Gas Treatment & Processing

Contents:

1. Enppi At A Glance
2. Gas Treatment & Processing
3. Gas Treatment & Processing Experience
4. Other Areas Of Expertise
5. Software Applications
6. Q E H S Management Systems
Enppi, established in 1978 and headquartered in Cairo, Egypt, is an Engineering and EPC Main Contractor providing fully integrated engineering, procurement, construction supervision and project management services for the petroleum, petrochemicals, power and other industries, onshore and offshore.

**Shareholders**

- Egyptian General Petroleum Corporation (EGPC) 97%
- Petroleum Projects and Technical Consultations Co. (PETROJET) 2%
- Housing and Social Services Fund for the Petroleum Sector’s Employees 1%

**Capital**

- Authorized: US $ 600 Million
- Paid: US $ 220 Million
Fields of Experience

- Gas Treatment And Processing
- Offshore / Onshore Oil & Gas Production
- Offshore/Onshore Pipelines
- Petrochemicals & Chemicals
- Oil Refining
- Engineering, Consultancy And HRD Services
- Utilities And Offsite Facilities
Enppi executes various projects in the local and international markets, starting from studies to EPC and turn-key projects. Internationally, Enppi penetrated the markets in various regions such as; Arabian Gulf, Venezuela, Syria and Yemen.

Diverse project involvement utilizes Enppi’s own integrated multi-discipline engineering resources together with state of the art design software and techniques. Various process specialized programs (Hysys, Unisim, Pro II, Flarenet, Olga, Pipe phase, Pipesim, Pipeline studio, HTRI, …etc) and in-house developed programs together with process team specialists extensive experience and capabilities in simulation enables Enppi to support projects with static and dynamic simulation models for process units, pipelines and flare systems (reference projects utilizing Hysys dynamic simulation: West Harbor Expansion Project for PhPc and Qasr compression station for KPC. Reference projects utilizing Olga dynamic simulation: Assil & Karam gas development and PAGMI project phase I).

Enppi process division has acquired an extensive experience in the design and commissioning of gas processing facilities including fractionation, LPG, NGL’s recovery plants. Deep cryogenic extraction reached calculated recovery levels up to 98% for propane, 99% for butanes, 98% for ethane and 99% for pentanes.
In the gas treatment field, Process Division has acquired extensive experience in various facilities including acid gas removal, dehydration, mercury removal, compression, gas-oil separation, fuel gas treatment, … etc.

Further to the experience gained in the processing and treatment facilities, Enppi designed and commissioned several gas pipelines in both onshore and offshore territories. The experience and capabilities gained from the above engineered projects support and help Enppi to offer development packages for projects that cover the entire Gas Handling and Processing value chain including but not limited to LPG & NGLs extraction.

Enppi integrated team experience / capabilities cover the following:

- Studies (upgrading, debottlenecking, environmental, safety assessment, flow assurance and surge studies,…etc)
- Pre- front-end engineering and design (Pre-FEED) studies
- Front-end engineering and design (FEED) studies
- Basic Engineering
- Detailed Engineering
- Revamping
- Rehabilitation
- Expansions
- Quantitative Risk Assessment for Gas Facilities
- Engineering, procurement and construction (EPC) Projects
- Turn-key Projects
Samples of technologies employed in different designs performed by Enppi integrated team:

- Sweetening (With capacities up to 2200 MMSCFD)
- Turbo-expanders (With capacities ranging from 300 to 700 MMSCFD)
- Absorption (With capacities up to 330 MMSCFD)
- Adsorption (With capacities up to 1300 MMSCFD)
- Refrigeration (With capacities up to 900 MMSCFD)
- Cold-Box (With capacities ranging from 300 to 900 MMSCFD)
- Deep Cryogenic extraction
  - C2/C3 production (With capacities up to 1000 MMSCFD)
  - Selective fractionation for propane, iso-butane, normal butane, pentane, gasoline and heavy ends recovery (With capacities up to 50,000 BPD)

Samples for the fields experienced by Enppi in gas processing, treatment, storage and transportation projects:

**Gas Production**

Onshore production facilities (launchers, receivers, slug catchers, separators, …etc)

Offshore platform topside facilities/structure (HIPPS, Compressors, de-sanding…etc)

Processing facilities (gas lift, gas injection, dew-pointing…)

Receiving terminals

Export terminals

Compression stations

Metering stations

Control and safety systems (PLC, DCS, ESD, HIPPS, CEMS on heaters and SCADA)
**Gas Storage and Transportation**

Storage facilities (LPG, LNG, NGLs, condensate, C2/C3, Propane…etc)

Pipelines

Loading Arms and shipping terminals facilities

**Gas Processing**

Gas processing and fractionation facilities, to supply ethane and propane, at the required purity, as make-up to the refrigeration cycles.

Heat transfer fluid facilities to provide reboil heat for the various fractionation columns and chilling purpose.

Gas treatment facilities (mercury removal, acid gas removal, dehydration / drying, sweetening…etc)

Gas scrubbing facilities

Sales gas conditioning facilities

LPG production facilities

Condensate recovery facilities

Condensate processing and blending facilities

C2/C3 production facilities

Gas storage and transportation facilities

Condensate storage and transportation facilities

NGL and cryogenic storage and transportation facilities

LNG facilities
Gas Treatment & Processing Experience
We apply state of the art technology and know-how based on worldwide sources of operating companies, international engineering firms and technology licensors. We comply with international codes and standards such as ASME, ANSI, API, ASTM, IEC, etc…
INTERNATIONAL PROJECTS

YANBU GAS PLANT EXPANSION

OWNER
Saudi Aramco, KSA

CONTRACT TYPE
EPC Main Contractor - lump-sum turnkey.

SCOPE OF SERVICES
Detailed engineering, material supply, construction and commissioning & start-up.

PROJECT DESCRIPTION
Expand Yanbu NGL plant capacity from 390 to 585 MBOD. The scope of work includes: 195 MBOD de-ethanizer with ancillaries and propane, refrigeration system, feed to the existing de-propanizer and de-butane columns, construction of substation with process interface room and expansion of DCS and ESD systems.

GAS EXTRACTION AND COMPRESSION PROJECT

OWNER
PDVSA, Venezuela

CONTRACT TYPE
Lump-sum for professional services/material supply cost plus.

