market risk

2.1. Access to a diverse supply of derivatives promotes competition

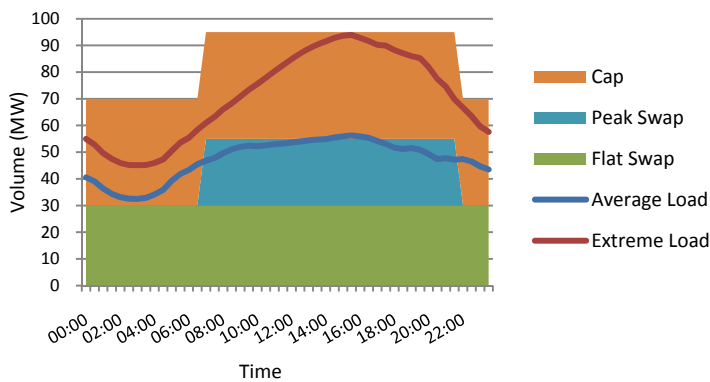
The ability to combine different derivatives in a hedge portfolio gives rise to a key point of competitive advantage and commercial differentiation in the energy market. As described on Appendix A, one of the advantages of OTC products is counterparties can sculpt contract terms. These structured OTC products provide participants with more flexibility to tailor a hedging strategy that more closely aligns to their needs. Complementing the use of standard products means participants can respond to market conditions more efficiently and effectively.

Access to a diverse set of hedging products enables retailers to:

- manage market risk effectively; but also
- do so in a way that enables them to differentiate themselves from their competitors.

Using a simple example, the figures below compare two hedging approaches: one using standard products (OTC and/or Futures) only (Retailer A); and one using a combination of standard derivatives and non-standard OTC derivatives (Retailer B). The hedging profile looks at meeting demand over a single day.

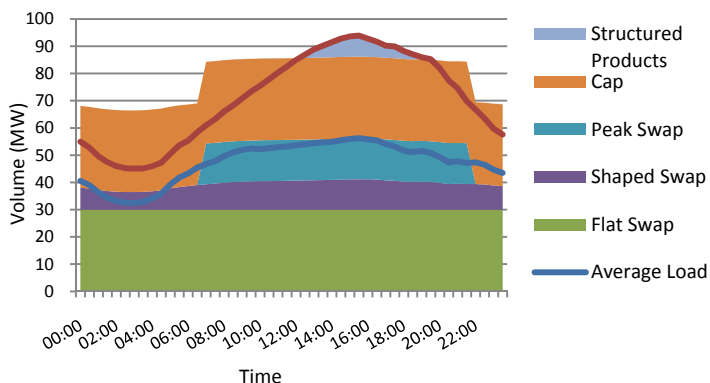
Figure 1: Retailer A - Hypothetical example using only standard hedging products



In this example, prudent Retailer A uses standard products only to hedge its demand (load). As a prudent retailer, A uses energy products, like swaps to cover its average load. Peak swaps cover demand from 7am to 10pm each day while flat swaps provide a 24 hour hedge. Cap products are capacity products, used to hedge against volatility.

Using only standard products limits the flexibility available to Retailer A. The net impact is to over-contract for the volatility periods particularly. This is because the most significant market exposure (risk) is at the peak time. If the participant is not hedged during that period, it runs the risk of being exposed to the market price cap. With a market price cap of \$12,900 per megawatt hour, that could be a significant exposure. While this hedge portfolio covers Retailer A's market exposure, there is an element of redundancy in the profile.

Figure 2: Retailer B - Hypothetical example using non-standard OTC and other standard hedging products



In this example, Retailer B uses a combination of standard products (OTC, futures) and non-standard OTC products (structured products and shaped swaps) to hedge its market exposure. When compared to Figure A, the hedge portfolio is more reflective of actual demand, particularly around managing the extreme load peaks with structured products.

