
ZAPSIBNEFTEKHIM





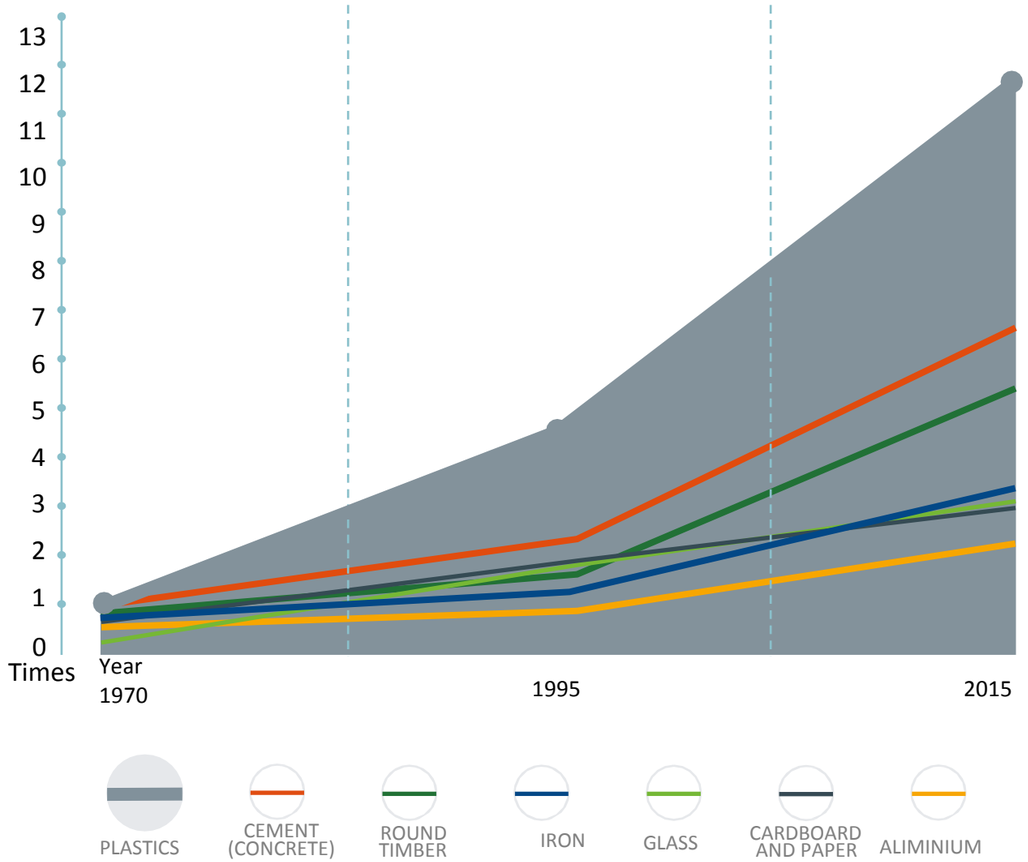





Contents

Market background of the project

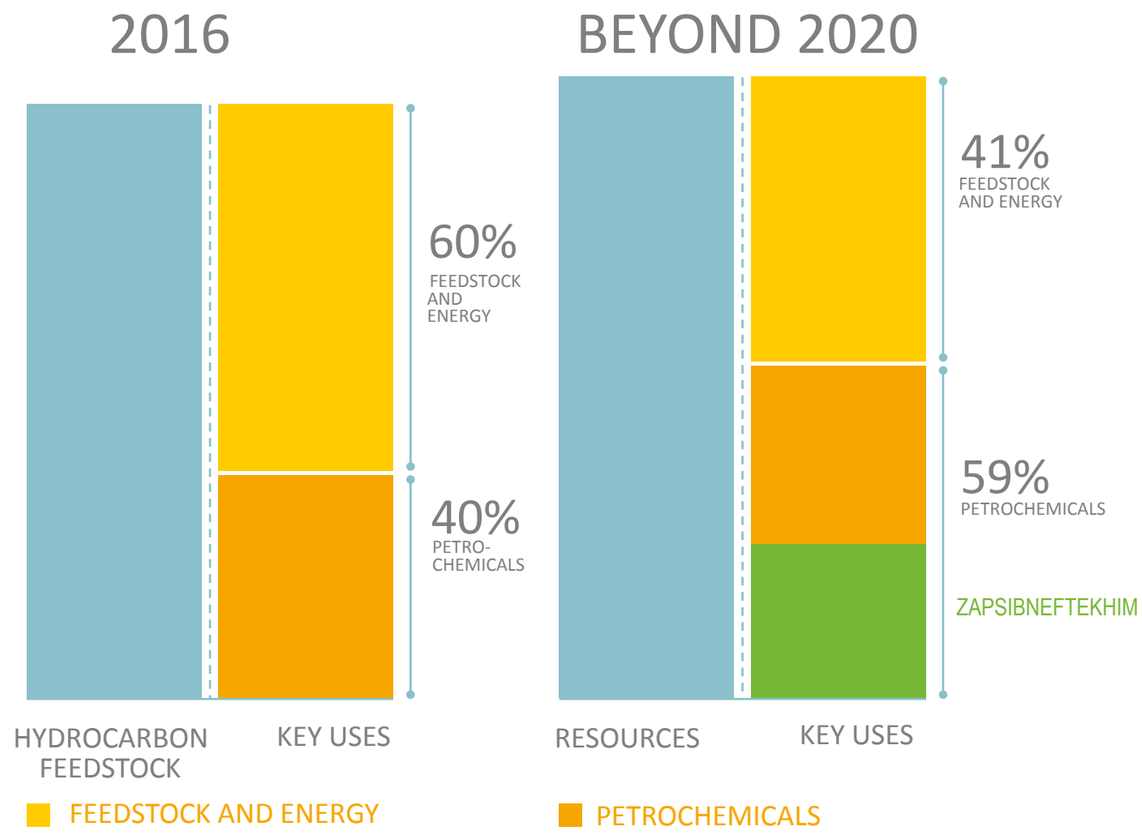
INDEX OF GLOBAL GROWTH IN BASIC MATERIALS PRODUCTION*



