

# LNG

## LNG – Liquefied Natural Gas

LNG is a fuel produced from natural gas by removing impurities and then changing the aggregate state under pressure and very low temperature of approx. minus 160°C (-270°F). After liquefaction, a very pure, colourless and odourless fuel is obtained, which does not possess any toxic or corrosive properties. The LNG is composed of mainly methane and small amounts of other hydrocarbons.

Liquefied natural gas has a volume approx. 600 times smaller than in the gas (natural) state, which makes it more economic for it to be transported and stored. After supplying LNG to the point of destination, it is subsequently subjected to the process of re-gasification, therefore, once again transformed into the gas state by heating the raw material in the liquid state. Modern technologies are employed in the liquefaction and re-gasification processes that meet the required safety standards.

Trade in liquefied natural gas is carried out within LNG projects which are also referred to as LNG chains. The supply system consists of pipelines leading the natural gas from the deposit to the LNG facilities, the loading terminal (export), tankers (methane carriers), and the unloading terminal (import).

The natural gas transmitted via pipelines from its deposits is liquefied. LNG is then transmitted to storage containers from which special tankers are filled, so-called methane carriers. They have a capacity ranging from several dozen thousand to approx. 250 thousand m<sup>3</sup> of liquefied gas (at present ships exceeding a holding capacity of 250 thousand m<sup>3</sup> are under construction).

Once the load is transported by sea to the receiving facility (import and re-gasification terminal), the liquid fuel is transmitted to special cryogenic containers. They can be metal, reinforced concrete or underground – in frozen ground or underground caverns. At the import terminal, LNG is subjected to the process of re-gasification and then transmitted on via gas pipelines or cisterns (rail or road transport).