

DOUSING THE FLAMES

THE MARKET CONTINUES A STABLE UPWARD TRAJECTORY DESPITE GOVERNMENT COOLING MEASURES, WITH MORE ON THE WAY. NESTOR NG, PRESIDENT OF REAL ESTATE AGENCY ANZAC, EXPLAINS WHY SMALLER APARTMENTS ARE THE TREND



9 771812 685006
Macao and Hong Kong (HKSAR) | Mainland China | 100% CS

SPECIAL

News to read in 2018. Or not

Keep him silent



Parliament has suspended directly elected legislator Sulu Sou, who awaits his day in court to answer charges of 'aggravated disobedience'. The story of a case seen by many as a way to silence local dissent

SPECIAL REPORT

Asian bonanza



Gaming in Australia. A boom in Chinese visitation. All putting a smile on operators' faces. Thus, The Star Entertainment Group is raising the stakes. As exclusively revealed by veteran game-changer Greg Hawkins

Nuclear deterrent

A recent incident in the nearby Taishan nuclear plant hints at lax quality control that has delayed the project and could pose safety risks, warns international expert Mycle Schneider who fears cost-cutting is also leaving nuclear plants vulnerable to natural disasters and terrorist attack

BY VÍTOR QUINTÃ

The alarm bells sounded last month, with Hong Kong Free Press reporting cracks had been found in a component of one of the two reactors in Taishan nuclear plant, some 70 kilometres west of Macau.

China General Nuclear Power (CGN), which is building the plant in a joint venture with French utility EDF, admitted to ‘partial defects’ in the welding of the three parts of the deaerator. But the state-owned company stressed that the component, which helps cool down the reactor, ‘is not part of the nuclear safety system’.

The problem goes way deeper, though, claimed an international consultant during last month’s 6th International Forum on Clean Energy held in Macau.

For Mycle Schneider “quality control is very clearly one of the major issues” for China’s nuclear industry and is “also a big issue in Taishan . . . A piece not according to technical specifications should never reach a construction site”.

Xu Yuming, former Deputy Director of the China Atomic Energy Authority, came to the industry’s defence during the Forum, pledging that “overall safety is under control” and that the country’s 37 nuclear reactors “are also using the highest safety standards”.

But with nuclear companies “in great difficulties, financially and economically,” Schneider says cost-cutting measures are hurting their operations. “Apparently not even both reactors in

Taishan have 100 per cent identical fabrication schemes,” he revealed.

Born crooked

The manufacturing of reactor components is commonly subcontracted, to get the prices down, says the German: “It makes it even more difficult to know where each part comes from” and to ensure their quality, he added.

Taishan will be the world’s first plant using the European Pressurised Water Reactor, whose manufacture, claims Schneider, has serious flaws. Last year, a pressure vessel at the Flamanville plant run by CGN’s Taishan partner EDF failed to meet technical specifications.

In order to create the most solid structure, the reactor vessel is forged into one huge piece, with a bottom welded on and a mobile lid.

The bottom part and other components made by French manufacturer



Taishan will be the world’s first plant using the European Pressurised Water Reactor, whose manufacturing Mycle Schneider says has serious flaws

Areva had excessive carbon levels, which “makes the structure more fragile,” says the analyst. “We’re quite sure at least one of the pressure vessels in Taishan has a similar issue.”

The French regulator created a “problematic precedent” by giving EDF the green light, even though “for the first time ever there was a minority vote by a couple of independent experts,” says Schneider. “I can only highly recommend that the Chinese safety authorities have a thorough look and not simply copy the decision taken in France”.

For Mycle Schneider, “quality control is very clearly one of the major issues” for China’s nuclear industry and “also a big issue in Taishan”



Missing timetable

Last March, CGN vowed to connect Taishan’s first reactor to the grid by the end of 2017. Questioned by Macau Business, the company declined to offer a new timetable, saying only that the deaerator replacement was ‘nearly finished’.

Mycle Schneider says this goes beyond a lack of transparency and constitutes a major indictment of CGN’s operations: “They are now not even able to foresee for a few months. That’s quite amazing if you think about it,” he stressed. “It’s an industry that should be able to have an oversight of what they’re doing, at least a few months ahead.”

Yet, this is a common problem in China, with more than half of the country’s 19 reactors under construction behind schedule. Mycle Schneider says delays are only growing worse.

A chronic problem that could prevent China from tripling its nuclear power output by 2040 and becoming the world’s leader, a forecast made in Macau by Timur Gül, director of Sustainability, Technology and Outlooks at

the International Energy Agency.

Mycle Schneider is more circumspect, stressing that there has been no groundbreaking for any new plant in China so far this year.

Over the past 20 years, China has “built up a complete nuclear power industry, from research to operation,” says Xu Yuming. Yet he admitted that “slowdown in energy demand growth” is among the “many uncertainties” the sector is facing.

Beijing is unlikely to let this major industry fall by the wayside, not with CGN claiming interest from Thailand, Kenya, Malaysia and Indonesia in its reactors, and Chinese firms building plants in Pakistan and the United Kingdom.

Yet for now Mycle Schneider says that even to the industry “it’s unclear what the Central Government will do”.

On the other hand, it’s “increasingly obvious” that nuclear power is no longer competitive compared to renewable energy. And with China’s solar and wind power capacity growing many times faster, he believes nuclear is in for a pretty quick “organic phase-out”. ■

BIG RISKS, WEAK SECURITY

“Nuclear energy companies are having to cut costs. When will that eat into safety and security?” Mycle Schneider’s final question left an uneasy cloud among the mostly Chinese executives attending a session on nuclear energy.

A few minutes later, Xu Yuming came to the stand and blamed “negative reports and rumours” for scaring the Chinese public, which “has a very limited understanding” of nuclear power.

But Mycle Schneider says there are reasons to be afraid, from the vulnerability of nuclear shipments to “some design weaknesses and rapid ageing of most of the nuclear power plants that are currently operating around the world”.

His biggest concern is the spent nuclear fuel pools, which can self-ignite if exposed to air: “That’s about the worst thing that can happen, because where there’s no possible containment,” he says.

Dispersion models have shown that if one pool of unit 4 in Japan’s Fukushima plant had dried out “it could have been necessary to evacuate 35 million people, which is virtually impossible,” the researcher says.

In 2016, Macau’s Secretary for Security Wong Sio Chak vowed to revise the city’s nuclear accident contingency plan but no more has been heard since.

Fukushima was a natural disaster “but you can provoke the same kind of situation through terrorist attack or through war, using portable weapons that ISIS and other terrorist organisations use on a daily basis,” says Mycle Schneider.

Macau Government’s Policy Address for 2018 includes plans to create an independent anti-terrorism group “with deep resources” as well as plans to start drafting “a full terrorism prevention and warning system”.

Authorities have yet to comment upon the Taishan incident, even though last year they announced the creation of a communication mechanism with Guangdong over the nuclear plant. Nor have they answered Macau Business’ questions.