







CN2050		2018	2030	2040	2050	2018– 2030 p.a. net	2030– 2050 p.a. net
<b>Greenhouse gas emissions*</b> (Mt CO <sub>2</sub> eq)							
Energy sector 		305	98	45	-19	-17	-6
Industry 		195	123	43	-30	-6	-8
Transport 		162	89	18	0	-6	-4
Buildings 		117	65	24	1	-4	-3
Agriculture 		70	58	52	44	-1	-1
Waste / other 		10	5	3	2	0	0
<b>Total</b>		<b>858</b>	<b>438</b>	<b>185</b>	<b>-2</b>	<b>-35</b>	<b>-22</b>
Reduction relative to 1990		31	65	85	100		
LULUCF (for informational purposes only)		-27	1	2	-10	2	0
<b>Primary energy consumption (PJ)</b>		<b>13,129</b>	<b>8,578</b>	<b>7,208</b>	<b>6,573</b>	<b>-379</b>	<b>-100</b>
Coal		2,909	349	34	0	-213	-17
Petroleum		4,452	2,108	817	2	-195	-105
Fossil gases		3,099	2,613	1,354	3	-41	-131
<b>Gross electricity consumption (TWh)</b>		<b>595</b>	<b>643</b>	<b>824</b>	<b>962</b>	<b>4</b>	<b>16</b>
Share of renewables in gross electricity consumption (%)		38	69	82	100**		
Onshore wind (GW)		52	80	119	130	2	3
Onshore wind (GW)		6	25	51	70	2	2
Photovoltaics (GW)		45	150	252	355	9	10
Number of electric cars, including plug-in hybrids (millions of units)		0	14	32	30	1	1
Rail freight transport (billions of tkm)		135	190	210	230	5	2
Number of heat pumps (millions of units)		1	6	11	14	0.4	0.4
Useful energy demand in residential buildings (kWh/(m <sup>2</sup> ·a))		106	85	71	60	-2	-1
Electrolyser capacity in Germany (GW)		0	10	25	51	1	2
Hydrogen use (TWh)		0	63	172	268	5	10
Generation of renewable hydrogen in Germany (TWh)		0	19	38	84	2	3
Imported hydrogen (TWh)		0	44	134	184	4	7
Other imported synthetic fuels and feedstocks (TWh)		0	1	8	164	0	6
<b>Carbon capture and storage (gross volume, MT CO<sub>2</sub>)</b>		<b>0</b>	<b>-1</b>	<b>-22</b>	<b>-73</b>	<b>0</b>	<b>-4</b>
Process emissions and waste (Mt CO <sub>2</sub> )		0	-1	-5	-18	0	-1
Negative emissions (Mt CO <sub>2</sub> )		0	0	-17	-56	0	-3
<b>Negative emissions including carbon absorption (Mt CO<sub>2</sub>)</b>		<b>0</b>	<b>0</b>	<b>-17</b>	<b>-64</b>	<b>0</b>	<b>-3</b>
Bioenergy CCS (BECCS, Mt CO <sub>2</sub> )		0	0	-15	-37	0	-1
Direct air capture CCS (DACCS, Mt CO <sub>2</sub> )		0	0	-2	-19	0	-1
Imported green polymers (Mt CO <sub>2</sub> )		0	0	0	-8	0	0
Population in Germany (millions)		83	83	81	79	0	0
EU-ETS, EUR <sub>2019</sub> /t		16	52	70	90	3	2

\* Negative emissions are directly factored into the sectors.

\*\* This includes electricity generation from renewable hydrogen together with stored and imported renewable electricity.

Prognos, Öko-Institut, Wuppertal Institut (2020)