

# PROJECT OWNER/PROJECT DEVELOPER

FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA -

REPRESENTAÇÃO PERMANENTE REPRESENTED BY:

PRESIDENT: LAWYER VINCENZO CORTEGIANI

GENERAL DIRECTOR: DR. FABIO ROSATI,

WEB-SITE DESIGNER/PROJECT DESIGNER: DR. LUCA ROSATI

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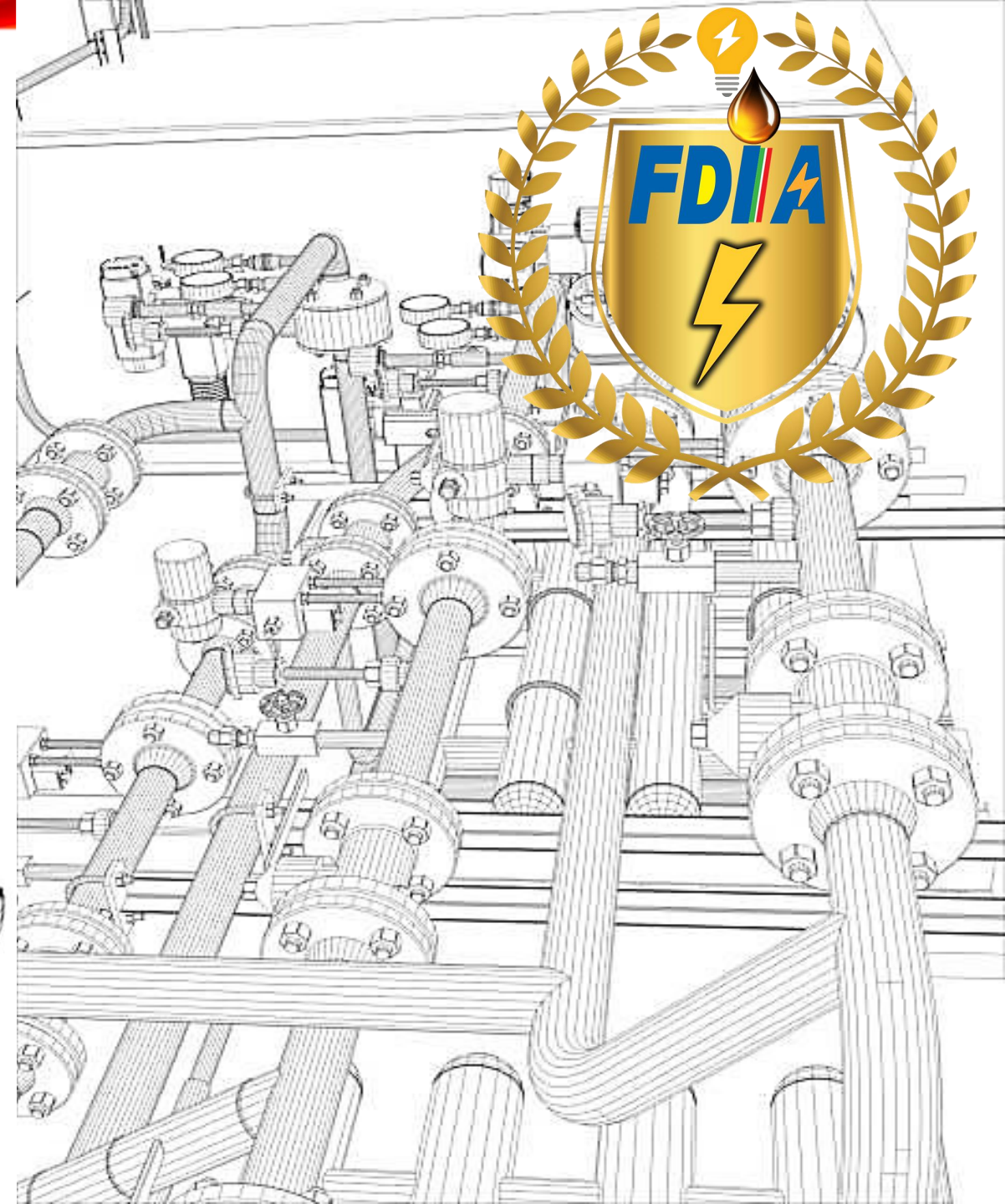
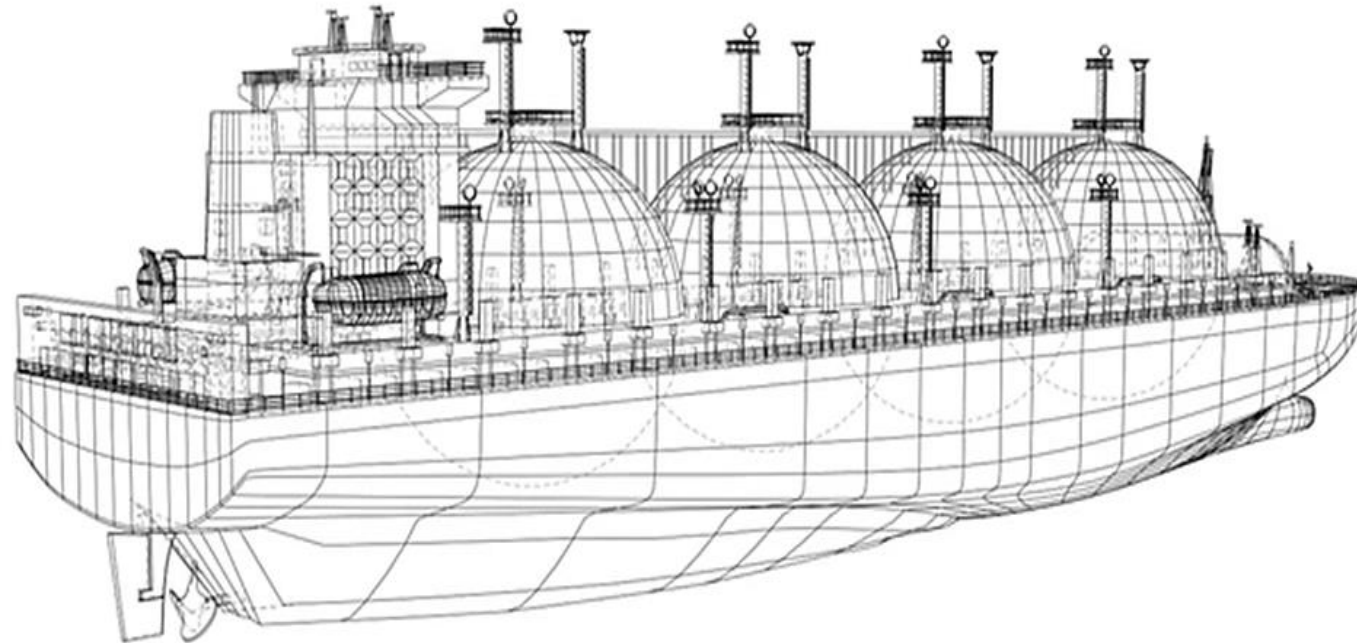
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**THIS ENGINEERING FEASIBILITY STUDY PROVIDES A STRUCTURED OVERVIEW OF THE FUTURE COLOMBIA GAS TERMINAL PROJECT, DETAILING ITS LOCATION, INFRASTRUCTURE, OPERATIONAL DESIGN, BENEFITS, AND ECONOMIC IMPACT. THE PROJECT'S EXECUTION WILL BE CRITICAL FOR COLOMBIA'S ENERGY STABILITY AND WILL PRESENT SIGNIFICANT OPPORTUNITIES FOR ECONOMIC DEVELOPMENT.**





