



Reference List

SCR - Technology

Plant	Client	Country	unit capacity [MW(el)]	Fuel type	Arrangement	Flue gas flow rate [m <sup>3</sup> /h (STP, wet)]	Number of SCR reactors	Reagents	Date of start-up
Torrevaldaliga Nord # 2	Enel	Italy	660	Bituminous coal	High-dust vortex mixing	1.910.700	2	UREA AOD	2009
Torrevaldaliga Nord # 3	Enel	Italy	660	Bituminous coal	High-dust vortex mixing	1.910.700	2	UREA AOD	2008
Torrevaldaliga Nord # 4	Enel	Italy	660	Bituminous coal	High-dust vortex mixing	1.910.700	2	UREA AOD	2008
Maasvlakte Unit # 1	E.ON Benelux n. v.	Netherlands	540	Bituminous coal	High-dust delta wing	1.638.000	2	NH <sub>4</sub> OH	2007
Maasvlakte Unit # 2	E.ON Benelux n. v.	Netherlands	540	Bituminous coal	High-dust delta wing	1.638.001	2	NH <sub>4</sub> OH	2006
Esbjergvaerket Unit # 3	Elsam A/S	Danmark	400	Bituminous coal	High-dust delta wing	1.022.400	1	NH <sub>3</sub>	2004
Belews Creek Unit # 2	Duke Energy		1225	Bituminous coal					2004



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Winyah # 1	Santee Cooper		292						2004
Ghent Unit # 1 Ghent, KY	Kentucky Utilities		470	Bituminous coal					2004
Zimmer	Amercian Electric Power		1300	Bituminous coal					2004
Amos Unit # 2	American Electric Power		800	Bituminous coal					2004
Young-Nam unit 2	Korea Southern Power Corporation (KOSPO)	Korea	200	Orimulsion / B-C Oil	High-dust	508.000	2	NH <sub>3</sub>	2003
Cross Unit # 1	Santee Copper		600	Bituminous /Petcoke coal					2003
Big Sandy Unit # 2	American Electric Power (AEP)		800	Bituminous Coal					2003
Amos Unit # 3	American Electric Power (AEP)		1300	Bituminous					2003
Cardinale Unit # 1	American Electric Power (AEP)		600	Bituminous Coal					2003
Cardinale Unit # 2	American Electric Power (AEP)		600	Bituminous Coal					2003
Cardinale Unit # 3	American Electric Power (AEP)		630	Bituminous Coal					2003
Pleasant Prairie Unit # 2	WE Energies		640	PRB Coal	After Econmizer Delta Wing				2003
Monroe, MI Unit # 4	Monroe DTE		780	BNT / PRB coal	After Econmizer Delta Wing				2003
Monroe, MI Unit # 1	Monroe DTE		780	BNT / PRB coal	After Econmizer Delta Wing				2003



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Clifty Creek Unit # 1	American Electric Power (AEP)		220	Bituminous / PBR Coal					2003
Clifty Creek Unit # 2	American Electric Power (AEP)		220	Bituminous / PBR Coal					2003
Clifty Creek Unit # 3	American Electric Power (AEP)		220	Bituminous / PBR Coal					2003
Clifty Creek Unit # 4	American Electric Power (AEP)		220	Bituminous / PBR Coal					2003
Clifty Creek Unit # 5	American Electric Power (AEP)		220	Bituminous / PBR Coal					2003
Kyger Creek Unit # 1	American Electric Power (AEP)		220	Bituminous Coal					2003
Kyger Creek Unit # 2	American Electric Power (AEP)		220	Bituminous Coal					2003
Kyger Creek Unit # 3	American Electric Power (AEP)		220	Bituminous Coal					2003
Kyger Creek Unit # 4	American Electric Power (AEP)		220	Bituminous Coal					2003
Kyger Creek Unit # 5	American Electric Power (AEP)		220	Bituminous Coal					2003
Belews Creek Unit # 5	Duke Energy		1225	Bituminous Coal					2003
Cross Unit # 2	Santee Copper		600	Bituminous / Petcoke coal					2003
Mill Creek Unit # 3	Louisville Gas and Electric (LG & E)		390	Bituminous Coal					2003
Mill Creek Unit # 4	Louisville Gas and Electric (LG & E)		490	Bituminous Coal					2003
D.B. Wilson	Western Kentucky Energy (WKE)		415	Bituminous / Petcoke Coal					2003



