

The tables below outline the locations of six major regional grids and the connections between provinces.

1 Transmission lines

Table 1. Province information and its abbrev.¹

Regional grid	Province	Abbreviation
North China	Beijing	BJ
	Tianjin	TJ
	Hebei	HE
	Shanxi	SX
	Inner Mongolia	NM
	Shandong	SD
Northeast China	Liaoning	LN
	Jilin	JL
	Heilongjiang	HL
East China	Shanghai	SH
	Jiangsu	JS
	Zhejiang	ZJ
	Anhui	AH
	Fujian	FJ
Central China	Jiangxi	JX
	Henan	HA
	Hubei	HB
	Hunan	HN
	Chongqing	CQ
	Sichuan	SC
South China	Guangdong	GD
	Guangxi	GX
	Hainan	HI
	Guizhou	GZ
	Yunnan	YN
Northwest China	Shannxi	SN
	Gansu	GS
	Qinghai	QH
	Ningxia	NX
	Xinjiang	XJ
	Tibet	XZ

Table 2. Transmission Line HVDC^{2,3}

No.	Transmission project	Power Capacity (GW)	Voltage (KV)	From Province	To Province	Line loss ⁴⁻⁷
1	Ximeng-Taizhou ±800kV DC	10	±800	NM	JS	3.32%
2	Jinbei-Nanjing ±800kV DC	8	±800	SX	JS	7.00%
3	GaoLin Back-to-Back ±125kV DC	3	±125	LN	HE	4.26%
4	Zhalute-Qingzhou ±800kV DC	10	±800	NM	SD	6.00%
5	Gezhouba-Shanghai ±500kV DC	3	±500	HB	SH	7.00%
6	Sanxia-Changzhou ±500kV DC	3	±500	HB	JS	7.00%
7	Sanxia-Shanghai ±500kV DC	3	±500	HB	SH	7.50%
8	Xiangjiaba-Shanghai ±800kV DC	6.4	±800	SC	SH	7.50%
9	Tuanlin-Fengqin ±500kV DC	3	±500	HB	SH	7.50%
10	Jinping-Sunan ±800kV DC	7.2	±800	SC	JS	7.00%
11	Xiluodu-Jinhua ±800kV DC	8	±800	SC	ZJ	7.00%
12	Baihetan-Jiangsu ±800kV DC	8	±800	SC	ZJ	7.00%
13	Baihetan-Zhejiang ±800kV DC	8	±800	SC	JS	7.00%
14	Yazhong-Jiangxi ±800kV DC	8	±800	SC	JX	6.00%
15	Jianglin-Echeng ±500kV DC	3	±500	HB	GD	7.65%
16	Ningdong-Shandong ±660kV DC	4	±660	NX	SD	6.00%
17	Shanghaimiao-Shandong ±800kV DC	10	±800	NM	SD	6.00%
18	Ningdong-Zhejiang ±800kV DC	8	±800	NX	ZJ	4.26%
19	Jiquan ±1100kV DC	12	±1100	XJ	AH	4.26%
20	Lingbao Back-to-Back ±500kV DC	1.11	±500	SN	HA	3.47%
21	Baoji-Deyang ±500kV DC	3	±500	SN	SC	3.47%
22	Haminan-Zhengzhou ±800kV DC	8	±800	XJ	HA	6.00%
23	Jiuquan-Hunan ±800kV DC	8	±800	GS	HN	6.50%
24	Qinghai-Henan ±800kV DC	8	±800	QH	HA	7.20%
25	Shanbei-Wuhan ±800kV DC	8	±800	SN	HB	5.00%
26	Chaidamu-Lasha ±400kV DC	0.6	±400	QH	XZ	13.70%
27	Zhundong-Wannan ±1100kV DC	12	±1100	XJ	AH	4.26%
28	Zhangjiakou-Jingji ±500kV DC	3.75	±500	HE	BJ	3.47%
29	Yunnan-Guangdong ±800kV DC	5	±800	YN	GD	6.57%
30	Nuozhadu-Guangdong ±800kV DC	5	±800	YN	GD	6.57%
31	Dianxibei-Guangdong ±800kV DC	5	±800	YN	GD	6.57%
32	Gui-Guang-1 ±500kV DC	3	±500	GZ	GD	3.47%
33	Gui-Guang-2 ±500kV DC	3	±500	GZ	GD	3.47%
34	Tian-Zhong ±500kV DC	3	±500	YN	GD	6.57%
35	Jin-Zhong ±500kV DC	3	±500	YN	GX	2.98%
36	Yun-Gui interconnection ±500kV DC	3	±500	YN	GZ	2.98%
37	Wudongde-Guangdong ±800kV DC	8	±800	YN	GD	6.57%
38	Xi-Guang ±500kV DC	6.4	±500	YN	GD	6.57%
39	Chongqing-Hubei back-to-back ±500kV DC	5	±500	CQ	HB	2.98%

