

## Grid points of GASCADE Gastransport GmbH



Last update: 8. March 2012

Grid point ID	ETSO/EIC-Code	Grid point name	Flow direction	Grid point type	Adjacent system operator / storage operator	Gas specification
01A+	---	Ostpfalz	EX	Exit zone	Creos Deutschland GmbH	1.1
0AAA	37Z0000000035275	TW Ludwigshafen	EX	Interconnection point - distribution system operator	Kommunale Netzgesellschaft Südwest mbH (KNS)	1.1
0CFA	---	Wörth	EX	Grid connection point	end consumer	1.1
11A+	37Z000000004115N	RMN	EX	Exit zone	VNB Rhein-Main-Neckar GmbH & Co. KG	1.1
11B+	37Y000000000028F	Hameln	EX	Exit zone	GWS Stadtwerke Hameln GmbH	1.1
1632	21Z000000000074Q	Bunde	EX	Interconnection point - international	Gas Transport Services B.V.	2
1632	21Z000000000074Q	Bunde	EN	Interconnection point - international	Gas Transport Services B.V.	2
1BMA	---	Jemgum I (Plan)	EX	Storage	astora GmbH & Co. KG	1.1
1BMA	---	Jemgum I (Plan)	EN	Storage	astora GmbH & Co. KG	10
1BQA	---	Nüttermoor	EX	Storage	EWE Netz GmbH	1.1
1BQA	---	Nüttermoor	EN	Storage	EWE Netz GmbH	10
1ELA	---	Rehden/EGM	EX	Interconnection point - transmission system operator	Nowega GmbH	1.1
1ELA	---	Rehden/EGM	EN	Interconnection point - transmission system operator	Nowega GmbH	10
1FZA	37Z000000003938L	SW Bünde	EX	Interconnection point - distribution system operator	Energie- und Wasserversorgung Bünde GmbH	1.1
1GZA	37Z000000003941W	SW Lemgo	EX	Interconnection point - distribution system operator	Stadtwerke Lemgo GmbH	1.1
1HFA	---	Bentrop	EX	Grid connection point	end consumer	1.1
1LLA	37Z0000000051580	Großenritte	EX	Interconnection point - distribution system operator	Gas-Union Transport GmbH & Co. KG	1.1
1LMA	---	Baunatal (Plan)	EX	Grid connection point	end consumer	1.1
1IMA	37Z000000001587Y	Warburg I	EX	Interconnection point - distribution system operator	RWE Westfalen-Weser-Ems Verteilnetz GmbH	1.1
1NFA	37Z000000003909S	SW Hünfeld	EX	Interconnection point - distribution system operator	Stadtwerke Hünfeld GmbH	1.1
1NLA	37Z000000003425D	Reckrod II	EX	Interconnection point - distribution system operator	Gas-Union Transport GmbH & Co. KG	1.1
1NLC	37Z000000004923T	Reckrod I	EX	Interconnection point - transmission system operator	Open Grid Europe GmbH	1.1
1NLC	---	Reckrod I	EN	Interconnection point - transmission system operator	Open Grid Europe GmbH	10
1RZA	37Z000000005159Z	Wirtheim	EX	Interconnection point - distribution system operator	Gas-Union Transport GmbH & Co. KG	1.1
1SEA	37Z000000004647R	Jügesheim II	EX	Interconnection point - distribution system operator	MAINGAU-Energie GmbH	1.1
1UXB	37Z000000000194L	GGEW Bensheim	EX	Interconnection point - distribution system operator	GGEW Gruppen-Gas- und Elektrizitätswerk Bergstraße	1.1
1UZB	37Z000000004016P	SW Weinheim	EX	Interconnection point - distribution system operator	Stadtwerke Weinheim GmbH	1.1
1ULA	---	Gernsheim (Plan)	EX	Interconnection point - transmission system operator	GRTgaz Deutschland GmbH	1.1
1ULA	---	Gernsheim (Plan)	EN	Interconnection point - transmission system operator	GRTgaz Deutschland GmbH	3
1VCA	37Z0000000034538	Frankenthal Nord	EN	Interconnection point - distribution system operator	Gas-Union Transport GmbH & Co. KG	6
1VCC	37Z000000002352J	Worms Süd	EX	Interconnection point - distribution system operator	EWR Netz GmbH	1.1
1VLA	37Z000000001442N	Lampertheim IV	EX, EN (C)	Interconnection point - transmission system operator	terraneis bw GmbH	1.1
1VMB	37Z0000000007905	Lampertheim I	EX, EN (C)	Interconnection point - transmission system operator	Open Grid Europe GmbH	1.1
1VNA	37Z000000000275L	SW Lampertheim	EX	Interconnection point - distribution system operator	ENERGIERIED GmbH & Co. KG	1.1
1VTA	---	Mannheim I	EX	Grid connection point	end consumer	1.1
1VTB	---	Mannheim II	EX	Grid connection point	end consumer	1.1
1VZA	---	Ludwigshafen	EX	Grid connection point	end consumer	1.1
22A+	---	Suedsachsen	EX	Exit zone	Südsachsen Netz GmbH	1.1

