

# NOVATEK'S GROWTH STRATEGY:

Implications for European  
LNG markets



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# NOVATEK ON THE EUROPEAN LNG MARKET: DIRECT SUPPLIES AND RE-EXPORT

Currently Novatek supplies LNG to European markets from two LNG liquefaction plants:

- ♣ **Yamal LNG (large-scale, current capacity 16,5 million tons per annum);**
- ♣ **Vysotsk LNG (mid-scale, current capacity 0,66 million tons per annum).**

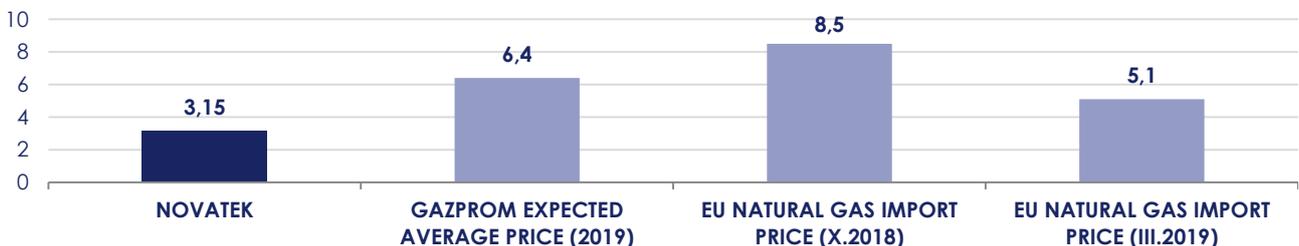
Yamal LNG plant currently consists of 3 production trains; the design production capacity of each train is 5,5 million tons per annum (mtpa). Production trains became operational in December 2017, August 2018 and November 2018, respectively. Novatek holds 50,1% of the project's shares. French major Total (20%), Chinese CNPC (20%) and China's Silk Road Fund (9,9%) are minor shareholders. Due to the geographical location of the plant in the north of Russia, the Yamal LNG supplies can be realized only by a limited number of icebreaker carriers (class Arc7 LNG carriers). As a result Novatek and his partners prefer (in case of the European deliveries) a possibly quick transshipment of LNG onto standard gas carriers, so that the icebreaking vessels could become available to take on a new work assignment in the Arctic seas as soon as possible. Throughout most of the year (due to the melting of ice on the Northern Sea Route), the LNG deliveries directed to Asian market (and other global markets) are reloaded at various European LNG terminals.

Novatek's second operating LNG liquefaction facility that is used to export LNG to Europe is Vysotsk LNG. Launched in March-April of 2019, Vysotsk plant has the capacity of 0,66 million tons per year. The project is shared by Novatek (50,1% shares) and Russian Gazprombank (49,9%). Despite the fact that the commercial operations at the Vysotsk plant commenced only in the last few weeks, half of the production capacity had been booked by the Finnish Gasum OY already back in 2015. It is assumed that the other half of production capacity will be offered in the small-scale LNG segment in the Baltic Sea area. Ultimately Rostock (Germany) is to become the key distribution center for the Vysotsk LNG deliveries, as Novatek with the Belgian Fluxys are building a dedicated mid-scale terminal there.

**Thanks to the operating Russian liquefaction plants, Novatek became a significant (although not the largest) LNG supplier in Europe.**

It is worth noting that Novatek controls only 50,1% of the shares in Yamal LNG and Vysotsk LNG, and that a significant part of the LNG deliveries is merely reloaded at European terminals and directed further to other markets. For example, in 2018 the volume of LNG imported from Russia (from Yamal LNG) reached 4,85 million tons, but over half of the supplies were later re-exported further.