SCOPE OF SERVICES
Basic & detailed engineering and procurement services.

PROJECT DESCRIPTION
Installation of a new NGL extraction plant with processing capacity 1000 MMSCFD of natural gas.
FRACTIONATION CAPACITY INCREASE AT JOSE (ACFJ) PROJECT

OWNER
PDVSA, Venezuela

CONTRACT TYPE
Lump-sum for professional services/material supply cost plus.

SCOPE OF SERVICES
Conceptual design, basic & detailed engineering, procurement services and construction supervision.

PROJECT DESCRIPTION
Development of new facilities to process the increase of NGL capacity to 50000 SBPD in order to cover the requirements of the 1st Phase of NGL production increase. Each fractionation train will be designed to produce propane, iso-butane, n-butane, pentanes, gasoline and heavy ends.

ETHANE RECOVERY PROJECT

OWNER
PDVSA, Venezuela

CONTRACT TYPE
Lump-Sum For Professional Services.

SCOPE OF SERVICES
Basic & detailed engineering for sweetening package (ISBL), detailed engineering for C2 extraction unit (ISBL) and overall project management & coordination.

PROJECT DESCRIPTION
Installation of 2200 MMSCFD gas sweetening plant to completely remove the CO2/H2S and CO2 dehydration for the natural gas upstream. The extraction facilities in Anaco and the dehydrated CO2 (200 MMSCFD) will be used for well gas lift, in addition to retrofit of the San Joaquin extraction facilities Trains A&B to achieve 98% ethane recovery. The scope includes provision of molecular sieve dehydration package along with its regeneration (H2O plus CO2 200 MMSCFD – well gas lift).
PAGMI PROJECT PHASE I & II – GAS CONDITIONING FOR DOMESTIC MARKET

OWNER
PDVSA, Venezuela

CONTRACT TYPE
EPCM - lump-sum for professional services, material supply cost plus and unit rates for construction works.

SCOPE OF SERVICES
Basic engineering review, detailed engineering, procurement services for long lead equipment, construction management and overall management for phase I. Conceptual engineering and basic & detailed engineering for phase II.

PROJECT DESCRIPTION
Treating and conditioning gas produced from the offshore area in Northeastern Venezuela to be used in the domestic market in the PDVSA CIGMA Complex, located in Güiria, Estado Sucre, Venezuela.
Phase I: Conditioning of 600 MMSCFD gas from Dragon field (mainly Methane saturated with water), molecular sieve dehydration package and all required utilities to accomplish the domestic market requirements.
Phase II shall be designed to treat 1000 MMSCFD gas and 20197 STD bpd condensate. There will be an additional dehydration module (module B) parallel to module A in PAGMI phase I, with capacity of 600 MMSCFD with different outlet water content.

KHURSANIYAH GAS PLANT

OWNER
Saudi Aramco, KSA

CONTRACT TYPE
Professional services - reimbursable basis

SCOPE OF SERVICES
Engineering services (main contractor – Bechtel)

PROJECT DESCRIPTION
The Khursaniyah gas plant includes two gas-conditioning trains, ethane and natural gas liquids recovery units in order to process 1000 MMSCFD of natural gas, produce 550 MMSCFD sales gas, 240,000 BL/D ethane / natural gas liquids, and 1,800 metric tons / day sulfur. The complex will process natural gas from three onshore fields in the eastern province: Abu Hadriya, Fadhili, and Khursaniyah.
CONCEPTUAL & BASIC ENGINEERING FOR PIRITAL-I PROJECT

OWNER
PDVSA GAS S.A, Venezuela

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Conceptual design and basic engineering.

PROJECT DESCRIPTION
Construction of new extraction plant and its utility systems, processing capacity 1000 MMSCFD of natural gas.

DEVELOPMENT OF THE JORDANIAN GAS TRANSMISSION PIPELINE

OWNER
Jordanian Egyptian Fajr for Natural Gas Transmission and Supply Company

CONTRACT TYPE
EPCM - lump-sum for engineering and construction/material supply cost plus - consortium (Petrojet, Gasco and Enppi Leader).

SCOPE OF SERVICES
Engineering, material supply, construction supervision, and commissioning & start-up assistance.

PROJECT DESCRIPTION
Transmit Egyptian Natural Gas to Jordan through a 36"/394 km pipeline (With Throughput capacity 10 BCM/Y Gas) (From Aqaba to Syrian borders). A compression station was installed at Aqaba for gas transmission.
LOCAL PROJECTS

NGL PROJECT AT PORT SAID

OWNER
United Gas Derivatives Company (UGDC) (BP/Eni/Gasco), Port Said

CONTACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
EPCM: basic engineering review, detailed engineering & procurement services, construction supervision, commissioning & start-up assistance and overall project management.

PROJECT DESCRIPTION
Installation of processing facilities for 1100 MMSCFD feed of natural gases produced from El-Gamil & Ha’py fields to produce propane, LPG and condensates.

DAMEITTA NGL EXPORT FACILITIES

OWNER
United Gas Derivatives Company (UGDC) (BP/Eni/Gasco), Damietta

CONTACT TYPE
EPC turnkey - consortium contract (Enppi and Tractebel) - lump-sum for professional services and cost plus fees for material supply and construction work.

SCOPE OF SERVICES
FEED & detailed engineering, procurement, construction and commissioning & start-up assistance.

PROJECT DESCRIPTION
Installation of marine export facilities - cryogenic tank capacity (30,000m³) for propane storage produced from Port Said NGL process facilities.
MAXIMIZATION OF C2/C3 RECOVERY FROM WESTERN DESERT GAS FIELDS

OWNER
Egyptian Natural Gas Company (GASCO), Alexandria

CONTRACT TYPE
Lump-sum for professional services/material supply disbursable.

SCOPE OF SERVICES
EPCM: techno-economical feasibility study, basic & detailed engineering, procurement, construction supervision, commissioning & start-up assistance and overall project management.