*USGS, FAO, BP, Rubber, The New Plastic Economy

SIBUR'S STRATEGY: MONETISING UNIQUE ACCESS TO FEEDSTOCK AND GROWTH IN DEMAND FOR PETROCHEMICALS

ZAPSIBNEFTEKHIM WILL INCREASE THE PETROCHEMICAL SEGMENT'S SHARE IN SIBUR'S BUSINESS PORTFOLIO



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Feedstock for the project

	2003	2016
APG PROCESSING	8 bcm	25 bcm
C3 RECOVERY RATE	64 %	95 %
MAX PIPELINE THROUGHPUT	4.8 mt	8 mt
NGL FRACTIONATION IN TOBOLSK	2.3 mt	8 mt

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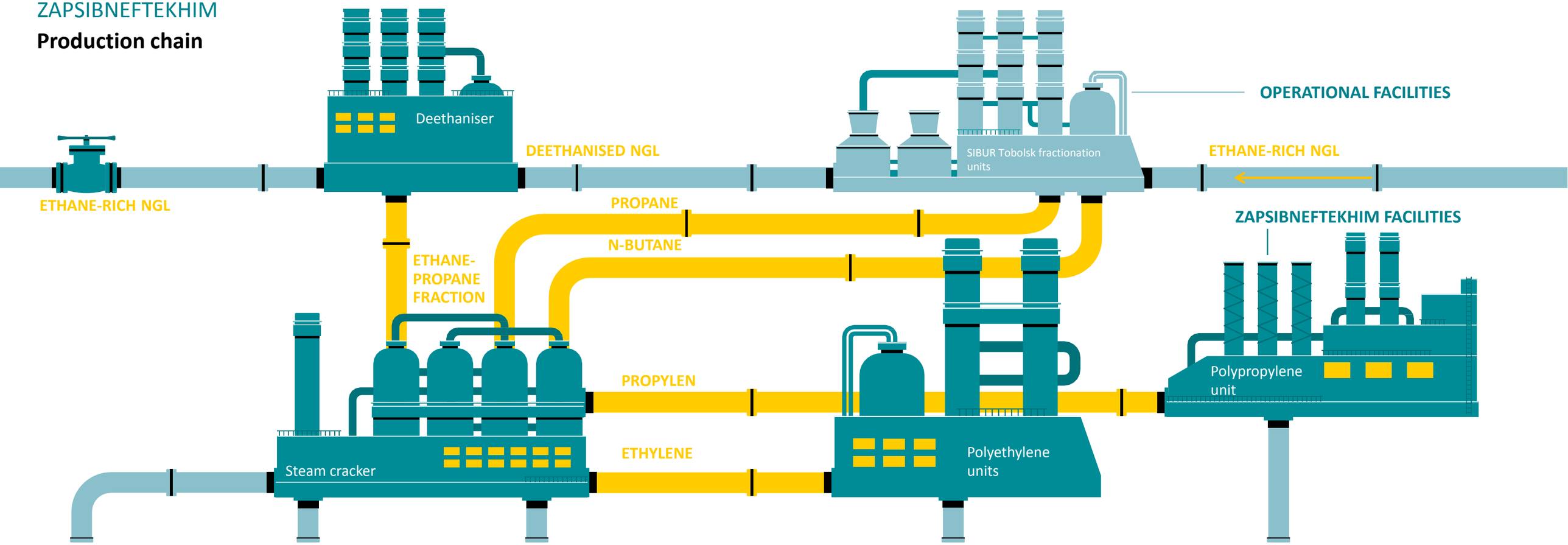
Production chain