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2730	21Z00000000092O	Olbernhau II	EX	Interconnection point - international	NET4GAS s.r.o.	1.1
2731	21Z00000000091Q	Brandov-STEAL	EN	Interconnection point - international	NET4GAS s.r.o.	4
2BZA	37Z000000004066A	SW Marienberg	EX	Interconnection point - distribution system operator	Stadtwerke Marienberg GmbH	1.1
2CXA	37Z000000003795H	Chemnitz Stelzendorf	EX	Interconnection point - distribution system operator	Netzgesellschaft mbH Chemnitz	1.1
2EEA	37Z000000003796F	SW Crimmitschau	EX	Interconnection point - distribution system operator	MITGAS Mitteldeutsche Gasversorgung GmbH	1.1
2EFA	---	SW Werdau	EX	Interconnection point - distribution system operator	Stadtwerke Werdau GmbH	1.1
2ERA	37Z0000000031598	Ronneburg	EX	Interconnection point - distribution system operator	Erdgastransportgesellschaft Thüringen-Sachsen mbH	1.1
2EZA	37Z0000000030699	Gera-Gorlitzschberg	EX	Interconnection point - distribution system operator	GeraNetz GmbH	1.1
2FZA	37Z0000000040775	Stadtroda II	EX	Interconnection point - distribution system operator	Stadtwerke Stadtroda GmbH	1.1
2LXA	37Z000000003701F	Wölfershausen	EX	Interconnection point - distribution system operator	Nowega GmbH	1.1
3070	---	Sp. Rehden	EN	Storage	astora GmbH & Co. KG	10
3070	---	Sp. Rehden	EX	Storage	astora GmbH & Co. KG	1.1
52A+	37Z000000004128E	Glauchau	EX	Exit zone	Stadtwerke Glauchau Dienstleistungsgesellschaft mbH	1.1
55A+	37Z000000004741Z	Altenburg	EX	Exit zone	Energie- und Wasserversorgung Altenburg GmbH (EWA)	1.1
5AKA	37Z000000004070J	SW Meerane	EX	Interconnection point - distribution system operator	Stadtwerke Meerane GmbH	1.1
6800	21Z000000000056S	Mallnow	EN, EX (C)	Interconnection point - international	EuRoPol GAZ s.a.	3
6AQA	37Z000000001078I	Kienbaum	EX, EN (C)	Interconnection point - transmission system operator	Open Grid Europe GmbH	1.1
7005	37Z000000001044Z	Rehden	EX	Interconnection point - distribution system operator	E.ON Hanse Netz GmbH	1.1
7100	37Z000000000089I	Heidenau	EX	Interconnection point - distribution system operator	E.ON Hanse Netz GmbH	1.1
7CZA	37Z000000003797D	Rotenburg-Boetersen	EX	Interconnection point - distribution system operator	Stadtwerke Rotenburg (Wümme) GmbH	1.1
7DEA	37Z000000000103D	SW Zeven	EX	Interconnection point - distribution system operator	Stadtwerke Zeven GmbH	1.1
88A+	---	Lippstadt	EX	Exit zone	Stadtwerke Lippstadt GmbH	1.1
88B+	37Z000000004181A	Monheim	EX	Exit zone	Monheimer Elektrizitäts- und Gasversorgung GmbH (MEGA)	1.1
8950	21Z0000000000155	Eynatten	EX	Interconnection point - international	Fluxys SA	1
8950	21Z0000000000155	Eynatten	EN	Interconnection point - international	Fluxys SA	1
8AFA	---	Hillegossen	EX	Grid connection point	end consumer	1.1
8AFC	37Z000000000002J	Bielefeld (KOWI)	EX	Interconnection point - distribution system operator	Stadtwerke Bielefeld Netz GmbH	1.1
8AZA	---	Gütersloh-Verl	EX	Interconnection point - distribution system operator	Stadtwerke Gütersloh GmbH	1.1
8CLA	37Z000000003886E	SW Soest	EX	Interconnection point - distribution system operator	Stadtwerke Soest GmbH	1.1
8ERA	---	Hagen-Kabel	EX	Grid connection point	end consumer	1.1
8EUA	---	Herdecke	EX	Grid connection point	end consumer	1.1
8FZA	---	Wuppertal-Hohenhagen	EX	Interconnection point - distribution system operator	WSW Netz GmbH	1.1
8GWA	---	Rath	EX	Grid connection point	end consumer	1.1
8GWB	---	Ratingen	EX	Interconnection point - distribution system operator	Stadtwerke Ratingen GmbH	1.1
8GZA	---	Uerdingen	EX	Grid connection point	end consumer	1.1
8IRA	---	Köln-Merkenich	EX	Grid connection point	end consumer	1.1
8IRB	---	Leverkusen	EX	Grid connection point	end consumer	1.1
8IZB	---	Neuss	EX	Grid connection point	end consumer	1.1