PROJECT DESCRIPTION
The project aims to maximize C2 and C3 Recovery from Western Desert Gas Complex (WDGC) and Ameriya LPG plant. The recovered C2 and C3 in Ameriya LPG plant will be transferred to WDGC through a 12” pipeline, to be processed within WDGC where storage and loading facilities exist.
The project was executed in three phases:
Phase I: production of 600 MMSCFD
Phase II: increase of production to 800 MMSCFD
Phase III: increase of Production to 900 MMSCFD

WEST HARBOR EXPANSION PROJECT

OWNER
Pharaonic Petroleum Company (PhPC), Port Said

CONTRACT TYPE
EPC LSTK (Enppi Main Contractor).

SCOPE OF SERVICES
Engineering, material supply, construction, commissioning & start-up and overall management.

PROJECT DESCRIPTION
Expand West Harbor facility which is currently processing 280 MMSCFD from Ha’py and 265 MMSCFD from Taurt fields, by providing an additional HP stage Compression Train and expand the plant design capacity to 585 MMSCFD.
SIMIAN/SIENNA DEVELOPMENT PROJECT

OWNER
Burullus Gas Company (BG/Petronas/EGPC), Idku

CONTRACT TYPE
EPC lump-sum turnkey - consortium (Enppi and Petrojet, Enppi leader).

SCOPE OF SERVICES
Basic & detailed engineering, procurement services, construction supervision, commissioning & start-up assistance and overall project management.

PROJECT DESCRIPTION
Extension to the onshore existing Scarab/Saffron facility to treat 665 MMSCFD of natural gas produced from Simian/Sienna offshore deepwater fields to feed the onshore Egyptian LNG Plant.

SAPPHIRE DEVELOPMENT PROJECT

OWNER
Burullus Gas Company (BG/Petronas/EGPC), Idku

CONTRACT TYPE
EPC lump-sum turnkey - consortium (Enppi and Petrojet, Enppi leader).

SCOPE OF SERVICES
Basic & detailed engineering, procurement services, construction supervision, commissioning & start-up assistance and overall project management.

PROJECT DESCRIPTION
Extension to the onshore existing Scarab/Saffron and Simian/Sienna facility to treat 665 MMSCFD of natural gas produced from Sapphire offshore deepwater fields to feed the onshore Egyptian LNG Plant.
**WDDM PHASE V BOOSTER COMPRESSION STATION**

**OWNER**
Burullus Gas Company (BG/Petronas/EGPC), Idku

**CONTRACT TYPE**
EPC lump-sum turnkey - consortium (Enppi and Petrojet, Enppi leader).

**SCOPE OF SERVICES**
Engineering services, material supply, construction supervision, commissioning & start-up assistance and overall project management.

**PROJECT DESCRIPTION**
Adding two new gas booster compression systems including waste heat recovery and other facilities required to maintain the export gas supply pressure within the fields of Simian/Sienna, Sapphire and Scarab/Saffron at Idku - Egypt.

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**PHASE VII MAIN COMPRESSION ONSHORE PROJECT**

**OWNER**
Burullus Gas Company (BG/Petronas/EGPC), Idku

**CONTRACT TYPE**
Lump-sum (FEED phase) and detailed engineering lump-sum/material supply cost plus (EP phase).

**SCOPE OF SERVICES**
FEED review, basic engineering, tendering of long lead items and project management; detailed engineering and material supply at cost plus (EP scope); construction supervision (separate contract).

**PROJECT DESCRIPTION**
To install 5x25% new gas turbine driven compression stations with a capacity of 500 MMSCFD each to accommodate the pressure declination from 59 barg to 28 barg, including west heat recovery system and a new figure type slug catcher.
**WESTERN DESERT GAS COMPLEX**

**OWNER**
Egyptian Natural Gas Company (GASCO), Alexandria

**CONTRACT TYPE**
Lump-sum for professional services/material supply disbursable.

**SCOPE OF SERVICES**
EPCM: techno-economic/feasibility study, basic & detailed engineering, procurement, construction supervision, commissioning & start-up assistance and overall project management.

**PROJECT DESCRIPTION**
Treatment of 550 MMSCFD natural gas produced from Western Desert (Obaiyed, Salam & Tarek) to produce ethane & propane mixture for 300,000 t/y ethylene, commercial propane, sales gas, condensate and LPG - Dehydration Package: 2x300 MMSCFD molecular sieve two trains.

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**OBAYIED PRE-COMPRESSION PROJECT**

**OWNER**
Bapetco (Shell Egypt/EGPC), Western Desert

**CONTRACT TYPE**
EPC turnkey – lump-sum for professional services and construction works/material supply disbursable.

**SCOPE OF SERVICES**
EPC Main Contractor: detailed engineering, procurement, construction supervision, commissioning & start-up assistance and overall project management.

**PROJECT DESCRIPTION**
Restore Obaiyed Gas Plant (OGP) compression capacity by 420 MMSCFD through the installation of 2x50% compression train facilities to upgrade OGP pressure from 25 to 86 barg.
ASSIUT/ASWAN GAS PIPELINE PROJECT

OWNER
EGAS

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Route selection, surveying, basic & detailed engineering, procurement services, construction supervision and overall project management.

PROJECT DESCRIPTION
Installation of gas transmission pipeline (500 km) from Assuit to Aswan as follows:
Phase I: Assiut/Gerga P/L 120km – 32”
Phase II: Gerga/Aswan P/L 380km – 30”

DAHSOUR GAS COMPRESSION STATION PROJECT

OWNER
EGAS

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Engineering and procurement services.

PROJECT DESCRIPTION
Installation of four new gas turbine compression stations in Dahshour area, including civil, mechanical and E&I works, Station current capacity is 27.7 MMSCMD by using 3 compressors + 1 standby and the future capacity will be 40 MMSCMD by using 5 compressors + 1 standby
AMERYA LPG RECOVERY PLANT

OWNER
EGPC, Alexandria

CONTRACT TYPE
Lump-sum for professional services/material supply and construction work disbursable.

SCOPE OF SERVICES
Basic & detailed engineering, procurement services, construction supervision and commissioning & start-up assistance.

PROJECT DESCRIPTION
Installation of LPG recovery plant with inlet gas production capacity of 300 MMSCFD producing 360 T/D of LPG. The scope includes Dehydration of 330 MMSCFD of gas by molecular sieve (one train).

EGYPTIAN LNG PROJECT

OWNER
Egyptian Natural Gas Company, Idku

CONTRACT TYPE
S/C: Lump-sum for engineering services (Bechtel USA).