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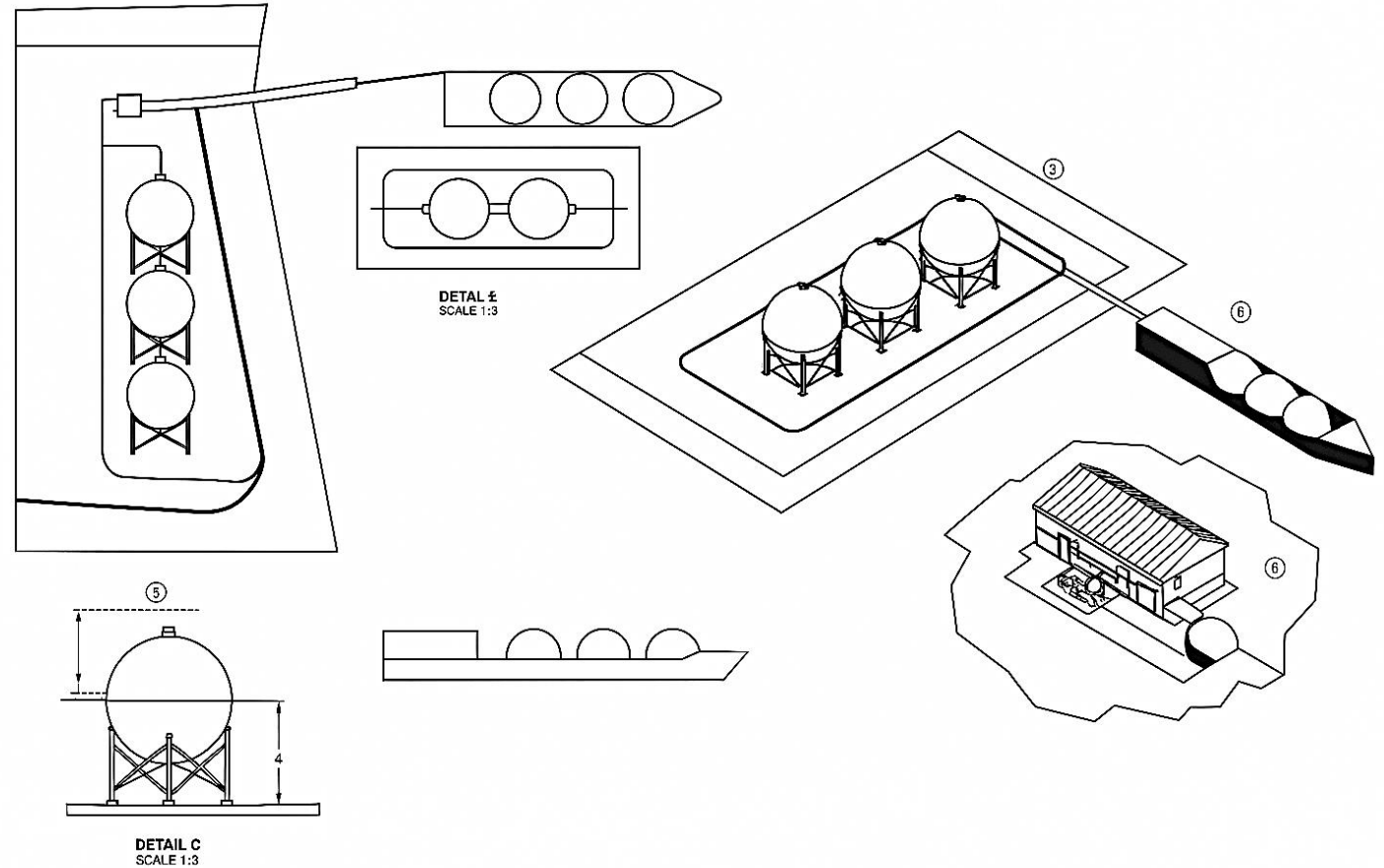
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## AIR QUALITY EMISSION CONTROL.



## ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL



- **Green Equipment for CO<sub>2</sub> Emission Control**
- These technologies can be integrated into a maritime gas plant to minimize emissions:
- **A. Carbon Capture and Storage (CCS)**
- **Post-combustion capture:** Captures CO<sub>2</sub> from flue gases before release.
- **Pre-combustion capture:** Converts fuel into hydrogen and CO<sub>2</sub>, storing CO<sub>2</sub> underground.
- **Direct air capture (DAC):** Uses chemical filters to remove CO<sub>2</sub> from ambient air.



## © ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL

- **Flue Gas Desulfurization (FGD)**
- Reduces sulfur dioxide ( $\text{SO}_2$ ) emissions using **wet scrubbers** or **dry scrubbing systems**.





## © ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL



Paulownia species are fast-growing, high CO<sub>2</sub>-absorbing trees. Absorb 10 times more CO<sub>2</sub> than typical trees. Improve air quality and reduce soil erosion. Use vertical gardens and green roofs in future on plant buildings to improve air quality.

## © ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL

- **Green Hydrogen Production**

Use excess renewable energy to **electrolyze water**, producing **green hydrogen** as a fuel source instead of natural gas.







# ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL

- Our humanitarian association FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE will be a green partner of a Colombian multinational gas project has a critical role in balancing economic development with environmental and humanitarian support. While not directly involved in operations, the association acts as an advocate for sustainable practices, social responsibility, and environmental protection.



## ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL

- Key Roles of the Humanitarian Association

### 1.Environmental Oversight & Advocacy

1. Ensuring that the project follows **eco-friendly policies** and **minimizes carbon emissions**.
2. Promoting **biodiversity conservation** around the maritime port and pipeline locations.
3. Recommending the use of **renewable energy integration** into the gas terminal's energy supply.





## © ROLE OF THE HUMANITARIAN ASSOCIATION FDIA AS A GREEN PARTNER IN THE COLOMBIAN GAS PROJECT OF THE MULTINATIONAL



- **Community Support & Social Welfare**
- Advocating for **fair labor practices** and ensuring that job creation benefits local communities.
- Organizing **education programs** for workers and local populations on sustainable energy.
- Supporting **health and safety standards** for workers and nearby residents.

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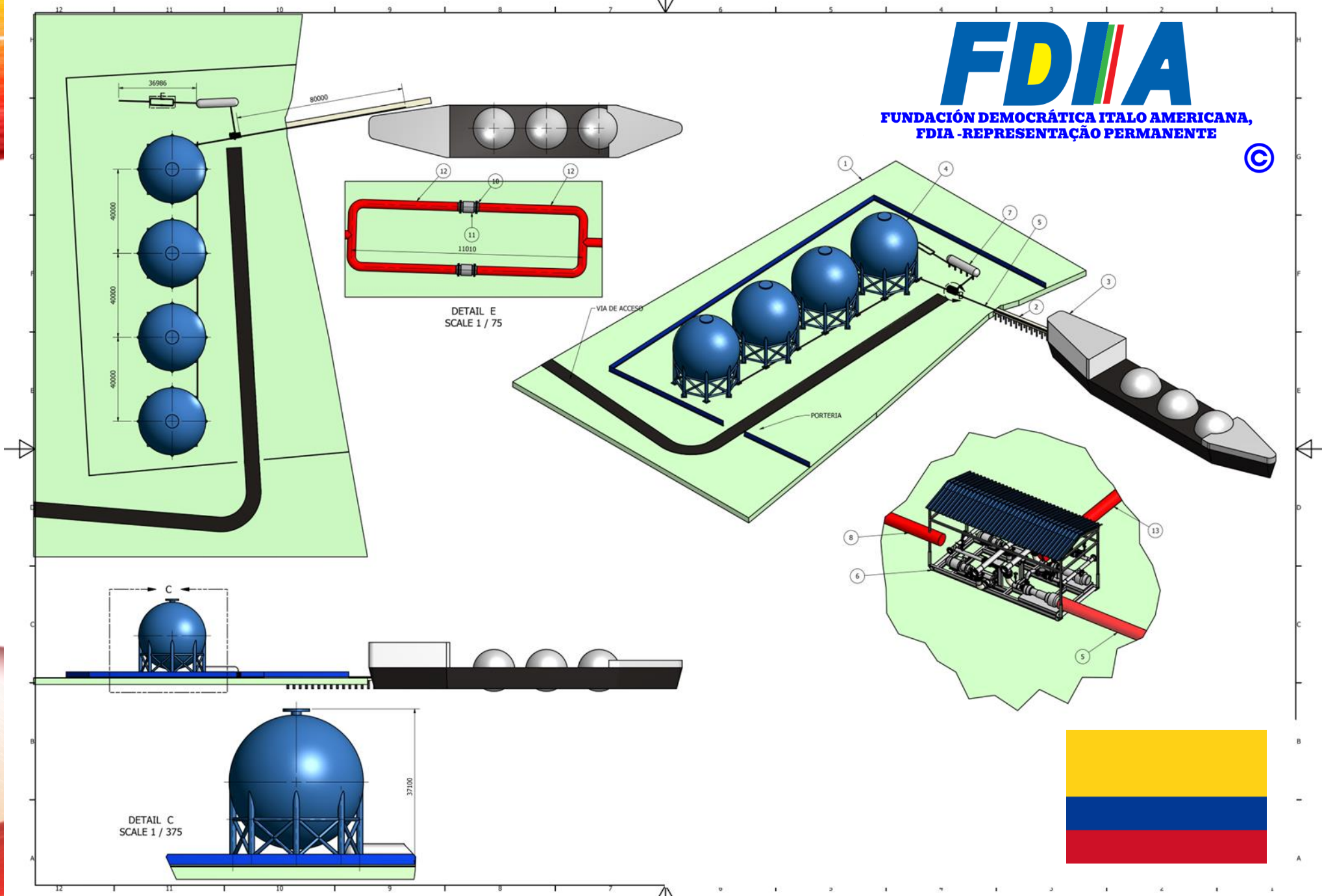


