

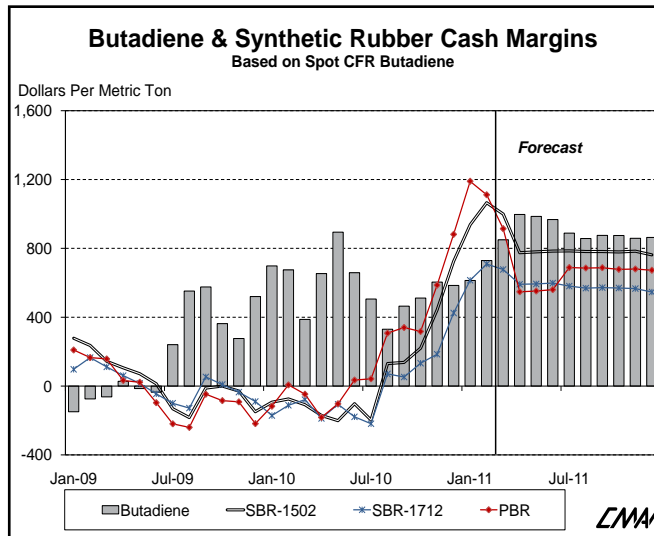
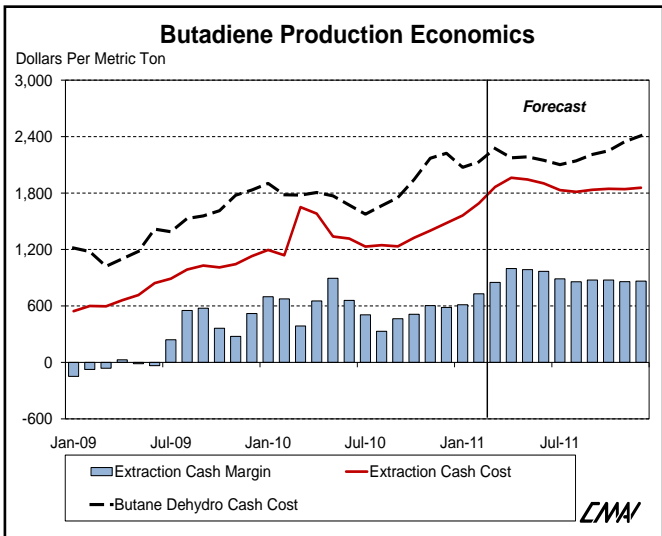
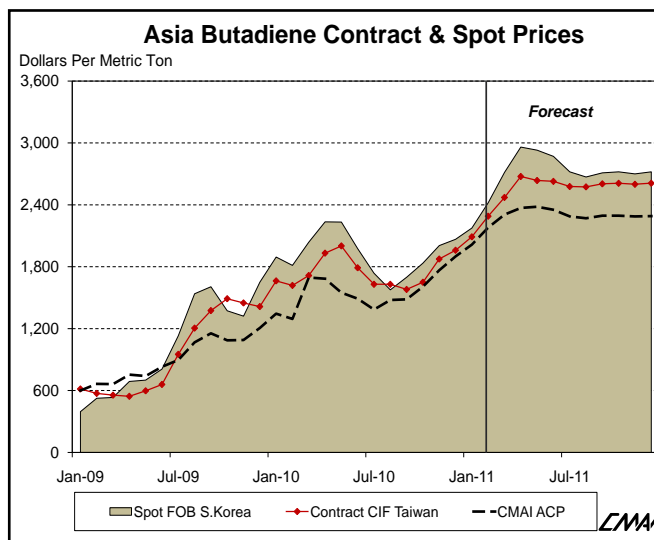
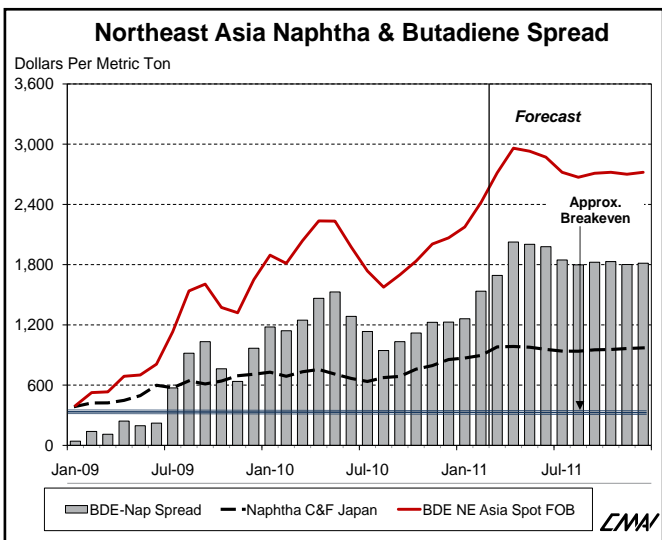