## NOVATEK'S LNG PRICES IN EUROPE, AS STATED BY NOVATEK (USD/mmBtu)



## NOVATEK'S COMPETITIVE ADVANTAGE

Novatek's statements and the analysis of European liquefied gas market clearly shows that the Russian LNG deliveries constitute a competitive alternative to other gas suppliers. This seems to be the case both for Yamal LNG terminal, as well as for the recently launched Vysotsk LNG plant, whose clients include

Lithuanian Achema. Achema immediately purchased small-scale deliveries, despite having direct gas pipeline supply from Russia. There are a couple of factors behind Novatek's competitive advantage including: tax cuts and political support from Russian Federation's authorities; very low cost of gas exploration and liquefaction.

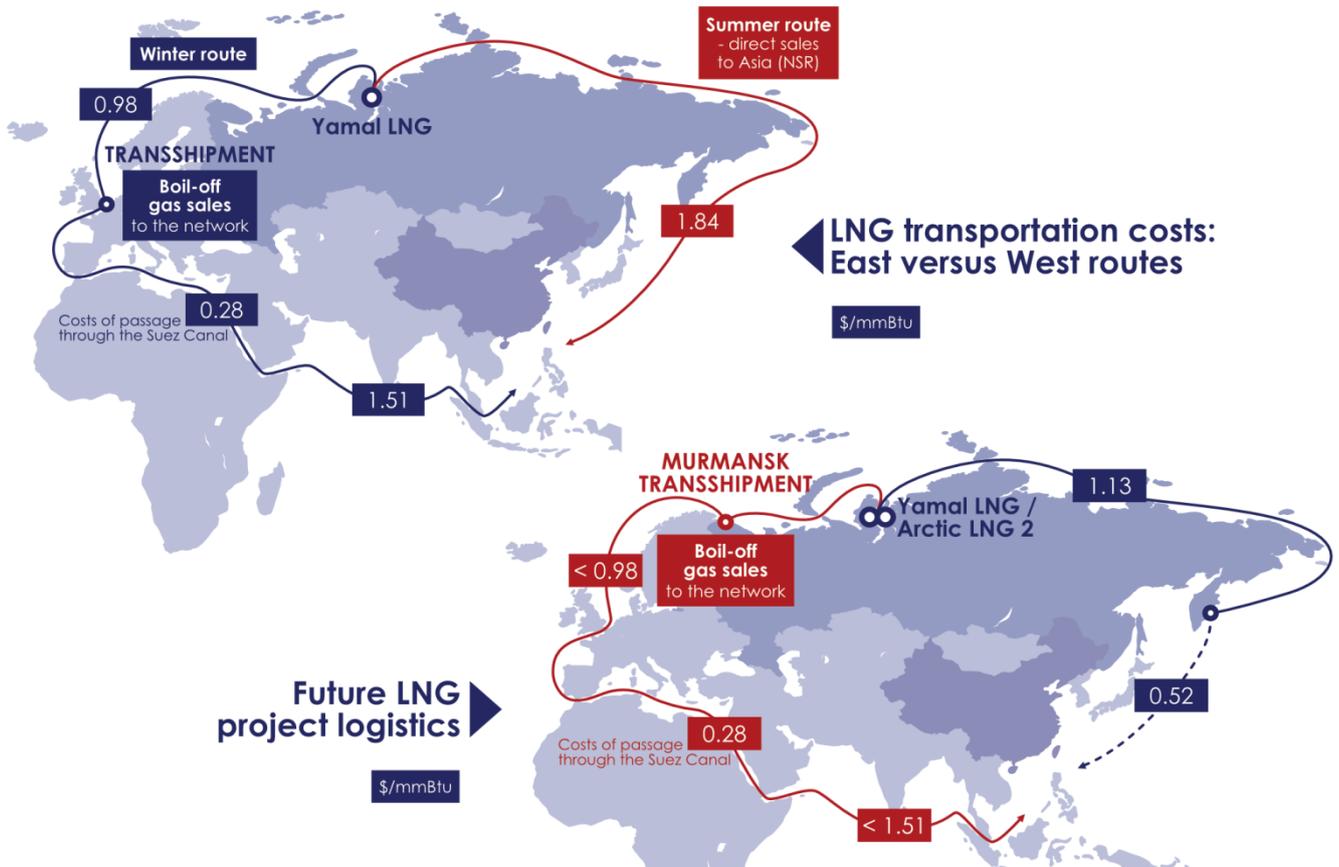
# MURMANSK LNG TRANSSHIPMENT FACILITY PROJECT