The more targeted derivatives help manage market exposure more effectively, more closely aligned to the actual risk exposure being managed by Retailer B. Retailer B's hedging strategy is a more cost effective approach, with less redundancy.

This simple comparison highlights that even though both hedging strategies cover the retailer's market risk, access to non-standard products can help manage market risk more effectively. Products like shaped swaps can be tailored to individual portfolios, whether that is a retailer's customer demand or the optimal operation of generation plant. These cannot be standardised; no two retail portfolios or generation plant are the same.

A more competitive energy market results from retailers becoming more sophisticated in how they manage their hedging portfolios and market exposures. Origin is concerned that the proposed Bill may reduce the use of non-standard products, which leads to an outcome that could increase market risk and volatility, while reducing market stability. This is discussed in more detail in Section 3 below. This is unlikely to be in the long term interests of energy consumers.

3. Implications from applying the proposed regulatory framework on energy markets

The proposed regulatory framework has three aspects:

1. report all OTC derivatives to trade repositories;
2. clear all standard OTC derivatives through central counterparties; and
3. execute all standard OTC derivatives on exchanges.

3.1. Unclear on benefits from reporting all energy OTC derivatives

Potential consequences for availability of non-standard derivatives

The proposed framework appears to cover all OTC derivatives from the perspective of reporting trades to a repository. While there would be a compliance cost for reporting standard trades, there is a more significant impact likely from a requirement to report on non-standard derivatives also.

A requirement to report these transactions to a central repository could expose the commercial positions of individual companies. For markets where only a small proportion of OTC trades are non-standard, that may be less of a concern. However, for energy markets, these non-standard OTC derivative products are a key point of competitive differentiation between participants. The commercial impact is dependent on the nature of the detailed reporting requirements, which are currently unknown.

Central reporting may constrain execution of future derivative products and limit incentives to develop innovative solutions to hedge energy market risk. This could lead to less efficient hedging strategies, constraining the ability of energy market participants to optimise and leverage off the uniqueness of their individual portfolios. The likely outcome is a more costly hedging profile for these participants, which translates into higher energy costs.

Cost-benefit test unlikely to support application of reforms to energy derivatives

It is also unclear what the benefit from collecting information on all energy OTC derivatives would be. These contracts cover only one aspect of the overall hedging strategy of an energy market participant, so it would be difficult to form a complete market risk profile.

This then raises another question around the use for the collected information. Given a proportion of the derivatives are non-standard, it is difficult to see how ASIC could report

on them without releasing commercially sensitive information. Aggregating the data is also unlikely to offer a practical solution for nonstandard products.

Therefore, if the data has limited value, a net market benefit does not appear likely to result from imposing this requirement on energy derivatives. Rather, it seems like the obligation would impose a significant compliance burden on energy market participants and introduce an unnecessary requirement to establish a trade repository.

3.2. Relevance of central clearing and execution for energy derivatives

Potential consequences for availability of non-standard derivatives

Origin supports the Treasury's position that central clearing and execution is not appropriate for those OTC derivative classes that primarily provide a hedging capacity. In the April 2012 Consultation Paper, Treasury stated:

"It may be appropriate to only apply the clearing obligation to some types of transactions. The transactions to which the clearing obligation applies may be limited by reference to the nature of those transactions (for example hedging or commercial risk mitigation transactions may be exempt from the obligation). Rules proposed in other jurisdictions would exempt transactions entered into for the purpose of hedging or mitigation commercial risks from a central clearing obligation."²

As discussed throughout this submission, the primary use of energy derivatives is to hedge exposure in physical energy markets. As such, Origin would support exempting energy derivatives from these requirements.

Increase in regulatory compliance costs

From a practical perspective, energy market participants use a variety of hedging products to manage their market exposure. In addition to physical generation, participants in the NEM also use exchange-based products and non-standard OTC derivatives. As a proportion of the total quantum of trades executed, the volume of standard OTC derivatives is unlikely to warrant the expense of establishing a central counterparty and the regulatory resources required to prepare and consult on the applicable derivative transaction rules.

