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Hong Kong split over whether to import more power from mainland China

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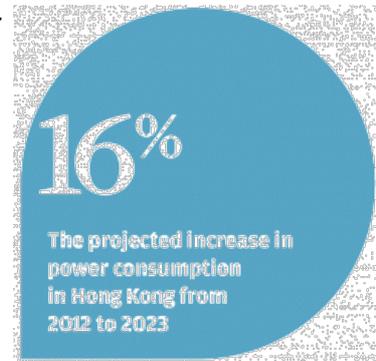
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Hong Kong is split over whether to import more electricity from an overburdened mainland grid or generate more at home

At a recent forum on future sources of energy for Hong Kong, industrialist Arthur Lee told the panel that he was happy with the stream of power his mainland factories get.

"I have machines that could not stand a single second of power interruption. But the power supply has been more than good," said Lee, who opened his first mainland factory in Shenzhen in 1989 to produce test equipment for quartz crystals.

Lee was one of the few to voice support for a controversial proposal for Hong Kong to import more electricity from the mainland's power grid to meet the city's growing needs. Hong Kong now buys 10 billion kilowatt-hours of electricity a year from the mainland - about a quarter of what it consumes.



Few of Lee's fellow entrepreneurs shared his optimism. Many people who run factories in Guangdong, including lawmaker Jeffrey Lam Kin-fung, said power cuts were routine there. He and others said they feared that if Hong Kong chose an option in which at least half of the city's electricity would come from the mainland, it could pose a challenge to tens of thousands of Hong Kong-owned factories, particularly in the Pearl River Delta.

Three months ago, the government's Environment Bureau asked the public to pick the best energy plan to supply Hong Kong's projected electricity consumption of 50 billion kilowatt hours by 2023 - 16 per cent more than in 2012.

The city began to publicly explore energy options after deciding that in the next decade it would phase out polluting coal-fired plants, which currently produce half of Hong Kong's electricity.

Government officials will choose one of two options - buying more electricity from the mainland or increasing self-sufficiency by boosting local electricity production from natural gas. The consultation ends today.



Henry Wong

[1]To receive even more mainland power, the city would have to create cross-border transmission infrastructure capable of handling 15 billion kilowatt hours, or 30 per cent of Hong Kong's projected electricity demand by 2023. The power supply would come directly from China Southern Power Grid, a state-owned enterprise which spans five provinces including neighbouring Guangdong.

Wong Kam-sing, the city's environment secretary, defended the import option at the meeting, saying the city buys all its natural gas from the mainland.

He also said buying more mainland electricity would allow Hong Kong to access a greater

diversity of energy sources, including renewables and nuclear power.

Some business leaders expressed unease at the idea. With the routine power cuts on the mainland, Lam said he worried that Hong Kong's efficient power supply might be sacrificed if it was linked to one across the border that was widely perceived to be less reliable.

But Vincent Liu Ming-kwong, deputy environment secretary, disputed that. "Most power cuts on the mainland are caused by faults in the local distribution networks, rather than the backbone transmission lines from which Hong Kong would draw power," he said.

The idea of importing power is not new to Hong Kong. Since the mid-1990s, about a quarter of the city's electricity has come from two reactors at the Daya Bay nuclear plant in Shenzhen. CLP Power Hong Kong, the largest energy company in the city, pays the mainland about HK\$5 billion for about 10 billion kilowatt-hours, which is supplied through a dedicated transmission line controlled by Hong Kong. The company charges its customers about HK\$1 per kilowatt-hour.

If city officials opt to keep the additional power supply local, the gas-fired generating capability of the city's two power companies, including HK Electric, would triple to 60 per cent while maintaining nuclear energy intake at the current level. The tripling will require extra investment by the power companies.

Power companies said they were ready to build new units at an appropriate time to meet rising demand. The share of coal-fired energy would drop to 10 per cent if more electricity is bought from the mainland, and to 20 per cent under the local option.

Over the past three months, the import option has been strongly opposed by HK Electric and some engineering and economic experts, who question the reliability of mainland supply. Energy officials have defended the idea, while repeatedly saying they have no preferred option.

