

Technology, Media & Telecommunications

Building Green Data Centres – Singapore Lifts Moratorium on New Data Centres, Introduces Environmental Sustainability Standards

Introduction

Digitalisation and decarbonisation are sometimes thought of as opposing forces in the pursuit of development. The carbon footprint of the infrastructure required to support the information and communication technologies industry can be potentially sizeable; conversely, the restrictions implemented in efforts towards achieving sustainability standards can hinder the construction of such vital infrastructure.

Perhaps one of the clearest demonstrations of these countervailing interests is that of data centres. Data centres are important enablers of the digital economy, facilitating the transmission, storage and processing of data. However, in order to function, they are intense consumers of water and electricity, and are responsible for significant carbon emissions.

In Singapore, the Government had sought to manage the growth of data centres by imposing a moratorium on new data centre projects since 2019. However, there have been indications from the relevant Government Ministries that this moratorium is set to be lifted soon, albeit subject to certain prescribed environmental standards and restrictions. In doing so, Singapore seeks not only to balance digitalisations and decarbonisation, but to harmonise its efforts on both fronts.

In this Update, we look at the lifting of the moratorium on new data centres, the restrictions that may be imposed, and what it means for the technology industry on the sustainability front.

Moratorium on Data Centres

Data centres are essential in the flow of digital traffic, powering many applications and services for businesses and everyday life, including data management and e-commerce transactions. Singapore serves as a hosting services and data centre hub in the ASEAN region, with more than 70 operational data centres as of 2021 with a total IT capacity of about 1,000 megawatts ("MW").¹

Singapore has also made clear commitments to reduce greenhouse gas ("GHG") emissions with a view to achieving net zero emission. In light of the rapid growth of data centres and their corresponding

¹ Mr Gan Kim Yong, Minister for Trade and Industry, Written Reply to Parliamentary Question on Data Centres (11 January 2022), available [here](#).

Technology, Media & Telecommunications

energy consumption and GHG emission, the Government embarked on a review of the data centre industry in 2019 and imposed a moratorium on the construction of new data centres.

Concurrently, the Government and industry stakeholders have been active in research and development programmes on the creation of green data centres with greater energy efficiency, as well as establishing standards and metrics in this regard. With the increased implementation of cloud computing and greater use of data services by consumers and businesses, the demand for data centres has continued to grow, and Singapore stands as a prime candidate for new green data centres.

Lifting of Moratorium

The lifting of the moratorium is thus a welcome move for the technology industry in Singapore. On 4 March 2022, Dr Janil Puthucheary, Senior Minister of State for Communications and Information, announced the intended lifting of the moratorium, stating that the Infocomm Media Development Authority and the Economic Development Board would pilot a Call for Application ("**CFA**") to facilitate the calibrated growth of data centres. He indicated that the CFA would be launched by the second quarter of 2022.²

The lifting of the moratorium is not without restriction. Dr Puthucheary further indicated in his speech that the CFA would seek data centres "that possess the best-in-class techniques, technologies and practices for energy efficiency and decarbonisation". Minister for Trade and Industry Mr Gan Kim Yong had also earlier indicated that the Government would be selective of data centres, and that it would seek those that are "best in class in terms of resource efficiency, which can contribute towards Singapore's economic and strategic objectives".³

In this regard, market information indicates that the CFA for new data centres is likely to include certain standards and criteria.⁴ This may include:

- (a) **Data centre capacity** – 60MW of capacity would be allocated between a maximum of three companies, with each having between 10MW and 30MW of capacity.
- (b) **Power Usage Effectiveness** – Data centres would have to target a Power Usage Effectiveness of 1.3 or less. Power Usage Effectiveness is a globally accepted metric that illustrates the total energy used by a data centre divided by the energy used by IT equipment in that data centre.
- (c) **Lease term** – The proposed lease term is 10 years.

² Speech by Dr Janil Puthucheary, Senior Minister of State, Ministry of Communications and Information, at the Ministry of Communications and Information Committee of Supply Debate on 4 March 2022 (available [here](#))

³ Mr Gan Kim Yong, Minister for Trade and Industry, Written Reply to Parliamentary Question on Data Centres (11 January 2022), available [here](#).