94 ktpa OF BUTADIENE

13 ktpa OF MTBE

137 ktpa OF HYDROGENATED PYGAS

1,500 ktpa OF POLYETHYLENE

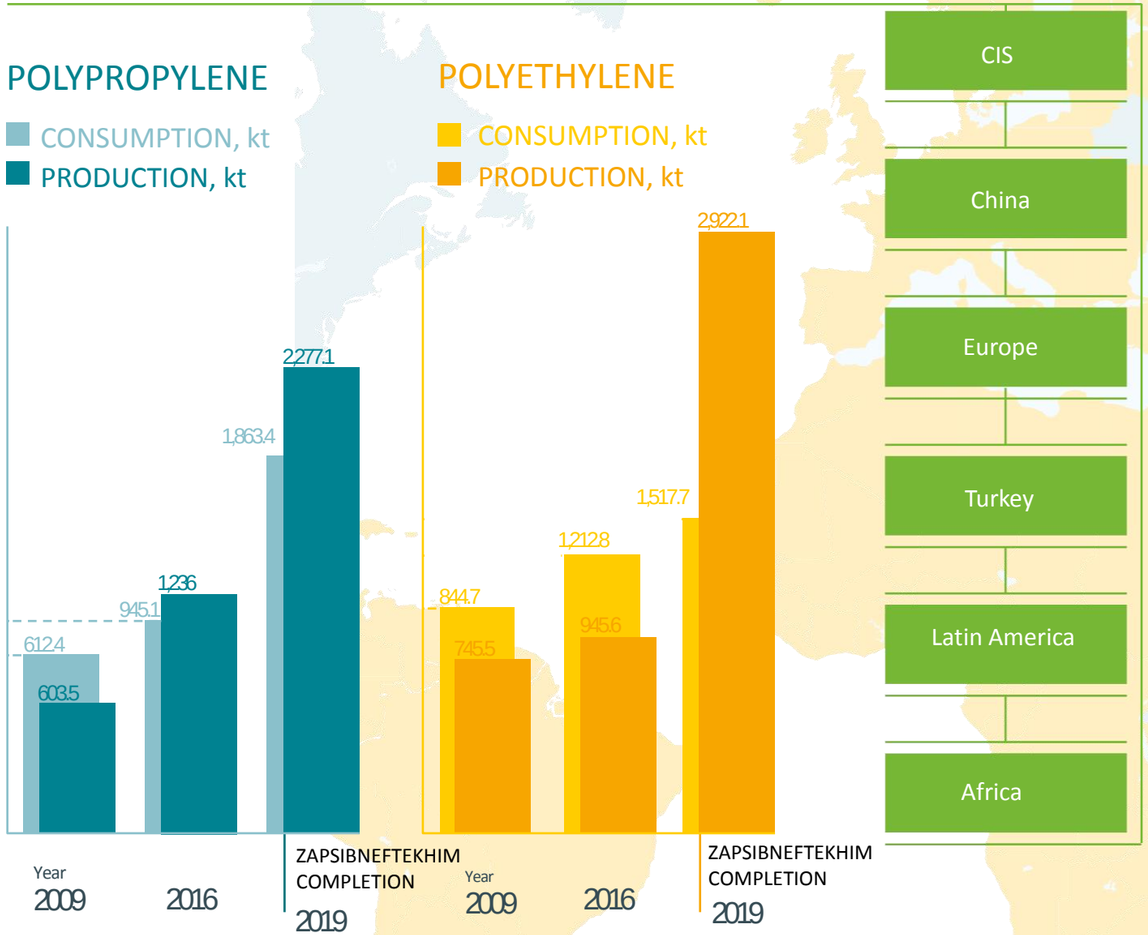
500 ktpa OF POLYPROPYLENE

ZAPSIBNEFTEKHIM

Import substitution and higher export potential*

Growth in domestic supplies **X2**

Growth in exports **X14**



*Market Report, public sources

Key uses

CONSTRUCTION MATERIALS
2,224,138 km
of water supply pipes

MEDICAL PRODUCTS
600 billion
vials

AUTOMOTIVE PARTS
71,428,571
car bumpers

PACKAGING
16,129,032 km
of food wrap or stretch film

CABLES
35,917,820 km
of fiber optics insulation

TEXTILE INDUSTRY
151 km²
of carpeting

A major petrochemical construction site globally

12,100 km

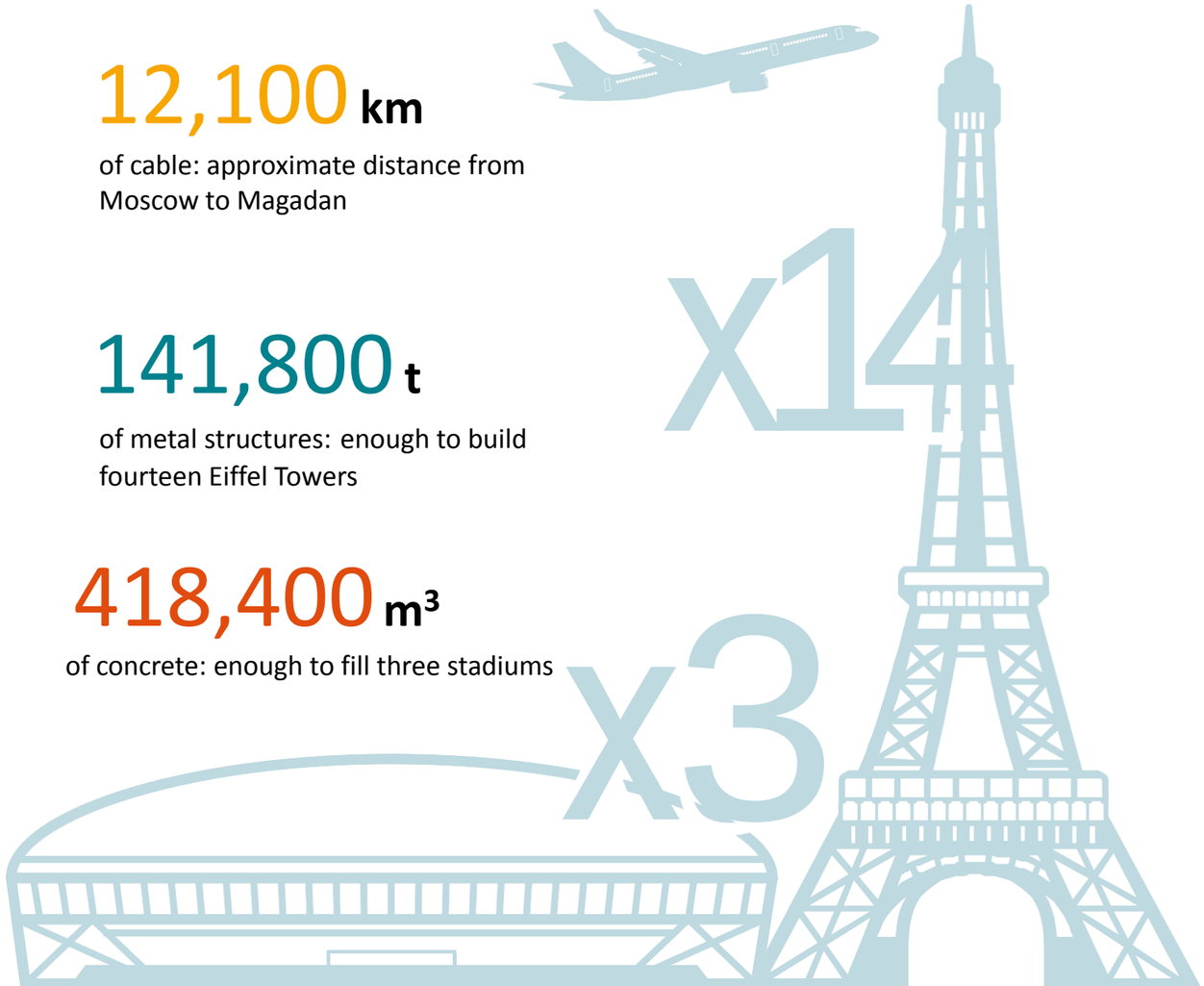
of cable: approximate distance from Moscow to Magadan