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8IZC	---	Dormagen I	EX	Grid connection point	end consumer	1.1
8IZF	---	Dormagen II	EX	Grid connection point	end consumer	1.1
8IZD	---	Dormagen III	EX	Grid connection point	end consumer	1.1
8IZE	---	Dormagen IV	EX	Grid connection point	end consumer	1.1
8KLA	---	Frechen	EX	Grid connection point	end consumer	1.1
8KLC	---	Kalscheuren	EX	Grid connection point	end consumer	1.1
8KLD	---	Wesseling I	EX	Grid connection point	end consumer	1.1
8KLE	---	Hürth	EX	Grid connection point	end consumer	1.1
8KLF	---	Wesseling II	EX	Grid connection point	end consumer	1.1
8KLG	---	Frechen-Rhein-Erft	EX	Grid connection point	end consumer	1.1
8KLN	---	Godorf	EX	Grid connection point	end consumer	1.1
8MLA	---	Weisweiler	EX	Grid connection point	end consumer	1.1
8MTA	37Z000000003937N	Dürwiß	EX	Interconnection point - distribution system operator	regionetz GmbH	1.1
8MVA	37Z000000004913W	Broichweiden Süd	EX, EN (C)	Interconnection point - transmission system operator	Thyssengas GmbH	1.1
8MXA	37Z000000003682U	Aachen (Debyestr.)	EX	Interconnection point - distribution system operator	STAWAG Netz GmbH	1.1

## Grid points at the SÜDAL pipeline section

Grid point ID	ETSO/EIC-Code	Grid point name	Flow direction	Grid point type	Adjacent system operator / storage operator	Gas specification
Z122	37Z000000004655S	Haiming-UP2	EX	Interconnection point - distribution system operator	bayernets GmbH	1.2
ZBL+	---	Haiming ABG	EX		Open Grid Europe GmbH	1.2
ZBL+	---	Haiming ABG	EN		Open Grid Europe GmbH	1.2
ZAAA	21Z0000000001240	Überackern	EX	Interconnection point - international	Gas Connect Austria GmbH	9
ZAAA	21Z0000000001240	Überackern	EN	Interconnection point - international	Gas Connect Austria GmbH	9
ZAMA	21Z000000000125Z	Neuhofen	EN	Storage	RAG Rohöl-Aufsuchungs Aktiengesellschaft	9
ZAMA	21Z000000000125Z	Neuhofen	EX	Storage	RAG Rohöl-Aufsuchungs Aktiengesellschaft	1.2
ZBLZ	---	Burghausen	EX	Grid connection point	end consumer	1.2