⁴ *Singapore data centre players worry about feasibility of new standards ahead of lifting of moratorium*, The Business Times Singapore, 4 May 2022

Technology, Media & Telecommunications

- (d) **Rating requirement** – A Platinum rating under the Green Mark Scheme for new data centres would be required.

It should be noted that these proposed standards are tentative and may be subject to change.

Concluding Words

The lifting of the moratorium on new data centres has been long awaited by the technology industry and data centre industry players. The impending launch of the CFA will bring with it new opportunities for development and investment.

Parties seeking to capitalise on these opportunities should nonetheless be aware that there will be certain environmental sustainability standards and criteria that will be imposed on the new data centres. This indicates the Government's continuing commitment to its carbon emission goals, and demonstrates the balance that it seeks to achieve between the development of data centres and the pursuit of sustainability.

Industry players may also wish to better understand the data centre opportunities in the region.

For further queries, please feel free to contact our team below.

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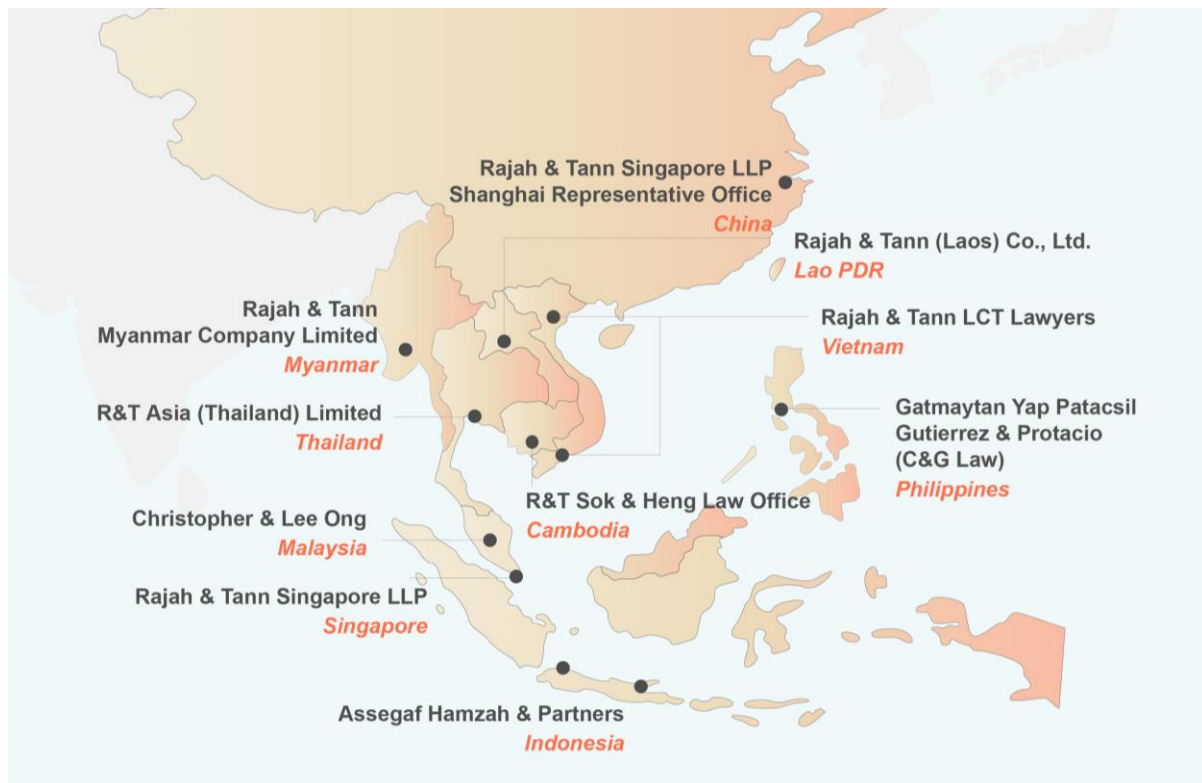
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