141,800 t

of metal structures: enough to build fourteen Eiffel Towers

418,400 m³

of concrete: enough to fill three stadiums

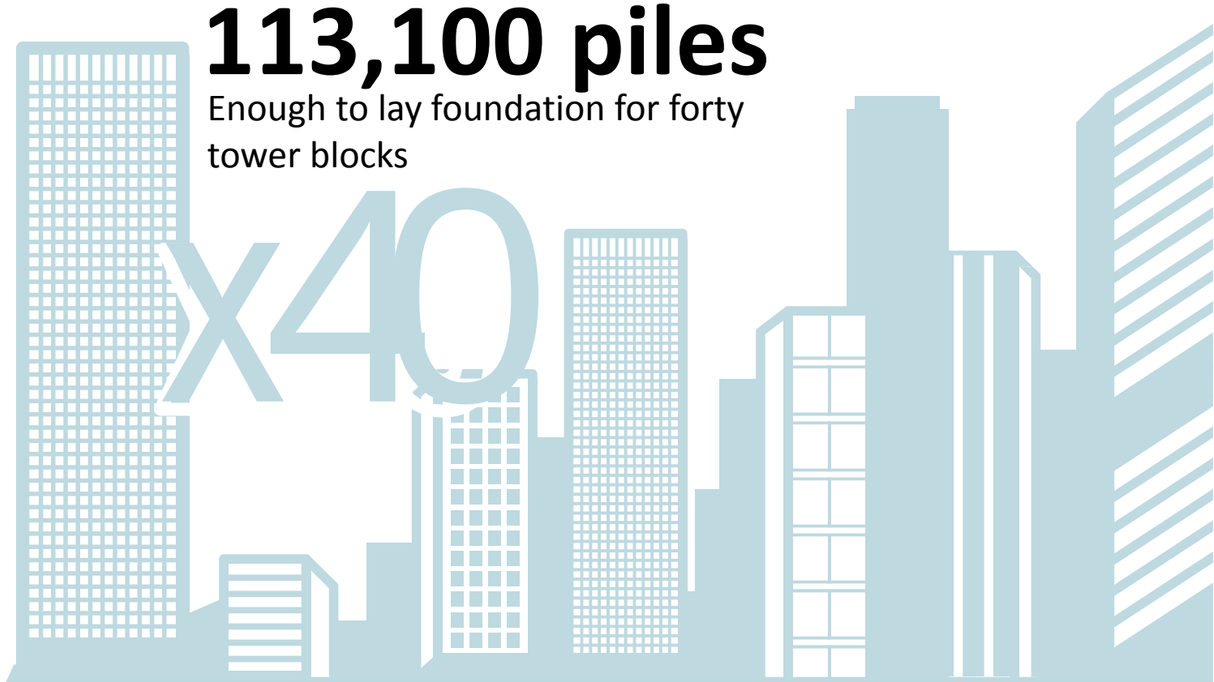


MAJOR POLYMER PRODUCTION PROJECTS*

No.	Country	Company	Location	Greenfield/brownfield	Capacity, kt
1	Russia	SIBUR	Amur GCC**	Greenfield	Ethylene – over 1,500; PE – over 1,500
2	USA	SASOL	Lake Charles	Greenfield	Ethylene – 1,550
3	Malaysia	Petronas	Pengerang	Greenfield	Propylene – 1,750; ethylene – 1,000
4	Russia	SIBUR	ZapSibNeftekhim	Greenfield	Ethylene – 1,500; PE – 1,500; PP – 500
5	India	Reliance Industries	Jamnagar	Greenfield	Ethylene – 1,500; PE – 950

