

HVDC PROJECTS LISTING

Prepared for the
DC and Flexible AC Transmission Subcommittee
of the
IEEE Transmission and Distribution Committee
by the
Working Group on HVDC and FACTS Bibliography and Records

SYSTEM / PROJECT	HVDC SUPPLIER	YEAR COMMISSIONED	POWER RATING (MW)	DC VOLTAGE (kV)	LINE/ CABLE (km)	MERCURY/ THYRISTOR/ TRANSISTOR	LOCATION
MOSOW-KASHIRA (retired from service)	RUSSIAN	1951 ()	30	±100	100	MERC	RUSSIA
GOTLAND I (retired from service)	ASEA	1954 (1986)	20	±100	96	MERC	SWEDEN
GOTLAND EXTENSION (retired from service)	ASEA	1970 (1986)	30	±150	96	THY	SWEDEN
GOTLAND II	ASEA	1983	130	150	100	THY	SWEDEN
GOTLAND III	ASEA	1987	260	±150	103	THY	SWEDEN
GOTLAND HVDC LIGHT	ABB	1999	50	±60	70	TRA	SWEDEN
ENGLISH CHANNEL (retired from service)	ASEA	1961 (1984)	160	±100	64	MERC	ENGLAND-FRANCE
VOLGOGRAD-DONBASS	MINISTRY FOR ELECTROTECHNICAL INDUSTRY OF USSR	1962/65	720	±400	473	MERC/THY	RUSSIA
NEW ZEALAND HYBRID INTER ISLAND LINK	ASEA	1965	600	±250	609	MERC	NEW ZEALAND
NEW ZEALAND HYBRID INTER ISLAND LINK	ABB	1992	1240	+270/-350	612	THY	NEW ZEALAND
KONTI-SKAN 1	ASEA	1965	250	±250	180	MERC	DENMARK-SWEDEN
KONTI-SKAN 1	AREVA	2005	250	±250	180	THY	DENMARK-SWEDEN
KONTI-SKAN 2	ASEA	1988	300	285	150	THY	DENMARK-SWEDEN
SAKUMA (retired from service)	ASEA	1965 (1993)	300	2x125	B-B	MERC	JAPAN
SARDINIA (retired from service)	ENGLISH ELECTRIC	1967 (1992)	200	200	413	MERC	ITALY
VANCOUVER I	ASEA	1968/69	312	±260	74	MERC	CANADA
VANCOUVER II	GENERAL ELECTRIC	1977/79	370	±280	74	THY	CANADA
PACIFIC INTERTIE	ASEA/GE	1970	1440	±400	1362	MERC	U.S.A
PACIFIC INTERTIE	ASEA/GE	1982	1600	±400	1362	MERC	U.S.A
PAC INTERTIE UPGRADE	ASEA	1985	2000	±500	1362	THY	U.S.A
PACIFIC INTERTIE EXPANSION	ABB	1989	3100	±500	1362	THY	U.S.A
KINGSNORTH (retired from service)	ENGLISH ELECTRIC	1972 (1987)	640	±266	82	THY	UNITED KINGDOM
EEL RIVER	GENERAL ELECTRIC	1972	320	±80	B-B	THY	CANADA
NELSON RIVER 1	ENGLISH ELECTRIC/GEC ALSTHOM	1973	1854	±463	890	MERC	CANADA
NELSON RIVER 1	GEC ALSTHOM	1992/93	1854	±463	890	MERC/THY	CANADA
NELSON RIVER 1	SIEMENS	2001/02	1854	±463	890	THY	CANADA
NELSON RIVER 2	AEG/BBC/SIEMENS	1978	900	±250	940	THY	CANADA
NELSON RIVER 2	AEG/BBC/SIEMENS	1985	2000	±500	940	THY	CANADA
SKAGERRAK I	ASEA	1976	275	±250	240	THY	NORWAY-DENMARK
SKAGERRAK II	ASEA	1977	275	±250	240	THY	NORWAY-DENMARK
SKAGERRAK III	ABB	1993	500	±350	240	THY	NORWAY-DENMARK
SHIN-SHINANO 1	HITACHI/TOSHIBA/NISSHIN	1977	300	125	B-B	THY	JAPAN
SHIN-SHINANO 2	HITACHI/TOSHIBA/NISSHIN	1992	300	125	B-B	THY	JAPAN
SQUARE BUTTE	GENERAL ELECTRIC	1977	500	±250	749	THY	U.S.A.
