

GAS SPECIFICATIONS

A. Operating conditions and quality requirements at Point of Delivery

The natural gas delivered at a delivery border point by a shipper into the Fluxys grid:

- (i) shall comply with the specifications range related to the relevant delivery point, and
- (ii) may not contain any added odorants, nor any other elements or impurities (such as, but not limited to methanol and condensates) to the extent that it cannot be transported, stored or marketed in Belgium without additional treatment, and
- (iii) shall be made available at any pressure within the specified range as requested from time to time by Fluxys.

Should EASEE-gas approve a new common business practice (CBP) with regard to gas specifications applicable in the framework of this project, the relevant specifications tables below should be adjusted accordingly.

A.1 – IZT/Zee Hub

A.2 – ZPT

A.3 – Zeebrugge LNG Terminal

A.4 – 's-Gravenvoeren

A.5 – Eynatten 1 (WINGAS Transport)

A.6 – Eynatten 2 (E.ON Gastransport)

A.7 – Zelzate

A.1 – IZT/Zee Hub

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.80 ⁽¹⁾	12.38
Wobbe Index	kWh/m ³ (n) [25°C]	14.13 ⁽²⁾	15.05
Pressure for offtake by Fluxys	barg	55	80
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 10
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30

(1) Subject to the shipper's reasonable endeavours to deliver natural gas at a minimum of 10.94 kWh/m³(n).

(2) Shall be decreased to 13.82 kWh/m³(n) subject to notification by Fluxys.

A.2 – ZPT

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	11.17	12.77
Wobbe Index	kWh/m ³ (n) [25°C]	14.17	15.47
Pressure for offtake by Fluxys	barg	45	80
Temperature	°C	2	30 (Oct-May) 32 (June-Sept)
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 10
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30
Mercaptans (as S)	mg/m ³ (n)	-	6

A.3 – Zeebrugge LNG Terminal

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.83	12.77
Wobbe Index	kWh/m ³ (n) [25°C]	14.17	15.56
Pressure for offtake by Fluxys	barg	55	80
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 8
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30
Mercaptans (as S)	mg/m ³ (n)	-	6

A.4 – 's Gravenvoeren

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.94 ⁽¹⁾	12.32
Wobbe Index	kWh/m ³ (n) [25°C]	13.84 ⁽²⁾	15.47
Pressure for offtake by Fluxys	barg	49	66.2
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 3
Water dewpoint	°C at 69 barg	-	Minus 8
Oxygen content (O ₂)	ppm	-	5000
Carbon dioxide content (CO ₂)	Mol %	-	3.0
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	150
Total sulphur - yearly average (as S)	mg/m ³ (n)	-	120
Mercaptans (as S)	mg/m ³ (n)	-	6

(1) 10.84 kWh/m³(n) in case of emergency.

(2) 13.67 kWh/m³(n) in case of emergency.

A.5 – Eynatten 1

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.80 ⁽¹⁾	12.38
Wobbe Index	kWh/m ³ (n) [25°C]	14.13 ⁽²⁾	15.05
Pressure for offtake by Fluxys	barg	49	80
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 10
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30

(1) Subject to the shipper's reasonable endeavours to deliver natural gas at a minimum of 10.94 kWh/m³(n).

(2) Shall be decreased to 13.82 kWh/m³(n) subject to notification by Fluxys.

A.6 – Eynatten 2

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.80 ⁽¹⁾	12.38
Wobbe Index	kWh/m ³ (n) [25°C]	14.13 ⁽²⁾	15.05
Pressure for offtake by Fluxys	barg	49	80
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 10
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30

(1) Subject to the shipper's reasonable endeavours to deliver natural gas at a minimum of 10.94 kWh/m³(n).

(2) Shall be decreased to 13.82 kWh/m³(n) subject to notification by Fluxys.

A.7 – Zelzate

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.80 ⁽¹⁾	12.38
Wobbe Index	kWh/m ³ (n) [25°C]	14.13 ⁽²⁾	15.05
Pressure for offtake by Fluxys	barg	49	80
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 10
Oxygen content (O ₂)	ppm	-	1000
Carbon dioxide content (CO ₂)	Mol %	-	2.5
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	30

(1) Subject to the shipper's reasonable endeavours to deliver natural gas at a minimum of 10.94 kWh/m³(n).

(2) Shall be decreased to 13.82 kWh/m³(n) subject to notification by Fluxys.

B. Operating conditions and quality requirements at Point of Redelivery**B.1 – Creos**

	Unit	Min.	Max.
Gross Calorific Value	kWh/m ³ (n) [25°C]	10.80	12.77
Wobbe Index	kWh/m ³ (n) [25°C]	13.84 ⁽¹⁾	15.70
Pressure for offtake by Fluxys	barg	27	66.2
Temperature	°C	2	38
Hydrocarbon dewpoint	°C up to 69 barg	-	Minus 2
Water dewpoint	°C at 69 barg	-	Minus 8
Oxygen content (O ₂)	ppm	-	5000
Carbon dioxide content (CO ₂)	Mol %	-	3
H ₂ S + COS (as S)	mg/m ³ (n)	-	5
Total sulphur at any time (as S)	mg/m ³ (n)	-	150
Total sulphur - yearly average (as S)	mg/m ³ (n)	-	120
Mercaptans (as S)	mg/m ³ (n)	-	6

(1) 13.67 kWh/m³(n) in case of emergency.