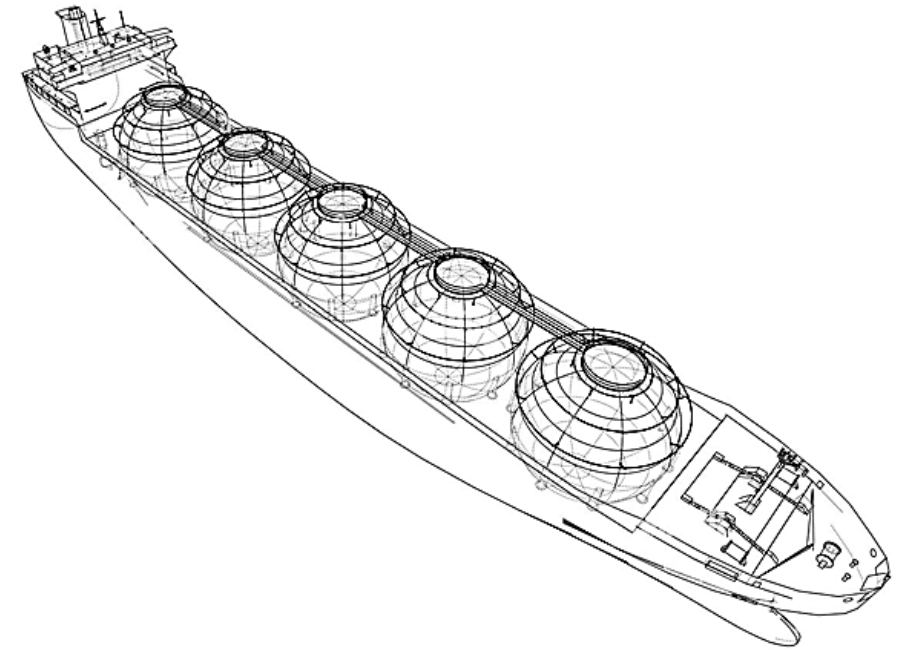
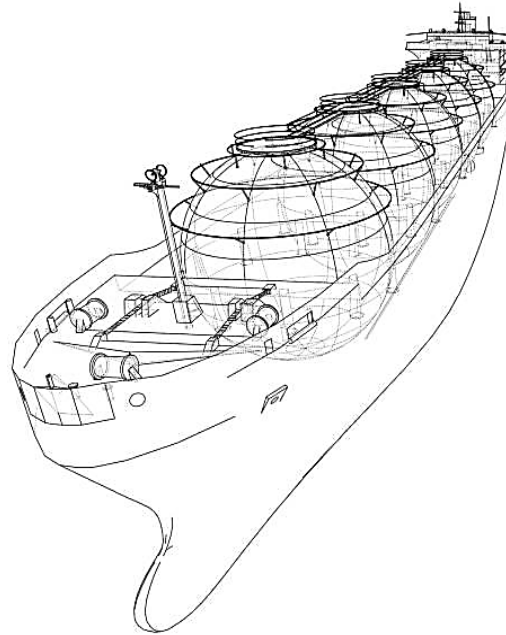
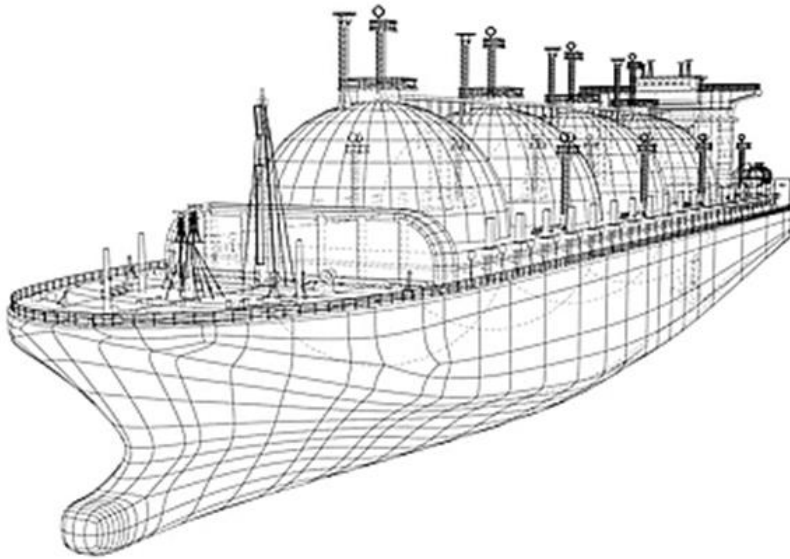
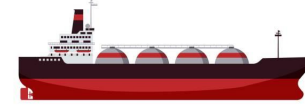
- Sustainable Development Initiatives
- Working to **offset the environmental footprint** of the project (e.g., **reforestation, marine conservation**).
- Encouraging the use of **green technologies** like **carbon capture and methane leakage prevention**.
- Promoting **eco-friendly infrastructure** in the construction phase.



