

Economic Indicators

PLANT WATCH

Company / Contractor or Licensor	Plant location	Product	Cost, capacity	Startup
Saudi Aramco and Sumitomo Chemical Co. / Basell	Rabigh, Saudi Arabia	High-density polyethylene	300,000 tons/yr	Late 2008
Basell	Wesseling, Germany	High-density polyethylene	320,000 tons/yr	Feb. 2005
Indian Oil Corp. / Basell	Panipat, India	High-density polyethylene	300,000 tons/yr	2007
Poliellenos Uniao S.A. (subsidiary of Unipar S.A.) / Chevron Phillips Chemical Co. LP	Santa Andre, Sao Paulo, Brazil	Polyethylene	200,000 m.t./yr	2007
ORIX GTL Ltd. (j.v. between state-owned Qatar Petroleum and South African Sasol Synfuels International Ltd.) / USFiber	Ras Laffan Industrial City, Qatar	Two separate water-treatment systems for reuse of wastewater produced during gas-to-liquids conversion process	1.3-million gal/d	Late 2005
Honeywell's Electronic Materials	Chandler, Ariz.	Electronic chemicals for the semiconductor industry	40,000-ft ² manufacturing facility	Feb. 2005
DSM	Greenville, N.C. Heerlen, Netherlands	Dyneema polyethylene fiber	\$50-million overall investment; new line in N.C. and a 10% increase in capacity in the Netherlands	Early 2006
GE Advanced Materials	Cartagena, Spain	Lexan resin (third phase of plant expansion)	€600-million; 130,000 tons/yr (bringing total investment in this plant to €1,700 million)	Feb. 2005
Hydro Polymers / Uda GmbH	Romes, Norway	Conversion of existing diaphragm-based chlorine plant to one based on membrane electrolysis	€85-million, to increase capacity	Mid 2006
Baku Heydar Aliyev Refinery / UOP Ltd.	Baku, Azerbaijan	New high-octane gasoline complex	300,000 m.t./yr of motor fuel alkylate, 130,000 m.t./yr of DIPE (high-octane gasoline components)	2008
Petrochina / Haldor Topsoe A/S	Gotmud Oil Refinery, Qinghai, China	Methanol	Increase capacity from 300 to 1,000 m.t./d	2006
Degussa AG	Paulinia, Brazil	Carbon black	Increase capacity to 100,000 m.t./yr	Not disclosed

MERGERS, ACQUISITIONS AND DEALS

Buyer	Other party	Date	Details
Eastman Chemical Co. (Columbia, S.C.)	Lockwood Greene (Spartanburg, S.C.)	Feb. 8	Eastman Chemical Co. has awarded Lockwood Greene an engineering, procurement and construction contract for the construction of the first commercial-scale PEI plant based on the patented IntegRex technology at Eastman's existing Columbia, S.C., site. IntegRex, introduced by Eastman in September 2004, allows for the integrated manufacturing of paraxylene to polyethylene terephthalate (PET) resin. The new 350,000-m.t./yr facility is expected to be online by fourth quarter 2006.
Abu Dhabi Gas Industries Ltd. (Abu Dhabi, UAE)	Foster Wheeler Ltd. (Hamilton, Bermuda)	Jan. 31	Abu Dhabi Gas Industries Ltd. has awarded Foster Wheeler International Corp. a project-management consultancy (PMC) contract for development of a world-scale Onshore Gas Development Project (OGD-III), to increase production of condensate and natural gas liquids of Habshan, Abu Dhabi, UAE. Terms were not disclosed. Work will be carried out by Foster Wheeler's U.K. office, and mechanical completion of the OGD-III project is slated for 2007.
BASF AG (Ludwigshafen, Germany)	Merck KGaA (Darmstadt, Germany)	Jan. 28	BASF has acquired the global electronic chemicals business of Merck KGaA for a purchase price of €270-million. The transaction is still subject to the approval of regulatory authorities, but closing is expected in the second quarter of 2005.
Industrial Insulation Group LLC (Brunswick, Ga.)	Shanghai Chengfeng Electric Machinery Equipment Co. Ltd. (Shanghai, China)	Jan. 21	Industrial Insulation Group (IG), a manufacturer of high-temperature industrial insulation, has entered into a joint venture agreement with Shanghai Chengfeng Electric Machinery Equipment for the manufacture of Thermo-12 Gold calcium silicate pipe and block insulation (an exclusive brand of IG). The new corporation, IG Thermal Insulation (Shanghai) Co., Ltd. will be located in Shanghai.
Sigma-Aldrich Corp. (St. Louis, Mo.)	Degussa AG (Düsseldorf, Germany)	Feb. 16	Degussa has sold the Protigo Group (headquartered in Boulder, Colo.) to the life-science company Sigma-Aldrich for an undisclosed purchase price. Sigma-Aldrich is seeking to expand its activities in the nucleic acid market, and Protigo operates in the field of nucleic acids and oligonucleotide synthesis, with sites in Hamburg, Paris, Boulder, Singapore, Kyoto and Lismore, Australia.
Sud-Chemie AG (Munich, Germany)	Wacker-Chemie GmbH (Munich, Germany)	Feb. 2	Wacker-Chemie has sold its proprietary technology for manufacturing diesel catalytic converters to Sud-Chemie. The divestiture includes all technical expertise, the coating systems and the associated testing facilities. Both parties have agreed not to disclose the financial details of the transaction.