SCOPE OF SERVICES
Detailed engineering for: Inlet treating unit, buildings for power generation, LNG storage, flares, marine facilities and utilities.

PROJECT DESCRIPTION
The 1st LNG project in Egypt; two trains LNG plant with a capacity of 3.6 MMTY LNG production each, located in Idku, Beheira, Northern Coast of Egypt.
TRANSGULF LPG PLANT

OWNER
EGPC, Ras Bakr

CONTRACT TYPE
EPC turnkey - lump-sum for professional services/ material supply and construction works disbursable.

SCOPE OF SERVICES
Detailed engineering, procurement services, construction supervision and commissioning & start-up assistance.

PROJECT DESCRIPTION
Inlet gas production 130 MMSCFD - producing 960 T/D of LPG. The scope includes provision of molecular sieve dehydration package.

SETH OFFSHORE DEVELOPMENT PROJECT

OWNER
Belayim Petroleum Company / PETROBEL (Eni / EGPC)

CONTRACT TYPE
EPC LSTK – Consortium (Enppi, Petrojet and Tecnomare).

SCOPE OF SERVICES
Detailed engineering for topside facilities, Procurement Services and material supply and assistance for commissioning & Start-up.

PROJECT DESCRIPTION
The project aims to install a new platform at water depth 83.3 m at PTB Seth gas field in Ras El barr concession west Nile Delta area (Mediterranean Sea), with total field production flow rate of 4.5 MMSCMD.
ROSETTA GAS FIELD DEVELOPMENT

OWNER
Rashid Gas Company - Rashpetco (BG / Edison / EGPC), Rashid

CONTRACT TYPE
Lump-sum for basic & detailed engineering, reimbursable for construction supervision and commissioning & start-up assistance.

SCOPE OF SERVICES
Detailed engineering, procurement services, construction supervision and commissioning & start-up assistance.

PROJECT DESCRIPTION
The project aims to install Rashid onshore gas processing facilities (275 MMSCFD FEED) including the onshore terminal with gas treatment and export; stabilization unit, condensate export facilities, dehydration & dew-pointing system, gas export facilities, chemical injection package, heating medium, oily water treatment, control system, electricity generation and distribution and utilities in addition to 30km 24” pipeline to transmit sales gas to national grid, and 23km 6” onshore condensate pipeline for gas exported to WEPCO facilities.

RASHID-2 PLATFORM PROJECT

OWNER
Rashid Gas Company - Rashpetco (BG / Edison / EGPC), Mediterranean Sea

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Basic & detailed engineering and procurement services.

PROJECT DESCRIPTION
Installation of four legged unmanned steel jacket platform located in Rosetta at 49 m water depth, with capacity of 275 MMSCFD, weight 450 tons through a 24” subsea pipeline to the onshore terminal for final processing, 3 (1x70 mm2) XLPE 12 / 20 KV 61km submarine cable with fiber optical bundle.
SEMMAN FIELD DEVELOPMENT

OWNER
Belayim Petroleum Company / PETROBEL (Eni / EGPC), Mediterranean Sea

CONTRACT TYPE
Professional services reimbursable.

SCOPE OF SERVICES
Basic engineering review, detailed engineering and procurement services.

PROJECT DESCRIPTION
Installation of new Semman platform (tripod plus deck) and laying of new 18” sea line from Semman to existing Darfeel platform with total length 20km.

DENISE B DEVELOPMENT PROJECT - TNW2 - PLATFORM UPGRADE

OWNER
Belayim Petroleum Company / PETROBEL (Eni / EGPC), Mediterranean Sea

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Basic & detailed engineering and procurement services.

PROJECT DESCRIPTION
Upgrade of TNW2 existing platform to suit Denis gas field production, transmit additional capacity onshore via 61km 32” offshore pipeline and 1km 32” onshore pipeline and upgrade of El Gamil onshore facilities.
ASSIL & KARAM GAS DEVELOPMENT PROJECT

OWNER
Badr Eldin Petroleum Company – Bapetco (SHELL / EGPC)

CONTRACT TYPE
Professional Services & Construction Lump-sum, Material Disbursable – EPC Turnkey.

SCOPE OF SERVICES
Detailed engineering, material supply, construction, commissioning & start-up

PROJECT DESCRIPTION
Installation of CO₂ removal plant, utility facilities to support CO₂ removal plant, 29km P / L, gas turbine generator, air cooler, 2 separators, flare package.
QASR COMPRESSION STATION

OWNER
Khalda Petroleum Company- KPC (Apache / EGPC)

CONTRACT TYPE
EPC LSTK.

SCOPE OF SERVICES
Detailed engineering, Procurement, construction and Pre commissioning & commissioning.

PROJECT DESCRIPTION
Aims to install a gas compression station (four trains), to maintain gas pressure and the condensates produced from the wells at 123 bar. The produced gas will be sent for treatment at Salam and Obayed stations. The pressure of gas produced from the wells is expected to drop from 120 bar to less than 30 bar in the coming years.
TAURT ONSHORE DETAILED ENGINEERING

OWNER
Gulf Of Suez Petroleum Company - Gupco (BP Egypt / EGPC), Port Said

CONTRACT TYPE
Professional services reimbursable.

SCOPE OF SERVICES
Detailed engineering for onshore part of Taurt gas field development project.

PROJECT DESCRIPTION
The Project aims to develop Taurt field through a sub-sea production system (SPS) that consists of seven sub-sea wells tied with a manifold with well testing capability.

OFFSHORE NORTH SINAI FIELD DEVELOPMENT

OWNER
North Sinai Petroleum Company - NOSPCO (BP / Gasco / Perenco), North Sinai

CONTRACT TYPE
Lump-sum for professional services/material supply disbursable.

SCOPE OF SERVICES
Detailed engineering for offshore topside facilities and onshore gas central processing facility, overall procurement services except for pipelines and offshore structure steel, and construction supervision.

PROJECT DESCRIPTION
Development of Tao offshore gas field, 60km north of Rommana producing 180 MMSCFD of gas. The development includes offshore production wells, production platform, submarine pipeline, onshore gas treatment plant and sales gas pipeline in addition to gas dehydration.
TEMSAH-4 PLATFORM

OWNER
Belayim Petroleum Company / PETROBEL (Eni / EGPC), Mediterranean Sea

CONTRACT TYPE
Lump-sum for professional services.

