

ADMINISTRATION SAMARA REGION

RENFORS NEW TECHNOLOGIES JSC - RUSSIA

INTERNATIONAL TRADING TECHNOLOGY FZE - UAE

Development of technologies for gas processing
Production Modular Complex
Processing of gas into synthetic products

GAS RESOURCES

Every year in the oil fields in the world burned more than 150 billion cubic meters of associated gas

In global terms major APG flaring regions are Russia and the Caspian basin countries - about 60 billion followed by the Near East and North Africa - about 45 billion then countries of the Central Africa -35 billion and Latin America -12 billion m³

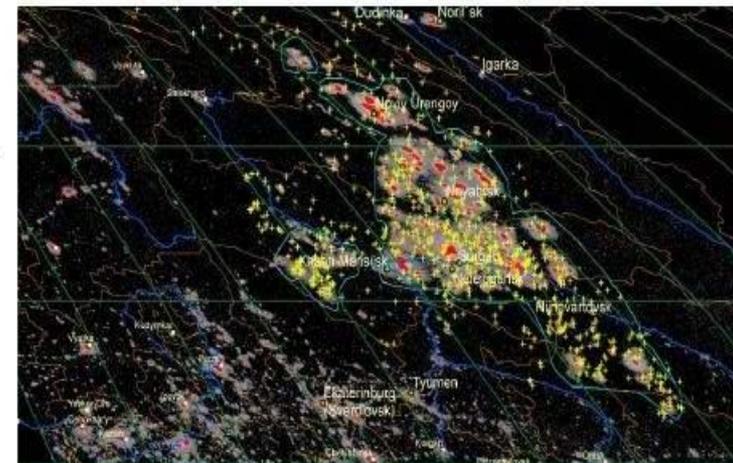
Recycling unused resources of gas reduces the cost of synthetic products

Quantity of unused gas resources estimated 100 trillion m³

Gas remote marginal fields
gas with high sulfur content
low pressure gas



Flares in Western Siberia, Russia

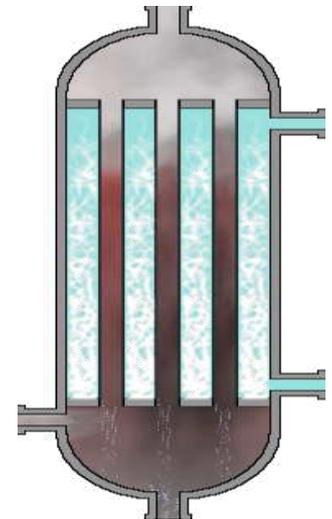
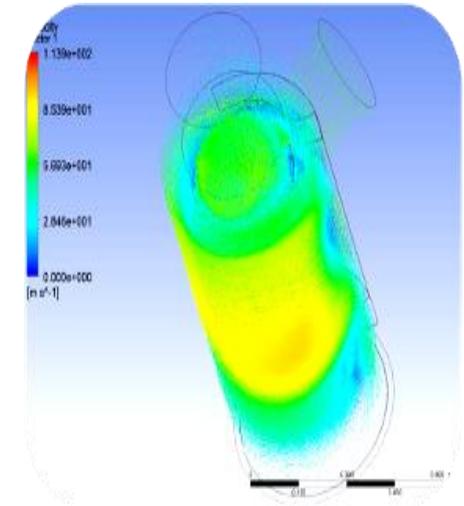


Source: IEA/NOAA, 2006

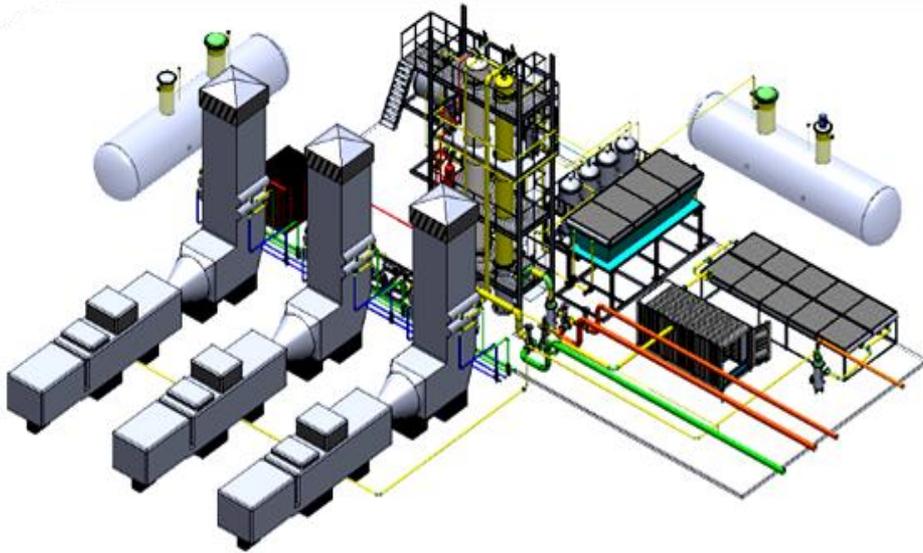
INNOVATIVE DEVELOPMENT OF OIL AND GAS INDUSTRY

