

## *BERKUT GROUP OF COMPANIES*

### PROJECT

# “CONSTRUCTION OF LPG TERMINAL IN THE TOWNSHIP OF SLAVYANKA, PRIMORSKY REGION”

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## *BERKUT GROUP OF COMPANIES*

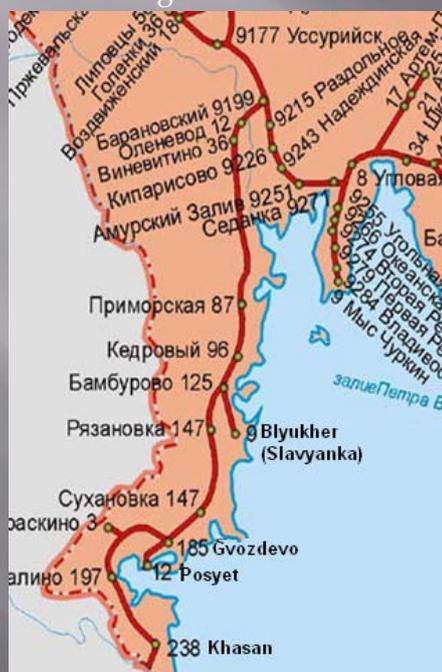
- ▣ Berkut Group of Companies is a finance & industry group that carries out projects in Primorsky region of the Russian Far East.
- ▣ Using the strategic potential of Primorsky region, we have initiated building of a multi-purpose transshipment facility, expanded and modernized ship-repair and shipbuilding capacities of Slavyanka Shipyard, taken part in developing logistics corridor Primorye-2.
- ▣ We have been participating in diversification businesses flexibly reacting to current trends and developing in those areas where we have unique competence and many years of experience: shipbuilding, transportation, logistics. Among other business areas, we have leading positions in Primorsky region tourism industry and have been rapidly developing in the duty-free trading sphere.
- ▣ Our enterprises are located in Khasan district of Primorsky region, which is why we are interested in developing this area's economy. In this connection, we have created a cluster system for development of transport & logistics as well as industrial businesses. The center of application of this strategy is the township of Slavyanka, where all our main businesses are located as well as new business objects which are still under design.

# SLAVYANKA CLUSTER VISUALIZATION



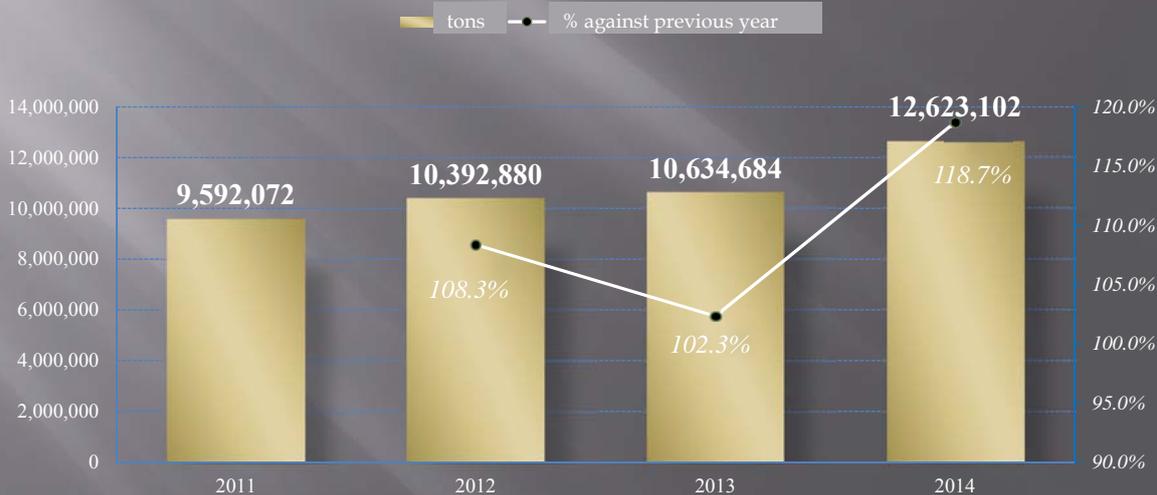
## GEOGRAPHIC POSITION OF THE TOWNSHIP OF SLAVYANKA

The advantageous geographic position of the township of Slavyanka, existence of the area to hold the terminal and supporting infrastructure, possibility to build quays and piers accepting vessels with up to 13m draft and closed water area of Slavyanka Bay make this project very promising, with stage-by-stage increase of capacities and extension of the range of handled goods.



