Table B2. MTBE Ban Impacts on CARB Gasoline Production 100MB/D Illustrative California Refinery

Case:	Base Case		Case 2		Case 3		Case 4		Case 5	
	CARB with MTBE		5.7% Ethanol, Reduce C_5's, C_3 Alkylate Production + Purchae		Increase Alkylate Purchase over Case 2 Restore Some Light & Heavy Components		Restore Full Production Increase Alkylate, Iso-Octane & Ethanol		Restore Full Production 5.7% Etanol & Alkylate	
	Volume (MB/D)	Vol %	Volume (MB/D)	Vol %	Volume (MB/D)	Vol %	Volume (MB/D)	Vol %	Volume (MB/D)	Vol %
Production										
LSR	7.5	13.0	4.7	9.2	5.0	9.2	5.5	9.5	5.3	9.1
Isomerate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reformate	16.9	29.1	15.5	30.4	16.0	29.5	16.7	28.8	16.6	28.8
FCC Gasoline	16.5	28.5	15.7	30.8	15.7	28.9	15.7	27.1	15.7	27.1
Alkylate	9.5	16.4	11.5	22.5	11.5	21.2	11.5	19.8	11.5	19.8
n-Butane	1.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Refinery	51.4		47.4		48.2		49.4		49.1	
Purchases										
MTBE	6.5	11.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ethanol	0.0	0.0	2.9	5.7	3.1	5.7	4.1	7.0	3.3	5.7
C_4 Alkylate	0.0	0.0	0.7	1.4	3.0	5.5	2.0	3.5	5.5	9.5
C_3/C_4 Alkylate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Iso-Octane	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.3	0.0	0.0
Total Purchases	6.5		3.6		6.1		8.6		8.8	
Total Gasoline	57.9		51.0		54.3		57.9		57.9	
Properties										
Octane: (R+M)/2	88.6		88.3		88.5		89.1		88.8	
RVP: psi	6.5		7.0		7.0		7.0		6.98	
Benzene: vol %	0.32		0.36		0.34		0.32		0.32	
Aromatics: vol %	25.0		25.7		24.8		24.0		23.9	
Olefins: vol %	7.6		8.5		8.0		7.5		7.5	
Sulfur: ppm	12		12		11		11		11	
ASTM D86 T50	196		208		209		209		209	
ASTM D86 T90	335		326		326		329		327	
CARB	PASSES		PASSES		PASSES		PASSES		PASSES	
Predicted Percent Change In Emissions (Candidate vs Reference)										
NO_x	-1.14		-0.29		-0.79		-0.36		-1.29	
Exhaust THC	-0.19		-0.12		0.01		0.01		-0.14	
POT.TOX.	-9.24		-6.69		-8.22		-9.49		-9.67	

Definition of abbreviations and technical terms:

LSR = light straight run;
FCC = fluid catalytic cracking;
ppm = parts per million;
psi = pounds per square inch;
vol% = volume percent;
MB/D = thousand barrels per day;
MTBE = methyl tertiary butyl ether;
RVP = Reid vapor pressure;
THC = total hydrocarbons;
POT. TOX. = potency weighted toxins.

Source: Energy Information Administration