DAVID A. HAMIL	GENERAL ELECTRIC	1977	100	±50	B-B	THY	U.S.A
CAHORA-BASSA	AEG/BBC/SIEMENS	1975/1998	1920	±533	1456	THY	SOUTH AFRICA/MOZAMBIQUE
CU	ASEA	1979	1000	±400	701	THY	U.S.A
HOKKAIDO-HONSHU	ASEA	1979	150	125	167	THY	JAPAN
HOKKAIDO-HONSHU	HITACHI/TOSHIBA	1980	300	250	167	THY	JAPAN
HOKKAIDO-HONSHU	HITACHI/TOSHIBA	1993	600	±250	167	THY	JAPAN
ACARAY	SIEMENS	1981	55	±25	B-B	THY	PARAGUAY-BRAZIL
VYBORG	MINISTRY FOR ELECTROTECHNICAL INDUSTRY OF USSR	1981	355	1X170(±85)	B-B	THY	RUSSIA-FINLAND
VYBORG	MINISTRY FOR ELECTROTECHNICAL INDUSTRY OF USSR	1982	710	2x170	B-B	THY	RUSSIA-FINLAND

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VYBORG	MINISTRY FOR ELECTROTECHNICAL INDUSTRY OF USSR	1984	1065	3x170	B-B	THY	RUSSIA-FINLAND
VYBORG	MINISTRY FOR ELECTROTECHNICAL INDUSTRY OF USSR	1999	4x405	±85	B-B	THY	RUSSIA-FINLAND
ZHOU SHAN PROJECT		1982	50	100	42	THY	CHINA
INGA-SHABA	ASEA/GE	1982/83	560	±500	1700	THY	ZAIRE
DUERNROHR 1 (retired from service)	BBC/SIEMENS	1983 (1997)	550	145	B-B	THY	AUSTRIA
EDDY COUNTY	GENERAL ELECTRIC	1983	200	82	B-B	THY	U.S.A.
POSTE CHATEAUGUAY	BBC/SIEMENS	1984	2x500	145	B-B	THY	CANADA-U.S.A.
OKLAUNION	GENERAL ELECTRIC	1984	200	82	B-B	THY	U.S.A.
ITAIPU 1	ASEA	1984	1575	±300	785	THY	BRAZIL
ITAIPU 1	ASEA	1985	2383	±300	785	THY	BRAZIL
ITAIPU 1	ASEA	1986	3150	±600	785	THY	BRAZIL
ITAIPU 2	ASEA	1987	3150	±600	805	THY	BRAZIL
BLACKWATER	BBC	1985	200	57	B-B	THY	U.S.A.
SACOI TAP ON CORSICA (LUCCIANA)	CGEE/ALSTHOM	1985	50	200	415	THY	ITALY-CORSICA-SARDINIA
SACOI (CODRONGIANOS AND SUVERETO)	ANSADO/GENERAL ELECTRIC	1993	300	±200	385	THY	ITALY-CORSICA-SARDINIA
HIGHGATE	ASEA	1985	200	±56	B-B	THY	U.S.A.
MADAWASKA	GENERAL ELECTRIC	1985	350	130.5	B-B	THY	CANADA
MILES CITY HVDC SYSTEM (MCCS)	GENERAL ELECTRIC	1985	200	82	B-B	THY	U.S.A.
BROKEN HILL	ASEA	1986	40	2x17 (±8.33)	B-B	THY	AUSTRALIA
INTERMOUNTAIN POWER PROJECT (I.P.P.)	ASEA	1986	1920	±500	785	THY	U.S.A.