113,100 piles

Enough to lay foundation for forty tower blocks



* Source: IHS

** Decision to proceed to the Execution stage is not expected until year-end 2018.

CONTRACTS WITH RUSSIAN COMPANIES WORTH OVER RUB 200 BN

Producers and contractors

FROM **35** RUSSIAN REGIONS

46 million
man-hours of builders and engineers

OVER **0.4** mcm
of concrete

OVER **110,000** PILES

18,000 PERSONS
engaged at the peak of construction

NEARLY **1,000**
process equipment units

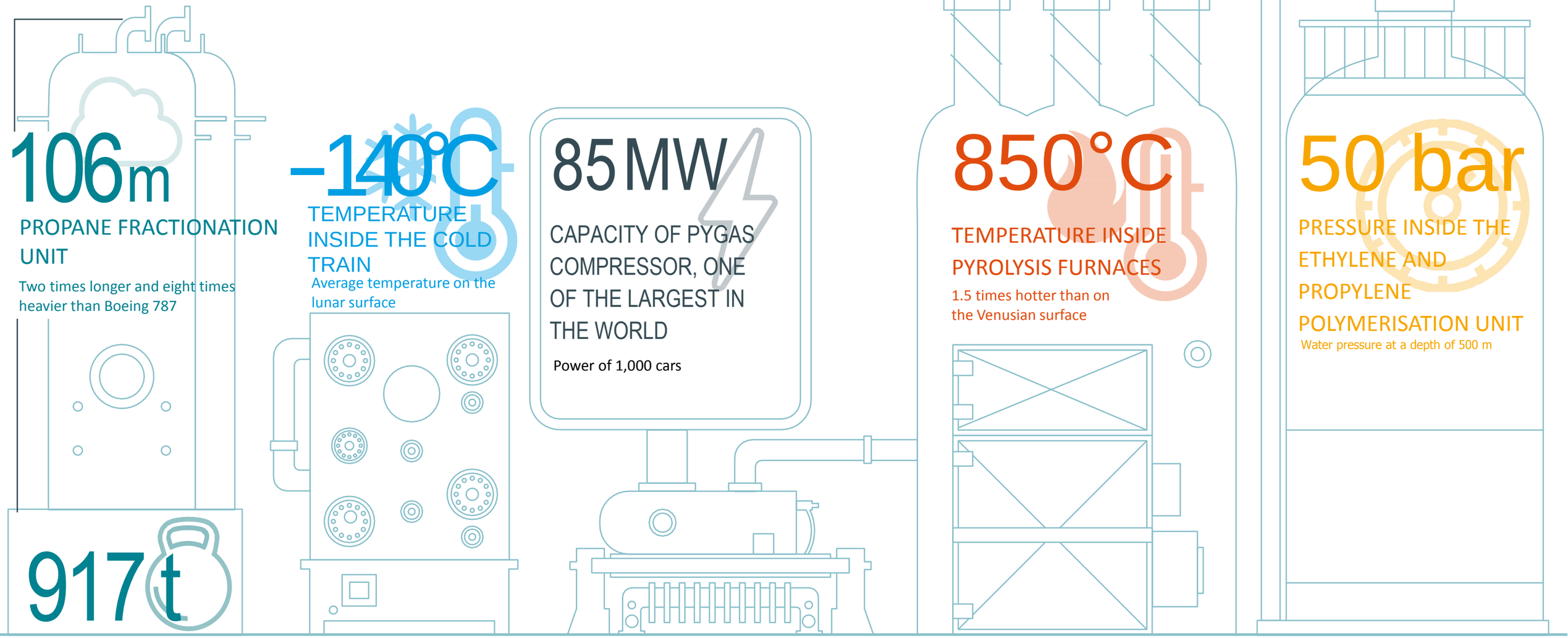
OVER **140,000** t
of metal structures

NEARLY **20,000** t
of pipe

OVER **200** km
of plastic pipe

OVER **12,000** km
of cable

Unique cutting-edge equipment



106 m

PROPANE FRACTIONATION UNIT

Two times longer and eight times heavier than Boeing 787

917 t

–140°C

TEMPERATURE INSIDE THE COLD TRAIN

Average temperature on the lunar surface

85 MW

CAPACITY OF PYGAS COMPRESSOR, ONE OF THE LARGEST IN THE WORLD

Power of 1,000 cars

850°C

TEMPERATURE INSIDE PYROLYSIS FURNACES

1.5 times hotter than on the Venusian surface

50 bar

PRESSURE INSIDE THE ETHYLENE AND PROPYLENE POLYMERISATION UNIT

Water pressure at a depth of 500 m

ZAPSIBNEFTEKHIM

Exceptional logistics of oversize equipment

SABETTA

TOBOLSK

SAINT PETERSBURG

3,300 km

GERMANY

CZECH REPUBLIC

FRANCE 5,200 km

ITALY

NOVOROSSIYSK

7,000 km

6,500 km

ZABAIKALSK

VLADIVOSTOK
NAKHODKA
VOSTOCHNY

BUSAN

KOBE

SHANGHAI

GUANGZHOU

Suez Canal

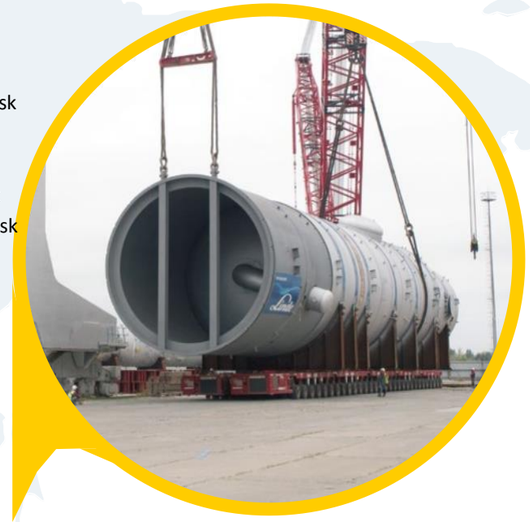
JEBEL ALI

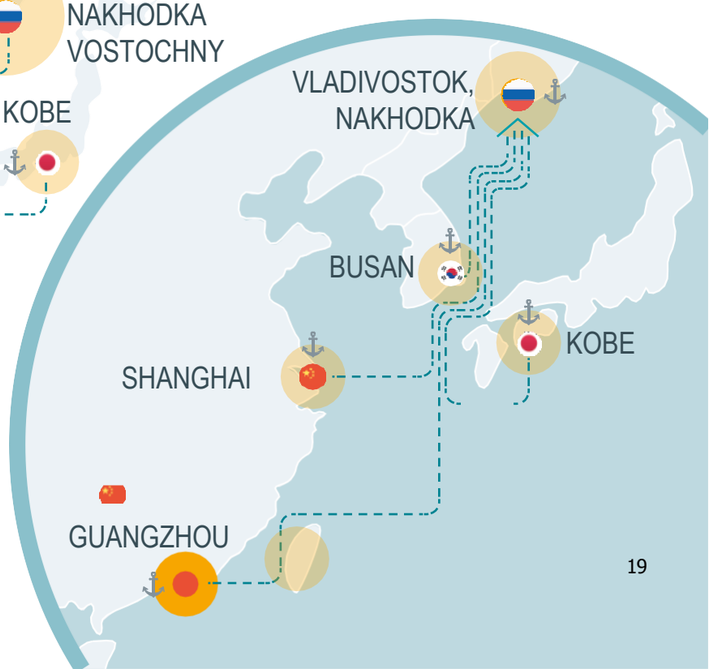
8,000 km

MUMBAI

Equipment suppliers from more than 40 Russian regions

Tyumen	Zelenograd	Saratov	Yelabuga
Ufa	Nizhny Novgorod	Izhevsk	Nizhnekamsk
Chelyabinsk	Veliky Novgorod	Yaroslavl	Kurgan
Tambov	Omsk	Novomoskovsk	Salavat
Barnaul	Penza	Dzerzhinsk	Sterlitamak
Belgorod	Kazan	Magnitogorsk	Budyonnovsk
Vologda	Rostov-on-Don	Votkinsk	Angarsk
Voronezh	Ryazan	Cheboksary	Orenburg
Kemerovo	Samara	Kumertau	Novy
Kostroma	Togliatti	Naberezhnye Chelny	Urengoy
Shadrinsk			Kostroma