## BUTADIENE & DERIVATIVES PRODUCTION ECONOMICS

Week Ending	BUTADIENE				DERIVATIVES			
	Production Cash Cost		Production Cash Margin		<sup>4</sup> Production Cash Cost			
	Extraction (Crude C4)	Dehydro (Butane)	Extraction (Crude C4)	Dehydro (Butane)	e-SBR	s-SBR	PBR	ABS
25-Feb	1,944	2,176	601	369	2,835	2,940	3,360	2,393
4-Mar	1,928	2,297	672	303	2,839	2,953	3,387	2,419
11-Mar	1,933	2,336	697	294	2,822	2,935	3,387	2,374
18-Mar	1,850	2,283	825	392	2,854	2,967	3,417	2,405
<b>FORECAST</b>								
Apr-11	1,963	2,174	997	786	3,155	3,263	3,832	2,494
May-11	1,944	2,184	986	746	3,140	3,247	3,798	2,447

	<sup>5</sup> Production Cash Margin				<sup>8</sup> Butadiene Affordability			
	<sup>6</sup> SBR-1502	<sup>7</sup> SBR-1712	PBR	ABS	<sup>6</sup> SBR-1502	<sup>7</sup> SBR-1712	PBR	ABS
	25-Feb	1,065	747	1,040	-44	4,024	3,814	3,627
4-Mar	1,161	861	1,113	-58	4,153	4,005	3,700	2,306
11-Mar	1,078	726	1,013	-12	4,041	3,780	3,599	2,514
18-Mar	1,046	700	1,033	-43	4,030	3,767	3,648	2,403
<b>FORECAST</b>								
Apr-11	775	591	548	-180	4,046	3,996	3,588	2,193
May-11	780	593	552	-91	4,021	3,969	3,562	2,566

4: Butadiene feedstock priced at spot CFR NE Asia; 5: Based on NE Asia spot prices; 6: Based on e-SBR economics; 7: Includes aromatic oil costs  
 8: Affordability is defined as the highest price paid for the last incremental spot butadiene such that buyer is at breakeven economics



**February 2011 Asia Butadiene Price Settlements**

CMAI ACP is an unbiased third-party butadiene contract price reference that preserves the economic interest of both producers/sellers and consumers/buyers by ensuring an equitable distribution of butadiene and derivative margins, taking into consideration the average production cash cost of butadiene producers and the average butadiene affordability of butadiene consumers. CMAI ACP minimizes pricing risks by providing an equitable system of chain margin distribution between butadiene producers and consumers. CMAI ACP is derived from CMAI's production cash cost models for butadiene extraction unit (butadiene production cash cost) and CMAI's production cost models for butadiene derivatives (weighted average butadiene affordability). CMAI ACP is the price at which profitability for butadiene and derivative producers is split according to the proportion of capital investment for their respective production units.

*Please refer to February issue of GOFER Focus for more information*

<b>Energy &amp; Feedstock</b>		
Crude WTI FOB Cushing	89.57	\$/bbl
Naphtha C&F Japan	895	\$/ton
Crude C4 FOB Asia	1,154	\$/ton

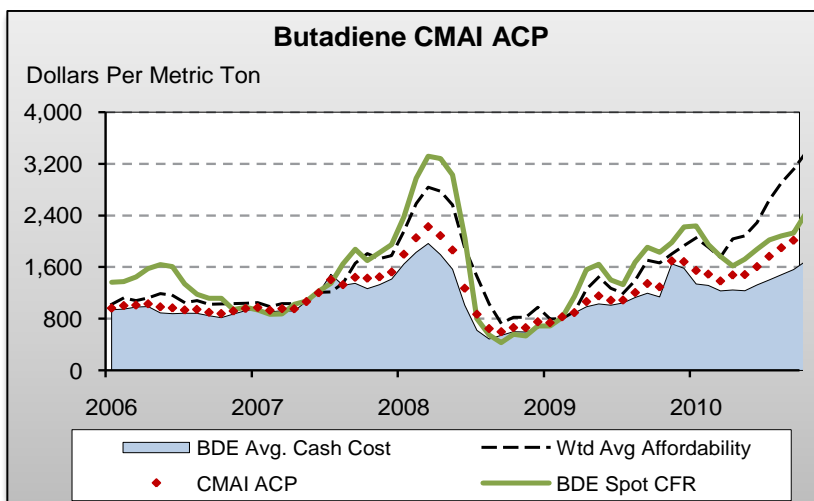
<b>Raffinate-1</b>	
Asia FOB Estimate	967



<b>Butadiene Production Cost</b>	
Extraction Unit	1,690

<b>Butadiene Affordabilities</b>	
SBR-1502	3,845
SBR-1712	3,612
PBR	3,565
ABS	2,621
<b>Wtd Avg Asia</b>	<b>3,366</b>

