

Supplementary Information

Decarbonizing China's grid: provincial grid carbon footprint factors and export-embedded electricity emissions from 2020 to 2060

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Table S1: The upper bounds of national total renewable energy generation in three scenarios (10⁸ kwh).

Scenario	Year	Hydro power	Nuclear power	Wind power	Solar power	Biomass power
BAU	2025	13265	5036	10427	8907	1806
	2030	13598	8245	17752	14783	2303
	2035	14342	13182	24746	22534	2604
	2040	15456	18062	30316	30915	2742
	2050	20556	25826	42590	48606	7281

S1	2060	22483	38800	77141	87379	7780
	2025	12999	4314	8931	10183	1547
	2030	13590	6916	14890	12400	1931
	2035	14055	11262	21143	19253	2225
	2040	15301	15758	26448	26970	2392
	2050	20350	23478	38719	44187	6619
S2	2060	22258	36204	71980	81533	7260
	2025	14917	5664	11726	13371	2031
	2030	14105	11348	24433	20347	3169
	2035	15337	21825	40971	37309	4311
	2040	15765	33574	56352	57465	5097
	2050	20967	53702	88562	101071	15140
	2060	22932	82795	143272	165119	16602