Processing of gas in the transportable products with high added value is one of the problems of oil and gas industry

The most progressive today are gas-chemical technology for processing natural gas into synthetic products and synthetic motor fuel



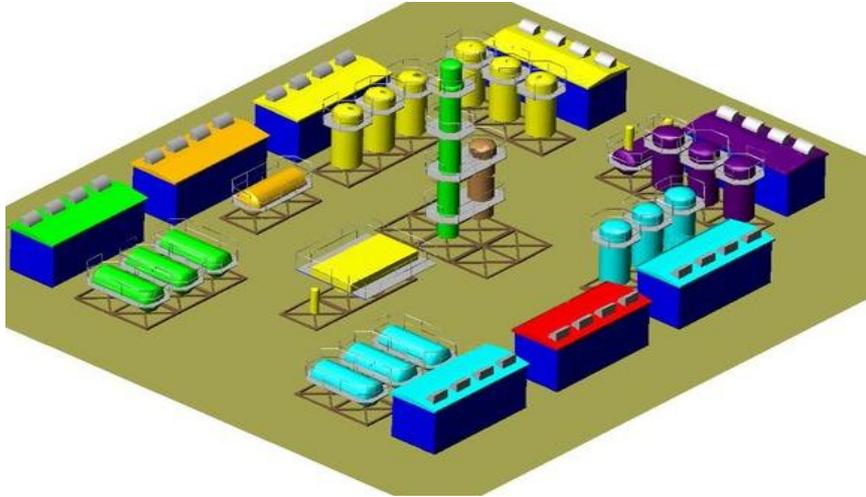
BMC MODULAR COMPLEXES PREPARATION OF GAS AND ELECTRICITY



Modular mobile power equipment for shipment and delivered to the customer a turnkey basis including
gas desulfurization modules
gas dehydration units

Use the energy of the exhaust gases can reduce the cost of the complex
Costs oil companies for the purchase and operation of power equipment down at times

MODULAR COMPLEXES FOR PRODUCING SYNTHETIC OIL AND FUEL



Modular complexes recycle gas to transportable products with high added value
synthetic oil
synthetic motor fuel
synthetic diesel fuel with Euro - 5

**If using a complex oil companies the level of utilization of associated petroleum gas
will be at least 95%**

GENERAL VIEW GAS COMPRESSOR UNITS IN GAS COMPRESSOR STATIONS



NEW SOURCES OF ENERGY

For pumping natural gas use powerful transmission system. For transportation of gas through pipelines in most cases use turbo-driven turbine units GTA various capacities. As a motor fuel use natural gas

The energy of motor fuel consumed in the proportions

~ 30% to drive the compressor

70% or more goes into the atmosphere as heated to a temperature of ~ 450oS exhaust