4. Recommended framework amendments to provide regulatory certainty for energy market participants

While we appreciate the Draft Bill introduces enabling legislation, Origin is concerned with the absence of detail around how the Minister and ASIC will make their decisions and the content and practical application of those decisions. The wide powers provided under the legislation leave open the very real possibility that decisions impacting on the energy sector could be made without adequate consultation with industry or energy market institutions. Given the complexity of the energy market, this lack of consultation increases the likelihood of decisions being made that reduce energy market stability. Consequently, we consider additional checks and balances are necessary to ensure that the appropriate level of energy sector expertise informs decisions made under this legislation that affects energy markets.

² Commonwealth Treasury, *Implementation of a framework for Australia's G20 over-the-counter derivatives commitments*, Consultation Paper, April 2012, p. 17.

Origin considers the Commonwealth Minister for Energy (as Chair of the Standing Council on Energy and Resources) should have a key decision-making role with respect to hedging products used by participants in the energy sector - including energy derivatives. As such, we recommend that, in addition to the decision-making power proposed for the Minister for Financial Services and Superannuation, the Chair of the SCER be a joint decision-maker for any decision under this legislation relating to an energy market derivative class.

This recommended process can help minimise the risk of a decision leading to unintended consequences for the energy sector. This is particularly relevant given that it is difficult to comment on the Draft Bill in isolation of the supporting regulations and rules. In addition, the legislation has been drafted at a high level, making it difficult to consider its practical application to the energy market. As such, we consider introducing a decision-making role for the Chair of the SCER provides additional assurances that decisions relating to energy market derivatives will be informed by parties who understand the complexities of the energy sector and the possible consequences of such decisions on the energy market as a whole.

5. Additional suggestions to improve the operation of the Draft Bill

Separate to the energy-specific comments made above, we would like to provide some suggestions that could improve the certainty, transparency and predictability of the overall framework as set out in the Draft Bill. We consider these suggestions are consistent with principles of good regulatory practice.

1. *Consultation prior to Minister declaring captured derivative class (s901B)*: as the framework currently stands, there is no public or industry specific consultation prior to the Minister determining to capture a particular derivative class. We consider it would be beneficial for the government agencies to consult prior to making a recommendation under s901B(6). This ensures the relevant market has forewarning and an opportunity to discuss the scope of a prospective declaration.
2. *Formal consultation process for ASIC process when developing derivative rules (s901J, S903G)*: to improve participant certainty, we recommend specifying a formal consultation process for ASIC to follow, which would include an initial stage, draft report and final decision. At the very least, we consider the Draft Bill should specify a minimum consultation period of 20 business days.

For rules that relate to an energy derivative class, we recommend ASIC be required to consult with the relevant energy market institution, the AEMC.

3. *Process for ASIC to make an urgent rule (s901L, s903J)*: while we appreciate this power is to allow ASIC to respond to an emergency, we still consider consultation necessary to ensure the proposed emergency or urgent rules do not inadvertently impose a requirement that has unintended consequences or is unworkable. A minimum consultation of five business days would enable ASIC to turn around its process quickly, but would give the relevant industry an opportunity to provide comments to help ensure that the proposed rules are fit for purpose.
4. *Clarify what rules apply between the making of an urgent rule by ASIC and the Minister's decision to accept, reject or amend the urgent rule (s901L, s903J)*: as the Draft Bill is currently drafted, it is unclear what rules apply between ASIC making an urgent rule and the Minister's decision. To improve regulatory certainty, we suggest the legislation clarifies that ASIC's rule applies until determined otherwise by the Minister.

There is also no limit on when the Minister may exercise this power. It therefore creates regulatory uncertainty, as theoretically, the Minister could amend or revoke an urgent rule at any point after it was made. We suggest the Minister should be required to exercise this power within 20 business days of ASIC making an urgent rule. Should the Minister require additional time, the legislation could provide the Minister with an additional power to extend the decision period by publishing a notice within the 20 business days. The extension notice would need to specify the revised decision date.