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Ghent Unti # 3 'Ghent KY	Kentucky Utilities		490	Bituminous Coal					2003
Ghent Unti # 4 'Ghent KY	Kentucky Utilities		490	Bituminous Coal					2003
Trimble County Bedford KY	Trimble LG&E		550	Bituminous Coal	After Economizer Delta wing				2002
Cliffside No. 5 Gastonia	Duke Energy	USA	590	Bituminous Coal	After economizer delta wing	2.100.400	2	UREA	2002
Amos No. 3 St. Albany	American Electric Power	USA	1300	Bituminous Coal	After economizer delta wing	4.500.000	3	UREA	2002
Shell Köln Godorf	Steag / Austrian Energy	Germany	5x100 t/h steam	residues from refinery + refinery fuel	High-dust	89.000	5	NH <sub>3</sub>	2002 Engineering only
Mountaineer Station Pleasant Point	American Electric Power	USA	1300	Bituminous coal	After economizer delta wing	4.500.000	3	UREA	2002
South Bay Station Unit # 3 Chula Vista, CA	Duke Energys No. america		180	Gas/Oil	After economizer delta wing				
Amagervaerket unit 3, Kopenhagen	Kobenhavns Belysningsvaesen	Danmark	250	Oil, Hard coal	High-dust	785.000	1	Ammonia water	2001
Gavin 1	Americian Electric Power	USA	1300	Bituminous coal	After economizer delta wing	4.500.000	3	UREA AOD	2001
Gavin 2	Americian Electric Power	USA	1300	Bituminous coal	After economizer delta wing	4.500.000	3	UREA AOD	2001

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Montour unit 2	Pennsylvania Power&Light	USA	750	Bituminous coal	High-dust delta wing	2.670.000	2	NH <sub>3</sub>	2000
Montour unit 1	Pennsylvania Power&Light	USA	750	Bituminous coal	High-dust delta wing	2.670.000	2	NH <sub>3</sub>	2000
Langerlo	Tractebel	Belgium	500	Bituminous coal	High-dust delta wing	1.640.000	2	NH <sub>4</sub> OH	1999
Merrimack unit 1, Bow	Public Service of New Hampshire	USA	122	Bituminous coal	High-dust delta wing	450.000	1	NH <sub>3</sub>	1999
Yang Shu Pu	CNTIC Peking	China	200	Bituminous coal	High-dust	950.000	2	NH <sub>3</sub>	Engineering only, In stallation later
Schwedt	PCK	Germany	220	Gas / oil vis breaker	High-dust	459.000	2	NH <sub>3</sub>	1998
Vado Ligure TPS unit 3+4	ENEL	Italy	640	Hard coal	High-dust	1.880.000	2x2	NH <sub>3</sub>	1998
Vodskov	NJV	Danmark	415	Bituminous coal	High-dust delta wing	970.000	1	NH <sub>3</sub>	1998
HKW 2 Altbach-Deizisau	Neckarwerke Stuttgart AG	Germany	330	Bituminous coal	High-dust	875.000	1	NH <sub>3</sub>	1997
Turbigo 3 units	ENEL	Italy	960	Oil	High-dust delta wing	2.475.000	3	NH <sub>4</sub> OH	1997
Turbigo	ENEL	Italy	250	Oil	High-dust delta wing	660.000	1	NH <sub>4</sub> OH	1997



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Torrevaldaliga power plant North unit 1-4 Civitavecchia	ENEL	Italy	2640	Oil	High-dust	6.800.000	4 x 2	NH <sub>3</sub>	1997
Montalto di Castro unit 1-4	ENEL	Italy	2640	Oil	High-dust	6.800.000	4x2	NH <sub>3</sub>	1996
Orlando unit 2	Orlando Utilities Commission	USA	420	Hard coal	High-dust	1.488.000	1	NH <sub>3</sub>	1996
Merrimack unit 2, Bow	Public Service of New Hampshire	USA	330	Bituminous coal	High-dust	1.169.000	1	NH <sub>3</sub>	1996
Ensted	(SH)	Danmark	600	Bituminous coal	High-dust delta wing	1.746.000	1	NH <sub>3</sub>	1996
S.C.E. Redondo Beach unit 7	Southern California Edison	USA	480	Gas/Oil	before airpreheater	1.560.000	1	Ammonia water	1995
S.C.E. Alamitos unit 6	Southern California Edison Rosmead	USA	480	Gas/Oil	before airpreheater	1.560.000	1	Ammonia water	1994
HKW Rudow unit 1 boiler 1, 2	BEWAG	Germany	70	Bituminous coal slag type boiler	High-dust	250.000	2	NH <sub>3</sub>	1994
HKW Rudow unit 2 boiler 3	BEWAG	Germany	93	Bituminous coal slag type boiler	Tail end delta wing	310.000	1	NH <sub>3</sub>	1994
Nijmegen	EPON	Netherland	630	Bituminous coal	High-dust delta wing	2.000.000	2	NH <sub>4</sub> OH	1994
Pasadena unit B3	City of Pasadena	USA	70	Gas/Oil	before airpreheater	233.400	1	Ammonia water	1994