SCOPE OF SERVICES
Basic & detailed engineering and procurement services.

PROJECT DESCRIPTION
Installation of a new platform: four legs, 12-slot unmanned fixed offshore production platform at 85m water depth and capacity of 10 MMSCMD gas plus 3000 BPD condensate.
As an Engineering EPC Main Contractor, Enppi areas of expertise lie in the value chain of its role as an Engineering, procurement, project management and construction supervision contractor.

ENGINEERING

PROCESS TECHNOLOGY

Enppi has considerable experience in the design of oil & gas, onshore/offshore production facilities, gas processing, oil refining, and petrochemicals in the areas of:

• Process optimization and selection
• Studies (techno-economic and technical)
• Flow assurance engineering (steady state & dynamic)
• Debottlenecking and revamps
• License evaluation and selection
• Review of basic engineering for others
• Oil & Gas separation
• FEED, conceptual and basic & detailed engineering
• HAZOP, HAZID, QRA, Sil and other safety studies
• Performance analysis and guarantees
• Operating manuals development
• Commissioning and start-up procedures
• Field assistance for construction and start-up
MECHANICAL ENGINEERING
Enppi has qualified specialists in all aspects of mechanical engineering. The following services are offered to support FEED and detailed design activities or independently as specialized services.

• Static equipment design, covering:
  » Pressure vessels, heat exchangers, columns, reactors, heating and power boilers and tank design.

• Rotating equipment design, covering:
  » Compressors, gas and steam turbines, pumps, turbo expanders, HVAC, etc..

• Material selection, covering:
  » Material selection guides
  » Cathodic protection
  » Painting

• Field assistance for construction and start-up

ELECTRICAL ENGINEERING
Enppi has fully experienced team in Electrical System Design, with heavy experience in both onshore & offshore applications; covering:

• Power generation and distribution
• Electrical systems analytical studies
• Relay coordination studies
• Overhead transmission lines design
• UPS systems
• Solar power units
• Plant power distribution & cabling systems
• Lighting systems
• Lightning protection facilities
• Navigational aid systems
• Grounding systems
• Heat tracing systems

• Solid handling designs, covering:
  » Solids Conveying, Transport, Storage and Processing Systems in the fields of Chemical, Petrochemical, Mining and Mineral Processing Industries
  » Cranes

• HVAC systems design and engineering works, covering:
  » Industrial Applications such as control, switchgear, battery, laboratory, warehouses and workshop buildings.
  » Administration buildings.

• Hazardous Area Classification, Plans & Elevations and Electrical enclosure selection criteria
• Field assistance for construction and start-up
INSTRUMENTS & CONTROL AND TELECOMMUNICATIONS ENGINEERING

The company’s competencies in Instrument & Control and Telecommunication engineering cover:

- Field instruments & Process Measurements.
- Process Control Applications (Burner Management System, Boiler control, Compressor Control, etc….)
- Process Control Systems (DCS, PLC)
- Pneumatic, Hydraulic controls.
- Safety Instrumentes System (SIS).
- High Integrity Pressure Protection System (HIPPS).
- SCADA & Communication Systems.
- Pipeline Management System.
- Fiscal Metering Systems.
- Automatic Tank Gauging.
- Oil & Gas Wellhead control system.
- Tele-communication systems such as:
  - Private Automatic Branch Exchange (PABX), VoIP
  - Public Address & Alarm System (PA&A)
  - Fiber Optic Cables / System
  - Wireless Systems (Satellite, Microwave, VHF/UHF)
  - Security systems (Closed Circuit Television (CCTV),
  - Access Control System & Intrusion detection system)
  - Video Conference.
- Field assistance for construction and start-up
CIVIL/STRUCTURAL/ARCHITECTURAL ENGINEERING
Enppi possesses considerable design experience in different phases of Civil/Structural/Architectural works, which covers the following activities for plant facilities and other onshore structures:

- General site preparation drawings
- Road and paving drawings
- Building design (architectural / structural detailed drawings)
- Detailed drawings (steel/concrete) and MTO preparation
- Tanks and basins drawings
- Foundation drawings
- General specifications, MRQs & MRPs preparation
- Field assistance for construction and start-up

OFFSHORE STRUCTURES
Enppi offshore structural design capabilities cover the following areas:

- Offshore fixed platforms analysis and design
- Deep & shallow foundation engineering
- Dynamic & fatigue assessments
- Earthquake Analysis
- Nonlinear Analysis
- Finite element Analysis
- Construction support engineering
- Transportation & Installation engineering
- Weight & COG engineering
- Structural Integrity Management
- Ports & Terminals engineering
- Subsea structural engineering
- Specification & Fabrication drawings
- Field assistance for construction and start-up
PIPING ENGINEERING

The principal documentation generated by Enppi piping engineering incorporates:

- Plot plans and equipment location plans
- Piping general arrangement drawings for the above ground piping
- Orientation drawings of Tower, vessel, tank, etc…
- Piping isometrics drawings
- Stress analysis reports for critical lines using Caesar II program
- Piping supports distribution and design
- Piping material specification and supply specification for packages
- MRQs and MRPs preparation for piping bulk and valves
- Underground Composite Drawing
- Detailed design of underground piping systems
- Update of drawings and 3D CADD model to “AS-BUILT” status
- Detailed and block plastic model building
- Field assistance for construction and start-up

PIPETLINE ENGINEERING

Enppi Pipeline Engineering is responsible for onshore/offshore pipelines engineering (FEED & Detailed Design), pre-commissioning and installation supporting; The main pipelines engineering activities cover the following:

- Pipeline design basis
- Pipeline mechanical design
- Route selection
- Planimetry and profile
- Riser/Spools Layout
- Crossing details
- Field assistance for construction and start-up
- Subsea Equipment
- Analysis reports
- Standard details
- Material requisitions and Specifications
- Bidders evaluations
The following section gives detailed description of the various deliverables:

**For onshore & offshore pipelines:**

- Pipeline specifications
- Material selection and wall thickness calculations
- Stress analysis studies
- P/L alignment drawings
- Buoyancy calculations
- Anchor blocks calculations
- Thermal expansion calculations
- Buckling calculations
- Coating and wrapping
- Cathodic protection
- Material take-off

Material requisitions including material specifications and purchase orders preparation

**For Offshore Pipelines:**

- Free span analysis
- Seabed irregularities analysis
- Upheaval buckling analysis
- Installation analysis
- Trenching study
- Pipeline survey, installation and trenching bid packages
- Riser and spool piece design
PROCUREMENT

Enppi’s strategy in procurement is to provide quality goods and services, at the right time, at the lowest cost, produced and delivered safely. We have the experience, the tools, and the know-how for procurement services by providing integrated, reliable, and cost-efficient supply chain management services to ensure the success of projects, large and small.

