

Hedging and managing risk in the upcoming Singapore electricity futures market

Come October 2014, SGX is set to launch Asia's first electricity futures market.

In a warm-up to this milestone development, Singapore Exchange Limited (SGX) held a forum to introduce the electricity futures market in Singapore. The Energy Market Company (EMC) and KPMG participated in the forum to provide attendees an overview of the underlying electricity spot market, as well as risk management and hedge accounting requirements.

Held at the Amara Hotel in Singapore on 25th April 2014, the event also discussed methods of commodity risk management and hedge accounting. Attendees, including major power consumers in Singapore, witnessed a slew of compelling topics presented by various industry players.

Senior VP Market Operations & IT of EMC, *Mr Toh Seong Wah* opened the forum by introducing the National Electricity Market of Singapore (NEMS). *Dr Matthias Obert*, Director Commodities at SGX presented an overview of Electricity Futures Market and Partner and Head of Accounting Advisory Services at KPMG, *Mr Reinhard*

Klemmer outlined the Commodity Risk Management for Industrials & Requirements of Hedge Accounting.

An Introduction of the Electricity Futures Market

The Electricity Futures Market allows the trading of standardised contracts of electricity loads into the future. It provides a platform for the power generation industry and electricity consumers to hedge their price risks.

One of the primary benefits of the new futures market is to boost competition in the wholesale and retail markets, thereby further removing disruptive market power from the large generation companies and equipping consumers with an additional method to manage their cost volatility.

It benefits industry stakeholders by providing more alternatives and facilitating a robust price discovery mechanism. Effectively, it brings about more efficient price negotiation of electricity in the wholesale and retail markets.

"Most people find it tough to believe that electricity can be traded. In fact, it is no different from any other commodity. It has unique features like

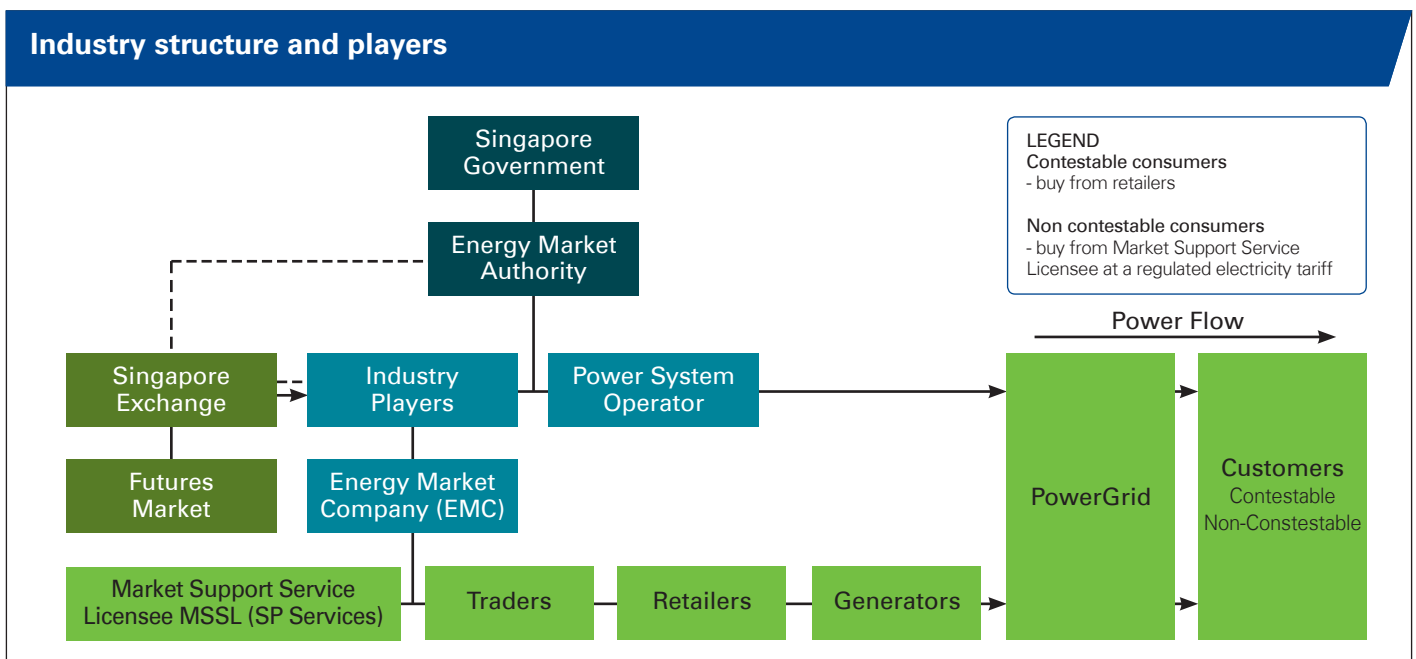
it cannot be stored and need to be available on demand. Hence, demand and supply must be balanced in real time," said Mr Toh of EMC. "Electricity is produced, sold and consumed on a real time basis."