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Haynes unit 5	Los Angeles Dept. of Water & Power	USA	340	Gas/Oil	High-dust	973.500	1	Ammonia water	1994
S.C.E. Alamitos unit 5	Southern California Edison Rosmead	USA	480	Gas/Oil	before airpreheater	1.560.000	1	Ammonia water	1993
PS Ingolstadt 3	Bayernwerk AG München	Germany	400	Oil, Residual oil	High-dust	1.300.000	1	NH <sub>3</sub>	1993
PS Tiefstack 1+2	HEW	Germany	300	Bituminous coal	High-dust	612.000	2	NH <sub>3</sub>	1992
Diesel generating plant Leinau	Vereinigte Wertach Elektrizitätswerke Kaufbeuren	Germany	14	Diesel oil engine	REDOX	63.900	3	Ammonia water	1992
HKW Nord unit 2	Stadtwerke München	Germany	300	Bituminous coal	High-dust delta wing	1.050.000	1	NH <sub>3</sub>	1991
Mainkraftwerke Höchst, unit 1 + 2 Frankfurt-Höchst	Mainkraftwerke AG	Germany	88	Bituminous coal	Low dust behind semi wet FGD	423.000	1	NH <sub>3</sub>	1991
S.C.E. Redondo Beach unit 8	Southern California Edison	USA	480	Gas/Oil	before airpreheater	1.560.000	1	Ammonia water	1991
PS Hüls I unit 4	Hüls AG	Germany	104	Bituminous coal	Low-dust	447.000	1	NH <sub>3</sub>	1991
PS Oberhavel 1 + 2	BEWAG	Germany	200	Bituminous coal wet bottom boiler	High-dust	664.000	2	NH <sub>3</sub>	1990
Dormagen unit 7	Bayer AG	Germany	125 t/h steam	Lignite coal	High-dust	195.000	1	NH <sub>3</sub>	1990



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PS Herdecke 2	Elektromark	Germany	96	Bituminous coal slag type boiler	Tail end	440.000	1	NH <sub>4</sub> OH	1990
PS Ingolstadt 4	Bayernwerk AG München	Germany	400	Oil, Residual oil	High-dust	1.300.000	1	NH <sub>3</sub>	1990
PS Ludwigshafen Mitte	BASF AG Ludwigshafen	Germany	250	Bituminous coal	Low dust behind ESP	1.132.000	2	NH <sub>3</sub>	1990
BHKW Airport München 2	Flughafen München GmbH	Germany	11	Gas/ Diesel oil engine	REDOX	64.057	7	Ammonia water	1990
BHKW Heilbronn	AEG Telefunken	Germany	2,2	Gas/ Diesel oil engine	REDOX	13.814	2	Ammonia water	1990
Motor-Test-Stand Friedrichshafen	MTU	Germany	1	Diesel oil engine	REDOX	3.640	1	NH <sub>3</sub>	1990
HKW Völklingen	HKW Völklingen		210	Bituminous Coal	After economizer Delta wing				1989
PS Werne K	VEW	Germany	750	Bituminous coal combined cycle unit	Low-dust downstream FGD	2.100.000	1	NH <sub>3</sub>	1989
RDK 7 Karlsruhe	Badenwerke AG	Germany	550	Bituminous coal	High-dust	1.556.000	1	NH <sub>3</sub>	1989
PS Uerdingen 1+ 2	Bayer AG	Germany	85 55	Bituminous coal wet bottom boiler	Low dust downstream FGD	416.000	2	NH <sub>3</sub>	1989
PS Walheim 1	Neckarwerke Stuttgart AG	Germany	106	Bituminous coal wet bottom boiler	High-dust	318.000	1	NH <sub>3</sub>	1989
HKW Charlottenburg 1+2+3	BEWAG	Germany	225	Bituminous coal wet bottom boiler	Low-dust	956.000	3	NH <sub>3</sub>	1989
PS Elverlingsen E3	Elektromark	Germany	210	Bituminous coal wet bottom boiler	Low-dust	807.000	1	NH <sub>3</sub>	1989





