



Well-to-Wheels Energy and Greenhouse Gas Emission Analysis of Bio-Blended High-Octane Fuels for High-Efficiency Engines

Appendix 1 – Refinery Products Yield

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Table A1-1. Products of PADD/Region Base Case Refinery in Year 2015, 2022 and 2040 (BPD)

PADD Refinery Base Cases	2015 PADD2	2015 PADD3	2015 CA	2022 PADD2	2022 PADD3	2022 CA	2040 PADD2	2040 PADD3	2040 CA
LPG Produced	148,089	385,376	59,826	156,745	466,140	60,394	132,395	397,048	39,320
Finished Mogas	2,148,782	4,259,261	965,736	2,016,536	4,253,573	1,006,125	1,633,365	3,976,537	755,812
USA Mogas	2,147,782	3,979,355	964,736	2,015,536	3,813,708	880,550	1,632,365	3,024,404	698,307
USA non-HOF	2,147,782	3,979,355	964,736	2,015,536	3,813,708	880,550	1,632,365	3,024,404	698,307
USA non-HOF CG	1,833,002	3,179,073	114,683	1,724,389	3,046,739	104,676	1,393,125	2,416,171	83,011
USA non-HOF RFG	314,780	800,282	850,053	291,148	766,969	775,874	239,240	608,233	615,295
USA Gasoline HOF	0	0	0	0	0	0	0	0	0
USA HOF CG	0	0	0	0	0	0	0	0	0
USA HOF RFG	0	0	0	0	0	0	0	0	0
Export Gasoline	1,000	279,906	1,000	1,000	439,865	125,575	1,000	952,133	57,505
Ethanol	215,852	399,925	96,956	202,561	383,278	88,495	164,069	303,983	70,187
Total Diesel	1,070,173	2,772,562	366,573	1,254,565	3,372,796	395,808	1,524,591	4,055,886	718,391
US Diesel	1,070,173	1,806,136	366,573	1,166,849	2,045,271	395,808	1,259,491	2,199,012	427,233
Export Diesel	0	966,426	0	87,716	1,327,525	0	265,101	1,856,873	291,158
Total Jet	243,030	844,469	302,213	252,344	907,087	309,297	294,441	1,012,926	347,253
Total Distillate	1,313,203	3,617,031	668,787	1,506,909	4,279,883	705,105	1,819,032	5,068,812	1,065,644
Heavies	213,495	458,575	87,271	221,732	460,325	106,351	236,076	496,585	103,605
Other Lights	31,093	519,482	70,029	29,373	526,570	33,971	31,319	536,067	24,692
Gasoline Export/Total	0.05%	6.57%	0.10%	0.05%	10.34%	12.48%	0.06%	23.94%	7.61%
Diesel Export/Total	0%	35%	0%	7%	39%	0%	17%	46%	41%
Gasoline/Diesel	2.0	2.2	2.6	1.7	1.9	2.2	1.3	1.4	1.6

Table A1-2. Products of PADD 3 Refinery with E Set Fuels Production in 2022 (BPD)