The Energy Market Authority (EMA) is presently reviewing the development of an electricity futures market in Singapore.

About the National Electricity Market of Singapore & Energy Market Company

EMC operates and administers Singapore's wholesale electricity market, also known as the National Electricity Market of Singapore (NEMS). Its key activities include calculating prices, scheduling generation, clearing and settling market transactions as well as supporting governance and evolution of the market.

In 2013, the NEMS grossed an annual trading value of SGD\$8.7 billion and had a total registered generation capacity of 12,422 MW with 13 generators, 10 wholesale market traders, 8 retailers and 4 service providers. The annual average Uniform Singapore Energy Price (USEP) in 2013 stands at SGD\$173/MWh.



Electrifying Singapore's Power Industry

Emphasising on the need for electricity futures for Singapore, Dr Obert said, "Unlike Europe, Singapore does not have the option of subsidising

electricity production. Also, the country is not in a position to subsidise fuel like other oil-producing countries."

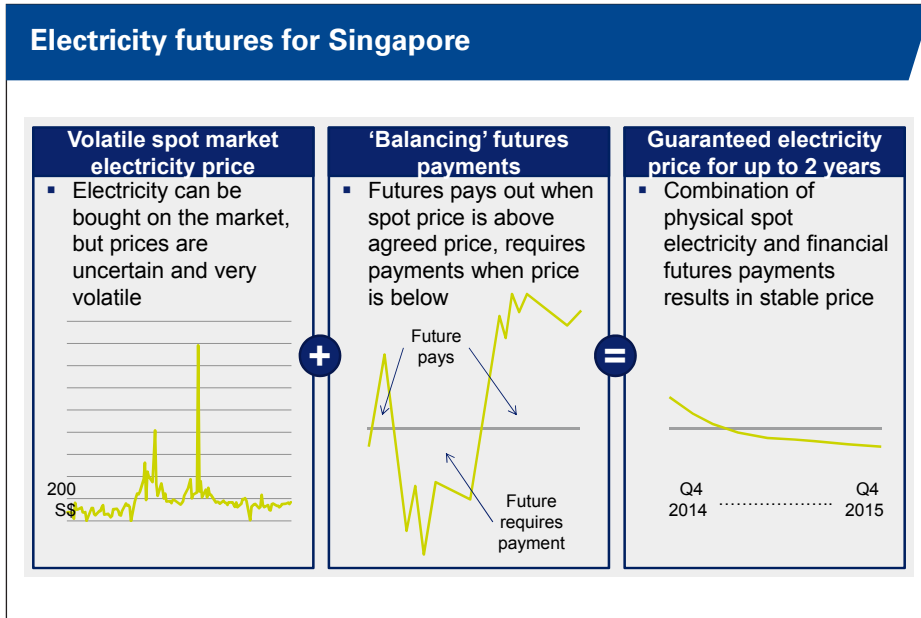
He added that, "The only viable options are to increase competition between

electricity retailers and make power generation more efficient. Hence, electricity futures assume significance."

Back to basics: understanding how futures market work

Prices in the spot market fluctuate extensively depending on demand-supply dynamics in the market.

Typically, a futures contract offsets such fluctuations, allowing players to fix their costs or revenues at a pre-determined price for a period of up to two years.



Source: 'Electricity futures for Singapore' by Dr Matthias Obert of SGX

Volatile spot electricity prices + Offsetting futures settlements = Guaranteed electricity price for up to 2 years

The diagram here shows how a longer term financial market (futures market) helps cancel the short-term fluctuations in the spot market, assuming no volume risk.

Key Advantages of the Electricity Futures Market

1. Provides a cost efficient way of fixing prices for large electricity consumers

This provides a greater certainty on costs and cash flows which translates into more stable returns for stakeholders.

It allows *power generators and retailers* to hedge against any low spot prices or cover unplanned or maintenance outages of their power plant, thereby protecting their revenues.

Potential new entrants to the electricity retail market will face a lower entry barrier with the option to use the futures market to secure fixed-price contracts for their customers.

Large consumers can also use the prices provided by the futures market to either negotiate their electricity retail packages with electricity retailers, or to offset their floating electricity price risk. Large electricity users can thus secure a

fixed power price that they like for the next two years.

2. Product choice

As the futures market develops, electricity retailers will be able to expand their product range – for example, by offering fixed-price variable-volume physical contracts.