An integral element of Novatek's strategy is creating their own reloading terminals at the ends of Northern Sea Route, on the Kamchatka Peninsula in the east and in the Murmansk area in the west. This is supposed to lessen the company's dependence on transshipment in third parties' port facilities (although transshipment could still occur for certain deliveries). Novatek's main ambition is to shorten the distance covered by the relatively small fleet of ice-class Arc7 carriers and thus, allow for a higher number of cargoes. Building their own transshipment facilities will allow Novatek to further optimize the costs of LNG export, curbing the expenses on icebreaker carriers freight, that are up to 70-80% higher than for the standard LNG carriers.

**LNG transshipment terminal in Murmansk (planned capacity up to 20 mtpa) is set to be ready for operations in 2022. Nevertheless, Novatek has already made the decision to start ship-to-ship reloading in 4Q2019.**

The planned reloading facility in Murmansk shall take over the transshipment service realized by the Novatek in Honningsvåg, Norway and limit the Novatek interest in transshipment services in the EU terminals as well.

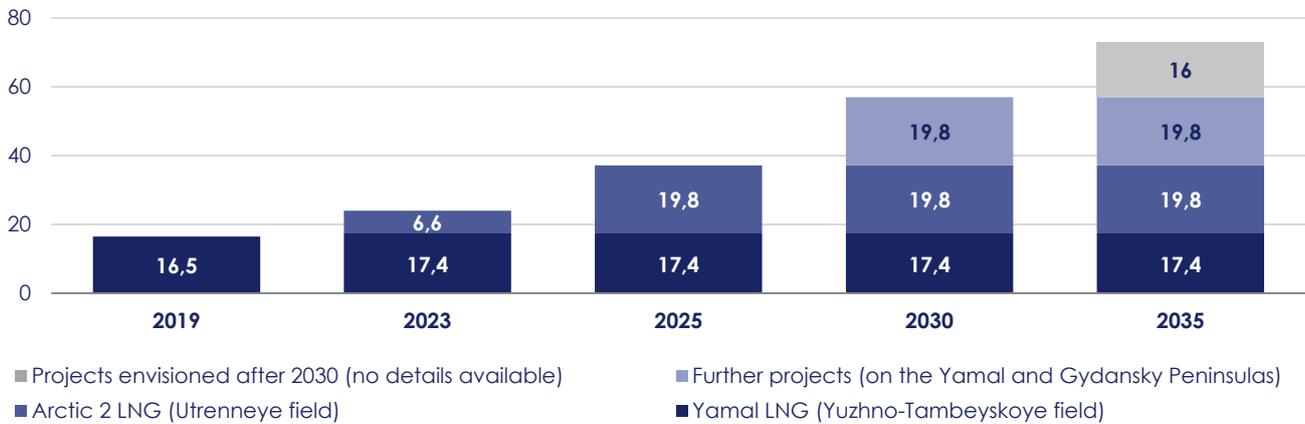
## NOVATEK'S CURRENT AND FUTURE ARCTIC LNG SUPPLY CHAIN



Source: data supplied by Novatek

# NOVATEK'S PLANS FOR DEVELOPING THE PRODUCTION CAPACITY

## NOVATEK'S PLANS FOR AN INCREASE IN LARGE-SCALE PRODUCTION CAPACITY (MTPA)



Novatek is planning to develop a string of LNG projects, thus realizing the company's long-term growth strategy. In the large-scale segment Arctic LNG-2 plant is at a fairly advanced stage. The facility is supposed to have 3 LNG production trains, each at 6,6 mtpa production capacity. The construction of the 3 trains includes gravity-based structure platforms that are being constructed at the dedicated production center in Murmansk area. The first Arctic LNG-2 liquefaction train is expected around 2022-2023, whereas the second and third trains are expected to become operational by 2025. Final investment decision (FID) is to be taken in 2H2019, and by that time the company hopes to have rounded up the business partners for the venture. A 10% stake in Arctic LNG-2 has been already taken up by Total, and in late April 2019 two Chinese companies decided to secure a 10% share each in the project: China National Oil and Gas Exploration and Development Company (CNODC), a unit of CNPC, and CNOOC. According to Novatek, the company will not wait with the FID until the vast majority of the long term production capacity is booked, as was the case for Yamal LNG (95% of Yamal LNG's production capacity was booked before FID).