March 2005; VOL 112; NO. 3

Chemical Engineering copyright © 2005 (ISSN 0009-2460) is published monthly, with an additional issue in September, by Access Intelligence, LLC, 1201 Seven Locks Road, Suite 300, Potomac, MD, 20854. Chemical Engineering Executive, Editorial, Advertising and Publication Offices: 110 William Street, 11th Floor, New York, NY 10038. Phone: 212-621-4674. Fax: 212-621-4694. Subscription rates: \$59.00 U.S. and U.S. possessions, Canada, Mexico; \$179 International. \$20.00 Back Issue & Single copy sales. Periodicals postage paid at Rockville, MD and additional mailing offices. Postmaster: Send address changes to Chemical Engineering, Fulfillment Manager, P.O. Box 619, Mt. Morris, IL 61054-7580. Phone: 815-734-1289. Fax: 815-734-5882. email: echm@igoble.com. Change of address, two to eight week notice requested. For information regarding article reprints only, please contact Daria Curtis, Reprint Sales Manager, 1201 Seven Locks Road, Suite 300, Potomac, MD 20854. Telephone: 800-211-6356, 301-354-1709. Fax: 301-340-3819. email: dc Curtis@accessintel.com. Contents may not be reproduced in any form without written permission. Publications Mail Product Sales Agreement No. 40559009. Return undeliverable Canadian Addresses to: P.O. Box 1632, Windsor, ON N9A7C9.

Economic Indicators

2003 2004 2005

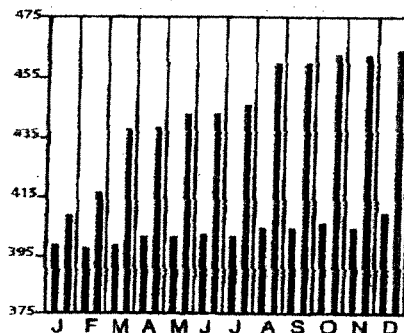
DOWNLOAD THE **CEPCI** TWO WEEKS SOONER AT WWW.CHE.COM/INDEX

CHEMICAL ENGINEERING PLANT COST INDEX (CEPCI)

(1957-59 = 100)

	Nov. '04	Dec. '04	Dec. '03
	Final	Prelim.	Final
CE INDEX	462.5	464.4	409.0
Equipment	535.1	538.8	455.3
Heat exchangers & tanks	510.8	516.8	376.9
Process machinery	511.7	513.1	457.7
Pipe, valves & fittings	606.8	608.9	579.7
Process instruments	378.7	379.8	366.4
Pumps & compressors	724.2	727.2	707.9
Electrical equipment	356.1	360.8	342.8
Structural supports & misc	582.5	584.6	447.5
Construction labor	308.1	306.0	310.0
Buildings	437.1	438.3	407.3
Engineering & supervision	345.4	344.9	346.7

Annual Index
1996 = 381.7
1997 = 386.5
1998 = 399.5
1999 = 390.5
2000 = 394.1
2001 = 394.3
2002 = 395.6
2003 = 402.8