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PS Elverlingsen E4	Elektromark	Germany	320	Bituminous coal wet bottom boiler	Low-dust	1.197.000	1	NH <sub>3</sub>	1989
KH Weiher III Kuierschied	Saarbergwerke AG	Germany	707	Bituminous coal	High-dust	2.484.000	1	NH <sub>3</sub>	1989
Reuter unit D	BEWAG	Germany	300	Bituminous coal	High-dust delta wing	930.000	1	NH <sub>3</sub>	1989
HKW Völklingen	Saarbergwerke AG	Germany	210	Bituminous coal	High-dust delta wing	630.000	1	NH <sub>3</sub>	1989
HKW WEST Boiler III	Stadtwerke Karlsruhe	Germany	75	Bituminous coal slag type boiler	Tail end	330.000	1	NH <sub>3</sub>	1989
PS Veltheim 1 + 2	GK Weser	Germany	100	Bituminous coal slag type boiler	High-dust delta wing	600.000	2	NH <sub>3</sub>	1989
PS Veltheim 3	GK Weser	Germany	300	Bituminous coal slag type boiler	High-dust	910.000	1	NH <sub>3</sub>	1989
PS Westfalen A, B	VEW	Germany	300	Bituminous coal	Low dust downstream FGD	1.261.200	2	NH <sub>3</sub>	1989
PS Westfalen C	VEW	Germany	300	Bituminous coal	Low dust downstream FGD	1.188.000	1	NH <sub>3</sub>	1989
PS Ens Dorf 1	VSE RWE	Germany	110	Bituminous coal	Low dust behind semi wet FGD	523.000	1	NH <sub>3</sub>	1989
PS Ens Dorf 2	VSE RWE	Germany	300	Bituminous coal	Low dust behind semi wet FGD	1.408.000	1	NH <sub>3</sub>	1989
PS Voerde A	STEAG AG Essen	Germany	707	Bituminous coal	High-dust	2.400.000	2	NH <sub>3</sub>	1989



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PS Voerde B	STEAG AG Essen	Germany	707	Bituminous coal	High-dust	2.400.000	2	NH <sub>3</sub>	1989
Nitrier-Prozeß-Anlage Bomlitz	Wolff Walsrode AG	Germany		industrial prozess	Waste gas low dust	6.000	1	NH <sub>3</sub>	1989
BHKW Water treatment Köln-Stammheim	Stadt Köln	Germany	6,4	Gas/ Diesel oil engine	REDOX	37.808	4	Ammonia water	1989
PS Heilbronn 3 - 6	EVS	Germany	440	Bituminous coal wet bottom boiler	Tail end	1.840.000	2	NH <sub>3</sub>	1988
PS Hüls I unit 5	Hüls AG	Germany	131	Bituminous coal	Low dust behind wet FGD	503.400	1	NH <sub>3</sub>	1988
PS München-Süd 4 + 5	Stadtwerke München	Germany	200	Gas/ oil	High-dust	670.000	2	NH <sub>3</sub>	1988
Reuter E	BEWAG	Germany	300	Bituminous coal	High-dust delta wing	930.000	1	NH <sub>3</sub>	1988
Mainz Wiesbaden 2 + 3	KMW	Germany	200	Bituminous coal	Tail end	800.000	2	NH <sub>3</sub>	1988
PS Heilbronn 3 - 6	EVS	Germany	440	Bituminous coal wet bottom boiler	Tail end	1.840.000	2	NH <sub>3</sub>	1988
Mannheim Boiler 14 + 15	Großkraftwerk Mannheim AG	Germany	440	Bituminous coal wet bottom boiler	Tail end	1.500.000	1	NH <sub>3</sub>	1988
HKW Niederrad HD 2	Stadtwerke Frankfurt	Germany	60	Gas/ oil	High-dust	180.000	1	NH <sub>3</sub>	1988
HKW Braunschweig Mitte	Stadtwerke Braunschweig	Germany	170 th.+el.	Hard coal	Low dust behind semi wet FGD	226.500	1	NH <sub>3</sub>	1988



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PS Wedel 1+2	HEW	Germany	260	Bituminous coal	High-dust	880.000	2	NH <sub>3</sub>	1987
PS Walheim 2	Neckarwerke Stuttgart AG	Germany	150	Bituminous coal wet bottom boiler	High-dust	480.000	2	NH <sub>3</sub>	1987
PS Scholven G	VKR Gelsenkirchen	Germany	714	Low sulfur oil	High-dust	1.700.000	1	NH <sub>3</sub>	1987
HKW Niederrad HD1	Stadtwerke Frankfurt	Germany	60	Gas/ oil	High-dust	180.000	1	NH <sub>3</sub>	1987
PS Scholven H	VKR Gelsenkirchen	Germany	714	Low sulfur oil	High-dust	1.700.000	1	NH <sub>3</sub>	1986
PS Hafen	HEW	Germany	85	Bituminous coal	Low-dust downstream FGD	409.000	1	NH <sub>3</sub>	1985
HKW 1 Altbach-Deizisau	Neckarwerke Stuttgart AG	Germany	460	Bituminous coal	High-dust	1.300.000	1	NH <sub>3</sub>	1985
PS FWK-Buer	VKR	Germany	150	Bituminous coal	High-dust	430.000	1	NH <sub>3</sub>	1985
			<b>52.840,60</b>			<b>111.949.019</b>	<b>134</b>		