

TERMINALAS

Will connect with final gas consumers

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More dependent on energy at rising prices

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Named after Independence and already being washed by water



The ship-storage Independence should come to the Port of Klaipėda in the second half of 2014.

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CAPACITY 170,000 m³
LENGTH 294 m
WIDTH 46 m
DRAUGHT 12.6 m
PUMPING CAPACITY up to 11 million m³ per day

A floating storage and regasification vessel (FSRU) being built for Klaipėda LNG terminal has been launched. During a ceremony the ship was given a symbolic name Independence (Nepriklausomybė).

“Due to its size, uniqueness and a special purpose the ship must have been given an exclusive name. We hope that this high-sounding name will reflect a breakthrough in Lithuanian energy gas sector and sought-out independence from a single supplier”, said Rokas Masiulis, General Manager of AB Klaipėdos nafta which has been implementing LNG terminal project and named the ship.

The ceremony took place in the world's largest shipbuilding company Hyundai Heavy Industries in Ulsan, the city of South Korea. The ship owner Norwegian company Hoegh LNG registered it in Singapore.



Ship building works which are being carried according to the schedule will be continued in a shipyard dock on water: LNG tanks as well as small mechanical units, auxiliary systems will be installed and all systems will be tested.

The price of the terminal will be cut by LTL 69 million

The European Investment Bank (EIB) has decided to grant a long-term loan comprising of EUR 87 million (LTL 300 million) for the project of Lithuanian LNG terminal which is under implementation. This loan allows saving approximately EUR 20 million (LTL 69 million) in comparison with costs required to cover the loan granted by commercial banks. "This is the least expensive borrowing currently possible in the market", says Rokas Masiulis, General Manager of AB Klaipėdos nafta. EIB loan funds will be used for construction of the terminal jetty and gas pipeline. Loan term: up to 20 years.

The Prime Minister: gas storage in Latvia would be the best solution

"It would be the best to store a part of gas from the future Klaipėda LNG terminal in the Latvian Incukalns Underground Gas Storage", says the Prime Minister Algirdas Butkevičius. According to him, Lithuania could expect funding from the budget of the European Union, especially for construction of additional piping, as gas pipeline capacity in the route Klaipėda-Kuršėnai would be subject to the increase. Based on the calculations by Litgas, the daughter company of AB Klaipėdos nafta, the preliminary storage capacity is up to 100 million m³ of gas in 2015 and up to 200 million m³ since 2017. Gas storage services would provide opportunities with respect to the more flexible management of seasonal fluctuations of gas flows, enable to purchase LNG on the spot market seeking more favourable prices. The conclusion of the gas storage agreement with the Latvian gas company Latvijas Gaze regarding gas storage is planned right after the end of the tender for the provision of gas storage services. *BNS*

JETTY: construction will start soon

A jetty will be constructed next to Kiaulės Nugara island at the Klaipėda Seaport for mooring of the ship-storage with regasification unit (FSRU) of LNG terminal. The jetty consisting of two platforms will be designed and constructed by the Latvian company BMGS having more than 60 years of experience in implementation of such projects. Previously BMGS constructed a jetty and reinforced the coast in the Gulf of Malku at the Klaipėda Container Terminal and filled in Palanga beaches with sand.

Vladimir Mironov, the Member of the Board at BMGS, Commercial Director shares preparation moods with the readers of the Terminalas before commencing the work on the construction site.

Could you describe a jetty of Klaipėda LNG terminal and its role after the terminal start-up?

In common words and not going into technical details, I'd say that this is a standard offshore jetty for mooring of big vessels which are unable to moor the existing berths due to insufficient depths. This particular jetty will be intended for secure transmitting of LNG from FSRU vessel to the national gas distribution network. Besides mooring of the ship-storage, dolphins of the jetty will be used for

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WORK VALUE:

LTL 113.6 million incl. VAT

EXECUTION TERM:

by 1 October 2014.



safe berthing of gas tankers coming to the jetty. The jetty will contain two platforms (servicing and technological) with special gas transmitting equipment and safety systems.

Will there be enough time for implementation of such a complicated task?

Based on our calculations terms set for engineering, construction and commissioning of the jetty are sufficient and the project will be implemented within the set period of time. Of course, given that all the parties involved in the project will perform their functions on time and cooperate in the most effective manner.

Have you ever constructed jetties for LNG terminals and what is your experience in this field?

BMGS has significant experience of designing and construction of similar structures in the Baltic region. For example, we had constructed a very similar jetty in Free Port of Riga.

Do you think any unforeseen challenges may come up during implementation of the project of Klaipėda LNG terminal?

Participation in such a project is a challenge for the local company especially taking into consideration the number of companies involved in the project. I'm talking about contractors and suppliers who will work on site and provide different kinds of goods and services within implementation of the entire Klaipėda LNG terminal project.