We have capabilities in:

• Procurement Management
• Purchasing and contracting services
• Purchase orders expediting and subcontracts administrations.
• Supplier quality surveillance.
• Material Logistics
• Material control

Enppi’s supply management services leverage today’s technologies and logistics’ methods to make efficient decisions which streamline the supply management process.

We have a global track record of ensuring timely and accurate material receipt through innovative expedition and quality assurance with vendors to minimize receiving delays and errors. We optimize transportation networks, operating hand-in-hand with global freight forwarders with dedicated assets. We offer the expertise, processes and tool utilization needed to facilitate frequent status updates on all material control information including material quantities required, received and issued.
PROJECT MANAGEMENT AND CONSTRUCTION SUPERVISION

The design and execution of large scale onshore and offshore projects necessitates the strict adherence to sound management and control practices. In such projects, Enppi provides specialized management, control and quality assurance services covering:

• Contracts/subcontracts preparation and administration
• Overall project management and control
• Front-end planning and detailed project scheduling
• Engineering coordination and control
• Cost estimation and budget monitoring
• Variance control
• Identifying and solving problems hindering project execution

Enppi also provides construction management services as part of the overall project management function, covering structural, piping, mechanical and E&I supervision.

The offered construction management services include construction supervision, commissioning and start-up activities covering:

• Construction management and quality assurance/control
• Construction safety management
• Construction planning and control
• Onshore fabrication, installation and load-out supervision
• Offshore installation supervision
• Commissioning and start-up assistance
The latest software programs have been widely used in Enppi to optimize the efficiency of the different disciplines’ processes.

### Process Technology

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dnv Phast</td>
<td>Quantitative risk assessment</td>
</tr>
<tr>
<td>Smart plant P &amp; ID “Intergraph”</td>
<td>Piping &amp; instrument diagram</td>
</tr>
<tr>
<td>Flare Net</td>
<td>Flare hydraulic networks</td>
</tr>
<tr>
<td>Flare Sim</td>
<td>Flare radiation calculation</td>
</tr>
<tr>
<td>Fri</td>
<td>Tower internals design</td>
</tr>
<tr>
<td>Hextran</td>
<td>Heat Exchanger network optimization</td>
</tr>
<tr>
<td>HTRI</td>
<td>Heat transfer equipment design (Heat exchangers, air coolers, heaters)</td>
</tr>
<tr>
<td>Hysys</td>
<td>Process simulation</td>
</tr>
<tr>
<td>Network Inplant</td>
<td>Network simulation</td>
</tr>
<tr>
<td>Pipeline Studio</td>
<td>Gas &amp; liquid pipeline dynamic simulation</td>
</tr>
<tr>
<td>Olga</td>
<td>Pipeline transient multiphase flow dynamic</td>
</tr>
<tr>
<td>Pipenet</td>
<td>fire water system hydraulic calculation</td>
</tr>
<tr>
<td>Pipephase</td>
<td>Pipeline steady state hydraulic simulation</td>
</tr>
<tr>
<td>Pipesim</td>
<td>Steady state multiphase flow simulator</td>
</tr>
<tr>
<td>Sil Core</td>
<td>Safety integrity level</td>
</tr>
<tr>
<td>Smart Plant P &amp; Id</td>
<td>P &amp; ID Document</td>
</tr>
<tr>
<td>Primatech</td>
<td>Hazop / Hazid</td>
</tr>
</tbody>
</table>
# Mechanical Engineering

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadna</td>
<td>Noise Models - Noise Contours</td>
</tr>
<tr>
<td>Compress</td>
<td>Pressure vessels design / analysis</td>
</tr>
<tr>
<td>E-Tank / ITS</td>
<td>Storage tanks design / analysis</td>
</tr>
<tr>
<td>Pv Elite</td>
<td>Pressure vessels design / analysis</td>
</tr>
<tr>
<td>Signal Ffs</td>
<td>Fittness for service assessment according to API 579</td>
</tr>
<tr>
<td>Solid Works Simulation</td>
<td>3-D modeling</td>
</tr>
</tbody>
</table>