2022 PADD 3 Refinery	F1	F7	F10	F14	F15	F16	F18	F19	F20
LPG Produced	448,726	524,476	452,612	480,804	420,372	570,325	483,657	415,778	451,160
Finished Mogas	4,292,393	4,112,979	4,276,485	4,236,517	4,670,081	4,097,940	4,437,844	4,666,489	4,502,477
USA Mogas	3,813,708	3,738,929	3,813,708	3,813,708	3,738,929	3,723,891	3,753,968	3,753,968	3,813,708
USA non-HOF	1,906,854	1,906,854	1,906,854	1,906,854	1,906,854	1,891,815	1,906,854	1,906,854	1,906,854
USA non-HOF CG	1,523,370	1,523,370	1,523,370	1,523,370	1,523,370	1,523,370	1,523,370	1,523,370	1,523,370
USA non-HOF RFG	383,484	383,484	383,484	383,484	383,484	368,446	383,484	383,484	383,484
USA Gasoline HOF	1,906,854	1,832,075	1,906,854	1,906,854	1,832,075	1,832,075	1,847,114	1,847,114	1,906,854
USA HOF CG	1,523,370	1,463,630	1,523,370	1,523,370	1,463,630	1,463,630	1,463,630	1,463,630	1,523,370
USA HOF RFG	383,484	368,446	383,484	383,484	368,446	368,446	383,484	383,484	383,484
Export Gasoline	478,685	374,050	462,777	422,810	931,152	374,050	683,876	912,521	688,769
Ethanol	382,324	374,846	382,324	382,324	741,261	373,337	561,062	745,773	573,010
Total Diesel	3,372,796	3,427,294	3,406,381	3,372,797	3,430,811	3,322,560	3,374,658	3,438,022	3,376,547
US Diesel	2,045,271	2,045,271	2,045,271	2,045,271	2,045,271	2,045,271	2,045,271	2,045,271	2,045,271
Export Diesel	1,327,525	1,382,023	1,361,110	1,327,527	1,385,540	1,277,289	1,329,387	1,392,751	1,331,276
Total Jet	907,087	907,087	907,087	907,087	907,087	907,087	907,087	907,087	907,087
Total Distillate	4,279,883	4,334,381	4,313,468	4,279,884	4,337,898	4,229,647	4,281,745	4,345,109	4,283,634
Heavies	460,325	460,325	460,325	460,325	460,325	460,325	460,325	460,325	460,325
Other Lights	526,570	506,235	506,235	526,570	506,235	514,010	506,235	506,235	506,235
Gasoline Export/ Total	11%	9%	11%	10%	20%	9%	15%	20%	15%
Diesel Export/Total	39%	40%	40%	39%	40%	38%	39%	41%	39%

Table A1-3. Products of CA Refinery with E set Fuels Production in 2022 (BPD)

2022 CA Refinery	F1	F7	F10	F14	F15	F18	F19	F20
LPG Produced	57,091	72,341	58,240	65,944	43,390	60,367	44,505	52,410
Finished Mogas	1,016,607	1,018,942	1,013,207	1,003,962	1,125,262	1,051,778	1,127,968	1,068,277
USA Mogas	849,757	863,284	864,963	849,757	866,817	863,284	863,284	878,497
USA non-HOF	426,748	440,275	426,748	426,748	440,275	440,275	440,275	440,275
USA non-HOF CG	52,338	52,338	52,338	52,338	52,338	52,338	52,338	52,338
USA non-HOF RFG	374,410	387,937	374,410	374,410	387,937	387,937	387,937	387,937
USA Gasoline HOF	423,009	423,009	438,216	423,009	426,542	423,009	423,009	438,222
USA HOF CG	50,285	50,285	50,285	50,285	50,285	50,285	50,285	50,285
USA HOF RFG	372,724	372,724	387,930	372,724	376,256	372,724	372,724	387,937
Export Gasoline	166,850	155,658	148,244	154,205	258,445	188,494	264,684	189,780
Ethanol	85,189	86,549	86,710	85,189	172,210	128,849	171,150	131,892
Total Diesel	395,808	395,808	395,808	395,808	395,808	395,808	395,808	395,808
US Diesel	395,808	395,808	395,808	395,808	395,808	395,808	395,808	395,808
Export Diesel	0	0	0	0	0	0	0	0
Total Jet	309,297	309,297	309,297	309,297	309,297	309,297	309,297	309,297
Total Distillate	705,105	705,105	705,105	705,105	705,105	705,105	705,105	705,105
Heavies	98,913	106,351	106,351	95,998	106,351	106,351	106,351	106,351
Other Lights	39,093	33,865	32,189	38,332	26,620	30,780	29,186	30,432
Gasoline Export/Total	16%	15%	15%	15%	23%	18%	23%	18%
Diesel Export/Total	0%	0%	0%	0%	0%	0%	0%	0%

