Decarbonization of industry

Methodology and solutions for reducing the carbon footprint of industrial activities





ARTELIA IS IMPLEMENTING CSR POLICY BASED ON 4 PILLARS :

- Ensure responsible governance
- Protect the environment
- Develop our human capital
- Commit to civic and humanitarian





With our holistic approach, we provide comprehensive services to support you in significantly reducing the environmental footprint of your operations.

OUR LEVERS FOR ACHIEVING DECARBONIZATION



CARBON PERFORMANCE INDUSTRIAL PROCESSES

Process evolution & improvement Support for change of raw materials Recovery of direct emission (flares, events, etc.) Emissions monitoring



ENERGY EFFICIENCY

Process energy efficiency Building renovation Heat and gas recovery Logistics management (RVE, H2, etc.)



ENERGY SUPPLY

Delete for a solution to supply for carbon-free electricity Self-consumption and storage Connection to heat and cold networks Biomass and green gas



CARBON CAPTURE UTILIZATION AND STORAGE

CO2 capture and purification Transportation Geological storage Reuse (e.g, petrochemistry CxHyOz)

OUR EXPERTISE IN GREENFIELD AND BROWNFIELD PROJECTS

CONCEPTUAL

- Researching the best technologies
- Process optimization
- Identifying the largest emitters
- Study of raw materials

DETAILED PROJECT DESIGN

- Project carbon balance objective
- Pinch study
- · Recovery of waste heat
- Process optimization
- Selection of low carbon materials based on life cycle assessment
- Design margin review
- Implementing a CSR strategy for purchasing and construction

END OF LIFE

- Production unit conversion Dismantling and reuse of equipments
- Environmental remediation



PRELIMINIARY PROJECT DESIGN

- Identifying energy saving opportunities
- Decarbonization review
- Implementing a carbon footprint reduction strategy
- Eco-design review
- Utility optimization
- Valorization study on direct emissions (flares, vents, etc.)
- BAT (Best Available Technology) Technological Watch

EPCM / EPC

- Project carbon balance monitoring
- Environmental management of construction
- Implementation and
- monitoring of a site-specific
- CSR specification
- Qualification, selection of
- suppliers and contractors

OPERATION

- Enhancing energy efficiency: auditing existing installations
- Energy and emissions data acquisition

ARTELIA | Designing solutions for a positive life

AIR LIQUIDE

Detailed engineering for projects involving the production of liquefied oxygen and hydrogen at 400 and 700 tons per day.

FRIEDLANDER ANGOLA TOTALENERGIES ANGOLA

Modification of an FPSO to operate in «closed flare» mode and upgrading of the gas produced.

CABOT

Feasibility and authorization studies for the development of a cogeneration unit dedicated to internal energy and steam supply for one its platforms based in Normandy (France).

AXENS

Basic & Detailed Engineering for the deployment of a pilot project dedicated to CO2 capture from industrial sources.

ALSTOM

Feasibility study for a photovoltaic power plant for its site based Barcelona (Spain).

TOTALENERGIES LEUNA

Recovery of waste heat from various refinery units to supply the district heating network of the city of Leipzig (Germany).

TOTALENERGIES

Basic & EPC to convert the existing Grandpuits refinery (nearby Paris airportd) to a zero fossil hydrocarbon platform: integration of a new unit to recycle waste plastic by pyrolysis to produce Tacoil, a feedstock for steam cracker, and revamping of utilities and logisitics facilities for SAF* production units.

*SAF = Sustainable Aviation Fuel

Artelia, an independant multi-disciplinary engineering and project management group



Mobility - Water - Energy - Buildings - Industry

Consulting Master planning & feasibility Design & engineering Construction & project management Asset & facility management Turnkey solutions



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