Enormous amount of energy emitted into the atmosphere

Contaminates the environment

EXAMPLE OF THE USE OF TERMAL ENERGY



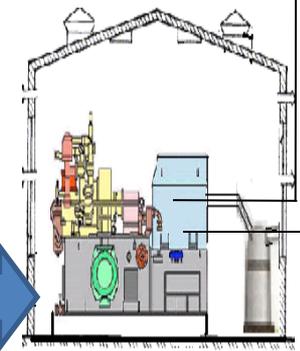
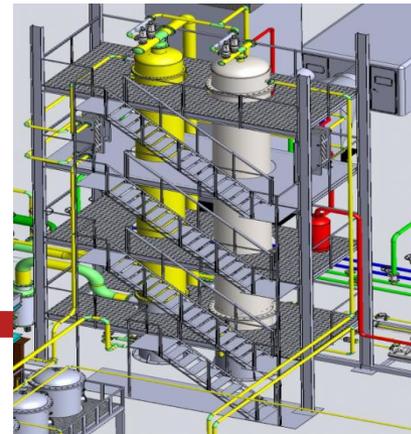
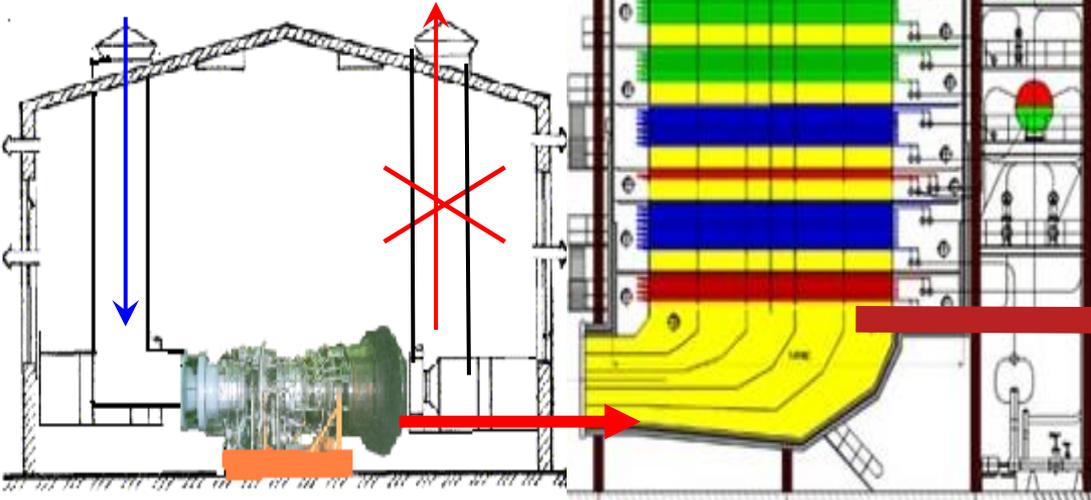
Example of the use of thermal energy on SCS in Germany - getting a pair and use it to drive the turbocharger is allowed to withdraw to the reserve is one of three gas turbine units

SCHEME OF USING EXHAUST HEAT



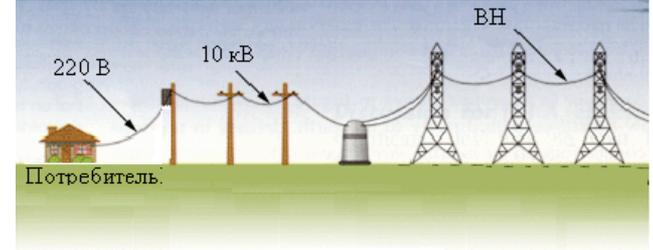
The existing gas compressor station

Installation of synthetic fuel
Steam turbine power plant



RESULTS OF TREATMENT OF GAS

- ▶ **Providing fields and surrounding areas with electricity**



Synthetic oil from the field can be transported by pipeline marine railway and road transport

Composition of the "synthetic oil"

70% of diesel

15% of petrol

15% kerosene



Directly on the fields can get diesel fuel standard Euro-5



EXPORT OF EQUIPMENT BMC

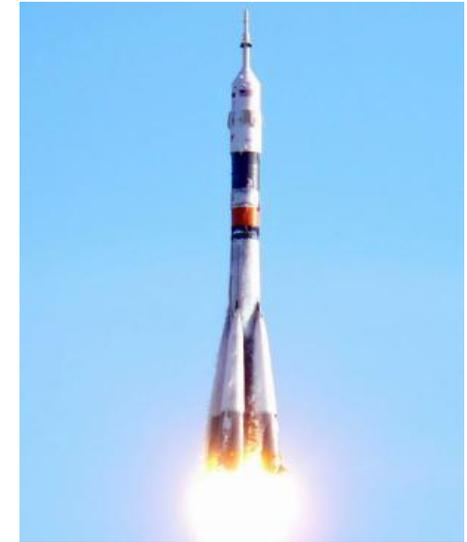
Shale gas stimulates the production of a block – Modular Complexes BMC

High export potential of modular complexes in gas-producing countries



RESOURCES OF SAMARA REGION - RUSSIA

The city of Samara has manufacturing facilities that produce rocket and jet engines;
hi-tech manufacturing facilities that produce specialised high-tech and chemical engineering;
qualified scientific and engineering design personnel.
In 2011, the 50th anniversary of the first manned space flight in the rocket manufactured by Samara Progress plant will be celebrated.



