

KEEP CALM AND MAKE OIL

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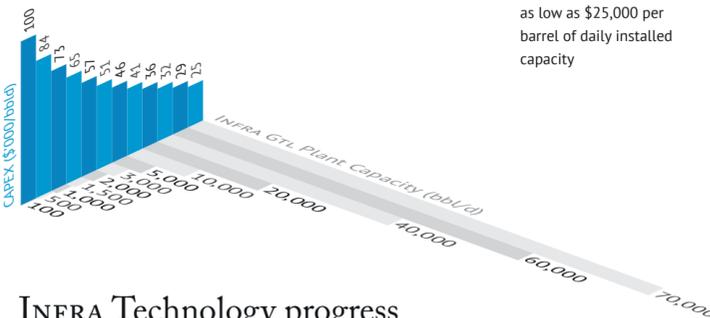
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M100 GTL Plant
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Economy of scale

INFRA GTL plants are easily scalable

Capital Cost of INFRA's plants per barrel of daily installed capacity, ISBL



Low capital costs and operating expenses: capital investment starts as low as \$25,000 per barrel of daily installed capacity

INFRA Technology progress

INFRA Technology is an international company that innovated, developed, and commercialized the next generation of GTL technology, based on the Fischer-Tropsch synthesis process, for the production of light synthetic oil and clean liquid synthetic motor fuels from natural and associated gas, as well as from biomass and other fossil fuels (XTL).

2009 INFRA Technology Incorporated	2011 Key patents issued for FT catalyst and reactor	2013 INFRA Technology supplied the integrated pilot GTL unit to Gazprom	2015 Catalyst Industrial Manufacturing
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2010 Pilot Plant	2011 FT catalyst manufactured, synthetic crude produced	2014 New pilot plant with 6m FT reactor	2015 Engineering Study for 1,000 BPD GTL plant	2016 First 100 bbl/d GTL unit launch
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INFRA's GTL Plants

M100 — First-to-Many

Compact, modular, transportable 100 barrel-per-day GTL (gas-to-liquids) unit for direct conversion of natural gas into synthetic crude oil.

Scope Of Supply:

- M100 is supplied in assembled modules;
- Steam Methane Reformer (capacity: 2.5 tons of synthesis gas per hour);
- Syngas Conditioning & Carbon Capture Block;
- Fischer-Tropsch block (capacity: 4,100 tons of synthetic oil per year);
- Control Room;
- First load of Fischer-Tropsch catalyst.

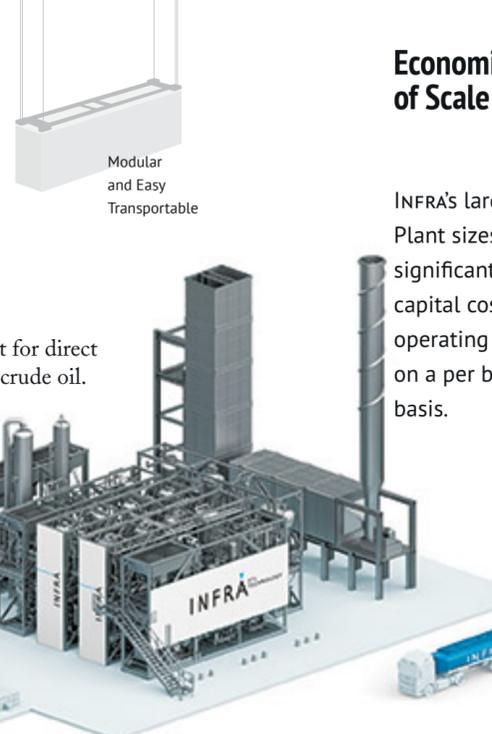
Add-On Options:

- Natural gas compression block.
- Wet desulphurization block.
- Electricity generation block.
- Water capture and recycle block.
- Drop-in fuel production e.g., diesel.

TODAY

Feedstock Requirements:

- Gas volume: 1 MMscfd (methane equivalent).
- Pressure: None.
- Temperature: None.
- Methane content: 60...100%
- Carbon dioxide content: 0...25% with increasing productivity.
- Sulphur > 4.0 ppm requires optional wet desulphurization block.
- Oxygen < 50.0 ppm.