Table A1-4. Products of PADD 3 Refinery with E Set Fuels Production in 2040 (BPD)

2040 PADD 3 Refinery	F1	F10	F14	F15	F18	F19	F20
LPG Produced	379,551	376,372	455,572	353,594	470,145	347,199	389,365
Finished Mogas	4,023,370	4,037,978	4,020,103	4,676,422	4,322,665	4,728,892	4,367,060
USA Mogas	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404
USA Gasoline HOF	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404	3,024,404
USA HOF CG	2,416,171	2,416,171	2,416,171	2,416,171	2,416,171	2,416,171	2,416,171
USA HOF RFG	608,233	608,233	608,233	608,233	608,233	608,233	608,233
Export Gasoline	998,966	1,013,574	995,700	1,652,018	1,298,261	1,704,488	1,342,656
Ethanol	302,440	302,440	302,440	907,321	604,881	907,321	604,881
Total Diesel	4,055,886	4,055,886	4,008,787	4,063,951	4,008,404	4,053,644	4,045,078
US Diesel	2,199,012	2,199,012	2,199,012	2,199,012	2,199,012	2,199,012	2,199,012
Export Diesel	1,856,873	1,856,873	1,809,774	1,864,939	1,809,392	1,854,632	1,846,066
Total Jet	1,012,926	1,012,926	1,012,926	1,012,926	1,012,926	1,012,926	1,012,926
Total Distillate	5,068,812	5,068,812	5,021,713	5,076,877	5,021,330	5,066,570	5,058,004
Heavies	496,585	496,585	496,585	506,738	496,585	506,738	496,585
Other Lights	536,067	521,326	536,067	536,067	536,067	521,326	521,326
Gasoline Export/Total Gasoline	25%	25%	25%	35%	30%	36%	31%
Diesel Export/Total	46%	46%	45%	46%	45%	46%	46%

Table A1-5. Products of CA Refinery with E set Fuels Production in 2040 (BPD)

2040 CA Refinery	F1	F10	F14	F15	F18	F19	F20
LPG Produced	40,976	40,283	46,712	34,695	43,454	34,831	37,020
Finished Mogas	809,458	791,640	806,602	907,608	842,119	907,687	829,402
USA Mogas	695,051	698,307	670,922	698,307	698,307	698,307	698,307
USA Gasoline HOF	695,051	698,307	670,922	698,307	698,307	698,307	698,307
USA HOF CG	79,756	83,011	79,756	83,011	83,011	83,011	83,011
USA HOF RFG	615,295	615,295	591,166	615,295	615,295	615,295	615,295
Export Gasoline	114,407	93,333	135,680	209,301	143,812	209,380	131,095
Ethanol	69,505	69,831	67,092	209,492	139,661	209,492	139,661
Total Diesel	671,054	684,478	666,091	730,273	704,519	730,273	724,619
US Diesel	427,233	427,233	427,233	427,233	427,233	427,233	427,233
Export Diesel	243,821	257,245	238,858	303,040	277,286	303,040	297,386
Total Jet	347,253	347,253	347,253	347,253	347,253	347,253	347,253
Total Distillate	1,018,307	1,031,731	1,013,344	1,077,526	1,051,773	1,077,527	1,071,872
Heavies	103,605	103,605	103,605	103,605	103,605	103,605	103,605
Other Lights	26,229	24,178	27,017	17,498	13,800	17,811	14,772
Gasoline Export/Total	14%	12%	17%	23%	17%	23%	16%
Diesel Export/Total	36%	38%	36%	41%	39%	41%	41%

Table A1-6. Products of Configuration Refinery Base Cases in 2022 and 2040 (BPD)