RESOURCES OF ZAPOROZHYE REGION - UKRAINE

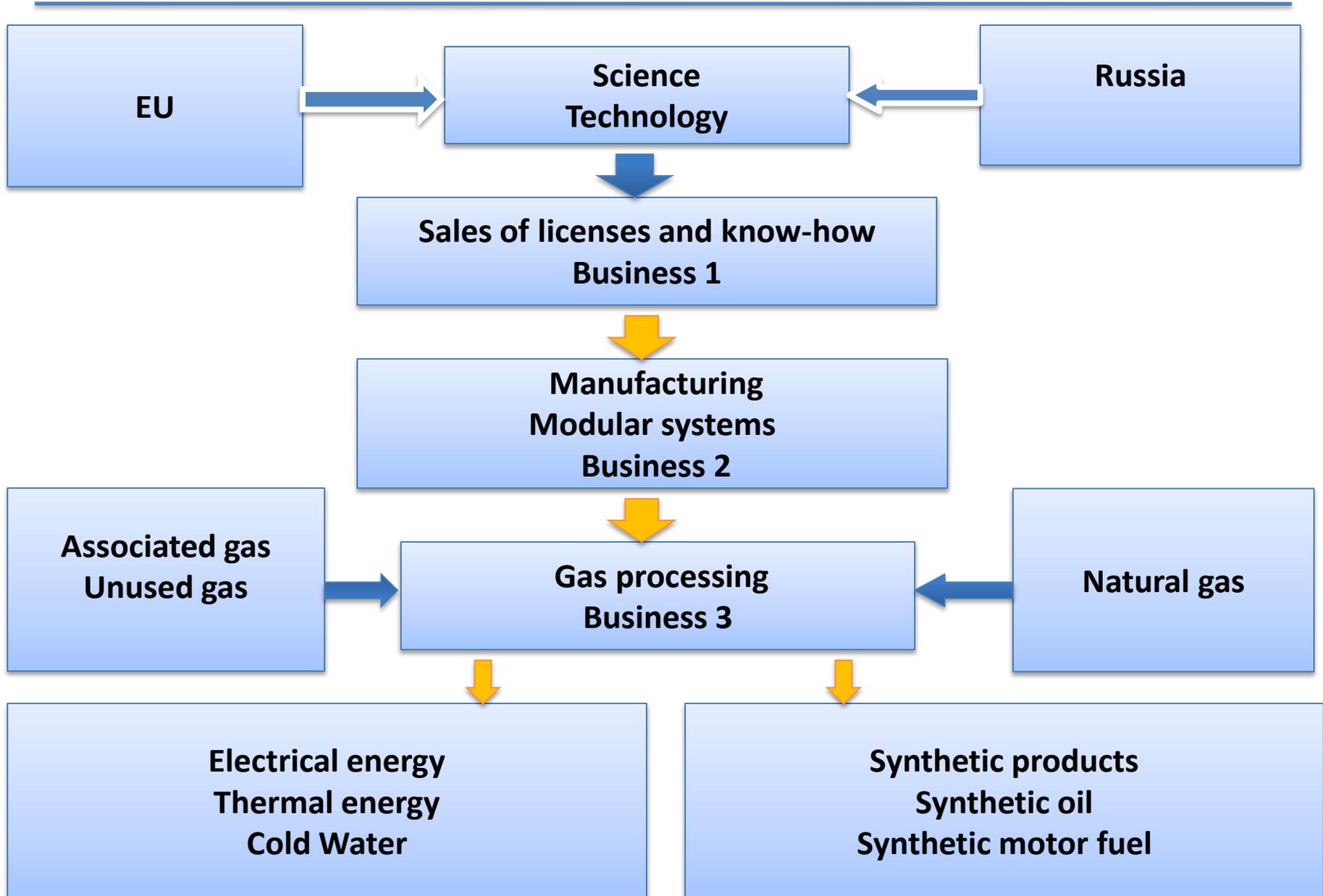
Zaporozhye region has

- manufacturing facilities that produce rocket and jet engines;
- high-tech engineering companies;
- qualified engineering and design personnel;

In 2011, Motor Sich JSC will celebrate its 104th anniversary.



GAS-CHEMICAL TECHNOLOGIES GAS PROCESSING



STRENGTHENING OF INTERNATIONAL COOPERATION

Russia and the EU scientific potential industrial and financial resources, leads them into the leaders among manufacturers of equipment for oil and gas industry

Gas processing technology specialists mastered rocket and jet engine-Russia



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