

Process Integration of Liquid Air Energy System with Hydrogen Liquefaction

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Energy storage systems have sprung to spotlight for their characteristic benefits against the changeability and uncontrollability of the outpower from renewables. The cryogenic energy storage systems are of particular importance as their high volumetric specific energy makes them suitable for large scale energy storage. Liquid air and liquid hydrogen are at the core of this subgroup. The exceptionally low temperatures involved in their production lead to huge energy demand but together they have the potential to not only drastically reduce the energy demand but also generate green electricity. In the current study, this very idea has been explored, analyzed, and presented.

This work was supported by Priority Research Centers Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education (2014R1A6A1031189).

Keywords

Energy storage, Liquefaction, Liquid Hydrogen, LAES, Liquid Air, Energy Network