# Civil / Structural / Architectural Engineering

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afes</td>
<td>Analysis &amp; design for shallow &amp; deep information</td>
</tr>
<tr>
<td>Arch</td>
<td>Arch, design to produce drawings &amp; MTO</td>
</tr>
<tr>
<td>Autodesk Revit</td>
<td>4D BIM software, used to design a building in 3D, interfacing with 2D drafting tools, access information from the model &amp; allow plan &amp; track various stages in the building’s lifecycle</td>
</tr>
<tr>
<td>Etabs</td>
<td>Civil building analysis, design for structural &amp; earthquake engineering</td>
</tr>
<tr>
<td>Pds 3d (Frameworks Plus)</td>
<td>3D modeling and steel drawings</td>
</tr>
<tr>
<td>Safe</td>
<td>Floor analysis &amp; drawings</td>
</tr>
<tr>
<td>Sap 2000 V15.0.1</td>
<td>3D structural analysis</td>
</tr>
<tr>
<td>Staad Pro</td>
<td>Structural analysis</td>
</tr>
<tr>
<td>Program</td>
<td>Deliverables</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ETAP 12.0.0 Electrical Transient Analyzer Program</td>
<td>To Perform Complete Power System Studies:</td>
</tr>
<tr>
<td></td>
<td>• Short Circuit Calculation</td>
</tr>
<tr>
<td></td>
<td>• Load flow studies</td>
</tr>
<tr>
<td></td>
<td>• Motor starting Calculation</td>
</tr>
<tr>
<td></td>
<td>• Harmonics analysis</td>
</tr>
<tr>
<td></td>
<td>• Transient stability studies</td>
</tr>
<tr>
<td></td>
<td>• Earthing Calculation</td>
</tr>
<tr>
<td></td>
<td>• Protection Relay Coordination</td>
</tr>
<tr>
<td>PLS-CADD and PLS-Pole</td>
<td>To perform Overhead transmission line (OHL) design for power distribution and transmission.</td>
</tr>
<tr>
<td>DIALUX</td>
<td>Lighting System Design</td>
</tr>
<tr>
<td>SMARTPLANT® 3D CABLE MANAGEMENT INTERFACE</td>
<td>Intelligent Software for Cables management through 3D Modeling</td>
</tr>
<tr>
<td>PDS</td>
<td>For 3D Modeling of electrical equipment/lighting/cable routing</td>
</tr>
<tr>
<td>PDMS</td>
<td>For 3D Modeling of electrical equipment/lighting/cable routing</td>
</tr>
<tr>
<td>Micro-Station</td>
<td>For smart extracting of layouts from PDS modeling</td>
</tr>
<tr>
<td>AutoCAD</td>
<td>For drafting layouts</td>
</tr>
<tr>
<td>Electrical Load Analysis (ELA)</td>
<td>Used for sizing of electrical equipment such as follows:-</td>
</tr>
<tr>
<td></td>
<td>• Generators</td>
</tr>
<tr>
<td></td>
<td>• Transformers</td>
</tr>
<tr>
<td></td>
<td>• Switchgears</td>
</tr>
<tr>
<td>Oracle and Electrical Cable Sizing</td>
<td>Used for Sizing HV/LV power cables feeding relevant users.</td>
</tr>
</tbody>
</table>
# Instrumentation & Control and Telecommunication Engineering

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aveva Instrumentation</td>
<td>Instrumentation Engineering design</td>
</tr>
<tr>
<td>Aveva (PDMS)</td>
<td>3D Modelling</td>
</tr>
<tr>
<td>Aveva Cable Design</td>
<td>3D Modelling</td>
</tr>
<tr>
<td>Smart Plant Instrumentation (Intools)</td>
<td>Instrumentation Engineering design</td>
</tr>
<tr>
<td>Smart Plant 3D</td>
<td>3D Modelling</td>
</tr>
<tr>
<td>PDS 3D Model</td>
<td>3D Modelling</td>
</tr>
<tr>
<td>CONVAL</td>
<td>Sizing Software</td>
</tr>
<tr>
<td>INSTRUCALC</td>
<td>Sizing Software</td>
</tr>
</tbody>
</table>

### Projects Control

#### Planning Division

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primavera P6 Team member / Collaborator</td>
<td>Planning &amp; Scheduling</td>
</tr>
<tr>
<td>Primavera Project Management</td>
<td>Planning &amp; Scheduling Projects</td>
</tr>
<tr>
<td>Primavera Risk Analysis</td>
<td>Planning &amp; Scheduling</td>
</tr>
<tr>
<td>Risky Project Professional</td>
<td>Quantitative Risk Analysis</td>
</tr>
</tbody>
</table>

#### Cost Division

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Decision Tools Suite Professional @ Risk</td>
<td>Cost quantitative risk assessment</td>
</tr>
<tr>
<td>Comfar lll Expert</td>
<td>Feasibility Analysis</td>
</tr>
</tbody>
</table>
## Plant Design & Piping

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aga, Prci</td>
<td>Stability</td>
</tr>
<tr>
<td>Autodesk Navisworks Simulats</td>
<td>Model Access / review</td>
</tr>
<tr>
<td>Autopip</td>
<td>Stress analysis</td>
</tr>
<tr>
<td>Aveva Area Based Automatic Drawing Production</td>
<td>Automatic 2D drawing generation</td>
</tr>
<tr>
<td>Aveva Final Designer</td>
<td></td>
</tr>
<tr>
<td>Aveva Laser Model Interface</td>
<td>Transferring laser scanner data to 3D model</td>
</tr>
<tr>
<td>Aveva Multi Discipline Supports</td>
<td>Pipe support modeling</td>
</tr>
<tr>
<td>Aveva Pdms</td>
<td>3D equipment / pipe modeling</td>
</tr>
<tr>
<td>Aveva Review</td>
<td>Model access / review</td>
</tr>
<tr>
<td>Caesar II</td>
<td>Pipe stress analysis / calculations</td>
</tr>
<tr>
<td>Isogen</td>
<td>Piping isometrics extraction</td>
</tr>
<tr>
<td>Lmi</td>
<td>Laser scanner data review</td>
</tr>
<tr>
<td>Microstation / J</td>
<td>2D drawings</td>
</tr>
<tr>
<td>Offpipe</td>
<td>Subsea pipe lay</td>
</tr>
<tr>
<td>Orthogen</td>
<td>Automatic 2D drawing generation</td>
</tr>
<tr>
<td>PDMS</td>
<td>3D equipment / piping modeling</td>
</tr>
<tr>
<td>PDS 3D</td>
<td></td>
</tr>
<tr>
<td>Sage Profile</td>
<td>Subsea seabed inequalities</td>
</tr>
<tr>
<td>Sewer Cad</td>
<td>Underground pipe network modeling</td>
</tr>
<tr>
<td>Smart Plant 3D</td>
<td>3D equipment / piping modeling</td>
</tr>
<tr>
<td>Smart Plant Review –Api</td>
<td></td>
</tr>
<tr>
<td>Smart Plant Review-Photo Realism</td>
<td>Model access / review</td>
</tr>
<tr>
<td>Smart Plant Review- Simulation &amp;Visual Effects</td>
<td></td>
</tr>
<tr>
<td>Smart Plant Sketch</td>
<td>2D drawings</td>
</tr>
<tr>
<td>Smart, Plant Review</td>
<td>Model access / review</td>
</tr>
<tr>
<td>Vpe Workbench</td>
<td>P&amp;ID Sketch</td>
</tr>
</tbody>
</table>
## Pipeline

