



EMA assistant director Rachel Su also designs policies to restrict the exercise of market power by large power-generation firms. ST PHOTO: NEO XIAOBIN

RACHEL SU

Detective work to monitor power market

AS ASSISTANT director of the Energy Market Authority's market development and surveillance department, Ms Rachel Su sees a healthy dose of detective work go into her day.

She needs to piece together different bits of the puzzle to uncover and arrive at an explanation for the price outcomes in the wholesale electricity market.

"This is to detect for signs of misbehaviour on the part of the power generation companies or rule breaches," said the 32-year-old, who has worked with the industry regulator since 2009.

What she looks out for are things like sudden spikes or dips in prices, which could indicate anything from a tripped power plant to changes in demand.

It could also mean something more serious, like a power generation firm withholding supply to push up prices, or that a rule with a loophole might have been exploited.

Tracking the price movements helps her team spot issues and evaluate if the rules that are in place work well and are relevant, or if they need to be tweaked for the market to stay effective.

Ms Su, as part of Singapore's energy market watchdog, also designs policies to restrict the exercise of market power by the large, existing power generation firms.

For example, power generation companies have to commit to pro-

Electricity: How the markets work

SINGAPORE'S real-time wholesale electricity market is where electricity is traded on a half-hourly basis.

Power-generation companies compete to produce and sell electricity through an "auction", making their bids to generate a specified quantity of electricity at a particular price.

After taking into consideration other information like forecasted demand, technical constraints, available plants and so on, the companies will then generate based on the least-cost solution.

The electricity is bought by electricity retailers who serve large industrial and commercial consumers.

These consumers fall into the category of "contestable consumers", which means they can buy electricity at the market price instead of at the

regulated tariff because their average monthly consumption is 10MWh or above.

These consumers account for about 75 per cent of Singapore's electricity demand.

Next year, this threshold is being lowered - first to 8MWh in April, then to 4MWh in October. This means more non-residential consumers can choose their electricity supplier - 70,000, up from the current 13,000.

Customers like retail chain stores and town councils will also be allowed to aggregate their energy demand across multiple locations to qualify as contestable.

In the second half of next year, Singapore will also launch an electricity futures market, which will support the trading of electricity products in the future at specified prices.

ducing a specified amount of electricity at a specified price, which means they are unable to cut back on power generated to push up spot price in the wholesale electricity market. These are called vesting contracts.

Ms Su, who graduated from

Nanyang Technological University with a Bachelor of Business in 2003, used to work with the Central Provident Fund Board. In 2007, she did her master's in applied finance at Singapore Management University, following which she joined the EMA.

While the technical aspects of the job seemed daunting at first, they were easy enough to pick up, especially given the guidance she received both within and outside the organisation, training, and reading things she encountered about the sector, she said.

Constant developments and discoveries, technological advancements, new energy sources and market players, and the market dynamics keep things fresh, she says.

Beyond working across EMA's other divisions, including energy planning and development, she also invests a lot of time interacting with both the industry and consumers, and assessing how the decisions she makes trickle down to ground level.

"The industry constantly evolves so the regulatory framework and systems need to be nimble. I need to keep abreast of developments not only in Singapore but also abroad, and adapt, adjust and re-configure my approach," she said.

Beyond surveillance, Ms Su also gets the chance to work on regulations that will impact exciting future developments, for example, the option for Singapore to import electricity from the region instead of generating its own.

That could mean, for instance, tapping into energy options that Singapore has no access to or which are not economically feasible.