



Operational Excellence Services

Decarbonization HiHGuard® (GHG Management Service)



Contact Us

 [Technology Inquiries | Contact Us | JGC HOLDINGS CORPORATION](#)

Access to Our Homepage

 <https://www.jgc.com/en/business/epc/operation-maintenance/service/>

Do you have any of these issues?

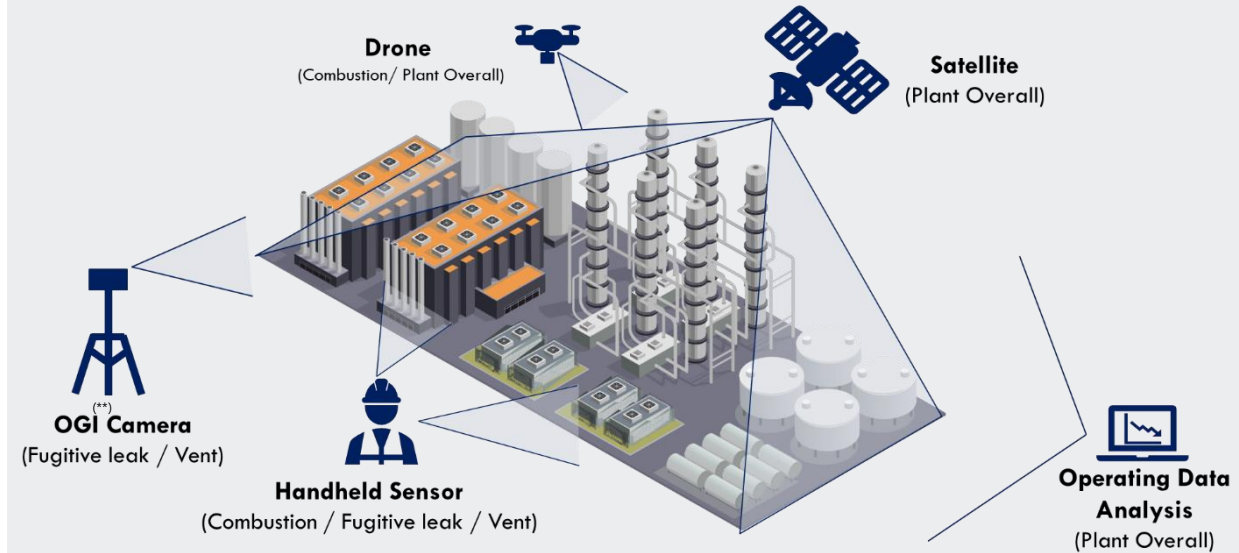
- ☹️ **Need to comply with EU Methane Regulation**
- ☹️ **Difficulty in quantifying CH₄ emissions**
- ☹️ **Need to quantify emissions in actual operation**
- ☹️ **Difficulty in selecting appropriate combinations of measurement technologies**

GHG Management Service

- Provide optimized MRV(*) methodology.
- Conduct actual measurement using drones, satellites, handheld sensors, IR cameras etc., and engineering calculation.
- Report GHG emission to the authorities.
- Provide technical consultation including Zero Routine Flaring (ZRF) study.

(*) MRV: Measurement, Reporting and Verification

Actual measurement



Technical evaluation



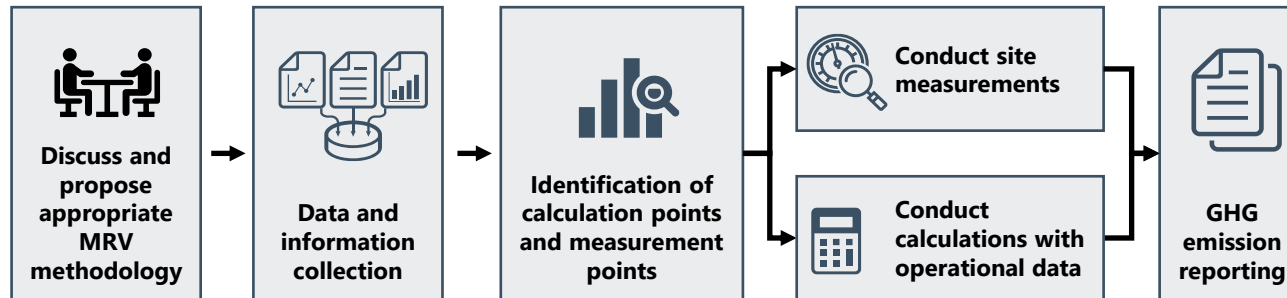
- ✓ Only company in Asia to evaluate methane quantification technology.