Economies of Scale

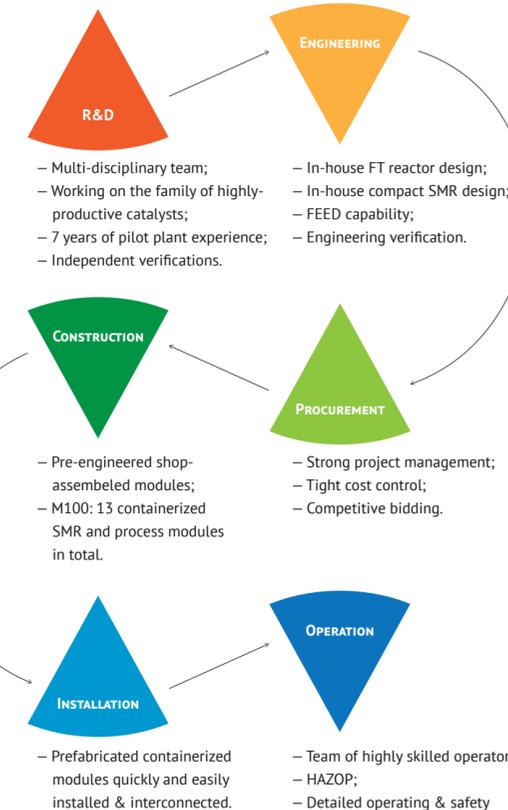
INFRA's larger GTL Plant sizes offer significant saving in capital cost and operating expenses on a per barrel basis.

INFRA's Project Delivery

INFRA provide complete range of solutions for GTL projects worldwide.



Flexible execution ensuring safety quality, reliability whilst maintaining tight cost control.



Our Mission

INFRA Technology Group is an innovation-based company, developing and commercializing advanced technologies that aim to profoundly alter energy, materials and resource systems worldwide.



Profitable.
Scalable.
Efficient.
Reliable.

INFRA finally makes production of synthetic oil economically feasible, ensuring that GTL process is profitable as a rule, rather than as an exception.



NEW GENERATION of GTL TECH



Proven Technology. Proven Process.
Proven Savings.

The patented INFRA's technology represents the new generation of the classical Fischer-Tropsch synthesis process, differentiated by the use of the unique proprietary pelletized cobalt-based catalyst.

It dramatically improves the efficiency of the Fischer-Tropsch process and eliminates hydrocracking required in previous generations.

INFRA PROCESS Technology Diagram

Synthetic crude is a stable product, fully compatible with the existing oil infrastructure.

Simplified process flowsheet, no need for hydrocracking and product upgrading.

INFRA's technology is self-sufficient for water, steam and electricity.

Clean Fischer-Tropsch water is used in the process in the closed loop.

Proprietary innovative cobalt-based catalyst.

Product Separation

FT Reactor

Syngas
H₂/CO: 2.15:1

Syngas Conditioning

Reformer

Desulfurization

Gas Cleaning

Premium synthetic crude mixes well with mineral crude and is easily upgradable to motor fuels.

Low capital costs and operating expenses.

Compact footprint starting from pre-engineered standardized modular (as small as containers) units.



Self-sufficient in Water



Synthetic Oil
>100 bbls



Self-sufficient in Electricity



Self-sufficient in Steam

ION TECHNOLOGY

Technology, developed by INFRA, finally makes production of synthetic oil economically feasible, ensuring the GTL process is profitable as a rule rather than an exception.

