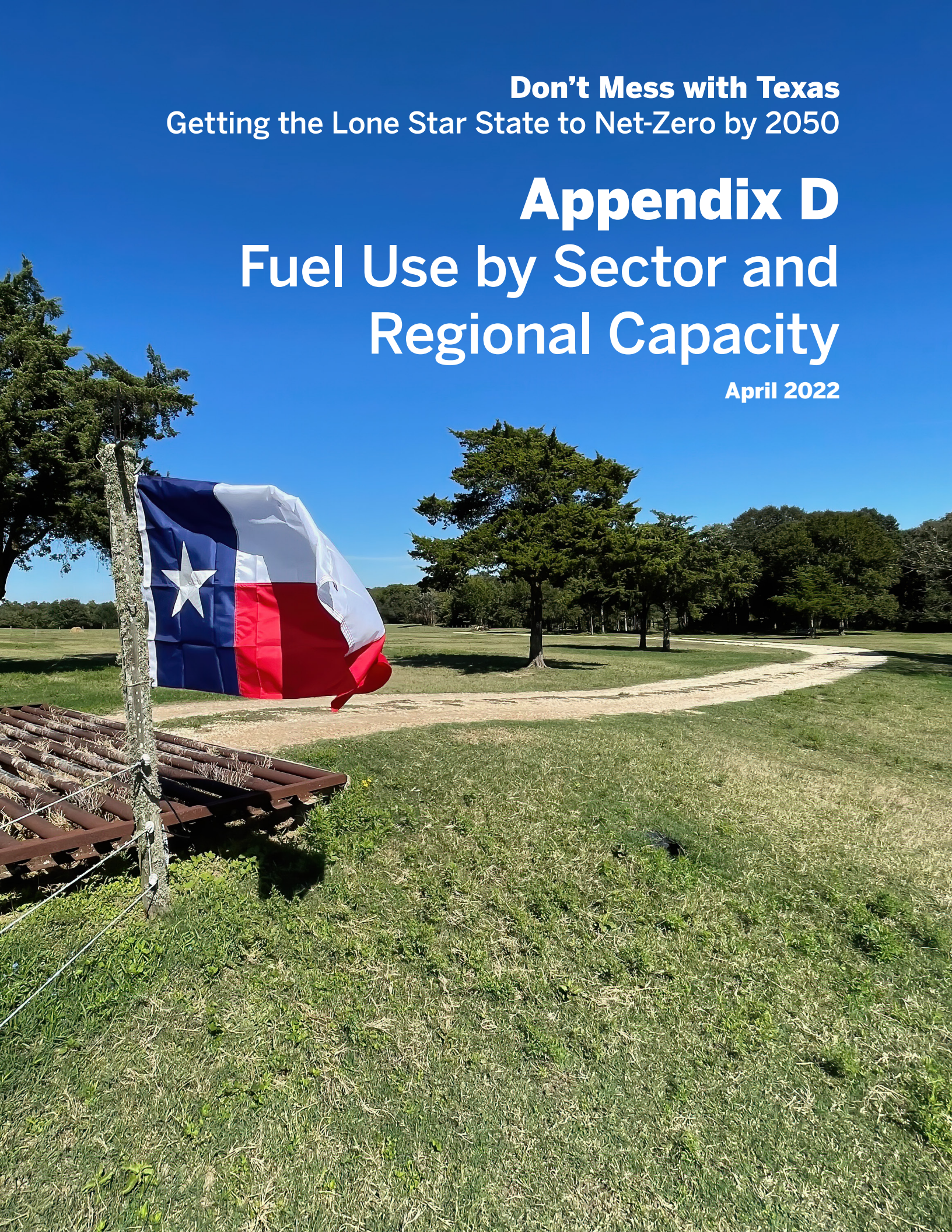
Don't Mess with Texas

Getting the Lone Star State to Net-Zero by 2050

Appendix D
Fuel Use by Sector and Regional Capacity

April 2022



Appendix D: Fuel Use by Sector and Regional Capacity

This appendix contains fuel use for the industrial, buildings, and transportation sectors.

