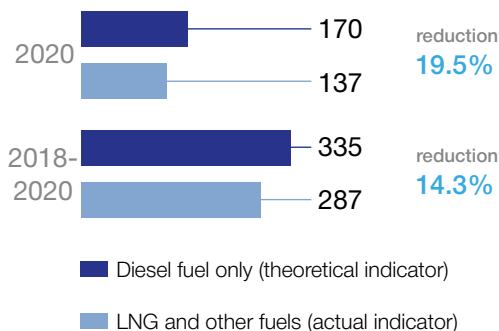


The first vessel of the series was put into operation in 2018. By the end of 2019 the number of Aframax tankers in the SCF fleet capable of running on LNG increased to six. An analysis of data obtained from ship operations during 2018-2020 confirms the theoretical calculations that Sovcomflot relied on when assessing the prospects of this technology.

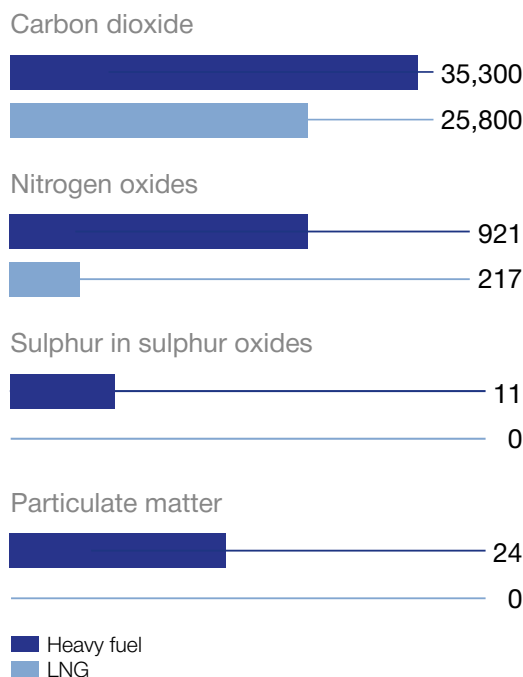
The diagram below shows the amount of carbon dioxide emissions from SCF Group's Aframax tankers that use LNG along with other marine fuels compared with similar tankers running on diesel fuel.

Reduction in carbon dioxide emission when using LNG as a fuel for Aframax tankers, ('000 tonnes per year)¹



Provided that an Aframax tanker runs exclusively on LNG, the reduction of sulphur oxides and soot emissions reaches 100%, nitrogen oxides emissions decrease by at least 76%, and the reduction of carbon dioxide emissions can reach 30% as compared with power plants running on conventional heavy fuel.

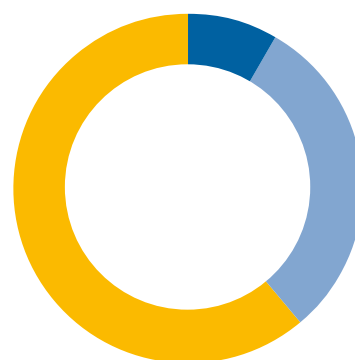
Potential for reducing atmospheric emissions from ship power plants through the use of LNG, (tonnes per year)



Wastewater and waste management

A key focus of the Sovcomflot Group's environmental protection activities is reducing the amount of wastewater and waste that gets into the World ocean during ship operations. These activities are carried out pursuant to the internal procedures of the Group, which encompass the requirements of both international and domestic legislation.

Amount of different types of garbage disposed of in 2020, (cubic metres)



¹ The amount of fuel of different types consumed by vessels during operations which was used for calculating these indicators is verified by IMO Data Collection System reports and by the classification society ABS.

443 ■ Discharged into the sea in accordance with the MARPOL 73/78 Convention
 1,600 ■ Incinerated on board
 3,176 ■ Delivered to on-shore reception facilities

At present the Group's ships are equipped with wastewater treatment systems that combine me-chemical, chemical, physical-chemical (including electrolysis) and biological methods. All wastewater treatment plants on board ships have the approval of classification societies confirming compliance with the requirements of Annex IV of the MARPOL 73/78 Convention. The quality of discharged water is confirmed by a wastewater plant certificate (Type Approval Certificate).

Management of garbage produced on ships is also organised in strict compliance with Annex V of the MARPOL Convention 73/78, which regulates prevention of pollution by garbage from ships.



The LNG carrier *Pskov* during a ship-to-ship cargo transfer operation

Energy consumption and efficiency

Different types of ship fuel are the main types of energy resources consumed during operations of the Group.

Dynamics of fuel consumption in 2018-2020, (tonnes)

Type of fuel	2020		2019		2018	
Fuel oil	800,023	65%	958,550	70%	1,025,791	72%
Diesel fuel	234,583	19%	203,754	15%	231,860	16%
Gas engine fuel	190,204	16%	200,475	15%	166,741	12%
Total	1,224,811	100%	1,362,779	100%	1,424,393	100%

Sovcomflot Group is actively engaged in work to implement a state programme for introducing gas engine fuel in the transport sector. In 2020, the share of gas engine fuel amounted to 16% of the total ship fuel consumption against 15% a year earlier. The increase in this indicator is due to an increase in the intensity of liquefied gas transportation and the addition of new-generation LNG-fuelled vessels to the Group's fleet. The SCF fleet includes five LNG tankers equipped with LNG-powered internal combustion engines and four LNG tankers that also use gas fuel for the ship power plant (steam turbine). In addition, six dual-fuel Aframax tankers using liquefied natural gas as the primary fuel were brought into service in 2018-2019. In 2020, two LNG carriers equipped with two-stroke internal combustion

engines running on gas fuel were accepted for operation.

The consumption of energy resources such as heat, electricity, motor gasoline is associated with the operation of the Group's onshore units. Their consumption volume is insignificant compared to consumption volumes of different types of ship fuel. The Group does not consume any types of energy resources other than those listed above.

16%

the share of gas engine fuel in the total amount of ship fuel consumed (vs. 15% in 2019)