Applications

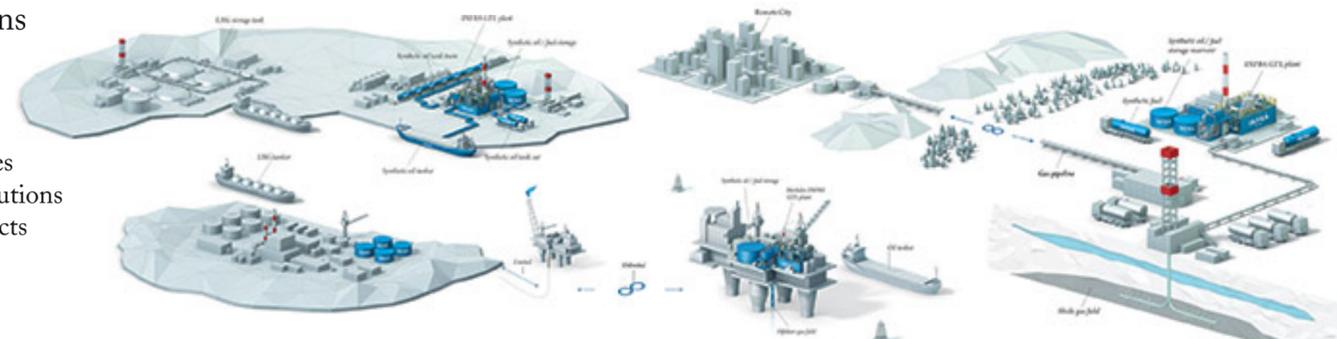
INFRA provides integrated solutions for GTL projects

Gas Monetization

INFRA's technology enables monetization of gas resources by offering modular construction and operation of compact GTL plants at the gas production site, producing high value-added product — liquid motor fuels or synthetic crude oil.

Eliminating Gas Flaring

INFRA's technology facilitates low-cost and compact modular GTL plants at the wells, or clusters of wells, making processing associated gas economically viable. The plants convert associated gas into synthetic oil. Mix it with mineral oil and transport the mixture using the existing transportation infrastructure (pipelines, tankers or railways).



OFFSHORE GAS

Monetization of stranded and offshore gas by producing value-added liquid motor fuels on site.

SHALE GAS

Improving shale gas economics by converting gas into value-added synthetic crude oil on site.



BIOMASS

Providing a useful add-on in conjunction with any bio-gasification technology economically viable, for clean and renewable energy.

COAL

Making conversion of coal into liquid fuels in conjunction with any gasification technology economically viable, reducing dependence on oil.

Market

Technology, developed by INFRA changes the game

LOGY

by bringing natural gas and coal resources to the crude oil and transportation fuels market.



D1 catalyst will allow to produce up to 75% of diesel fraction.



S1 catalyst ensures 40% of diesel and 60% of gasoline fractions.

INFRA's Unique Catalyst Produces Synthetic Crude Oil

Infra's Gtl units produce light synthetic oil, fully compatible with the existing oil industry infrastructure, processes and technologies.



Synthetic oil mixes well with mineral crude. It can be readily upgraded to ultra-high quality drop-in motor fuels with zero aromatics, zero sulphur and zero nitrogen.

- Liquid light fractions (FBP <360°C): naphtha and diesel;
- No sulphur and aromatics;
- Large fraction of iso-paraffins and olefins;
- High cetane number for diesel fuel;
- Large (up to 45%) fraction of jet fuel fraction;
- Mixes well with mineral crude;
- No waste or by-products.

GTL NAPHTHA

- Feedstock for petrochemical production;
- Plus 10% yield of high value chemicals.



GTL DIESEL

- High cetane index;
- Improved engine durability;
- Compatible with the existing infrastructure & engines.



GTL JET FUEL

- Clean burning;
- Higher energy density by weight.



High Productivity Catalysts — Infra Technology offers different catalysts to suit the preferred liquid product composition.

- Pelletized cobalt-based catalyst in the Fisher-Tropsch step of the process with the new generation modularised tubular fixed-bed reactor.
- Main function: catalysis of the Fischer-Tropsch process, or the reaction between carbon monoxide and hydrogen results in formation of heavier hydrocarbons, mostly liquid hydrocarbons C₅..
- Bifunctional Operation: The Fischer-Tropsch reaction is accompanied by cracking and other processes, which provide no-wax liquid product.
- Output Product: Light synthetic oil with EOB 360°C, which consists of gasoline and diesel fractions only.
- High Productivity: Approximately 300 grams of product per 1 liter of reactor volume per hour.



Clean Product

- Premium quality synthetic product;
- Free of sulphur, nitrogen and aromatics;
- Readily biodegradable;
- Environmentally friendly.