CROSS CHANNEL BP 1+2	CGEE-ALSTHOM/GEC-ALSTHOM	1985/86	2000	±270	70	THY	FRANCE-U.K.
DES CANTONS-COMFERFORD	GENERAL ELECTRIC	1986	690	±450	172	THY	CANADA-U.S.A.
QUEBEC-NEW ENGLAND (THREE TERMINAL)	ABB	1990-92	2250	±450	1500	THY	CANADA-U.S.A.
VIRGINIA SMITH	SIEMENS	1987	200	50	B-B	THY	U.S.A.
GESHA (GEZHOUBA-SHANGHAI)	BBC/SIEMENS	1989	600	500	1000	THY	CHINA
GESHA (GEZHOUBA-SHANGHAI)	BBC/SIEMENS	1990	1200	±500	1000	THY	CHINA
VINDHYACHAL	ASEA	1989	500	2x69.7	B-B	THY	INDIA
McNEILL	GEC ALSTHOM	1989	150	42	B-B	THY	CANADA
FENNO-SKAN	ABB/ALCATEL	1989/98	500	400	33+200	THY	FINLAND-SWEDEN
BARSOOR LOWER SILERU	BHEL	1989/91	100	±200	196	THY	INDIA
RIHAND-DELHI	ABB/BHEL	1991	750	500	814	THY	INDIA
RIHAND-DELHI	ABB/BHEL	1992	1500	±500	814	THY	INDIA
SAKUMA	HITACHI/TOSHIBA/MITSUBISHI/NISSHIN	1993	300	±125	B-B	THY	JAPAN
ETZENRICH (retired from service)	SIEMENS	1993 (1997)	600	160	B-B	THY	GERMANY-CZECH REPUBLIC
VIENNA SOUTH-EAST (retired from service)	SIEMENS	1993 (1997)	600	145	B-B	THY	AUSTRIA-HUNGARY
URUGUAIANA	TOSHIBA	1994	50	15	B-B	THY	BRAZIL-ARGENTINA
BALTIC CABLE	ABB	1994	600	450	261	THY	SWEDEN-GERMANY
WELSH	SIEMENS	1995	600	170	B-B	THY	U.S.A.
KONTEK	ABB/NKT CABLES	1995	600	400	171	THY	DENMARK-GERMANY
SYLMAR EAST (VALVE RECONSTRUCTION)	SIEMENS	1995	550	500	1200	THY	U.S.A.
HAENAM-CHEJU	GEC ALSTHOM	1997	300	±180	101	THY	KOREA
CHANDRAPUR-RAMAGUNDUM	GEC ALSTHOM	1997/98	1000	2x205	B-B	THY	INDIA

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CHANDRAPUR BACK-TO-BACK	ABB	1998	1500	±500	736	THY	INDIA
LEYTE-LUZON	ABB/MARUBENI	1998	440	350	455	THY	PHILIPPINES
MINAMI-FUKUMITZU	HITACHI/TOSHIBA	1999	300	125	B-B	THY	JAPAN
VIZAG 1	GEC ALSTHOM	1999	500	205	B-B	THY	INDIA
VIZAG 2	ABB	2005	500	±88	B-B	THY	INDIA
SWEPOL LINK	ABB	2000	600	±450	254	THY	SWEDEN-POLAND
DIRECTLINK	ABB	2000	3 x 60	±80	59	TRA	AUSTRALIA
KII CHANNEL	HITACHI/TOSHIBA/MITSUBISHI	2000	1400	±250	102	THY	JAPAN
GARABI 1	ABB	2000	1100	±70	B-B	THY	ARGENTINA-BRAZIL
GARABI 2	ABB	2002	2000	±70	B-B	THY	ARGENTINA-BRAZIL
RIVERA	GEC ALSTHOM	2000	70	20	B-B	THY	URUGUAY-BRAZIL
GRITA	PIRELLI/ABB	2001	500	400	316	THY	GREECE-ITALY
TIAN-GUANG	SIEMENS	2001	1800	±500	960	THY	CHINA
HIGASHI-SHIMIZU	HITACHI/TOSHIBA	2001	300	125	B-B	THY	JAPAN
MOYLE INTERCONNECTOR	SIEMENS	2001	2x250	2x250	64	THY	NORTHERN IRELAND-SCOTLAND
THAILAND-MALAYSIA	SIEMENS	2001	300	±300	110	THY	THAILAND-MALAYSIA
CROSS SOUND	ABB	2002	330	±150	40	TRA	U.S.A
MURRAYLINK	ABB	2002	200	±150	176	TRA	AUSTRALIA
SASARAM	GEC ALSTHOM	2002	500	205	B-B	THY	INDIA
RAPID CITY TIE	ABB	2003	2 x 100	±13	B-B	THY	U.S.A.