# FDIA

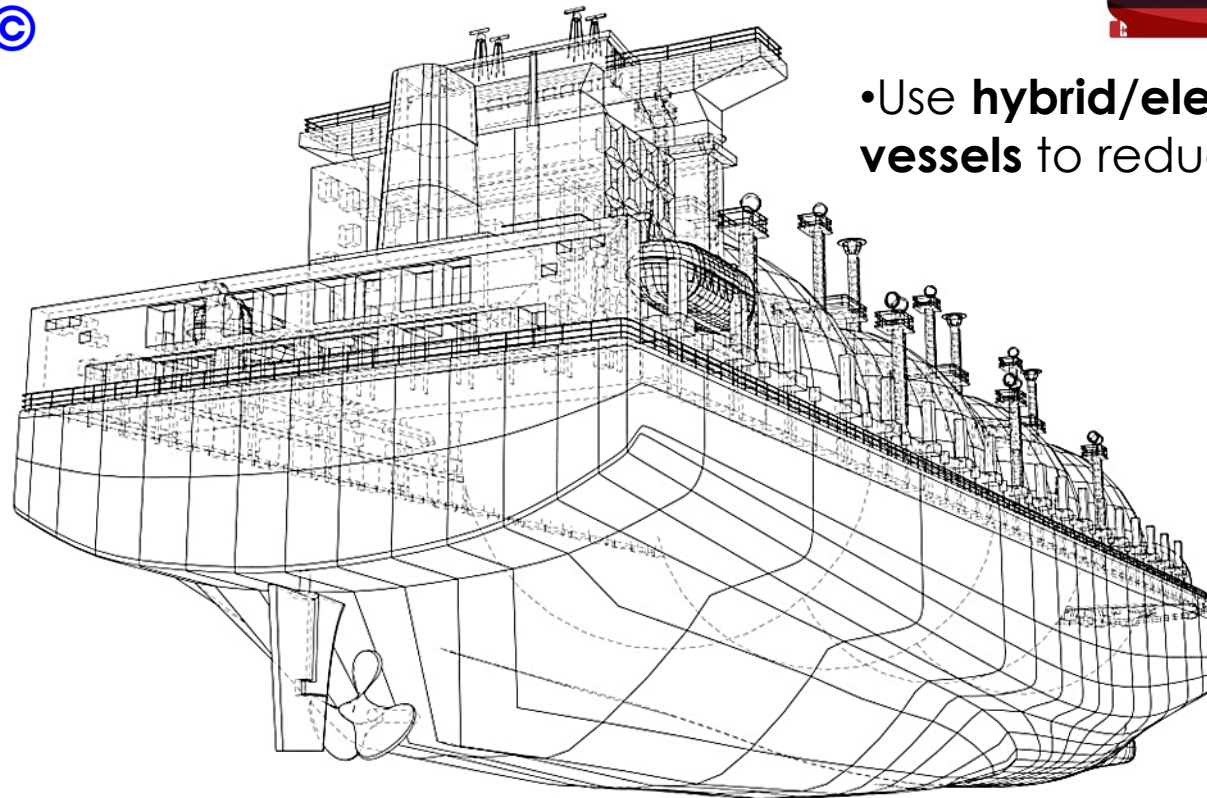
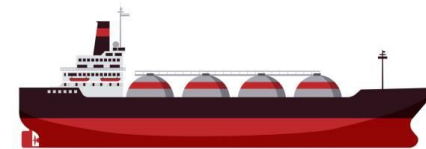
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- Use **hybrid/electric ships** and **LNG-powered vessels** to reduce maritime emissions.