**Explanation:**

EX = Exit point

EN = Entry point

C = counter-current capacity

Appendix 2 Grid points and gas specifications

		1	2	3	4	6	9
contract location		Eynatten	Bunde	Mallnow / Gernsheim (Plan)	Obernau	Frankenthal Nord	SÜDAL
Gross Calorific Value (min)	kWh / m <sup>3</sup>	10,97	10,97	10,97	10,97	11,00	10,70
Gross Calorific Value (max)	kWh / m <sup>3</sup>	12,22	12,22	11,61 *	11,61 *	12,30	12,78
Wobbe Index (min)	kWh / m <sup>3</sup>	13,82	13,61	14,14	14,14	13,60	13,50
Wobbe Index (max)	kWh / m <sup>3</sup>	15,05	15,00	15,00	15,00	15,70	15,47
Hydrocarbon dewpoint	°C / mg/m <sup>3</sup>	-2 °C @ 1 - 70 bar (a)	5 mg/m <sup>3</sup> bei -3°C @ 1-73 bar (a)	-2 °C @ 1 - 70 bar (a)	-2 °C @ 1 - 70 bar (a)	Bodentemp. @ Übergabedruck	0 °C @ 1 - 70 bar (a)
Water dewpoint	°C	-10 °C @ 70 bar (a)		-10 °C @ 70 bar (a)	-10 °C @ 70 bar (a)	Bodentemp. @ Übergabedruck	-8 @ 64 bar(a)
Oxygen content (max)	ppm	10	5	10	10	30.000	5.000
Oxygen content (min)	mol-%	2,5	2,5	2	2	-	2
Hydrogen sulphide content H <sub>2</sub> S + COS (max)	mg / m <sup>3</sup>	5,0	5,0	5,0	5,0	5 (incl. COS)	5,0
Mercaptans (max)	mg / m <sup>3</sup>	-	6,0	-	-	6	6
Total sulphur (as S)	mg / m <sup>3</sup>	20,0	20,0	22,4	22,4	30,0	10,0
		*)					

		10		1.1	1.2		
contract location		Injection in Germany JAGAL / STEGAL / RHG / MIDAL / WEDAL		Withdrawal specifications - Main grid	Withdrawal specifications - SÜDAL		
Gross Calorific Value (min)	kWh / m <sup>3</sup>	10,97		10,80	10,70		
Gross Calorific Value (max)	kWh / m <sup>3</sup>	12,22		12,30	12,78		
Wobbe Index (min)	kWh / m <sup>3</sup>	13,82		13,61	13,61		
Wobbe Index (max)	kWh / m <sup>3</sup>	15,00		15,70	15,70		
Hydrocarbon dewpoint	°C / mg/m <sup>3</sup>	-2 °C @ 1 - 70 bar (a)		Bodentemp. @ Übergabedruck	Bodentemp. @ Übergabedruck		
Water dewpoint	°C	-10 °C @ 70 bar (a)		Bodentemp. @ Übergabedruck	Bodentemp. @ Übergabedruck		
Oxygen content (max)	ppm	5		30.000	30.000		
Oxygen content (min)	Mol-%	2,5		-	-		
Hydrogen sulphide content H <sub>2</sub> S + COS (max)	mg / m <sup>3</sup>	5,0		5,0	5,0		
Mercaptans (max)	mg / m <sup>3</sup>	6,0		6,0	6,0		
Total sulphur (as S)	mg / m <sup>3</sup>	20,0		30,0	30,0		
		*)					

Gross Calorific Value and Wobbe Index are referring to a reference temperature of 298,15 K (25 °C) and combustion circumstances of 1,01325 bar and 273,15 K (0 °C).

\*) The Natural Gas delivered may not contain any other elements or impurities (such as, but not limited to methanol, condensates and gas odorants) to the extent that the Natural Gas delivered cannot be further transported, stored or marketed without incurring additional costs for quality adjustment.

This document is a convenience translation of the German original. In case of discrepancy between the English and the German versions, the German version shall prevail.