EAST-SOUTH INTERCONNECTOR II	SIEMENS	2003	2000	±500	1450	THY	INDIA
EAST-SOUTH INTERCONNECTOR II UPGRADE	SIEMENS	2007	2500	±500	1450	THY	INDIA
BAKUN		UNDER CONSTRUCTION 2015	2400	±500	1715	THY	MALAYSIA
THREE GORGES-CHANGZHOU	ABB/SIEMENS	2003	3000	±500	860	THY	CHINA
THREE GORGES-GUANGDONG	ABB	2004	3000	±500	940	THY	CHINA
GUI-GUANG I	SIEMENS	2004	3000	±500	980	THY	CHINA
GUI-GUANG II	SIEMENS	2007	3000	±500	1200	THY	CHINA
TROLL A	ABB	2004	2x40	±60	70	TRA	NORWAY
CELILO (VALVE REPLACEMENT)	SIEMENS	2004	3100	±400	1200	THY	U.S.A.
LAMAR	SIEMENS	2005	210	±64	B-B	THY	U.S.A.
BASSLINK	SIEMENS	2006	500	400	350	THY	AUSTRALIA
ESTLINK	ABB	2006	350	±150	105	TRA	ESTONIA-FINLAND
THREE GORGES-SHANGHAI	ABB	2006	3000	±500	900	THY	CHINA
NEPTUNE	SIEMENS	2007	660	500	105	THY	U.S.A.
LONG ISLAND CABLE PROJECT		2007	600	±450	40	THY	U.S.A.
LEVIS DE-ICER	AREVA	UNDER CONSTRUCTION 2008	250	±17.4	27 to 242	THY	CANADA
NORNED	ABB	2008	700	±450	580	THY	NORWAY-NETHERLANDS

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SAPEI	ABB	UNDER CONSTRUCTION 08/09	500	±500	440	THY	ITALY MAINLAND-SARDINIA
BALLIA - BHIWADI	SIEMENS	UNDER CONSTRUCTION 2009	2500	500	800	THY	INDIA
OUTAOUAIS	ABB	UNDER CONSTRUCTION 2009	2x625	315	B-B	THY	CANADA
AL FADHILI	AREVA	UNDER CONSTRUCTION 2009	3 x 600	3 x 222	B-B	THY	SAUDI ARABIA
BRIT-NED	SIEMENS	UNDER CONSTRUCTION 2010	1000	±450	200	THY	UK - NETHERLANDS
YUNNAN-GUANGDONG	SIEMENS	UNDER CONSTRUCTION 2010	5000	±800	1418	THY	CHINA
STOREBAELT	SIEMENS	UNDER CONSTRUCTION 2010	600	400	56	THY	DENMARK
XIANJIABA-SHANGHAI	ABB	UNDER CONSTRUCTION 2010 (MONOPOLE), 2011 (BIPOLE)	6400	800	2071	THY	CHINA
JINDO-JEJU		UNDER CONSTRUCTION 2011	2 X 200	250	119	THY	KOREA
COMETA	PRYSMIAN/NEXANS/SIEMENS	UNDER CONSTRUCTION 2011	400	250	247	THY	SPAIN
SUMATERA-JAWA		UNDER CONSTRUCTION 2013	3000	±500	700	THY	INDONESIA