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFPIPE (Ver. 2.07), Non-linear finite element method for offshore installation analysis for Pipelines, Risers and Cables</td>
<td>Modeling and structural analysis of non-linear analyses of offshore pipelines installations (including normal and davit lift).</td>
</tr>
<tr>
<td>AUTOPIPE-PLUS (Ver 8.06), stress analysis software</td>
<td>Finite element software program for analysis of complex pipeline/piping systems.</td>
</tr>
<tr>
<td>SAGE PROFILE (Ver 6.4)</td>
<td>Finite element software program for subsea pipeline seabed irregularities 2D and 3D analyses.</td>
</tr>
<tr>
<td>AGA/PRCI (Ver 3.0)</td>
<td>Submarine Pipeline On-bottom Stability software &amp; Design Standard developed by American Gas Association and Pipeline Research council International.</td>
</tr>
</tbody>
</table>

## Procurement

<table>
<thead>
<tr>
<th>Program</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Material Management System</td>
<td>Follow up &amp; control of project material at site</td>
</tr>
<tr>
<td>Vendor E-registration</td>
<td>Vendor to register via Enppi website – Evaluate vendors via internet</td>
</tr>
</tbody>
</table>
In line with our commitment to continuous growth and sustainable development for the future, Enppi works in the best possible manner to balance Quality, Environment, Energy and Health & Safety (QEHS) considerations into our daily business decisions and operations.

Quality Management System -QMS-

In compliance with the needs defined by the international codes and standards and in order to achieve a competitive edge in the global oil and gas sector, Enppi moves towards expanding alliances with its customers to continually boost productivity and keep our projects on-schedule and within budget aiming to achieve customer satisfaction.

Our applied Quality Management Systems provide strict controls, monitor work, track projects and streamline procurement and materials management activity.

The acquisition of globally acknowledged certification/accreditation is a crucial step toward continual improvement for achieving customer satisfaction through providing high quality services with time commitment and at competitive cost.

It is worth mentioning that Enppi has established a quality management system certified to ISO 9001 since 1995. Recently, in 2014, Enppi has acquired API spec Q1 certification from the American Petroleum Institute as sector specific certification for Quality Management System for oil and gas companies to become one of the leading companies in the world to be certified to these international standards.

For every project the company executes, QMS covers the following:

• Issuing Project Quality Plan.
• Developing Project KPIs.
• QMS auditing.

Enppi takes an additional responsibility in encouraging customers, suppliers and contractors to consider the QMS requirements in their activities.

Also, Enppi offers a wide range of QMS consultation and training services related to:

• ISO 9001 requirements.
• Quality management system auditing.
• API spec. Q1 requirements.
• Self-assessment.
• Documentation management.
Environmental Management System (EMS)

As a part of Enppi’s contribution towards sustainable development, Enppi has established, implemented and maintained an environmental management system as per ISO 14001: The system objectives are compliance with all applicable environmental legal and other requirements, minimizing pollution and reduction of resources. For every project the company executes, the EMS covers the following:

- Establishment and implementation of environmental policy and objectives.
- Aspects/impacts analysis.
- Identification of legal and other requirements.
- Development and implementation of environmental management programs.
- Emergency preparedness and response.
- Environmental management system auditing.

Enppi takes an additional responsibility in encouraging customers, suppliers and contractors to consider the environmental impacts of their activities, mainly through the following means:

- Organizing and conducting awareness sessions/courses.
- Requesting suppliers and contractors to declare their environmental policies and commitment to environmental protection.
- Following up supplier/contractor implementation of environmental management programs.
- Taking a leading role with customers to design environmentally friendly projects.

Enppi also has wide experience in EMS related services as awareness and training, environmental monitoring, environmental assessment, environmental management systems auditing and environmental performance evaluation.
Health & Safety Management System (HSMS)

Enppi recognizes the importance of protecting the health and safety of its employees, customers, suppliers and contractors personnel within work premises over which it has control. Enppi implements and continually improves a health and safety management system in accordance with OHSAS 18001 to achieve improvement in the overall company health and safety performance, including prevention of injury and ill health. For every project the company executes, HSMS covers the following:

- Establishment and implementation of Health & Safety policy and objectives.
- Provision of safe working environment.
- Hazards identification.
- Risk assessment.
- Implementation of necessary control measures to ensure that risks are reduced as low as reasonably practicable.
- Identification and compliance with applicable Health & Safety legal and other requirements.
- Development and implementation of Health & Safety management programs.
- Emergency preparedness and response.
- Encouragement of customers, suppliers and contractors to consider Health & Safety requirement in their activities.
- HSMS auditing.

Related Services provided by Enppi can be summarized as follows:
- Design of fire protection systems.
- Review plot plans (layout with respect to safety distance and prevailing wind).
- Quantitative risk analysis using “PHAST Software/ Fault Tree Analysis and Event Tree Analysis”.
- Qualitative risk analysis by HAZOP review, FMEA technique.
- Perform safety audits.
- Provide training courses related to health and safety:
  » OHSAS 18001 requirements
  » Loss prevention
  » HAZOP (basic and advanced)
  » Risk analysis techniques
  » Fire protection systems
  » Hazardous area classification
  » Detection and alarm systems
- Preparation of Safety case studies.
Energy Management System (EnMS)

In terms of Enppi role as a leader in the field of projects in the region and in line with our responsibilities toward the community and in order to keep pace with global and national trends for energy conservation, Enppi has developed, implemented and maintained EnMS as per the international standard ISO 50001 and became the first company in Egypt acquiring an accredited ISO 50001 certificate.

For every project the company executes, the EnMS covers the following:

- Establishment and implementation of energy policy and objectives.
- Consider energy performance improvement opportunities in the Design and Procurement activities.
- Energy use/consumption analysis.
- Identification of legal and other requirements.
- Development and implementation of energy action plan.
- Enppi takes an additional responsibility in encouraging customers, suppliers and contractors to consider the EnMS requirements in their activities.
- Energy Auditing.

Related Services provided by Enppi can be summarized as follows:

- Assist in establishing, implementing and maintaining energy management systems.
- Conduct Energy Reviews.
- Assist in issuing energy Baseline.
- Assist in Establishing Energy Objectives, Targets and Action Plans
- Assist in issuance of EnPIs for monitoring and measuring performance
- Assist in prioritizing opportunities for improvement through application of new technologies or process modifications.
- Designing and procurement for renewable energy technologies.
- Assist in establishing operational controls.
- Conducting Training Courses, Workshops and Awareness Sessions.
- Conducting Energy Management System Audits.
Enppi

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Website : www.enppi.com

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