5. *Treatment of confidential information:* The treatment of confidential information appears to be left to the supporting legislation or derivative repository rules. Given the commercial sensitivities around the treatment of non-standard products, we recommend making it clear in the law that commercial information held by the trade repository:
 - o Must be kept confidential, with strict handling processes to ensure confidentiality is maintained; and
 - o May only be used or disclosed in accordance with the Law/Regulations/Rules.

APPENDIX A - Explaining energy market risk and its management

A1. The nature of risk in the energy market

Energy companies are in the business of managing risk. The mechanisms and practices for allocating and managing these risks are fundamental to an energy business's decision-making. Broadly, the types of risks energy companies manage include³:

- *Market risk*: the risk that the value of an overall market or asset class will change according to economic conditions or other factors. Sub-categories include: commodity; equity; interest rate; liquidity; and currency risk.
- *Operational risk*: the risk of loss from inadequate or failed internal processes, people and systems, whether driven by internal or external factors. Sub-categories include: strategic risk; hazards; generation operations; energy trading operations; people; customer service; information systems; supply chain; project management and delivery; business continuity; legal; reputational; regulatory and policy; compliance; and internal conduct (e.g. codes of conduct).
- *Credit risk*: the risk that a debt issuer may default on payments. This risk can also be called counterparty risk.

For the purposes of considering the OTC derivative frameworks, the two most relevant risks are market risk and credit risk.

A1.1. What is market risk?

The National Electricity Market (NEM) is a highly volatile and unpredictable market. Electricity cannot be stored so customer demand needs to be met instantaneously or lights can go out. Generators sell all their electricity to the NEM's "spot market", which is where retailers purchase almost all of their supply. The variability of the spot price reflects constantly changing customer demand and the different mix of generation plant required to meet it.

The wholesale spot price prices can range from -\$1,000 per megawatt hour (MWh) to \$12,900 per MWh. Spot price variability is an important design feature of the NEM. Periods of high prices act as a signal for new investment, highlighting that the balance between supply and demand is getting tight. These periods also provide an opportunity for generators to recover their longer term costs, particularly given that prices can be low or negative at other times.

The role of a retailer in these markets is to manage their customers' exposure to such price variability. Businesses like Origin manage this risk for them. Retailers can do this using a range of physical and financial (derivative) products that hedge against variable wholesale prices. These products enable retailers to convert the varying wholesale electricity price into a more manageable and predictable cost, which can then be translated into a fixed price structure. This reduces risk and volatility for the end customer.

Similarly, electricity generators also seek to manage the variability of their revenue from the spot market. Building a generator is a significant capital investment. In addition to recovering the ongoing operational and maintenance costs, a generator also needs to recover its longer term costs and ensure a return on its investment. Hedging provides generators with a more stable cost recovery arrangement than spot revenue alone.

³ Definitions from AEMC NEM Financial Market Resilience Issues Paper, p. 21.

A1.2. How do derivatives help to manage energy market risk?

Principally, derivatives are financial instruments that serve two main purposes: they provide a tool for hedging; or they provide a tool for speculating. In the case of the NEM, electricity derivatives derive their value from the electricity spot price. As discussed above, physical electricity participants are dependent on derivatives to manage their exposure to the volatile spot price. As a hedging instrument, participants execute derivatives that move in a complementary direction to an expected market outcome. For example, if a retailer is concerned about extremely high spot prices that could arise, it will look for a derivative that will cap its exposure to those spot prices.

