

Calculation and Operation System of Carbon Neutral Natural gas / LNG Validation Report

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1. Validation Target

We, SOCOTEC Certification Japan (hereafter "SOCOTEC"), have performed the validation in response to the request from Japan Petroleum Exploration Co., Ltd. (hereafter "Organization") in order to provide an opinion on the "Calculation and Operation System of Carbon neutral natural gas/LNG" (hereafter "CN-Natural gas / LNG Calculation and Operation System") in accordance with the method for calculating GHG emissions and "Operational rule for the supply of the carbon off-set natural gas / LNG Ver.7" (hereafter "Operational rule"), which is a manual for carbon neutral operation by carbon offsetting, of natural gas / LNG subject to carbon neutralization as defined by the Organization to ensure that the GHG emissions of Carbon Neutral Natural gas / LNG Menu (hereafter "CN-Natural gas / LNG") are properly calculated and that the carbon neutralization procedure is properly operational.

The purpose of the validation is to objectively assess the validity of "CN-Natural gas / LNG Calculation and Operation System" and to further improve the reliability of the calculated CN-Natural gas / LNG.

2. Validation Summary

SOCOTEC has performed the validation based on the procedures of SOCOTEC that reference to ISO 14064-3 requirements with reference to the "Operational rule" and the "Specification for the demonstration of carbon neutrality" (PAS 2060:2014). The scope of validation covers the LC (Life Cycle) CO₂ emissions per unit of natural gas/LNG to be sold, the amount of carbon credits used for offsetting, and the calculation and operation system of CN-Natural gas / LNG to be sold. The LCCO₂ emissions refer to the amount of GHG emissions released from the stages of natural gas production to combustion. The level of assurance is "limited assurance," and the quantitative criterion of materiality is set at 5 % of the expected absolute emissions, the amount of carbon credits used for offsetting, and the amount of CN-Natural gas / LNG sold.

In the validation procedures, we have reviewed the calculation boundaries and the calculation structure of LCCO₂ emissions of CN-Natural gas / LNG in the "Operational rule" at the Organization, and have confirmed that LCCO₂ emissions of gas to be sold, the amount of credits used to offset for CN-Natural gas / LNG, and the amount of CN-Natural gas / LNG, are appropriately calculated and operated in accordance with the "Operational rule."

3. Our Conclusion

On the basis of "Operational rule" established by the Organization, we are not aware of any instances where LCCO₂ emissions of gas to be sold, the amount of credits used to offset for CN-Natural gas / LNG, and the amount of CN-Natural gas / LNG are not properly calculated and operated.

4. Points to Note

The Organization assumes responsibility for the "CN-Natural gas / LNG Calculation and Operation System", whereas the responsibility for this validation rests with SOCOTEC. There are no specific interests between the Organization and SOCOTEC.

SOCOTEC Certification Japan



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