Technical consultation



- ✓ Zero routine flare (ZRF) study
- ✓ Operation optimization

Workflow & Results



Steps

- Discuss and propose appropriate combinations of measurement technologies.
- Identify measurement and calculation points based on design documents.
- Conduct engineering calculations and actual measurements.
- Report to client or government agency with preset format.

JGC is

- able to select the most appropriate MRV methodology from international organizations and standards/guidelines.
- familiar with a variety of plants and can provide the optimal combination of drones, satellites, and handheld sensors.

Our Strengths

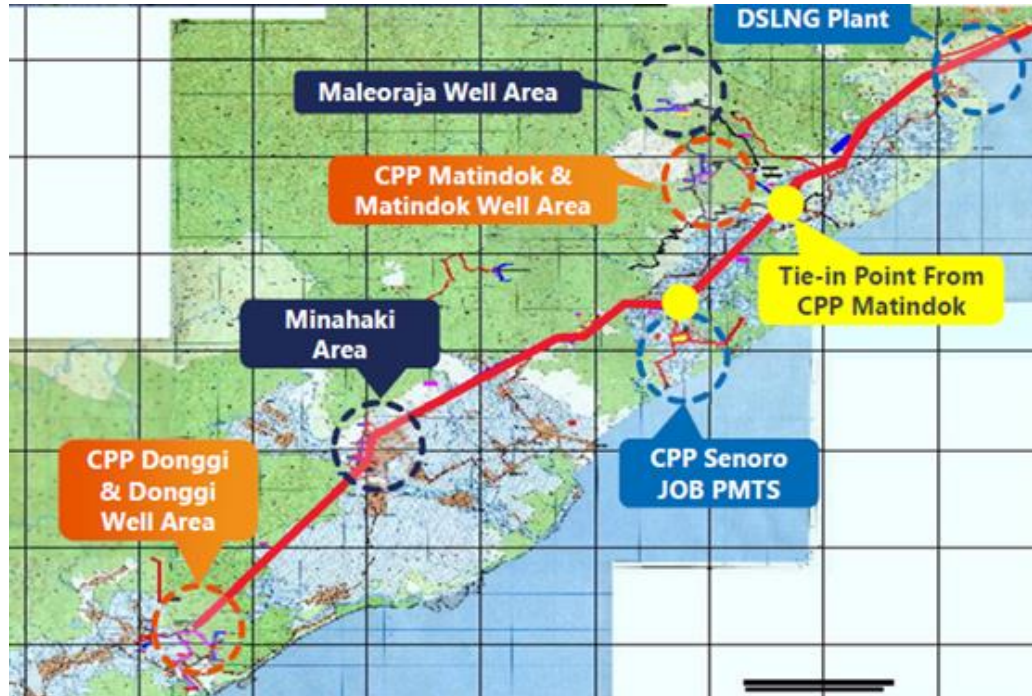
- The only company in Asia to evaluate methane quantification technology in own facilities (JGC METEC).
- Capability to reliably execute MRV based on the experience in EPC and O&M of many types of facilities in many locations around the world.
- Experience in MRV of many types of facilities in several countries.
- Professional HSE, Process, Mechanical Engineer Teams.