Participants can transact derivatives through two main channels:

- *Over-the-counter (OTC) hedge contracts.* These contracts are confidential and normally documented under the International Swaps and Derivatives Association (ISDA) Master Agreement, which sets out standard terms and conditions. Usually executed between a generator and retailer, a key benefit of an OTC contract is that the party's can tailor the contract terms. This includes conditions around credit support, depending on the credit rating of the counterparties. Table A1 below presents a summary of the most common OTC contracts.
- *Exchange-based contracts.* These contracts, including futures and options, are executed on an exchange. The Australian Securities Exchange (ASX) is the only exchange in Australia that transacts in electricity derivatives. Generators and retailers make trades on the ASX through a bank or other intermediary who is a member of the exchange. They do not transact directly with the exchange. It is therefore the intermediary who manages the credit risk of its exposure to the exchange on behalf of its counterparties. To manage this risk, the ASX requires anyone who trades on the exchange to provide an "initial margin" to act as credit support in the event of a failure to pay. In addition, the ASX also calculates "variation margins" based on daily price movements. Depending on the price movement, a party that purchases futures or options is required to pay or entitled to receive these variations each day. Table A2 below summarises the types of derivatives currently available on the ASX.

Table A1: Common types of OTC contracts

Name	Description
Swaps	The parties effectively swap the payment/receipt of the NEM spot price for the payment/receipt of an agreed strike price under the contract. As set out in the example below (Box A1), the strike price and the spot price are netted and the different is paid by one party to the other party. Swaps are also referred to as "contracts for differences".
Caps	The parties agree on a strike price for the cap. If the spot price exceeds this strike price, the seller of the cap (usually a generator) must pay the different to the buyer of the cap (usually a retailer). A common strike price for a cap contract is \$300/MWh. In return, the buyer of the cap will pay the seller a fee, which provides the generator with an extra source of revenue. Buying such a cap helps protect the retailer from high spot prices.
Floors	The opposite of a cap. The parties agree on a strike price. If the spot price is less than this strike price, the seller of the floor (usually a retailer) must pay the difference to the buyer of the floor (usually a generator). The buyer of the floor will pay the seller an additional fee. Buying a floor helps protect the generator from low spot prices.
Options	A right to enter into another form of OTC contract (usually a swap or a cap) at a later date at a fixed price. For example, an option may give a generator a right (but no obligation) to enter into a swap at a later date for an agreed strike price. In return for this right, the buyer of the option will pay the seller a fee.
Asian options	An option where payment is calculated based on the difference between the strike price and the average spot price over an agreed period.
Structured contracts	OTC contracts are purely financial arrangements and are not subject to any physical constraints. AS a result, they can be structured in many different ways to meet the risk management requirements of market participants. Examples of structured contracts include shaped or load following swaps or caps.

Source: AEMC 2012, *NEM financial market resilience*, Issues Paper, 8 June 2012, Sydney, p.10.

Box A2: Example of how a standard swap contract manages spot price risk

A standard swap contract between a retailer and a generator sets a flat price for a given volume, irrespective of what the actual wholesale price is at a given time. The contract "strike price" is the price that both parties are willing to pay for the energy, say \$50 per MWh. When the spot price is above the strike price (e.g. \$75 per MWh), the generator pays the retailer the difference between the spot price and strike price (\$25 times the contract volume). When the spot price is below the strike price (\$35 per MWh), the retailer pays the generator the difference (\$15 times the contract volume). Both parties have reasons for participating in this transaction: the retailer hedges its exposure to high and volatile spot prices, while the generator hedges its exposure to low and sustained spot prices.

Table A2: Electricity derivatives currently traded on the ASX

Name	Description
Futures	<p>Allow a generator or retailer to manage spot price volatility in a similar manner to an OTC swap. Three types can currently be traded:</p> <ol style="list-style-type: none"> 1. <i>Base load futures</i>: cover a full 24 hour period on each day over a specified calendar quarter. 2. <i>Peak load futures</i>: cover only the period from 07:00 to 22:00 on working weekdays in a quarter. 3. <i>\$300 cap futures</i>: allow a retailer to manage the risk of high spot prices in a similar manner to an OTC cap with a strike price of \$300/MWh.
Options	<p>Allow a generator or retailer to manage spot price volatility in a similar manner to an OTC option. An ASX 24 option gives the buyer of the option the right to buy or sell an ASX 24 future at an agreed price any time before an agreed future date. Different types of options are traded - options relating to base or peak load futures, and call options (a right to buy futures) and put options (a right to sell futures).</p>

Source: AEMC 2012, *NEM Financial Market Resilience*, Issues Paper, 8 June 2012, Sydney, p.11.