The project idea is based on positive results of marketing researches of LPG production and consumption markets, which objectively indicate its growth in Russia. Moreover, this process is also secured by decisions of the Government of the Russian Federation on obligatory disposal of almost all associated gas, which inevitably should result in the growth of production of liquefied petroleum gas (LPG) and increase in export thereof. This assumption has already been proved by statistics.

**DYNAMICS OF THE SCOPE OF LPG MARKET OFFER  
DURING 2011 – 2014 (TON)**



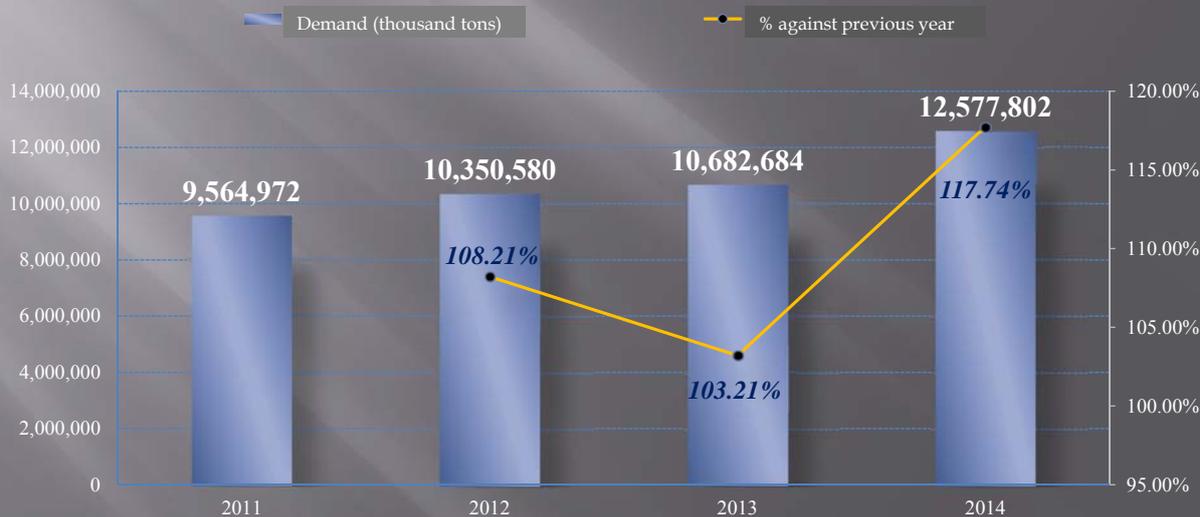
The Government of the Russian Federation set the task for oil industry operators to dispose of 95% of associated oil gas by 2012 – to prevent environment pollution with its combustion products. Very few companies will succeed in meeting the deadline, however associated gas supplies to gas processing plants have grown and will grow in the next future. Expecting new amounts, SIBUR has extended capacities of its gas processing plants, as well as TOBOLSK-NEFTEKHIM that processes broad fractions of light hydrocarbons.

**DYNAMICS OF THE SCOPE OF LPG MARKET OFFER  
DURING 2011 – 2014, PROGNOSIS FOR 2015 – 2019  
(THOUSAND TONS AND PERCENTAGE)**