3. Increased retail competition

With a greater number of players in the market, prices should remain under control.

Commodity Risk Management and Hedge Accounting

With corporate stakeholders (regulators, investors and analysts) increasingly demanding growth, earnings stability and disclosures, there is a compelling need to identify, quantify, measure and manage currency and commodity price volatility risks.

Hence, risk management and hedging is increasingly assuming importance. A hedging strategy, according to Mr Klemmer, should reflect the company's business strategy. "A solid foundation

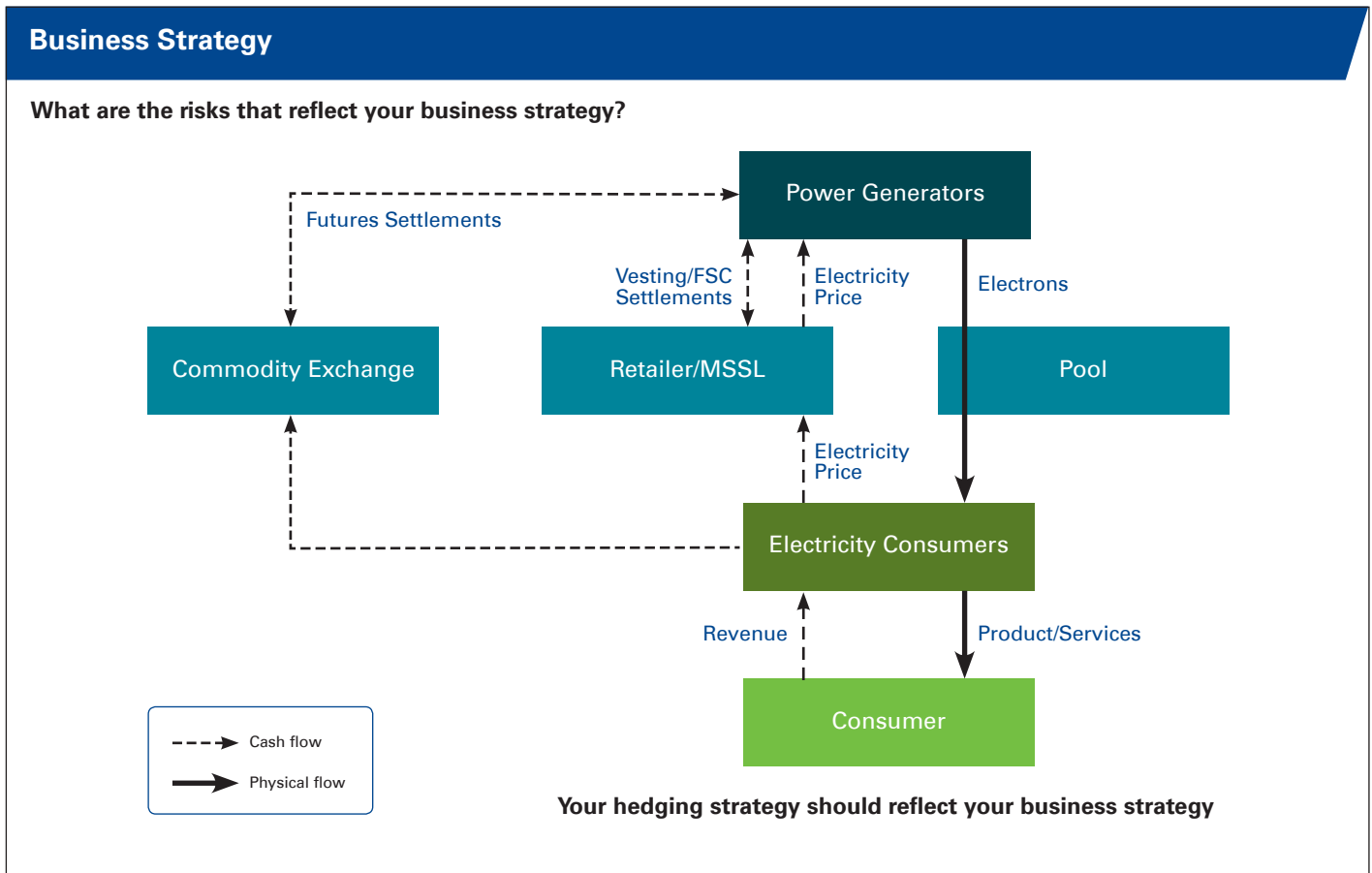
for hedging is a must. It can be laid only after analysing and evaluating alternative hedging strategies & instruments."

"An efficient risk management plan - starting from gauging risk appetite, measurement and identification, needs to be put in place, besides keeping in mind governance issues," Mr Klemmer added.

