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Prospects of Underground Gas Storage Construction in Rock Salt Deposits of Russia

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ABSTRACT

The concept of natural gas underground storages constructed in rock salt deposits has been developed. On the basis of gas consumption forecasts, seasonal and peak variations in natural gas supply, volumes of gas to be stored has been calculated, regional distribution and capacities of underground storage facilities determined.

it is planned that 10 natural gas storages will be constructed in different regions of Russia by the years 2010-2015 to deal with seasonal and peak variations in gas consumption.

Geological conditions within the selected sites allow us to establish underground cavities with specified parameters. Six of 10 sites allow to transfer brine for downstream processing.

Several new technologies are discussed, including: underground natural gas storage construction and operation - Kaliningradskoye Storage Facility; construction of gas storage of complicated geometry (due to thick anhydrite bed) - Volgogradskoye Storage Facility; tunnel gas storage construction - Tulskoye and Smolenskoye, Serpukhovskoye and Angarskoye Storage Facilities; and the use of preheated solvent for storage construction - Bereznikovskoye Storage Facility.

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