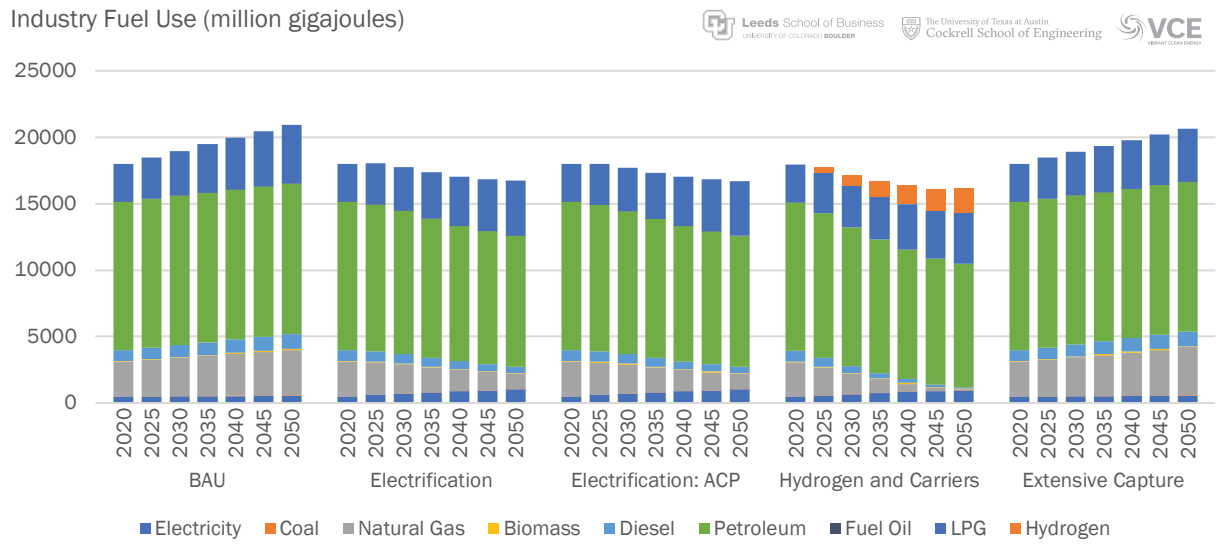


Figure D1: Industrial fuel use, including feedstock

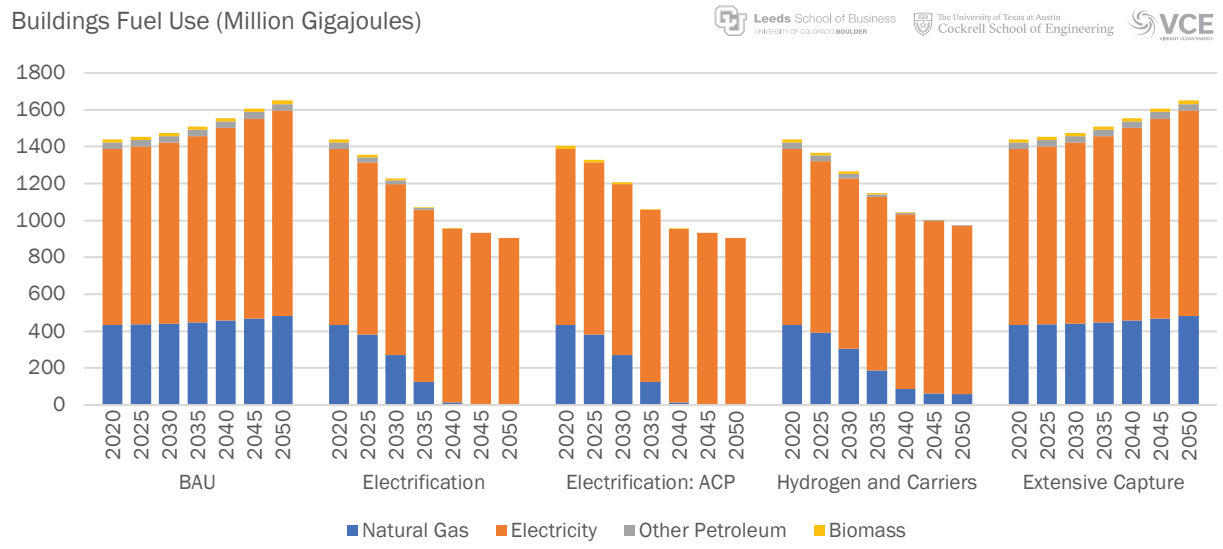


Figure D2: Buildings Fuel Use, Commercial and Residential

Natural Gas demand is replaced with synthetic natural gas in the Hydrogen and Carriers scenario.