<b>Butadiene Prices</b>	
NE Asia CFR	2,430
NE Asia FOB	2,420



<b>Butadiene Spot vs. CMAI ACP</b>			
	<u>NEA</u>	<u>CMAI</u>	
	<u>FOB</u>	<u>ACP</u> <sup>9</sup>	
Dec-10	2,066	1,893	History
Jan-11	2,175	2,008	History
<b>Feb-11</b>	<b>2,420</b>	<b>2,183</b>	<b>Settled</b>
Mar-11	2,714	2,306	MTD
Apr-11	2,960	2,370	Forecast

<sup>9</sup>: Domestic pipeline equivalent

Prices are in U.S. Dollars Per Metric Ton, unless otherwise stated

## ASIA BUTADIENE PRICE HISTORICAL & FORECAST TABLE

	Naphtha C&F Japan US\$/Metric Ton	Crude C4 FOB S. Korea US\$/Metric Ton	Butadiene CFR NE Asia US\$/Metric Ton	SBR-1502 CFR NE Asia US\$/Metric Ton	SBR-1712 CFR NE Asia US\$/Metric Ton	PBR CFR NE Asia US\$/Metric Ton
<b>MONTHLY</b>						
Jan-10	729	821	1,908	2,160	1,900	2,520
Feb-10	688	777	1,829	2,125	1,913	2,550
Mar-10	733	1,026	1,980	2,200	2,044	2,650
Apr-10	755	1,005	2,220	2,320	2,090	2,765
May-10	710	877	2,238	2,300	2,150	2,850
Jun-10	666	846	1,950	2,138	1,869	2,688
Jul-10	636	792	1,770	1,895	1,710	2,520
Aug-10	675	818	1,619	2,119	1,917	2,638
Sep-10	687	821	1,720	2,219	1,969	2,769
Oct-10	759	896	1,878	2,450	2,183	2,925
Nov-10	794	964	2,020	2,800	2,344	3,350
Dec-10	855	1,036	2,082	3,130	2,635	3,715
Jan-11	870	1,092	2,131	3,413	2,882	4,088
Feb-11	895	1,154	2,430	3,788	3,175	4,350
Mar-11	980	1,275	2,673	3,925	3,338	4,425
Apr-11	985	1,321	3,010	3,950	3,450	4,400
May-11	978	1,310	2,980	3,940	3,440	4,370
Jun-11	956	1,281	2,935	3,920	3,420	4,320
Jul-11	939	1,241	2,785	3,810	3,310	4,290
Aug-11	937	1,232	2,735	3,770	3,270	4,240
Sep-11	951	1,250	2,775	3,800	3,300	4,280
Oct-11	955	1,255	2,785	3,810	3,310	4,290
Nov-11	964	1,259	2,765	3,800	3,300	4,270
Dec-11	971	1,268	2,785	3,800	3,300	4,290
<b>WEEKLY</b>						
12-Nov-10	823	998	2,030	2,850	2,350	3,400
19-Nov-10	796	966	2,000	2,850	2,350	3,450
26-Nov-10	806	978	2,050	2,850	2,425	3,450
3-Dec-10	839	1,017	2,110	2,900	2,425	3,500
10-Dec-10	853	1,034	2,050	3,100	2,550	3,650
17-Dec-10	856	1,038	2,100	3,150	2,700	3,750
24-Dec-10	879	1,065	2,075	3,200	2,750	3,800
31-Dec-10	887	1,075	2,075	3,300	2,750	3,875
7-Jan-11	888	1,114	2,085	3,300	2,825	3,950
14-Jan-11	864	1,084	2,115	3,300	2,825	3,950
21-Jan-11	874	1,097	2,150	3,450	2,875	4,200
28-Jan-11	869	1,090	2,175	3,600	3,000	4,250
4-Feb-11	884	1,140	2,275	3,650	3,050	4,300
11-Feb-11	881	1,136	2,375	3,750	3,100	4,350
18-Feb-11	882	1,137	2,500	3,850	3,250	4,350
25-Feb-11	992	1,279	2,570	3,900	3,300	4,400
4-Mar-11	991	1,266	2,570	4,000	3,450	4,500
11-Mar-11	994	1,270	2,570	3,900	3,300	4,400
18-Mar-11	944	1,206	2,600	3,900	3,300	4,450
25-Mar-11	988	1,262	2,950	3,900	3,300	4,350
Forecast Prices						

The current and forecast prices presented herein are strictly the opinion of CMAI and Purvin & Gertz and are based on information within the public sector and on assessments by CMAI and Purvin & Gertz staff. CMAI and Purvin & Gertz make no guarantee or warranty and assume no liability as to their use.

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**CMAI - Headquarters**

1401 Enclave Parkway, Suite 700  
Houston, TX 77077 USA  
Tel: 1-281-531-4660  
Fax: 1-281-531-9966

**Regional Offices**

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