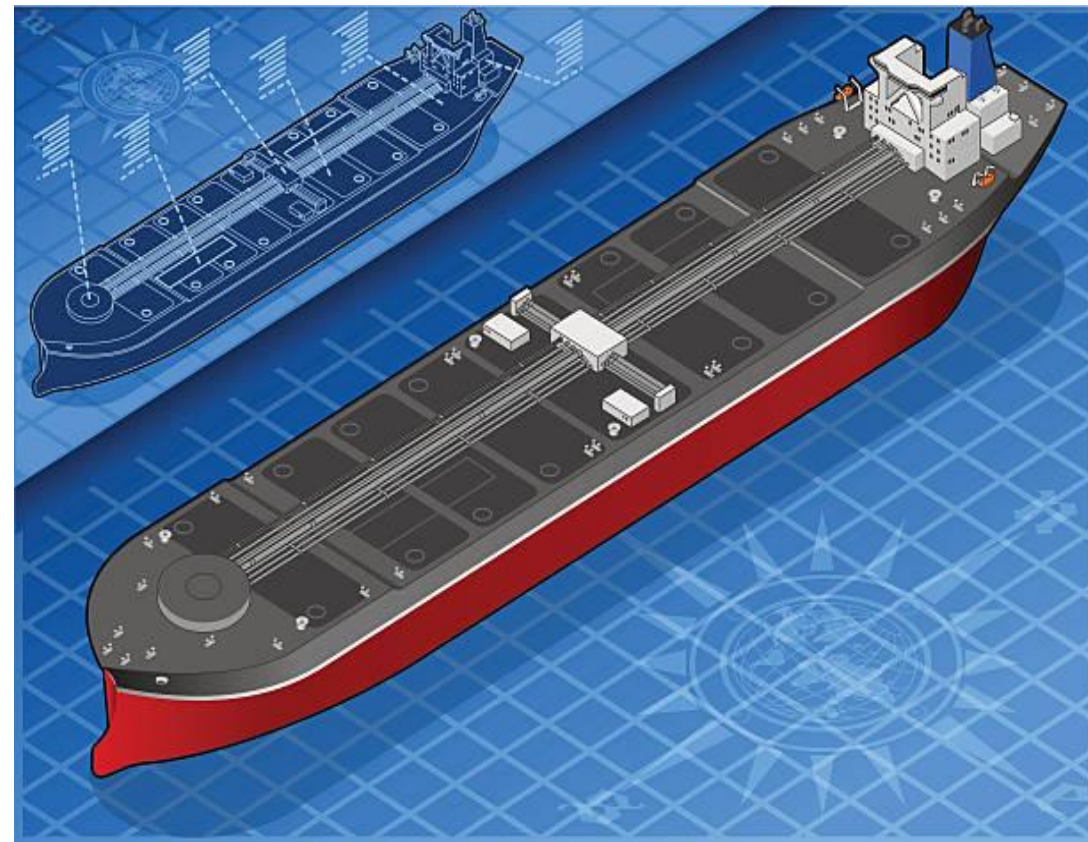
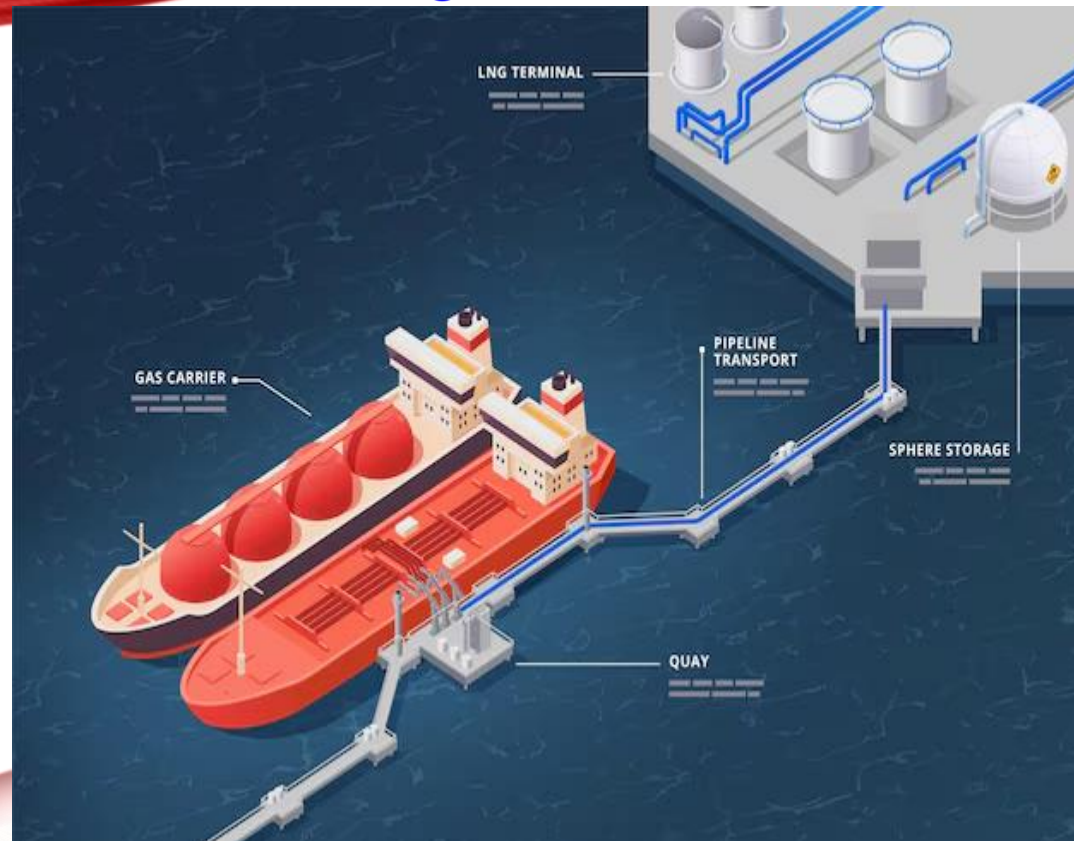
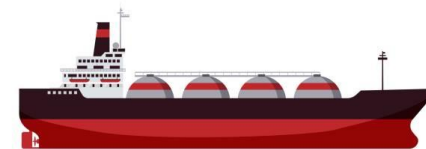




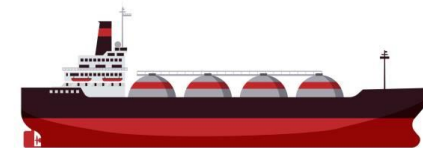
• Use **hybrid/electric ships** and **LNG-powered vessels** to reduce maritime emissions.











THE **COLOMBIA** HAS GREAT POTENTIAL FOR **RENEWABLE ENERGY GENERATION**, PARTICULARLY **SOLAR ENERGY**. THE COUNTRY'S AVERAGE SOLAR IRRADIATION IS **4.5 KWH/M<sup>2</sup>/DAY**, WHICH IS HIGHER THAN THE GLOBAL AVERAGE OF **3.9 KWH/M<sup>2</sup>/DAY**.