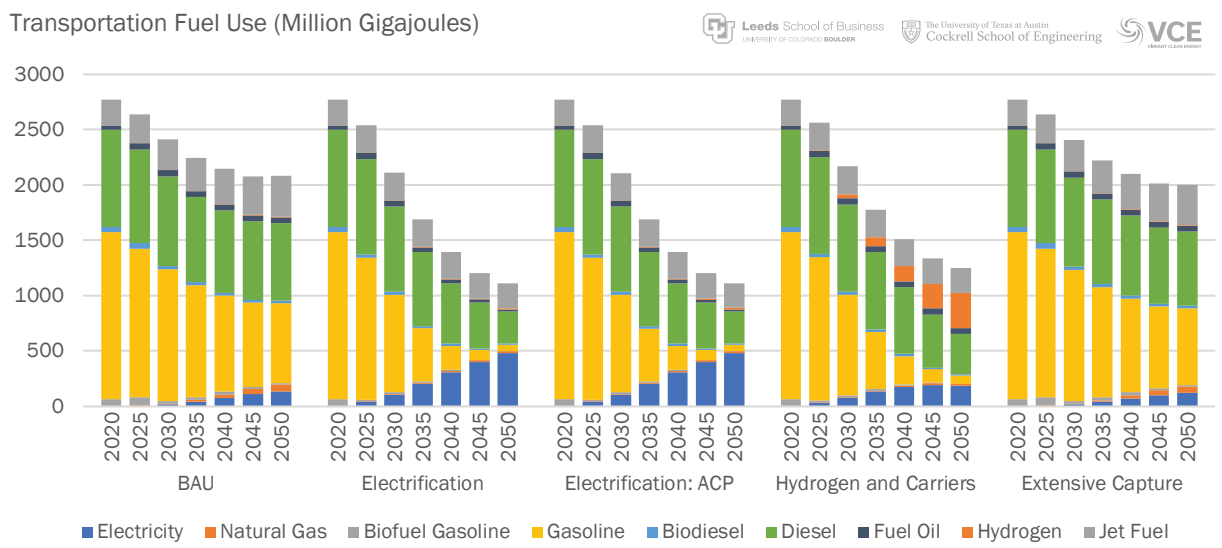


Figure D3: Transportation Fuel Consumption

Table D1: Change in Capacities 2020 to 2050, Business as Usual (MW)

	Alamo	Capital	Central	Gulf Coast	High Plains	Metroplex	Northwest	South	East	West
Coal	−3,238	−1,606	−4,752	−2,600	−2,105	0	−684	0	−4,006	0
NGCC	2,826	−4,266	14,279	−14,581	312	−12,048	2,675	−4,386	−3,263	1,376
NGGT	−826	1,237	−114	2,370	−1,774	3,474	−335	−676	265	−780
Storage	1,521	1,317	1,089	5,083	1,615	4,611	1,724	4,204	1,822	1,067
Nuclear	0	0	0	0	0	−2,309	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0
Wind	2,966	3,707	15,830	8,529	12,575	4,121	10,823	13,252	4,075	4,016
DPV	197	927	422	7,948	318	4,062	291	75	1,761	1,560
UPV	2,152	462	0	7,122	0	1,899	1,054	0	2,978	1,999
Geo/Bio	0	0	0	0	0	0	0	0	0	0
DACS	0	0	0	0	0	0	0	0	0	0
H2	0	0	0	0	0	0	0	0	0	0

Table D2: Change in Capacities 2020 to 2050, Electrification (MW)

	Alamo	Capital	Central	Gulf Coast	High Plains	Metroplex	Northwest	South	East	West
Coal	–3,238	–1,605	–4,752	–2,600	–2,105	0	–684	0	–4,006	0
NGCC	2,737	1,582	7,409	–10,922	–2,163	–7,976	–242	–4,588	–3,608	580
NGGT	–826	–724	–114	–4,284	–1,774	–654	–514	–676	–1,260	–1,375
Storage	4,760	3,722	5,426	12,538	2,078	11,275	1,860	7,685	4,376	3,167
Nuclear	0	0	0	6,250	0	2,616	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0
Wind	12,136	10,970	35,658	15,901	49,807	40,180	51,854	26,558	10,094	31,440
DPV	76	1,901	311	12,088	67	559	48	420	1,748	341
UPV	5,430	6,905	0	14,122	2,760	6,131	0	756	6,379	5,832
Geo/Bio	0	0	0	0	0	0	0	0	0	0
DACS	1,993	3,864	26,321	4,779	42,705	20,700	49,561	17,293	4,705	26,709
H2	0	0	0	0	470	0	0	0	0	1