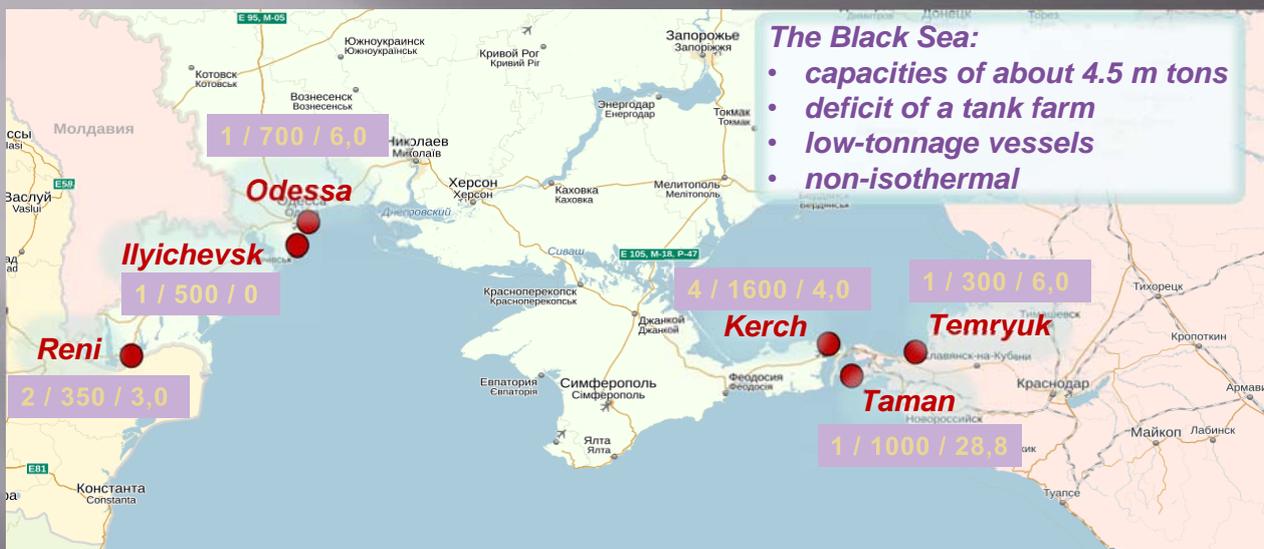


Meanwhile, the solvent demand for liquefied petroleum gas has grown for the last three years in Russia. In 2012, the increase in the demand was +8.21% against the previous year, in 2013, positive dynamics of the demand continued as well, although at slower rate (+3.21%). A special surge occurred in 2014, when market demand indices increased by 17.74%, which was mainly due to development of oil and chemical industry in the country.

**DYNAMICS OF THE DEMAND ON THE RUSSIAN LPG MARKET DURING 2011 – 2014 (THOUSAND TONS)**



The main existing destinations of Russian LPG export are European countries such as Poland, Turkey, Finland. This cargo flow is maintained by Russian port terminals of the Black and Baltic Sea. The product outcome to Far East markets is now restrained by the lack of sea terminals capable of accepting high-tonnage vessels.



**Legend: NUMBER OF TERMINALS / CAPACITY / TANK FARM, THOUSAND M<sup>3</sup>**

There are no isothermal LPG transshipment port terminals in the Black Sea basin. The market of the Black Sea is self-contained, with limited supplies to the Mediterranean Sea.

# Intended Location of LPG & Light Oil Products Terminal

The designed facility for liquid cargo transshipment is to be used for receipt of liquefied petroleum gases and light oil products from railway tanks, intermittent storage thereof and subsequent filling into sea gas carrier vessels and tankers for export shipping.

## Designed annual cargo turnover of the LPG Transshipment Facility:

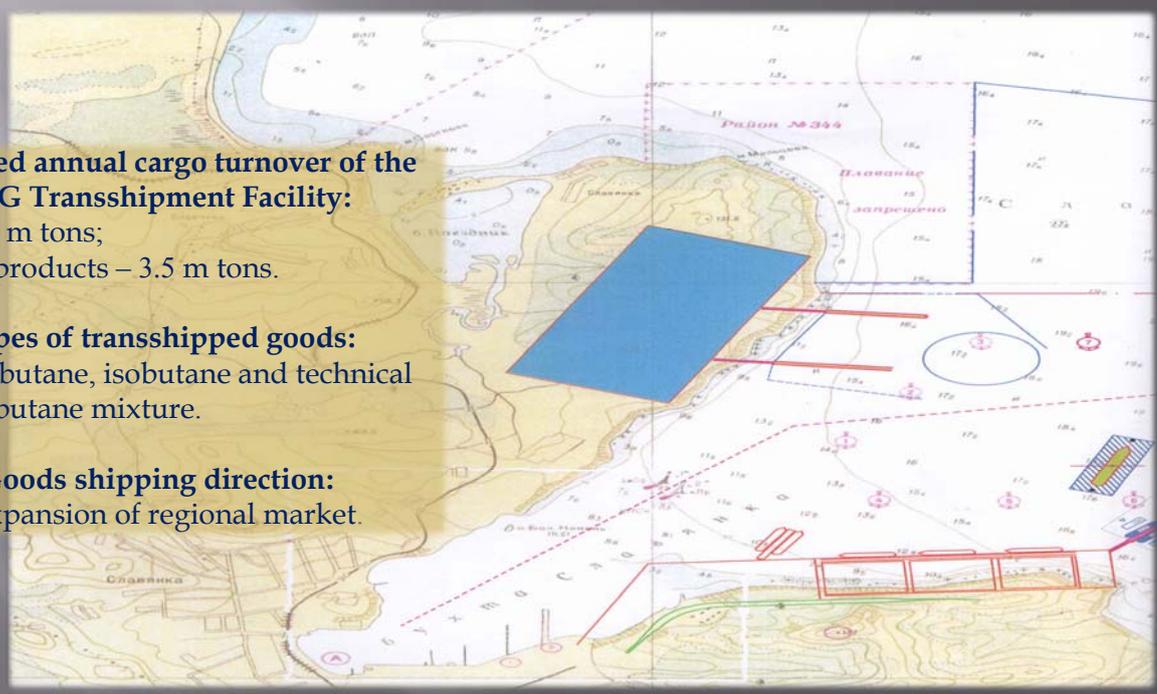
LPG – 1.0 m tons;  
Light oil products – 3.5 m tons.

