

# Hong Kong storage as transmission

How to enable green transportation by hydrogen in Hong Kong?

to Hong Kong's pathway towards hydrogen. To enable green transportation by hydrogen in Hong Kong, hydrogen gas station must be the foundation for the promotion of hydrogen FCVs. Strategic location for the initial installation of hydrogen station is most likely to be on

How much CO<sub>2</sub> can be stored in Hong Kong?

The overall storage capacity has recently been estimated to be 832 million tons of CO<sub>2</sub>, while saline formations in the basin could store about 41 billion tons of CO<sub>2</sub> (Zhang et al., 2014). 3. The CCS plan For many environmentalists in Hong Kong, as well as for many others, coal in the planned fuel mix has become a four-letter word.

Is hydrogen safe in Hong Kong?

contains about 50% v/v of hydrogen and a limited production of Hydrogen can be obtained using landfill gas. Meanwhile, Hong Kong Government needs to demonstrate that hydrogen is safe in all aspects including transportation, especially in tunnels, storage, ut

Can Hong Kong start a hydrogen refueling station?

supply hydrogen to FCEV, including passenger cars, vans, buses, trucks, trains, and non-electrified trains. For Hong Kong, it is easier to start implementing FCEV with buses and heavy goods vehicles as they are key air pollutant contributors with 47% of NO<sub>x</sub> and PM<sub>10</sub> emissions in congested areas. Besides, hydrogen refueling stations (HRS) can be

Should Hong Kong consider CCS before deciding the fuel mix?

Hong Kong should examine CCS before deciding the fuel mix for the next decades. Policy-makers in Hong Kong are considering the fuel mix of electricity generation for the coming decades, but to a large extent have neglected carbon (CO<sub>2</sub>) capture and storage (CCS).

Will Hong Kong decommission coal-fired power generating units?

Hong Kong is planning to gradually decommission a number of coal-fired power generating units, and the electricity supply gap would be filled mainly by gas power, which would result in a relative low proportion of installed renewable electricity.

To address this challenge, energy storage can be used to implement frequency regulation, voltage support, and peak load regulation during power transmission and distribution. Energy storage can also be used to reserve power for outages, address transmission congestion, minimize the capacity expansion needs of power transmission and distribution ...

Our analysis finds that a largely depleted natural gas field, having supplied Hong Kong since 1995, should be

sufficient for CO<sub>2</sub> storage and the connected natural gas pipeline should be capable for CO<sub>2</sub> transport. We examine an alternative fuel-mix plan, burning coal ...

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It remains relatively infancy in Hong Kong but there are promising signs of building momentum for the deployment of hydrogen in the below areas. Green transportation. As elaborated in the Clean Air Plan for Hong Kong 2035, green transportation has been identified as a major area and hydrogen deployment has therefore seen the potential room

This study aims to clarify the role of hydro power, storage and transmission under ambitious CO<sub>2</sub> emission reduction scenarios of future highly renewable Chinese power ...

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When solar and wind is strong it can overload transmission lines, leading to congestion, diminished performance and even power outages. As a result, renewables must ...

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performance and even power outages. As a result, renewables must often be switched off or "curtailed" to avoid system overload.

ESA Principles on Storage as Transmission Only 1. Energy storage should be considered as a transmission solution in the normal course of transmission planning processes. 2. Storage-as-transmission possesses different qualities than conventional transmission solutions and merits treatment that does not unduly penalize those differences. 3.

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