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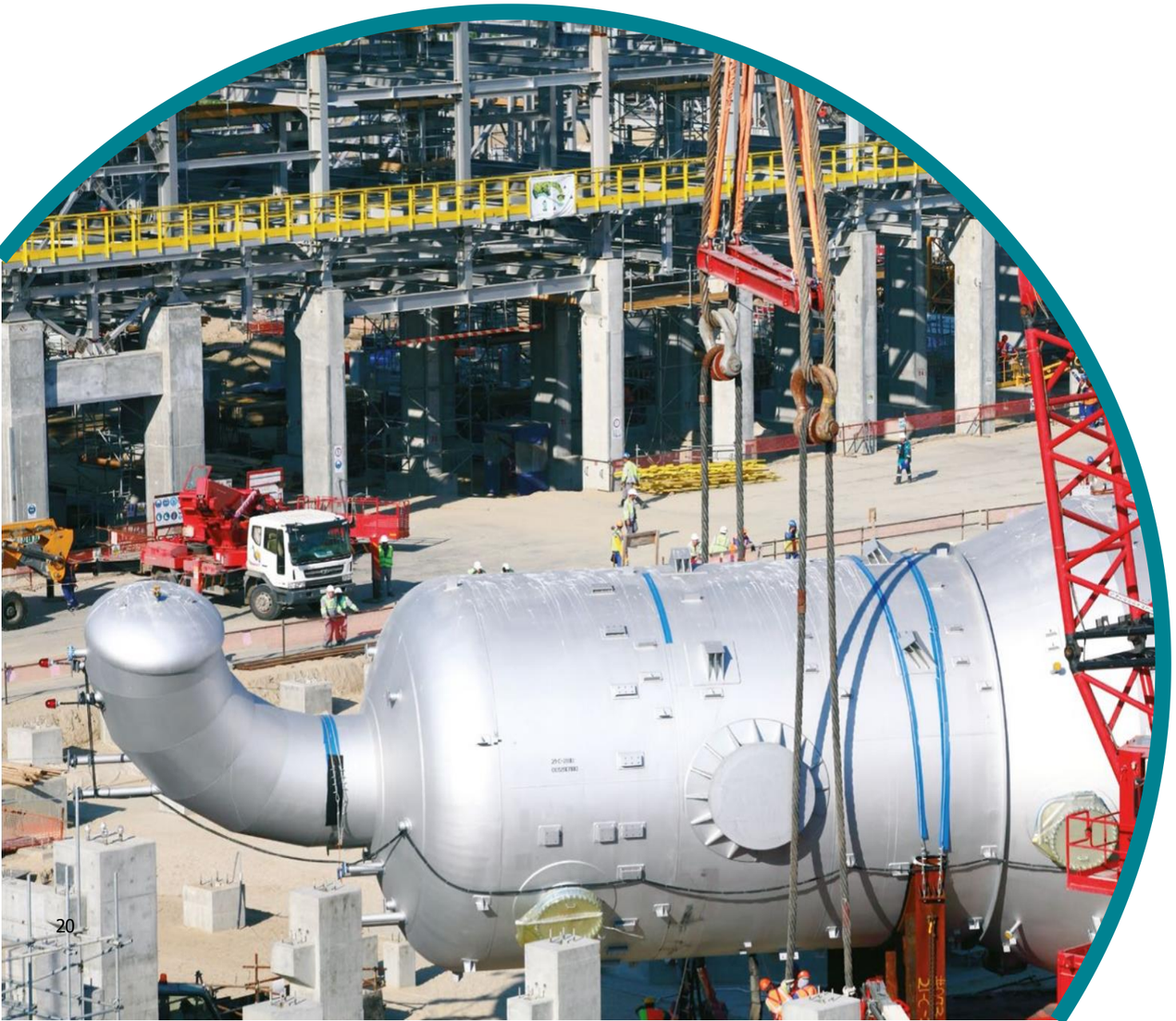
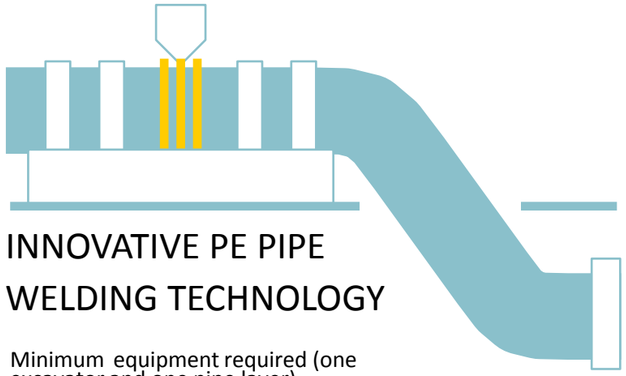
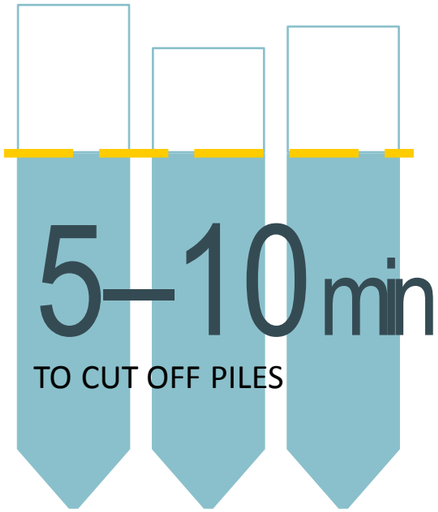
Advanced construction technology