## Types of transshipped goods:

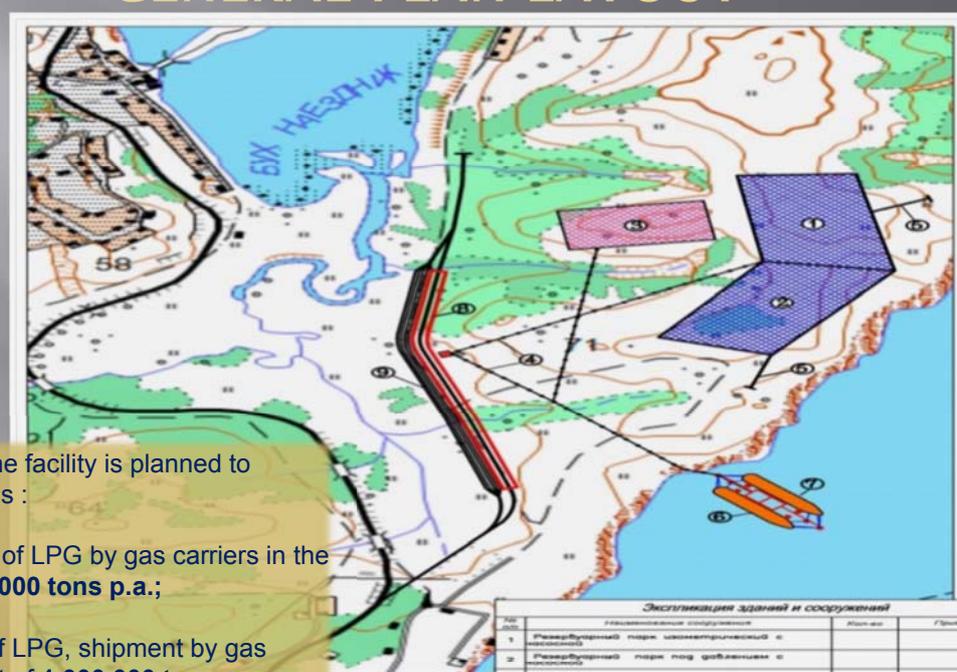
propane, butane, isobutane and technical propane-butane mixture.

## Goods shipping direction:

export, expansion of regional market.



# GENERAL PLAN LAYOUT



The construction of the facility is planned to consist of three stages :

- stage 1:  
receipt and shipment of LPG by gas carriers in the amount of **up to 500,000 tons p.a.**;
- stage 2:  
receipt and storage of LPG, shipment by gas carriers in the amount of **1,000,000 tons p.a.**;
- stage 3:  
receipt and storage of light oil products, shipment by tankers in the amount of **3,500,000 tons p.a.**

Экспликация зданий и сооружений			
№	Наименование сооружения	Материал	Примечание
1	Резервуарный парк концентрический с металлом		
2	Резервуарный парк под давлением с металлом		
3	Резервуарный парк нефтепродуктов		
4	Сети трубопроводов на площадке		
5	Фонарные мачты		
6	Причал (СП)		Судна L=220 м, B=30 м, T=12 м
7	Причал (нефтепродукты)		
8	Железнодорожные платформенные эстакады		
9	Железнодорожные станции		

Thus, the total capacity of the terminal will be 4.5 m tons p.a.

## Estimated Types of Gas Carriers

Name	Deadweight, thousand tons	Length, m	Beam, m	Draft, m
LPG pressurized gas carriers (4.5 thousand m <sup>3</sup> )	4.4	100	18	5.8
LPG refrigerated gas carriers (20 thousand m <sup>3</sup> )	24.6	160	26	10.9
LPG VLGC (40 thousand m <sup>3</sup> ) (the capacity of using this type of vessels is another benefit of the area)	55.0	230	36	12.0

## Preliminary Estimation of Capital Investment

Name	Unit	LPG	Light Oil Products
Cargo turnover	thousand tons	1,000	3,500
Relative capital investment	USD/ton	300.0	400.0
Capital investment based on relative indices	million \$	300.1	496.0
Forecast capital investment (estimate)	million \$	350.0	

Presenting out intentions and the project idea, we are seeking to involve Japanese partners in the initial project stage.

With your participation and your practical interest, the efficiency of project design operations and financial model composition may increase considerably. This also applies to Russian oil and gas industry businesses represented here on this forum.

We are open to constructive and mutually beneficial cooperation and collaboration in the project.

**Thank you!**