Our Background

- JGC has been commissioned by Japan Oil, Gas and Metals National Corporation (JOGMEC) to develop their guidelines.
- The Institute of Energy Economics, Japan (IEEJ) has contracted JGC as a technical adviser for GHG MRV

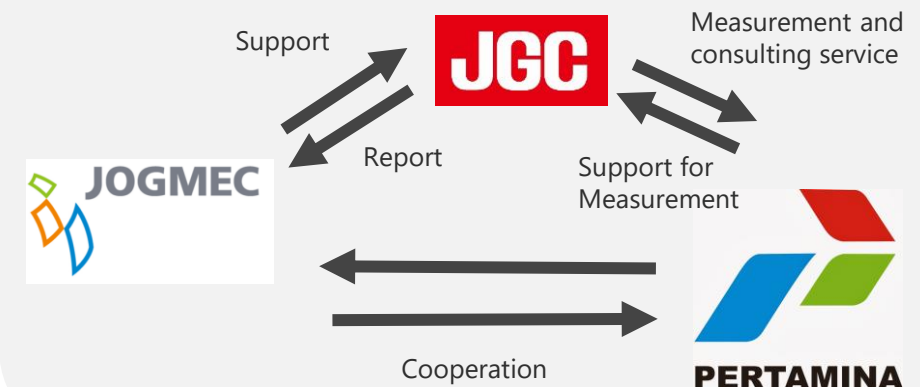
Project in Actual Plant

- JOGMEC/PERTAMINA/JGC completed **direct measurement** to quantify Methane emission in **natural gas production facilities**. (2024-2025)
- **Satellite / Drone / OGI Camera / Handheld Sensor** have been used in the project.
- Contribute to Pertamina's **Zero-Routine Flaring (ZRF)** targets through ZRF study.



Project Area Map

Project Formation



Feasibility Study for Southeast Asia METEC

- SEA METEC is a facility designed for LDAR training and the evaluation of measurement technologies, established by JOGMEC and PETRONAS.
- JGC conducted a feasibility study for SEA METEC based on its expertise from JGC METEC.
- JGC is supporting the establishment of SEA METEC.

(*) METEC: Methane Emissions Technology Evaluation Center

(**) LDAR: Leak Detection and Repair

(***)OGI: Optical Gas Imaging

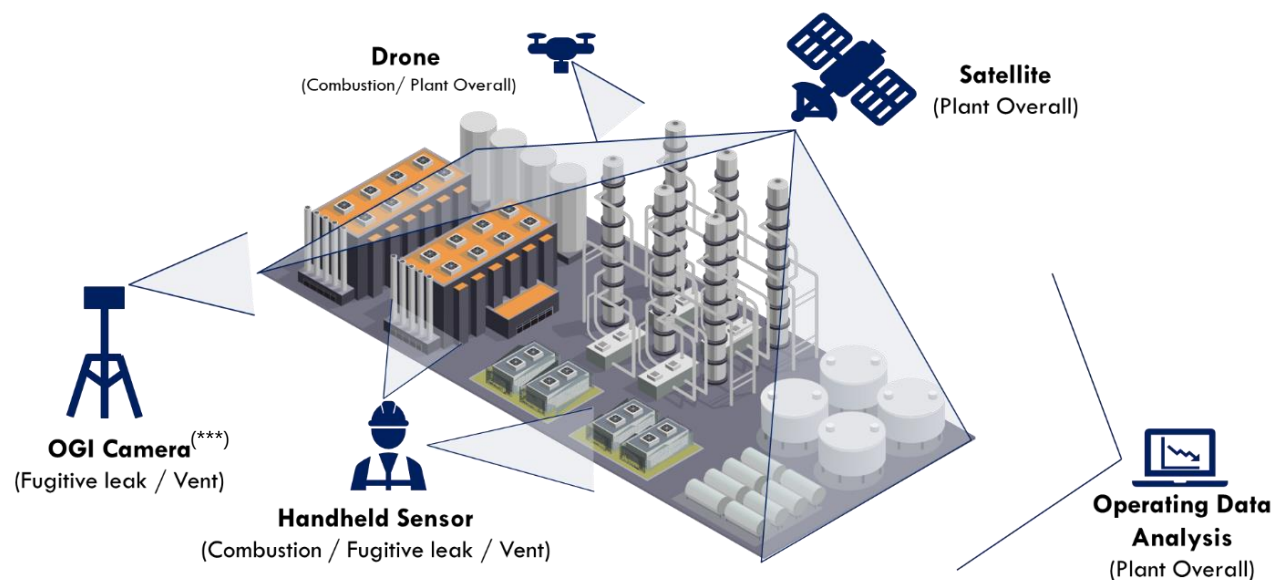


Image of on-site measurement



https://www.jogmec.go.jp/english/news/release/news_10_00076.html