Year Configuration Refinery Base Cases	2022				2040			
	CRK	LtCOK	HvyCOK	COKHCK	CRK	LtCOK	HvyCOK	COKHCK
LPG Produced	8,563	9,032	9,883	8,651	8,740	8,904	9,211	7,777
Finished Mogas	80,008	85,929	86,125	84,811	74,009	77,153	73,634	85,796
USA Mogas	79,998	85,919	86,115	84,801	73,999	77,143	73,624	85,786
USA non-HOF	79,998	85,919	86,115	84,801	73,999	77,143	73,624	85,786
USA non-HOF CG	61,598	66,157	69,896	8,703	56,979	59,400	58,236	8,823
USA non-HOF RFG	18,400	19,761	16,219	76,097	17,020	17,743	15,387	76,963
USA Gasoline HOF	0	0	0	0	0	0	0	0
USA HOF CG	0	0	0	0	0	0	0	0
USA HOF RFG	0	0	0	0	0	0	0	0
Export Gasoline	10	10	10	10	10	10	10	10
Ethanol	8,040	8,635	8,655	8,522	7,438	7,754	7,400	8,622
Total Diesel	43,117	48,944	46,413	45,076	48,486	58,317	58,553	53,795
US Diesel	43,107	48,934	46,403	45,066	48,476	58,307	58,543	53,785
Export Diesel	10	10	10	10	10	10	10	10
Total Jet	10,500	12,101	11,162	18,000	10,500	10,500	10,500	18,000
Total Distillate	53,617	61,045	57,575	63,076	58,986	68,817	69,053	71,795
Heavies	16,697	0	0	0	16,513	0	0	0
Other Lights	10	10	10	8,561	10	10	10	4,874
Export/Domestic Gasoline	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

**Table A1-7. CRK Refinery Products with Various E Set Fuels
Production in 2022 (BPD)**

CRK	F10	F14	F18	F19	F20
LPG Produced	8,114	9,194	9,230	8,047	8,703
Finished Mogas	81,137	77,608	77,884	83,471	78,717
USA Mogas	81,127	77,598	77,874	79,998	78,707
USA non-HOF	39,601	38,799	39,075	41,199	39,908
USA non-HOF CG	32,906	29,875	30,088	31,723	30,432
USA non-HOF RFG	6,696	8,924	8,987	9,476	9,476
USA Gasoline HOF	41,526	38,799	38,799	38,799	38,799
USA HOF CG	34,467	29,875	29,875	29,875	29,875
USA HOF RFG	7,059	8,924	8,924	8,924	8,924
Export Gasoline	10	10	10	3,473	10
Ethanol	8,133	7,779	11,687	15,780	11,771
Total Diesel	42,776	44,457	48,251	48,486	48,486
US Diesel	42,766	44,447	48,241	48,476	48,476
Export Diesel	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500
Total Distillate	53,276	54,957	58,751	58,986	58,986
Heavies	16,697	16,697	16,533	16,513	16,513
Other Lights	10	10	10	20	10
Export/Domestic Gasoline	0%	0%	0%	4%	0%