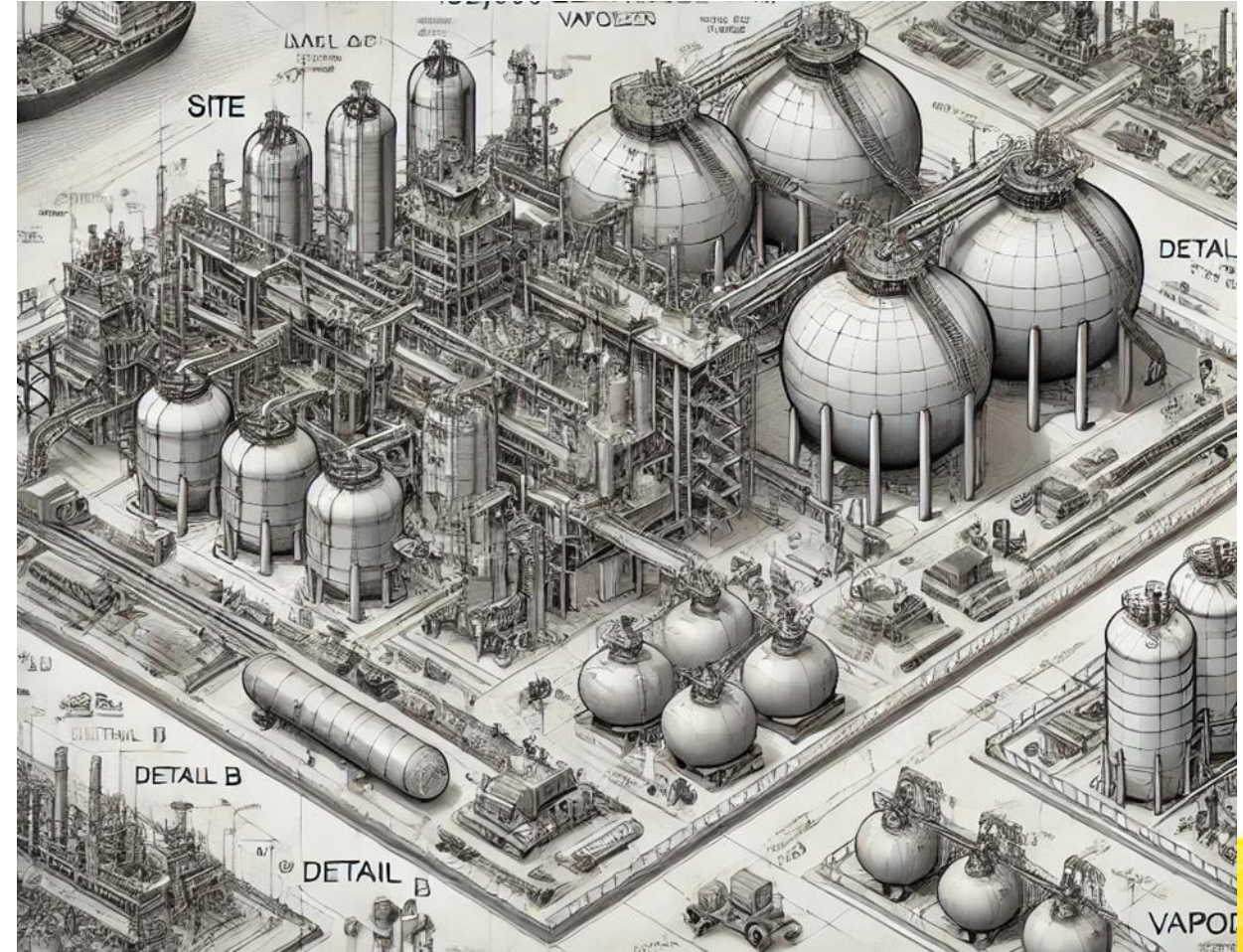






## PROJECT LOCATION

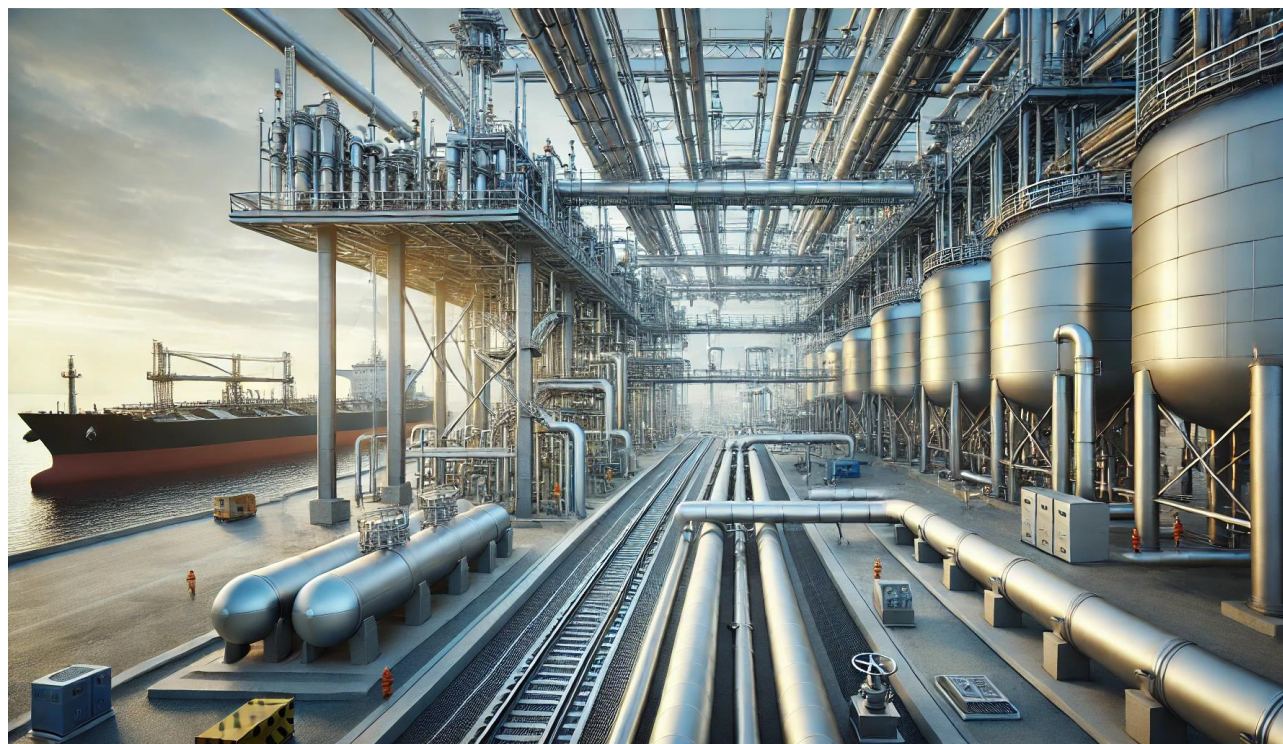
THE **COLOMBIAN SUSTAINABLE GAS TERMINAL PROJECT** WILL BE BUILT MAYBE IN FUTURE IN COLOMBIA IN A MARITIME PORT LOCATION IN A STRATEGICALLY LOCATED NEAR **THE NATIONAL NATURAL GAS TRANSPORTATION SYSTEM (SNT) PIPELINE** **CROSSES THROUGH THIS FUTURE LOCATION OF WORK**, ELIMINATING THE NEED TO CONSTRUCT NEW CONNECTION LINES WITH COMPLEX ROUTES.