CURRENT BUSINESS INDICATORS

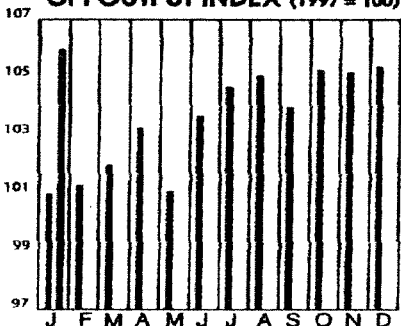
LATEST

PREVIOUS

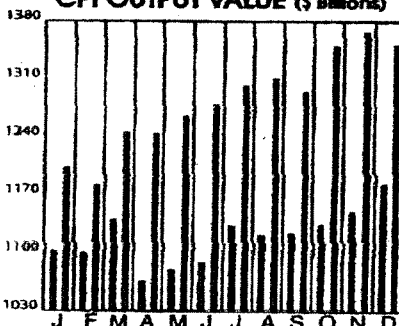
YEAR AGO

CPI output index (1997 = 100)*	Jan. '05 = 106.0	Dec. '04 = 105.4	Nov. '04 = 105.2	Jan. '04 = 101.1
CPI value of output, \$ billions	Dec. '04 = 1,352.4	Nov. '04 = 1,358.7	Oct. '04 = 1,350.9	Dec. '03 = 1,184.9
CPI operating rate, %	Jan. '05 = 81.4	Dec. '04 = 80.9	Nov. '04 = 80.9	Jan. '04 = 78.0
Construction cost index (1967 = 100)	Feb. '05 = 679.4	Jan. '05 = 679.3	Dec. '04 = 680.4	Feb. '04 = 638.7
Producer prices, industrial chemicals (1982 = 100)	Jan. '05 = 177.1	Dec. '04 = 177.3	Nov. '04 = 177.9	Jan. '04 = 150.1
Index of industrial activity (1992 = 100)	Feb. 5 '05 = 238.2	Jan. 29 '05 = 239.1	Jan. 22 '05 = 240.8	Feb. 7 '04 = 212.3
Hourly earnings index, chemical & allied products (1992 = 100)	Jan. '05 = 142.4	Dec. '04 = 143.6	Nov. '04 = 141.9	Jan. '04 = 137.2
Productivity index, chemicals & allied products (1992 = 100)	Jan. '05 = 130.9	Dec. '04 = 129.8	Nov. '04 = 129.8	Jan. '04 = 123.0

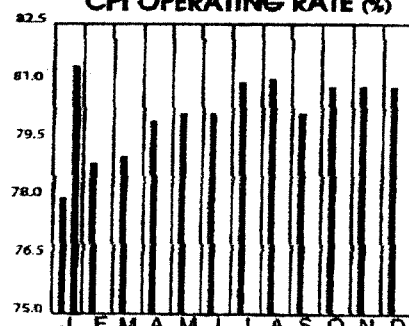
CPI OUTPUT INDEX (1997 = 100)



CPI OUTPUT VALUE (\$ billions)



CPI OPERATING RATE (%)

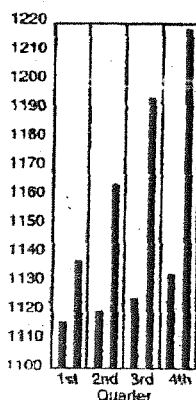


*To convert to 1992 multiply by 1.1514684. To convert to 1987, multiply by 1.2495478. For an explanation and additional information, call 212-621-4612. Current business indicators provided by DRI-WEFA, Lexington, Mass.

MARSHALL & SWIFT EQUIPMENT COST INDEX

(1926 = 100)

	4th Q 2004	3rd Q 2004	4th Q 2003
M & S INDEX	1,218.0	1,194.0	1,133.2
Process industries, average	1,245.4	1,218.9	1,153.6
Cement	1,244.1	1,214.6	1,144.8
Chemicals	1,224.4	1,197.6	1,132.8
Clay products	1,228.7	1,202.1	1,141.0
Glass	1,152.6	1,126.9	1,060.6
Paint	1,254.9	1,227.2	1,158.0
Paper	1,195.6	1,169.4	1,103.1
Petroleum products	1,301.8	1,274.8	1,207.6
Rubber	1,312.9	1,289.5	1,230.1
Related Industries			
Electrical power	1,118.8	1,091.3	1,018.5
Mining, milling	1,277.0	1,250.1	1,178.8
Refrigeration	1,464.8	1,436.6	1,362.7
Steam power	1,197.2	1,169.8	1,101.3



Annual Index:	1999 = 1,058.3	2002 = 1,104.2
	2000 = 1,089.0	2003 = 1,123.6
	1998 = 1,061.3	2004 = 1,178.5

VATAVUK AIR POLLUTION CONTROL COST INDEXES (VAPCCI)

(1st Quarter 1994 = 100.0)

CONTROL DEVICE ³	2001 Avg.	2002 Avg.	2003 Avg. ¹	2nd Q 2004	3rd Q 2004 ²	4th Q 2004 ²
Carbon adsorbers	105.9	106.8	113.0	134.3	141.5	145.3
Catalytic incinerators	112.9	114.5	124.0	146.6	151.5	157.8
Electrostatic precipitators	98.5	101.7	102.9	122.5	128.6	133.6
Flares	100.8	101.7	105.2	131.6	142.5	147.7
Gas absorbers	114.4	115.6	117.3	120.9	122.9	124.6
Refrigeration systems	105.8	106.6	108.8	118.7	122.6	124.8
Regenerative thermal oxidizers	110.7	111.9	113.9	123.1	126.4	128.6
Thermal incinerators	107.9	108.6	110.0	121.1	125.2	127.7
Wet scrubbers	111.8	113.2	120.1	141.8	149.7	154.4

1. Effective fourth quarter 2003, the Bureau of Labor Statistics (BLS) converted all of the Producer Price Indexes (PPI's) from the Standard Industrial Classification (SIC) to the North American Industrial Classification System (NAICS). During this conversion, many PPI's were abolished — among them most of the PPI's that had been key inputs to the VAPCCI's. As a consequence, substitute PPI inputs had to be found. The VAPCCI's for fourth quarter 2003 and subsequent quarters reflect these substitutions.

2. All third and fourth quarter 2004 indexes are preliminary.

3. Effective second quarter 2001, the BLS abolished the Producer Price Indexes (PPI's) for fabric filters and mechanical collectors. As the VAPCCI's for these two control devices were, essentially, their PPI's, the VAPCCI's can no longer be reported.