**Table A1-8. LtCOK Refinery Products with Various E Set Fuels
Production in 2022 (BPD)**

LtCOK	F10	F14	F18	F19	F20
LPG Produced	8,478	9,698.4	10,007.7	8,743.8	9,307.4
Finished Mogas	88,020	83,351.3	83,647.7	89,099.9	84,048.3
USA Mogas	88,010	83,341.3	83,637.7	85,918.8	84,038.3
USA non-HOF	42,950	41,670.6	41,967.0	44,248.2	42,367.7
USA non-HOF CG	35,685	32,086.4	32,314.6	34,071.1	32,715.2
USA non-HOF RFG	7,265	9,584.2	9,652.4	10,177.1	9,652.4
USA Gasoline HOF	45,060	41,670.6	41,670.6	41,670.6	41,670.6
USA HOF CG	37,400	32,086.4	32,086.4	32,086.4	32,086.4
USA HOF RFG	7,660	9,584.2	9,584.2	9,584.2	9,584.2
Export Gasoline	10	10.0	10.0	3,181.1	10.0
Ethanol	8,823	8,355.0	12,551.8	16,948.1	12,592.1
Total Diesel	49,425	52,039.4	55,936.6	56,613.9	56,613.9
US Diesel	49,415	52,029.4	55,926.6	56,603.9	56,603.9
Export Diesel	10	10.0	10.0	10.0	10.0
Total Jet	10,500	10,500.0	10,500.0	10,500.0	10,500.0
Total Distillate	59,925	62,539.4	66,436.6	67,113.9	67,113.9
Heavies	0	0.0	0.0	0.0	0.0
Other Lights	10	10.0	10.0	10.0	10.0
Gasoline Export/Total	0%	0%	0%	4%	0%
Diesel Export/Total	0%	0%	0%	0%	0%

Table A1-9. HvyCOK Refinery Products with Various E Set Fuels Production in 2022 (BPD)

HvyCOK	F10	F14	F18	F19	F20
LPG Produced	9,483	10,547	10,576	8,748	9,550
Finished Mogas	87,823	83,541	83,838	85,900	83,838
USA Mogas	87,813	83,531	83,828	85,890	83,828
USA non-HOF	44,062	41,766	42,063	44,124	42,063
USA non-HOF CG	36,572	33,899	34,140	35,771	34,140
USA non-HOF RFG	7,491	7,866	7,922	8,353	7,922
USA Gasoline HOF	43,751	41,766	41,766	41,766	41,766
USA HOF CG	36,313	33,899	33,899	33,899	33,899
USA HOF RFG	7,438	7,866	7,866	7,866	7,866
Export Gasoline	10	10	10	10	10
Ethanol	8,804	8,374	12,580	16,964	12,580
Total Diesel	46,205	48,617	52,708	57,258	54,075
US Diesel	46,195	48,607	52,698	57,248	54,065
Export Diesel	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500
Total Distillate	56,705	59,117	63,208	67,758	64,575
Heavies	0	0	0	0	0
Other Lights	10	10	10	10	10
Gasoline Export/Total	0%	0%	0%	4%	0%
Diesel Export/Total	0%	0%	0%	0%	0%

Table A1-10. COKHCK Refinery Products with Various E Set Fuels Production in 2022 (BPD)

COKHCK	F10	F18	F19	F20
LPG Produced	8,468	8,601	6,946	7,632
Finished Mogas	103,004	88,458	89,325	87,273
USA Mogas	102,994	87,083	87,083	87,083
USA non-HOF	50,807	43,672	43,672	43,672
USA non-HOF CG	4,027	4,482	4,482	4,482
USA non-HOF RFG	46,780	39,190	39,190	39,190
USA Gasoline HOF	52,188	43,411	43,411	43,411
USA HOF CG	3,979	4,221	4,221	4,221
USA HOF RFG	48,209	39,190	39,190	39,190
Export Gasoline	10	1,374	2,241	190
Ethanol	10,325	13,071	17,412	13,071
Total Diesel	44,998	48,553	54,217	51,455
US Diesel	44,988	48,543	54,207	51,445
Export Diesel	10	10	10	10
Total Jet	18,000	18,000	18,000	18,000
Total Distillate	62,998	66,553	72,217	69,455
Heavies	0	0	0	0
Other Lights	3,103	5,756	5,488	5,240
Gasoline Export/Total	0%	0%	0%	0%
Diesel Export/Total	0%	0%	0%	0%

Table A1-11. CRK Refinery Products with Various E Set Fuels Production in 2040 (BPD)