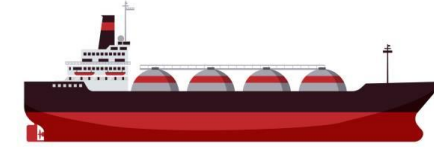




## PROJECT DESCRIPTION THE LIQUEFIED NATURAL GAS (LNG)







## **PHASES OF THE PROJECT PHASE I**

**RECEIVING, STORING, AND REGASIFYING LNG USING A FLOATING STORAGE AND REGASIFICATION UNIT (FSRU) DOCKED AT THE PORT.**

**TRANSPORTING GAS THROUGH NEW AND EXISTING INFRASTRUCTURE, INCLUDING PIPELINES ON THE PIER AND ONSHORE, TO CONNECT.**

**A NEW WHARF WILL BE BUILT TO ACCOMMODATE THE FSRU. THE POSSIBILITY OF AN ONSHORE COMPRESSION MAY ARISE DEPENDING ON DEMAND.**

**PHASE II (LONG-TERM EXPANSION) ONSHORE STORAGE AND REGASIFICATION FACILITIES WILL BE CONSTRUCTED, REPLACING THE FSRU. GAS COMPRESSION ON LAND WILL BE REQUIRED TO MEET SNT TRANSPORT CONDITIONS. THE ONSHORE FACILITY WILL BE IN MARITIME AREA OF WITH POTENTIAL EXPANSION OF THE HECTARES FOR SUSTAINABLE DEVELOPMENT OF LAND AND LOCAL COMMUNITY).**

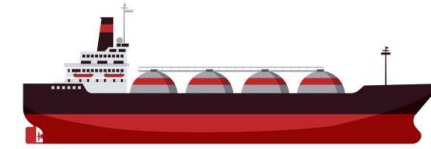


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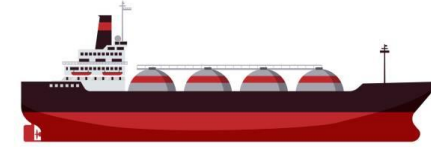




**Floating Storage and Regasification Unit** will be permanently docked at a dedicated pier, with a manoeuvring dock, access channel, and security infrastructure. The regasification system must ensure compliance with the Regulated Utility Tariff (RUT) parameters, including: Gas temperature and composition control. The legal Index and calorific value compliance Emission control and safety protections. The key components of the exclusive pier will include: Loading arms for vapor/gas transfer LNG spill protection systems Property sampling and metering systems. Emergency release couplings (PERC) for shutdown procedures Pipeline connections to the national network.







## Chapter 6: Operating Modes

### 1. Regular Operation – Regasification

- The **Floating Storage and Regasification Unit** receives, stores, and **regasifies LNG**, converting it into natural gas.
- The gas is transported through **dedicated pipelines** to the **SNT**.
- Gas flow is controlled**, ensuring safe and efficient delivery to consumers.

### 2. LNG Replenishment Operation

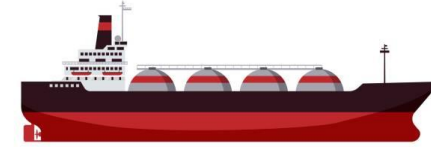
When LNG inventory **falls below operational demand**, the FSRU will be resupplied from **international LNG carriers (methane tankers)**.

The replenishment process involves:

- Mooring and securing the methane tanker to the FSRU**
- Cryogenic hose connection between vessels**
- Pumping and pressure control for LNG transfer**
- Purge and system shutdown procedures**
- Disconnection and departure of the methane tanker**

The **exclusive pier design** ensures that **replenishment operations** can occur **simultaneously with ongoing regasification**.





## Chapter 7: Socioeconomic and Environmental Benefit

### 1. Energy Security

The project **enhances national energy security**, ensuring **stable natural gas availability**.

### 2. Job Creation

- The project will **generate maybe 150 new direct jobs**.
- Local workforce training programs** will prepare employees for project operations.

### 3. Economic Growth

- The LNG terminal will **maybe**, covering a little part of **Colombia's national demand**.
- Infrastructure investments will **boost regional and national economies**.





**THIS PROJECT HAS  
NOT BEEN REALIZED  
OR STARTED, AS IT IS  
STILL IN THE  
PRELIMINARY PHASE  
OF THE FEASIBILITY  
STUDY.**





**THIS FEASIBILITY STUDY MATERIAL & HUMANITARIAN PROJECT IT IS FOR THE PERSONAL USE OF THE PROJECT DEVELOPER DENOMINATED FUNDACIÓN DEMOCRÁTICA ITALO AMERICANA, FDIA - REPRESENTAÇÃO PERMANENTE REPRESENTED BY PRESIDENT LAWYER VINCENZO CORTEGIANI, GENERAL DIRECTOR DR. FABIO ROSATI AND SECRETARY PROJECT MANAGER DR. LUCA ROSATI AND IS COVERED BY COPYRIGHT. REPRODUCTION OR REUSE, EVEN PARTIAL, IS STRICTLY PROHIBITED, PURSUANT TO AND FOR THE PURPOSES OF THE COPYRIGHT LAW (L. 22.04.1941/N. 633). ANY REPRODUCTION, MODIFICATION, DISTRIBUTION, PUBLICATION OR USE, IN WHOLE OR IN PART, IN ANY FORM AND BY ANY MEANS, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF THE AUTHORS PRESENT IN THIS DOCUMENT.**



## SUPPLIER/STARTUP INCUBATOR

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