**All of Novatek's large-scale projects are supposed to be operative for a period of over 30 years.**

Novatek recently showed interest in constructing Arctic LNG-3, as a result of a rich gas field discovery in the Ob Bay near Yuzhno-Tambeyskoye gas field.

According to the first estimates the newly discovered field contains recoverable reserves of 320 bcm of gas (11.3 trillion cubic feet). It isn't currently clear if construction of Arctic LNG-3 could be realized simultaneously with another large-scale project (no commercial name mentioned in the company's strategy). This project is expected to be commissioned between 2026-2030 in the area of Yamal Peninsula or Gydanski Peninsula. Similarly to Arctic LNG, the unnamed project consists of 3 LNG production trains of 6,6 mtpa each.

**Key element to further projects is the use of Novatek's patented liquefaction technology, Arctic Cascade, that capitalizes on the local climate conditions of the Arctic. It is expected to decrease the liquefaction costs from 1100 USD/t down to 450-500 USD/t. The technology will be employed first at the LNG train 4 of Yamal LNG (planned production capacity 1 mtpa), latest in 1Q2019.**

In the mid- and small-scale segment Novatek's strategy concentrates on Baltic Sea area, due to the expected rise in demand for LNG (bunkering and export). Currently the holding is already planning the construction of a second production train at Vystotsk LNG plant (envisioned production capacity of 0,66 mtpa) and sees an opportunity to expand further by taking over Cryogas' mid- and small-scale assets.

## EXTERNAL FACTORS CRUCIAL FOR THE SUCCESS OF NOVATEK'S STRATEGY

### POLITICAL SUPPORT OF MOSCOW

- Licence to export LNG;
- Licence for the transport of LNG using foreign fleet;
- Tax cuts and bond redemption;
- Close ties to the Russian political elite.

### PARTNERING WITH FOREIGN BUSINESS PARTNERS

- Yamal LNG – Total, CNPC, Silk Road Fund;
- Arctic LNG-2 – Total, CNODC, CNOOC;
- Novatek always holds onto the controlling stake.

### MELTING OF THE POLAR ICE CAPS

- Climate changes positively influence the navigation season in the Russian Arctic;
- It is estimated that the navigation season is to increase from 3-4 months in the next decade to 4-5 months by the half of 21<sup>st</sup> century.

## IMPLICATIONS FOR EUROPEAN LNG MARKETS



Novatek could become a dominant LNG supplier in the European market already in the mid-term perspective;



Novatek's expansion is not limited to large-scale segment, but includes also smaller projects, especially in the Baltic Sea area, where the company will be a strong competitor;



Novatek is pushing for indexed LNG prices for Asian customers, tied to Kamchatka gas hub. A similar solution could be in the plans for European customers, and would increase its competitiveness;



So far Novatek's projects didn't experience delays (or very slight delay), which increases the chances for success of future EU-oriented initiatives;



Although Novatek is a private company it enjoys support from the Russian government, as the tax cuts and licence to export clearly shows. Novatek's position seems unchallenged, and the support system in place will only help to continue the European expansion;



Novatek has its own hydrocarbon sources and acquires gas at a very low price, which makes the company a strong competitor to gas suppliers from USA and Qatar;



The construction of transshipment facilities will allow for a significant optimization of the supply chain, which in turn will increase the competitive advantage of Novatek's services, also in Europe;



Murmansk boil-off gas might be used to install gas in the Murmansk region decreasing boil-off gas injection volume in the European entry-points.