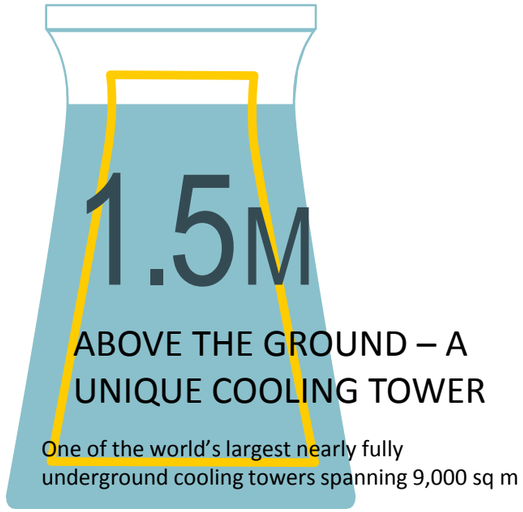
INNOVATIVE PE PIPE WELDING TECHNOLOGY

Minimum equipment required (one excavator and one pipe layer)



5–10 min

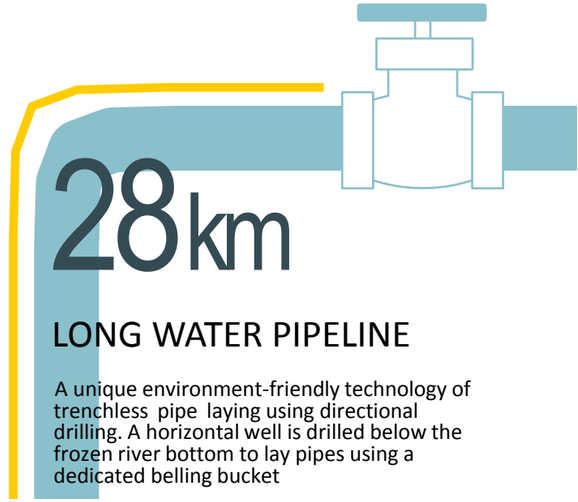
TO CUT OFF PILES



1.5 M

ABOVE THE GROUND – A UNIQUE COOLING TOWER

One of the world's largest nearly fully underground cooling towers spanning 9,000 sq m



28 km

LONG WATER PIPELINE

A unique environment-friendly technology of trenchless pipe laying using directional drilling. A horizontal well is drilled below the frozen river bottom to lay pipes using a dedicated belling bucket

ZAPSIBNEFTEKHIM

New jobs

Construction

18,000

PERSONS ENGAGED AT THE PEAK OF CONSTRUCTION

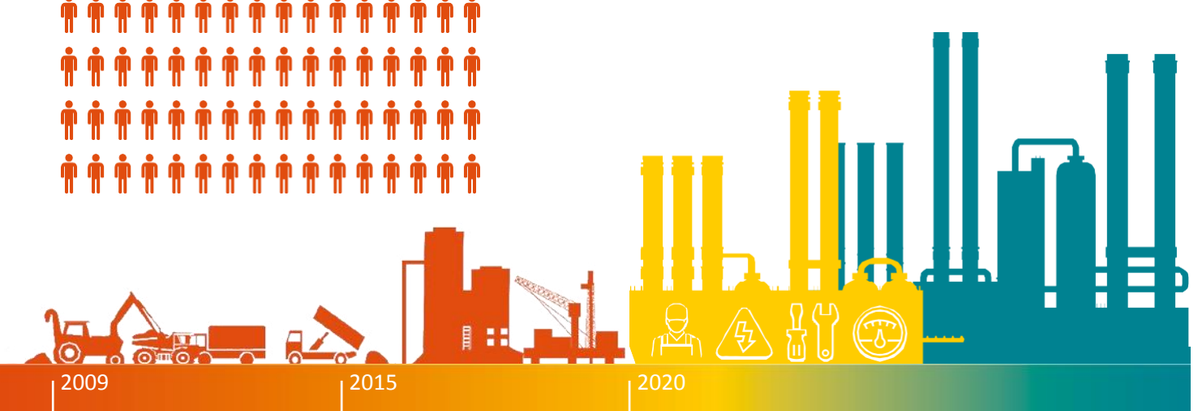
Post-commissioning

2,000

PERSONS ENGAGED IN AUXILIARY SERVICES

1,700

PERSONS ENGAGED IN CORE PRODUCTION



Employment geography

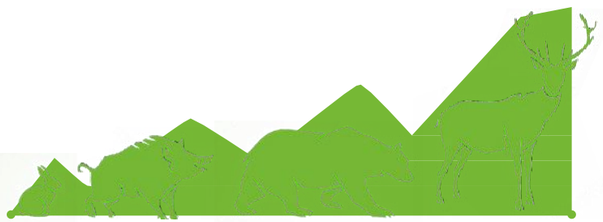
***Backup* programme**

Programme participants include external candidates to be trained as backups by SIBUR's mentors at a number of production sites. After completing the programme, backup employees are hired by ZapSibNeftekhim or replace their mentors transferred to ZapSibNeftekhim.