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Approved a special plan of LNG terminal

The Minister of Energy Jaroslavas Neverovičius approved a special plan of construction of LNG terminal and gas pipeline. Upon the approval of the plan a jetty and gas pipeline technical projects will be developed and construction permits issued. It is planned that construction activities will commence right after construction permits are received. Designing conditions were issued by a total of 25 authorities. They had no remarks for the design.



Will connect with final gas consumers



"The greatest challenge of the project is horizontal directional drilling underneath the Curonian Lagoon", says PPS Pipeline Systems GmbH representative **Mindaugas Zakaras**

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WORK VALUE:

LTL 114.756 million incl. VAT

EXECUTION TERM:

by 1 August 2014.

LENGTH OF THE PIPELINE:

approximately 17 km including gas pipeline underneath the Curonian Lagoon

PIPELINE DIAMETER:

0.7 m (DN 700)

OTHER INSTALLATIONS:

gas metering station, telecommunications, engineering and other systems

Installation of the gas pipeline of Klaipėda LNG terminal will become an anniversary project for the German concern PPS Pipeline Systems GmbH. The company is celebrating the sixty-year anniversary of its activity next year and plans to finish construction activities in Klaipėda until then.

The Terminalas questions regarding the commencement of the gas pipeline installation are answered by **Mindaugas Zakaras**, Project Manager of PPS Pipeline Systems GmbH.

The gas pipeline is one of the most important parts of the terminal infrastructure. Will there be any benefits if a ship-storage is not connected to the existing gas pipelines?

Each part of LNG terminal infrastructure is very important. Improper installation of one of the terminal parts would cause a danger for successful implementation of the entire project. However, installation of the gas pipeline is considered the most complicated task for two reasons: horizontal directional drilling underneath the Curonian Lagoon and installation of

the gas metering station. We made a detailed analysis of pre-design documentation and have several possible options for the main parts of construction; we do not see any reasons as to why we should not connect the gas pipeline with the ship-storage.

What is characteristic to installation of the gas pipeline of Klaipėda LNG terminal; what are the main challenges?

The greatest challenge of this project is horizontal directional drilling for pipe routing underneath the Curonian Lagoon. Drilling of such length is a complicated process by itself. An experienced subcontractor will be hired for this part of activities; however, the main difficulties depend not only on a subcontractor, but also on very important factors such as geological conditions of the depth, weather conditions, etc. It shall be noted that results of geological studies are not very favourable.

Another challenge in the scope of the terminal part to be constructed by PPS is a technological connection of the tap unit on the jetty with pipe DN 700 installed during the drilling activity. Besides engineering decisions and technical implementation

an effective cooperation with a construction company of the jetty as well as timely execution of their activity is very important.

The nature of this project should not be forgotten, this is a project of engineering, procurement and construction activities (EPC) where the contractor must design, receive all construction permits, perform procurement and install the entire object anticipated in the technical task. In our case, it shall be performed within a limited period of time.

Will there be enough time for execution?

When executing procurement procedures together with experienced and qualified workers and partners we had enough time to plan actions, discuss various design, technological and technical solutions. We will do our best to meet the terms of the contract.

You have a large experience in pipeline installation in Europe. Have you ever worked on similar LNG terminal projects in other countries?

PPS Pipeline Systems GmbH has been providing innovative solutions for constructions and EPC projects in oil and gas industry since 1954. Within the

last ten years the company had routed approximately 1750 km of gas and oil pipelines of 0.4 – 1.4 m diameter all over Europe. PPS Pipeline Systems GmbH also constructs gas metering stations and compressor houses, underground gas storages and other objects of the power industry. The company was successful and constructed the most parts of Nord Stream gas pipeline project that has a strategic importance in Europe, installed underground gas storages, gas metering and compressor house stations with the value of each project constituting more than EUR 100 million.

Do you find installation of the gas pipeline of Klaipėda LNG terminal important and interesting?

PPS Pipeline Systems GmbH successfully implemented a number of projects in Lithuania. We are happy to be able to contribute to the implementation of the project having a strategic importance to Lithuania. We understand our responsibility in the project thus we will strive for high quality and fast construction of our part in Klaipėda LNG terminal infrastructure by benevolent cooperation with both the owner, AB Klaipėdos Nafta, and other contractors.