After laying a solid foundation for hedging and a pre-planned strategy to approach the market, the attention needs to be focused on how to report it in the Profit and Loss (P&L) through *Hedge Accounting*.

"It is about seizing the best market opportunity, and making sure it is reflected in the financial statements correctly without causing any major issues with stakeholders," explained Mr. Klemmer of KPMG.

The diagram below shows the risks reflected your business strategy.



Understanding Hedge Accounting and its Benefits

Hedge accounting is a systematic and representative means of reflecting the effectiveness of a company's hedging activities in the financial statements.

The underlying principle is that all derivatives, including hedging instruments, are recorded at their fair values on the balance sheet.

Hedge accounting then allows compensating gains and losses on the hedging instrument and the hedged exposure to be recorded in the same manner, resulting in greatly reduced P&L volatility.

Any ineffectiveness of the relationship will continue to create P&L volatility, as one would expect.

Key Benefits of Hedge Accounting

1. Reduces volatility of reported earnings

It modifies the normal accounting treatment of hedging instruments and hedged items.

2. Reflects the effectiveness of hedging activity

Hedging activities can help to reduce economic risks. However the benefits may not always be reflected in the financial statements.

According to Mr Klemmer, some economically effective hedging relationships do not qualify under the hedge accounting rules and continue to result in volatility.

Explaining such effects to stakeholders can be very challenging and may actually result in companies deciding not to do the right thing – that is entering into the economic hedge – in order to avoid the volatility.

3. A welcome change with a new standard

The new hedge accounting standard that is expected to be issued soon by the global standard setter takes a more principle-based approach, closely aligning hedge accounting with risk management.

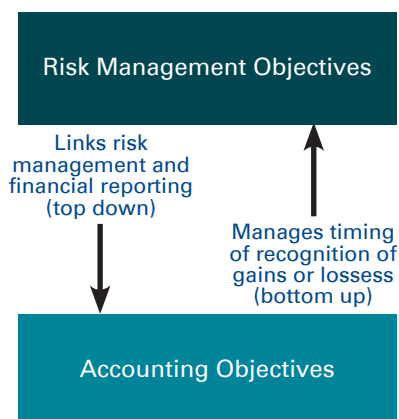
This will allow companies to revisit their current hedging strategies as a wider range of hedges will be eligible for hedge accounting.

Hedge accounting is voluntary. It is however permitted only when strict eligibility, documentation and effectiveness requirements are met. Also, to qualify for hedge accounting, the hedge must relate to a specific identified and designated risk and not merely to the company's general business risks. It must also ultimately affect the entity's profit or loss.

In conjunction with the new market opportunities and the wider and deeper markets that will become available, this is the right time for companies to re-assess their approach.

Companies should have a fresh look at their risk management strategies and to seriously consider applying the new hedge accounting framework going forward.

Risk Management Objectives



Benefit: Financial statements would reflect better on the company's performance.

Source: 'Commodity Risk Management for Industries & Requirements of Hedge Accounting' by Reinhard Klemmer of KPMG

The diagram here shows the new hedge accounting standard aims to align accounting with risk management objectives and practices.

Conclusion

While the Monetary Authority of Singapore (MAS) has yet to give its final approval to the proposed launch of Electricity Futures trading in Singapore, industry players are upbeat about the potential opportunities that the new futures market presents, particularly keeping in mind lessons from advanced power markets such as Australia and New Zealand.

However, given the size of Singapore's market, the key challenge to the development of the electricity futures market will be to ensure sufficient liquidity. After all, liquidity is the true measure of a futures market performance.

About the KPMG Global Energy Institute (GEI)

The GEI is a worldwide knowledge sharing platform detailing insights into current issues and emerging trends within the Oil & Gas and Power & Utilities sectors. Launched in 2007 in Houston, United States, the Institute opened its first regional centre in Singapore at the KPMG Global Energy Conference – Asia Pacific 2013.

Energy professionals will have access to valuable thought leadership, studies, events and webcasts on key industry topics. A regional focus to the GEI provides decision makers tailored insight within the Americas, Asia Pacific and the Europe, Middle East and Africa regions.

The GEI strives to equip professionals with new tools to better navigate the changes in

the dynamic energy arena.

About the Business Club

Launched in 2013, the KPMG Global Energy Institute in Asia Pacific aims to bring together senior decision makers in the Energy & Natural Resources sector every two months. While the main objective of the event is to allow participants to network, the GEI also aims to be a platform for our global energy specialists to share their insights into the sector. Participants will therefore be able to gain a broad perspective on what's happening in the energy sector.

Register

Individuals can register for the GEI at the following link: www.kpmg.com/energyaspac and receive regular updates, thought leadership and invites to events and web conferences.

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