

Environmental irregularities

We keep a record of environmental irregularities so that we can learn from them and, where possible, take appropriate measures to avoid any future environmental damage. The table below shows the number of reported environmental irregularities at Gasunie Nederland, per focus area:

	2012	2013	2014	2015	2016
Deviation from laws and regulations	2	1	1	1	2
Defects of environmental care system	0	0	0	0	0
Environmental incidents	65	57	57	47	64
Environmental complaints	123	139	136	111	101
Total	190	197	194	159	167

Approximately 80% of environmental incidents concern small gas leaks in appendages, detected during maintenance. These leaks are repaired immediately. 15% are small spills of natural gas condensate during gas pipelines operations. We also need to address matters such as spills of hydraulic oil from excavators. These are always cleaned up in accordance with the procedures in place.

Acidifying substances

In our gas turbines, engines and heating installations, we use natural gas as a fuel. During this process, acidifying substances (NO_x) are emitted. The NO_x emissions in 2016 amounted to 102 tonnes (2015: 136 tonnes). Many of our gas turbines are only used for a very limited number of hours (usually less than 500 hours per year per fuel gas installation), but they are necessary in order to be able to meet the demand for gas in even the coldest of winters.

The absolute value of NO_x

Description	2012 (tonnes)	2013 (tonnes)	2014 (tonnes)	2015 (tonnes)	2016 (tonnes)
NO _x emissions GUN	297	367	130	89	73
NO _x emissions GUD	107	101	40	47	29
NO _x emissions total	404	468	170	136	102

Compared to 2015, NO_x emissions decreased in 2016. This decline was mainly due to the mild winter, but also to the limited use of our gas turbines and gas engines.

Raw and auxiliary materials: nitrogen

To make high-calorific natural gas of a quality suitable for certain market segments, we add nitrogen to the natural gas at a number of locations in our gas transport network. We produce 70% of the nitrogen ourselves and purchase 30% from third parties. The following table indicates our use of nitrogen in kilotonnes (ktonnes):

Description	2012 (ktonnes)	2013 (ktonnes)	2014 (ktonnes)	2015 (ktonnes)	2016 (ktonnes)
Nitrogen purchased from third parties	17	22	33	420	558
Nitrogen from our own production	15	0	35	975	1278
Total	32	22	68	1395	1837

In 2016, the volume of gas from the Groningen field decreased, which led to a higher intake of H-gas. As a result, more nitrogen was needed for the quality conversion of this H-gas.