CRK	F10	F14	F18	F19	F20
LPG Produced	8,182	9,588	9,357	6,259	8,164
Finished Mogas	75,137	71,985	71,985	76,438	76,438
USA Mogas	75,127	71,975	71,975	76,428	76,428
USA Gasoline HOF	75,127	71,975	71,975	76,428	76,428
USA HOF CG	62,135	59,740	59,740	63,435	63,435
USA HOF RFG	12,993	12,236	12,236	12,993	12,993
Export Gasoline	10	10	10	10	10
Ethanol	7,513	7,198	14,395	22,928	15,286
Total Diesel	48,486	47,173	44,528	35,739	43,381
US Diesel	48,476	47,163	44,518	35,729	43,371
Export Diesel	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500
Total Distillate	58,986	57,673	55,028	46,239	53,881
Heavies	16,513	16,623	15,408	12,954	15,088
Other Lights	10	1,682	2,737	10	10
Export Gasoline/Total	0.0%	0.0%	0.0%	0.0%	0.0%
Export Diesel/Total	0.0%	0.0%	0.0%	0.0%	0.0%

Table A1-12. LtCOK Refinery Products with Various E Set Fuels Production in 2040 (BPD)

LtCOK	F10	F14	F18	F19	F20
LPG Produced	8,369	10,327	10,534	8,135	8,604
Finished Mogas	78,273	76,732	82,231	95,285	83,832
USA Mogas	78,263	76,722	81,468	81,468	81,468
USA Gasoline HOF	78,263	76,722	81,468	81,468	81,468
USA HOF CG	64,413	63,679	67,618	67,618	67,618
USA HOF RFG	13,849	13,043	13,849	13,849	13,849
Export Gasoline	10	10	763	13,817	2,364
Ethanol	7,826	7,672	16,294	24,440	16,294
Total Diesel	58,317	56,475	56,976	58,317	58,317
US Diesel	58,307	56,465	56,966	58,307	58,307
Export Diesel	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500
Total Distillate	68,817	66,975	67,476	68,817	68,817
Heavies	0	0	0	0	0
Other Lights	10	470	2,790	10	2,805
Export Gasoline/Total	0.0%	0.0%	1.2%	19.5%	3.5%
Export Diesel/Total	0.0%	0.0%	0.0%	0.0%	0.0%

Table A1-13. HvyCOK Refinery Products with Various E Set Fuels Production in 2040 (BPD)

HvyCOK	F10	F14	F18	F19	F20
LPG Produced	8,738	10,349	10,042	7,711	8,352
Finished Mogas	74,764	72,850	75,378	87,401	77,356
USA Mogas	74,754	72,840	75,368	77,346	77,346
USA non-HOF	0	0	0	0	0
USA non-HOF CG	0	0	0	0	0
USA non-HOF RFG	0	0	0	0	0
USA Gasoline HOF	74,754	72,840	75,368	77,346	77,346
USA HOF CG	61,606	60,457	62,219	64,197	64,197
USA HOF RFG	13,149	12,383	13,149	13,149	13,149
Export Gasoline	10	10	10	10,055	10
Ethanol	7,475	7,284	15,074	23,204	15,469
Total Diesel	58,553	56,546	61,055	62,340	62,340
US Diesel	58,543	56,536	61,045	62,330	62,330
Export Diesel	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500
Total Distillate	69,053	67,046	71,555	72,840	72,840
Heavies	0	0	0	0	0
Other Lights	10	1,271	1,817	10	1,575
Export Gasoline/Total	0.0%	0.0%	0.0%	15.7%	0.0%
Export Diesel/Total	0.0%	0.0%	0.0%	0.0%	0.0%

Table A1-14. COKHCK Refinery Products with Various E Set Fuels Production in 2040 (BPD)