Officials have tried hard to defuse worries that the mainland's less-than-reliable supply might compromise the city's system, which rates well in studies of reliability and consistency, surpassing other financial centres like London and New York. They say they expect the mainland grid will continue to improve.

However, some Hong Kong experts have asked whether the mainland can provide a reliable power supply to Hong Kong, given the fast-growing mainland economy and rising affluence, which has further increased demand for electricity.



Professor Way Kuo, nuclear energy expert

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Professor Way Kuo, president of City University and a nuclear energy expert, asked whether Hong Kong should take power from the energy-hungry mainland. "China does not have spare power to export. What it is going to send to Hong Kong is a loss to itself," he said at last week's forum.

Kuo said the mainland was already paying a heavy price for its thirst for energy. He noted that the health ministry has said more than 300,000 people on the mainland die each year from air pollution, much of it attributed to the burning of coal.

Hong Kong energy officials say that imports will not burden the mainland because the import volume would be a drop in the ocean, estimated to be less than 2 per cent of the power sold by China Southern Power Grid.

Some participants at the forum said they were concerned that buying energy from the mainland would add to the tensions between Hongkongers and mainlanders.

Wan Chi-tin, managing director of HK Electric, which was recently spun off from Li Ka-shing's conglomerate Cheung Kong Holdings, equated the issue to one of morality.

Why, he asked, was there a need to buy more power when the city was capable of supplying its own power and could manage the environmental impact of electricity generation better than the mainland. Under the proposal, pollution emitted generating power on the mainland for sale to Hong Kong would not be counted as part of the city's carbon footprint. "Why do we have to shift our responsibility to the mainland?" he asked.

He warned that Hong Kong could lose its bargaining power with mainland energy firms just as Macau did. The territory operates at a disadvantage when it bargains to buy electricity because it uses just one supplier.

CLP Power does not oppose the import option. However, company vice-chairwoman Betty Yuen So Siu-mai asked if the city should give up its hard-earned autonomy in electricity production.

The criticism did not deter the environment secretary. Wong said he was concerned about the impact on power prices from global gas price fluctuations. Wong said he believed that the import option could help buffer such swings because of the diverse energy sources available on the mainland, including renewable and nuclear power.

He said the import option would make it easier to open up the city's energy market to greater competition, which some lawmakers said could ease the power tariff rises caused by rising fuel prices.

Generating more power locally might incur extra costs if city officials decide to open up the market after the two local power firms invest further in new generation units.

Dr William Yu Yuen-ping, chief executive officer of energy advocacy group the World Green Organisation, said he wanted to see an open market where new suppliers were likely to come from the mainland.

"The import option is a game changer in the power market, with winners and losers. But there is nothing in the document about how the power is brought to Hong Kong and how the power is distributed among the two power suppliers," he said.

Dr William Chung Siu-wai, an associate professor and energy policy expert at City University, said he backed the local option. He said it was immoral for Hong Kong to shrug off its responsibility to produce power and cut emissions, although he said he would not hesitate to switch sides if the power market was not eventually opened up.

"If the local power firms are efficient, they will be fine [in the open market]," he said. "But the problem now is that we don't know if they are efficient."

Luk Bing-lam, chairman of the Hong Kong Nuclear Society, said neither option was desirable. Instead, he said the city should import more energy from mainland nuclear plants.

Fuel for thought

Hong Kong's proposed fuel-mix options:

Buying more electricity from mainland power grid

- Large-scale purchases are untested. Some worry that the supply won't be reliable
- Concerns that the city could become captive to a mainland supplier
- Would lower local emissions; could diversify fuel types
- Is expected to let the city tap into cleaner fuels
- Offers the city a more sustainable option to meet its power demands. Does not require new sites

Using more natural gas from local sources

- Reliable

- Could make the city more susceptible to natural gas tariffs
- Further environmental improvement may be limited
- Will increase heavy reliance on one fuel type
- May not provide the flexibility to let the city meet rising demand, because of difficulty finding suitable sites for future power plants

Source: Hong Kong Environment Bureau

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