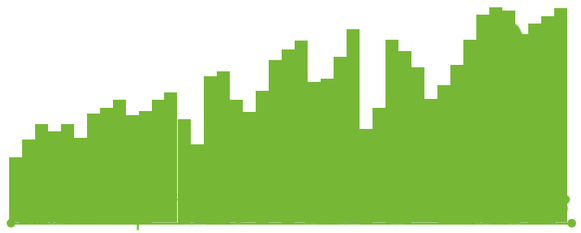
Environment-friendly processes

REGULAR INITIATIVES UNDER THE ENVIRONMENTAL MONITORING PROGRAMME INCLUDE:

Air monitoring

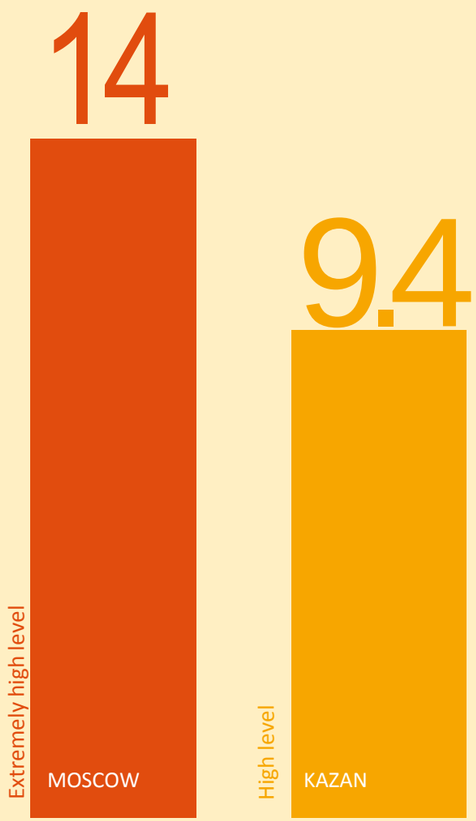


Fauna monitoring



Vegetation monitoring

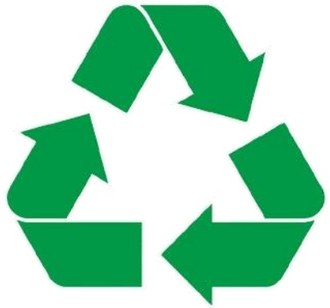
AIR POLLUTION INDEX (2016 REPORTS BY ROSHYDROMET)



99.9%

efficiency of state-of-the-art gas treatment systems

Post-launch index to remain unchanged



THE BULK OF WASTE IS TO BE RECYCLED

CLOSED-LOOP WATER SYSTEM

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Similar production sites in Europe

Cologne, Germany

POLYETHYLENE UNIT

Technology

Ineos, UK

Litvínov, Czech Republic

STEAM CRACKER

Technology

Linde, Germany

POLYPROPYLENE UNIT

Technology

Lyondellbasell, Netherlands

Płock, Poland

SIBUR’s Nature Path

A joint project of SIBUR and RAS's Integrated Research Station in Tobolsk to study and monitor biodiversity in the vicinity of the site

3

forest routes

500 m

away

from ZapSibNeftekhim’s construction site

1,500 m

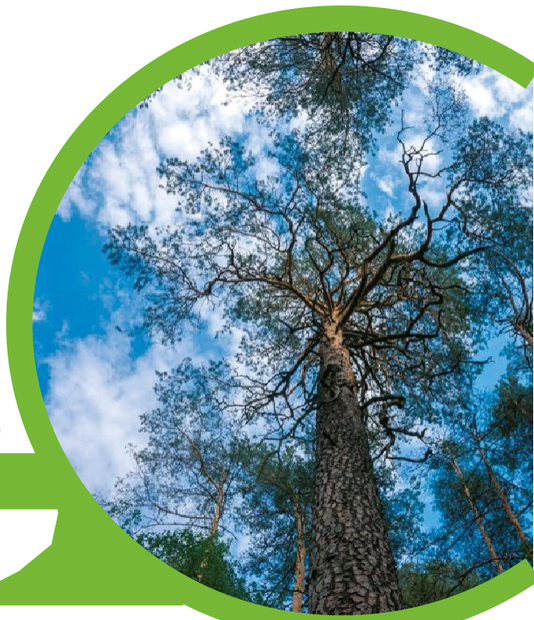
away from the Tobolsk production site

The project received an award of the Environmental Culture.Peace and Harmony international project and the jury's accolade as Russia’s only initiative of the kind rolled out in the immediate vicinity of an industrial site, as well as the Vernadsky National Environmental Award.

Local fauna has fully adapted to the industrial environment

The routes have monitoring sites to analyse air, water and soil samples, information boards, and other required infrastructure

The nature path features bioindicator plants



Relict pine tree

Tree lungwort

Spotted orchid

ZAPSIBNEFTEKHIM

Sky deck

SKY DECK IS THE HIGHEST POINT NEAR THE CONSTRUCTION SITE

Formula of the future

Maximum utilisation of energy efficient polymer construction materials makes the facility unique

CORIAN

A solid surface material made of acrylic resin and aluminium trihydrate

WOOD PLASTIC COMPOSITE

Hybrid of wood and plastics that rivals the strength of metals

POLYURETHANE FLOOR COATING

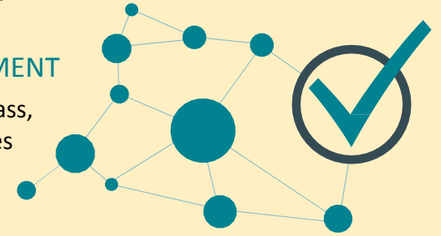
High-tech tough flexible seamless self-levelling floor coating made of heterochain polymers (two components in the main chain)

COMPOSITE REINFORCEMENT

Non-metallic bars made of glass, basalt, carbon or aramid fibres bonded with a thermosetting polymer binder

EXPANDABLE POLYSTYRENE

High-quality thermal insulation material with uniform structure



58 mm

THICK INSULATING GLASS UNITS (IGU)

6 m

IGU WITH THE LARGEST GLASS PANES PRODUCED IN RUSSIA

UV

REFLECTIVE WINDOW GLASS

SIBUR Holding, 2017