COKHCK	F10	F18	F19	F20
LPG Produced	8,011	8,082	6,663	7,525
Finished Mogas	89,454	94,206	99,526	94,206
USA Mogas	89,444	94,196	94,976	94,196
USA Gasoline HOF	89,444	94,196	94,976	94,196
USA HOF CG	12,614	12,614	13,395	12,614
USA HOF RFG	76,829	81,582	81,582	81,582
Export Gasoline	10	10	4,549	10
Ethanol	8,944	18,839	28,493	18,839
Total Diesel	50,272	52,601	58,257	52,208
US Diesel	50,262	52,591	58,247	52,198
Export Diesel	10	10	10	10
Total Jet	18,000	18,000	18,000	18,000
Total Distillate	68,272	70,601	76,257	70,208
Heavies	0	0	0	0
Other Lights	5,689	8,021	3,079	6,466
Export Gasoline/Total	0.0%	0.0%	6.4%	0.0%
Export Diesel/Total	0.0%	0.0%	0.0%	0.0%

Table A1-15. PADD Refinery Products with BR Fuels Production in 2022 (BPD)

Year-Region	2022 PADD 2			2022 PADD 3		
	BR1-T	BR2	BR4-T	BR1	BR2	BR4-T
LPG Produced	173,598	132,000	147,347	518,154	405,184	441,417
Finished Mogas	2,014,092	2,063,259	2,062,716	4,157,759	4,553,877	4,548,864
USA Mogas	2,013,092	2,058,377	2,018,017	3,783,709	3,753,968	3,738,929
USA non-HOF	1,024,264	1,029,189	1,029,189	1,906,854	1,906,854	1,906,854
USA non-HOF CG	878,350	878,350	878,350	1,523,370	1,523,370	1,523,370
USA non-HOF RFG	145,913	150,838	150,838	383,484	383,484	383,484
USA Gasoline HOF	988,828	1,029,189	988,828	1,876,855	1,847,114	1,832,075
USA HOF CG	843,905	878,350	843,905	1,493,371	1,463,630	1,463,630
USA HOF RFG	144,923	150,838	144,923	383,484	383,484	368,446
Export Gasoline	1,000	4,882	44,699	374,050	799,909	809,934
Ethanol	191,943	381,314	370,427	360,556	690,360	686,299
Total Diesel	1,189,876	1,350,193	1,352,969	3,353,678	3,437,783	3,376,547
US Diesel	1,166,849	1,166,849	1,166,849	2,045,271	2,045,271	2,045,271
Export Diesel	23,026	183,344	186,120	1,308,407	1,392,512	1,331,276
Total Jet	252,344	252,344	252,344	907,087	907,087	907,087
Total Distillate	1,442,220	1,602,537	1,605,314	4,260,764	4,344,869	4,283,634
Heavies	221,732	222,280	222,280	460,325	460,325	460,325
Other Lights	30,631	30,631	30,631	506,235	526,570	526,570
Gasoline Export/Total	0%	0%	2%	9%	18%	18%
Diesel Export/Total	2%	14%	14%	39%	41%	39%

Table A1-16. PADD Refinery Products with BR Fuels Production in 2040 (BPD)

Year-Region	2040 PADD2	2040 PADD3	2040 PADD2	2040 PADD3
2040 PADD 2/PADD3	BR2	BR2	BR4-T	BR4-T
LPG Produced	101,775	396,460	153,296	428,998
Finished Mogas	1,897,207	4,697,953	2,063,812	4,597,586
USA Mogas	1,632,365	3,024,404	1,574,626	3,024,404
USA non-HOF	0	0	0	0
USA non-HOF CG	0	0	0	0
USA non-HOF RFG	0	0	0	0
USA Gasoline HOF	1,632,365	3,024,404	1,574,626	3,024,404
USA HOF CG	1,393,125	2,416,171	1,338,493	2,416,171
USA HOF RFG	239,240	608,233	236,133	608,233
Export Gasoline	264,842	1,673,549	489,186	1,573,182
Ethanol	440,755	816,619	425,165	816,619
Total Diesel	1,379,394	3,989,581	1,489,524	3,996,853
US Diesel	1,259,491	2,199,012	1,259,491	2,199,012
Export Diesel	119,904	1,790,569	230,033	1,797,840
Total Jet	294,441	1,012,926	294,441	1,012,926
Total Distillate	1,673,835	5,002,508	1,783,965	5,009,779
Heavies	236,076	496,585	236,076	496,585
Other Lights	31,319	536,067	42,554	536,067
Gasoline Export/Total	14%	36%	24%	34%
Diesel Export/Total	9%	45%	15%	45%