Table 3. Transmission Line HVAC^{2,3}

No.	Transmission project	Power Capacity (GW)	Voltage (KV)	From Province	To Province	Line loss ⁸⁻¹¹
1	Yangcheng-Huaian 500kV AC	3.3	500	SX	JS	7.50%
2	Jindongnan-Nanyang-Jingmen 1000kV AC	5	1000	SX	HB	7.50%
3	Suizhong-Huabei ±500kV DC	2	500	LN	HE	3.50%
4	Liyujiang-Nanfang 500KV AC	1.8	500	HN	GD	6.00%
5	Jingjie-Huabei 500KV AC	3.6	500	SN	HE	4.00%
6	Yuheng-Weifang 1000kV AC	7.5	1000	SN	SD	4.50%
7	Ximeng-Shandong 1000kV AC	6	1000	NM	SD	4.00%
8	Neimeng-Hebei 1000kV AC	4	500	NM	HE	1.39%
9	Mengxi-Tianjinnan 1000kV AC	6	1000	NM	TJ	1.39%
10	Mengxi-Jinzhong 1000kV AC	8	1000	NM	SX	1.39%
11	Guizhou-Chongqing 500kV AC	2.64	500	GZ	CQ	3.50%
12	Huainan-Zhebei-Shanghai 1000kV AC	9.5	1000	ZJ	SH	0.68%
13	Zhebei-Fuzhou 1000kV AC	10.5	1000	ZJ	FJ	0.68%
14	Huainan-Nanjing-Shanghai 1000kV AC	10	1000	AH	SH	0.68%
15	Mengxi-Tianjinnan 1000kV AC	5	1000	NM	TJ	4.00%
16	Weifang-Shijiazhuang 1000kV AC	6	1000	SD	HE	4.00%
17	Tian-Guang 500kV AC	3.6	500	YN	GD	0.80%
18	Dian-Guang 500kV AC	1.4	500	GX	GD	0.80%
19	Luo-Bai 500kV AC	2.5	500	GX	GD	0.80%
20	Hainan-Guangdong 500kV AC	1.2	500	HI	GD	0.80%
21	Major interconnection between LN and JL	13.7	500	LN	JL	1.75%
22	Major interconnection between HL and JL	3.2	500	HL	JL	1.75%
23	Major interconnection between NM and BJ HE	3.95	500	NM	BJ	1.39%
24	Major interconnection between SX and BJ	25	500, 1000	SX	BJ	1.39%
25	Major interconnection between SD and BJ	24	500, 1000	SD	BJ	1.39%
26	Major interconnection between XJ and GS	3	750	XJ	GS	0.83%
27	Major interconnection between GS and SN	7	750	GS	SN	0.83%
28	Major interconnection between GS and QH	4.3	750	GS	QH	0.83%
29	Major interconnection between GS and NX	7	750	GS	NX	0.83%
30	Major interconnection between SC and CQ	6	500	SC	CQ	0.80%
31	Major interconnection between HB and HN	2.6	500	HB	HN	0.80%
32	Major interconnection between HB and HA	5	500	HB	HA	0.80%
33	Major interconnection between HB and JX	3	500	HB	JX	0.80%
34	Major interconnection between SC and XZ	1.7	500	SC	XZ	0.80%

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