A2. Existing framework robust and effective at managing financial contagion risk

A2.1. External risk management requirements

Energy businesses are already subject to a comprehensive regulatory framework.

Listed companies have ASX requirements that they must comply with. In addition, the ASX Corporate Governance Council Principles and Recommendations provide guidance on how to establish a system of risk oversight, management and internal control.⁴

Entities dealing in OTC electricity derivatives must also hold an Australian Financial Services (AFS) Licence. This is a requirement under the *Corporations Act 2001 (Cth)*. Licensed entities must comply with defined financial capacity measures and demonstrate that they have systems to manage the capacity requirements. There are additional requirements and standards relating to training, compliance, insurance and dispute resolution. These requirements are set out in ASIC's Regulatory Guide 166.⁵

NEM participants must also meet the regulatory requirements and obligations set out in the National Electricity Law and National Electricity Rules. A significant obligation is the provision of prudential collateral to cover spot purchases and outstandings in the spot market. This, along with other registration requirements, obliges market participants to demonstrate that they are committed to participating in the market and ensuring its future.

A2.2. Participant risk management framework

The NEM is a mature market with a diverse array of experienced utilities. As discussed above, managing risk is the foundation of our business model. In order to manage risk prudently, energy businesses, like Origin, have comprehensive risk management frameworks that helps to inform decisions and prioritise actions.

⁴ Available: <http://www.asx.com.au/governance/corporate-governance/htm>

⁵ ASIC, *Regulatory Guide 166: Licensing Financial Requirements*, May 2010. Available: www.asic.gov.au

These companies also have corporate governance frameworks that set the policies and procedures for: determining the overall risk appetite of the business; assessing the impact of risk; and implementing the appropriate risk management procedures. Monitoring and reporting are a key component of this.

Policies and procedures define roles and responsibilities as well as accountabilities. They detail monitoring requirements and detail escalation processes, if and when required. Training is also an imperative aspect of prudent risk management, covering both internal policies and external regulatory requirements.

A2.3. Credit risk management arrangements

Given that hedging is an essential component of managing market risk, it is important for participants to manage and monitor their exposure to their trading counterparties. Credit limits and trading guidelines set parameters around how much exposure a business can have to a single trading partner. While the risk profile differs between OTC trading and exchange trading, both have credit requirements and thresholds, set by individual businesses or the clearing house respectively.

For OTC trading, individual counterparties take on the risk of default. Origin, like other NEM participants, has well-developed credit assessment and review policies and procedures that set credit requirements and parameters around the appropriate level of exposure. Company credit rating, company history in general, financial solvency and previous trading experience are some of the relevant factors when calculating a counterparty's exposure limit and, if appropriate, credit support requirements. Businesses will limit the volume of contracts with a single counterparty and will vary the duration and nature of contracts across a cross-section of trading partners. Setting these limits at prudent levels is critical; if an energy hedge counterparty defaults, the hedging party's exposure is to the spot market not just an individual OTC trade.

As highlighted earlier, for exchange-based trading, a NEM participant will contract with a clearing house who is a member of the exchange. Clearers take a similar approach to individual businesses in determining the credit worthiness of prospective counterparties. The more risky the business, the higher the initial credit requirements will be. Participants with limited NEM experience or lower than average credit ratings may find trading through the exchange more accessible compared to OTC transactions. This is because a Clearer is likely to have a more diverse customer portfolio to manage risk across compared to an individual business.