Table A1-17. Products of Configuration Refineries with BR Fuels Production in 2022 (BPD)

BR set fuels 2022 Configuration	BR2			BR4-T		
	CRK	LtCOK	HvyCOK	CRK	LtCOK	HvyCOK
LPG Produced	7,794	8,983	8,850	8,376	8,990	9,752
Finished Mogas	79,519	85,884	84,641	83,063	90,130	92,924
USA Mogas	79,509	85,394	84,631	83,053	90,120	92,914
USA non-HOF	40,710	43,724	42,866	41,526	45,060	46,457
USA non-HOF CG	31,723	34,071	34,943	34,467	37,400	38,559
USA non-HOF RFG	8,987	9,652	7,922	7,059	7,660	7,898
USA Gasoline HOF	38,799	41,671	41,766	41,526	45,060	46,457
USA HOF CG	29,875	32,086	33,899	34,467	37,400	38,559
USA HOF RFG	8,924	9,584	7,866	7,059	7,660	7,898
Export Gasoline	10	490	10	10	10	10
Ethanol	14,568	15,646	15,585	15,386	16,696	17,213
Total Diesel	48,486	56,219	55,857	46,654	53,649	47,695
US Diesel	48,476	56,209	55,847	46,644	53,639	47,685
Export Diesel	10	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500	10,500
Total Distillate	58,986	66,719	66,357	57,154	64,149	58,195
Heavies	16,513	0	0	16,667	0	0
Other Lights	1,993	543	10	269	10	676
Gasoline Export/Total	0%	1%	0%	0%	0%	0%
Diesel Export/Total	0%	0%	0%	0%	0%	0%
Gasoline/Diesel	1.6	1.5	1.5	1.8	1.7	1.9

Table A1-18. Products of Configuration Refineries with BR Fuels Production in 2040 (BPD)

BR set fuels 2040 Configuration	BR2-T			BR4-T		
	CRK	LtCOK	HvyCOK	CRK	LtCOK	HvyCOK
LPG Produced	5,030	6,431	6,229	7,425	8,282	7,579
Finished Mogas	76,438	91,912	84,633	80,197	88,427	82,346
USA Mogas	76,428	81,468	77,346	72,803	77,231	72,840
USA non-HOF	0	0	0	0	0	0
USA non-HOF CG	0	0	0	0	0	0
USA non-HOF RFG	0	0	0	0	0	0
USA Gasoline HOF	76,428	81,468	77,346	72,803	77,231	72,840
USA HOF CG	63,435	67,618	64,197	59,810	63,679	60,457
USA HOF RFG	12,993	13,849	13,149	12,993	13,551	12,383
Export Gasoline	10	10,444	7,287	7,395	11,196	9,506
Ethanol	20,636	21,997	20,884	19,657	20,853	19,668
Total Diesel	36,714	58,317	62,340	46,184	56,614	58,868
US Diesel	36,704	58,307	62,330	46,174	56,604	58,858
Export Diesel	10	10	10	10	10	10
Total Jet	10,500	10,500	10,500	10,500	10,500	10,500
Total Distillate	47,214	68,817	72,840	56,684	67,114	69,368
Heavies	13,226	0	0	15,870	0	0
Other Lights	10	2,805	1,835	3,000	3,000	3,000
Gasoline Export/Total	0%	11%	9%	9%	13%	12%
Diesel Export/Total	0%	0%	0%	0%	0%	0%
Gasoline BOB/Diesel	2.1	1.4	1.2	1.6	1.4	1.2