

Coming up: S-E Asia's first giant underground substation



Source: SP GROUP
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The site where SP Group's underground substation in Labrador will be built. The project is scheduled for completion in 2024.
PHOTO: SP GROUP

Facility being built by SP Group in Labrador spans an area the size of four football fields

Choo Yun Ting

Spanning some three hectares – the area of four football fields – South-east Asia's first large-scale underground electrical substation is being constructed in Labrador, optimising space in land-scarce Singapore.

The underground substation

will also be Singapore's largest, and the land above it will be used for a 34-storey commercial development.

Both the substation and the commercial building at the site of the former Pasir Panjang Power District are due for completion in 2024, power company SP Group announced yesterday.

The company has awarded the main contract for the building of

the 230kV substation to Hyundai Engineering & Construction.

The project is in line with Singapore's urban renewal plans and SP Group's own goals of ensuring access to reliable, sustainable energy for all, and building sustainable infrastructure, said its group chief executive Stanley Huang.

The Labrador substation will serve the electricity needs of nearby Alexandra, Clementi, Keppel, Pasir Panjang and the Science Park districts.

Substations are part of essential infrastructure for homes, commercial buildings and public services,

transforming high-voltage electricity to lower voltage so it can be easily supplied to end-users.

SP Group said building a substation underground is typically more resource-intensive and requires specialised engineering capabilities.

Equipment in the substation must be of low fire risk, with cooling systems installed to prevent any heat build-up.

But the long-term benefits of building substations underground outweigh the costs, the utilities company said. "In addition to optimising land resources for other

purposes, underground substations have a lower risk of being exposed and damaged."

This would enhance asset and network security, it said.

Mr Huang said the company will be able to deal with the complexities of the project based on its extensive experience building Singapore's underground electricity cable tunnels. "With the learning and experience gathered from this project, we can explore the possibilities of housing more substations underground," he said.

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