Table D3: Change in Capacities 2020 to 2050, Electrification: Accelerated Clean Power (MW)

	Alamo	Capital	Central	Gulf Coast	High Plains	Metroplex	Northwest	South	East	West
Coal	–3,238	–1,606	–4,752	–2,600	–2,105	0	–684	0	–4,006	0
NGCC	–6,009	–4,460	–4,289	–14,049	–2,163	–12,656	–825	–4,123	–8,804	–2,678
NGGT	–826	–724	–114	–4,284	–1,774	–654	–514	–676	–1,260	–1,375
Storage	6,795	5,279	4,231	22,068	2,453	14,855	4,189	9,720	5,139	4,158
Nuclear	0	0	0	6,250	0	5,118	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0
Wind	13,549	14,913	21,091	26,493	40,037	23,567	37,019	22,047	11,785	22,905
DPV	743	1,096	1,021	5,671	63	3,156	40	399	3,516	1,855
UPV	4,668	5,467	0	34,619	2,760	8,060	0	3,181	4,540	6,144
Geo/Bio	776	756	0	753	0	784	0	0	406	0
DACS	4,361	7,589	14,824	17,150	33,702	7,872	35,064	13,805	7,378	21,467
H2	0	0	15	0	387	0	0	0	21	2

Table D4: Change in Capacities 2020 to 2050, Hydrogen and Carriers (MW)

	Alamo	Capital	Central	Gulf Coast	High Plains	Metroplex	Northwest	South	East	West
Coal	−3,238	−1,605	−4,752	−2,600	−2,105	0	−684	0	−4,006	0
NGCC	−606	−591	3,452	−9,808	−2,163	−8,664	−825	−4,588	−6,136	−2,004
NGGT	−826	−724	−114	−4,284	−1,774	−654	−514	−676	−1,260	−1,375
Storage	3,828	2,855	4,692	8,472	1,298	8,045	1,588	6,242	2,906	3,610
Nuclear	0	0	0	6,250	0	−2,308	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0
Wind	8,286	9,501	32,643	11,766	97,340	39,295	61,415	23,520	7,232	48,486
DPV	283	1,437	872	7,768	242	3,140	122	903	1,645	1,147
UPV	5,526	4,686	791	16,905	5,958	8,943	10,286	1,543	3,530	9,806
Geo/Bio	3	1	0	0	0	4	0	0	40	0
DACS	962	3,392	20,274	4,018	36,596	19,083	35,519	11,076	2,931	24,351
H2	32	0	4,137	0	46,314	1,315	24,073	5,180	270	18,610

Table D5: Change in Capacities 2020 to 2050, Extensive Capture (MW)

	Alamo	Capital	Central	Gulf Coast	High Plains	Metroplex	Northwest	South	East	West
Coal	−3,238	−1,605	−4,752	−2,600	−2,105	0	−684	0	−4,006	0
NGCC	−3,232	−457	−1,941	−9,783	−2,163	−12,858	−825	−4,588	−8,533	−2,566
NGGT	−826	−724	−114	−4,284	−1,774	−654	−514	−676	−1,260	−1,375
Storage	5,591	2,407	6,329	6,041	1,515	8,095	1,722	4,431	3,520	3,474
Nuclear	0	0	0	6,250	0	−2,308	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0
Wind	14,045	9,448	44,073	9,383	141,825	48,258	121,470	33,364	11,611	80,938
DPV	283	1,555	789	6,478	334	4,018	117	427	2,512	1,047
UPV	3,018	4,432	0	10,954	3,897	6,283	511	911	4,612	4,335
Geo/Bio	0	0	0	0	0	0	0	0	0	0
DACS	5,207	4,135	35,610	4,207	120,378	30,559	111,134	26,890	7,380	70,066
H2	0	0	0	0	155	0	0	0	0	1