The channel is deepened

Deepening of the channel by Kiaulės Nugara island at the Klaipėda Seaport where LNG terminal will be constructed has been completed. The Dutch company Van Oord deepened the anticipated water area up to 14.5 meters and up to 16 meters by Kiaulės Nugara island. Upon deepening of the channel, the bottom of the Klaipėda Seaport is prepared for coming of the ship-storage. *BNS*

LNG terminal will not compete with the regional one

LNG terminal being constructed in Klaipėda will not compete with the regional terminal which is planned to be constructed in the Gulf of Finland, said the President of Finland Sauli Niinistö who visited Lithuania: "I realized that there is no competition or any damage between these two projects as Lithuanian project is local. Moreover, we are not aware of

the location which will be selected for the regional terminal." The study regarding the regional LNG terminal carried out by the consulting company Booz&Company and ordered by the European Commission showed that the best location for the regional LNG terminal is the Gulf of Finland near Estonia and Finland. *BNS*



“Business costs for energy resources grow constantly”, says Rokas Kasperavičius, Partner in KPMG Baltics.

More dependent on energy at rising prices

The main Lithuanian economic sectors have recently become even more dependent on changes in prices of energy resources, and the business vulnerability has increased over the years, which is demonstrated by the research conducted by KPMG Baltics, the company providing audit, tax and advisory services.

The objective of the annual research “Business Vulnerability to Changes in Energy Prices” is to assess the impact of changes in energy prices on costs of the state companies.

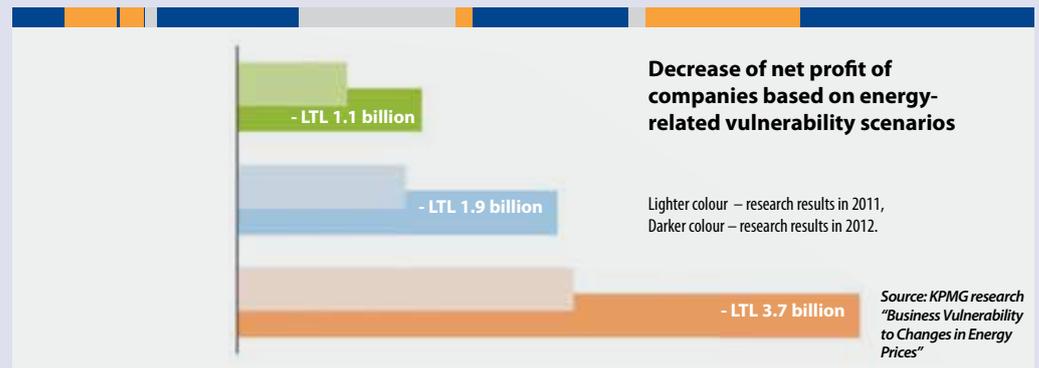
“The research results have shown that Lithuanian companies have become more susceptible to fluctuations in prices of energy resources, i.e. increasing costs for fuel, electrical and heat energy reduce the profit of the companies as well as their competitiveness in international markets”, says Rokas Kasperavičius, the partner in KPMG Baltics.

With respect to a potential scenario – optimistic, realistic or pessimistic – the expected profit of the companies of the main economic sectors

may be less by LTL 1.1 billion to 3.7 billion due to energy resources at rising prices. Like last year, construction and transport sectors remain the most vulnerable business sectors, while commerce and services sectors are less susceptible to changes in energy prices.

According to the expert, the Lithuanian economy is growing after the economic downturn. The companies are expanding, production scales are increasing, which requires more energy resources. For instance, last year electricity and heat energy prices for companies went up by 12%, fuel prices increased by 20%, however, the total company costs for energy resources grew by 61%.

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Supported by 90% of Managers

Lithuanian business leaders were asked to assess the significance of the state strategic projects in the survey of leader companies “Pulse of Economy 2013” conducted by KPMG Baltics. 90% of surveyed company managers and financiers supported the LNG terminal project. A total of 260 respondents from three Baltic States participated in the survey.

Racing with rising energy prices



Aušra Žemaitienė,
General Manager of UAB Mars Lietuva

The production activity generates a major part of the company’s turnover. Installations

are in service 24/7, therefore they constitute a significant part of the expenditures, although we incur relatively low gas and electricity costs, i.e. less than 4%.

Based on the sustainable development programme, we focus on reduction of consumption of natural resources and environmental protection issues. We have installed the energy monitoring system in our plant which helps us monitor over 300 energy consumption points and improve them in terms of the rational energy consumption. Of course, we are always in race with rising prices of energy resources, which seeks to neutralize our efforts, therefore the reduction of energy consumption is currently the only way.

Increases efficiency – reduces costs



Mantas Ručinskas, Executive Director of UAB Rolvika

We are producers and suppliers of professional refrigeration, commercial and food preparation equipment. Recently electrical energy has become more expensive, which results in the rapidly increasing demand for energy-efficient design solutions and equipment. Our clients tend to choose more energy-efficient refrigeration technologies

which enable to reduce energy costs. Moreover, we and our partners are the first to have developed remote control system of refrigeration equipment in Lithuania which helps reduce up to 25% of refrigeration energy costs. It is amazing that more and more clients are satisfied with the benefits of this system as investments in energy saving rather quickly pay off in Lithuania.