

Squeeze Is On As Firms Fight For What Little Work Is Available

Production of renewable facilities is bright spot in the gloom

The industrial and manufacturing sector, already careworn with decades of 'hollowing out' as plants moved overseas, continued its slow spiral downward in the last year. The economic crisis that hit in fall 2008 further sapped capital expenditures across the board, and the bankruptcy of two of America's Big Three automakers this spring contributed to the decline.

There are some bright spots, however. New starts have ramped up for polysilicon manufacturing plants as demand for photovoltaics increases and the demand for new battery technology to power hybrid vehicles has created a mini-boom in battery plants in the U. S. A recent injection of accelerated tax credits for plant and equipment for alternative-energy manufacturing, announced by the Obama administration in August, should provide even more stimulus for that sector.

Still, the short-term outlook is one of reduced capacity, more emphasis on retrofits instead of new plant construction, and a sector hamstrung by a lack of credit and slack consumer demand, sources say. "There is a pall of uncertainty hanging over everything," says Richard Haller, CEO of Detroit-based Walbridge. "The arc of the manufacturing sector, if you want to call it an arc, is more a hyperbolic curve downward."

Key manufacturing sectors like auto and steel production were doing well enough last year, Haller says, with work on the boards, particularly plans for retrofits to adapt to new types of demand. "Then August hit," he says, referring to the global economic meltdown. "Then everything just stopped. It just really decimated manufacturing," he says.

The resulting lack of credit has stalled projects and led to what Haller says is a major reduction in capital construction spending in those sectors. Other major contractors agree. "Certainly, we have seen a marked decline in the last 12 months in demand for construction in the manufacturing sector," says Gavin Keith, project executive for DPR Construction, San Jose, Calif. "The collapse of access to capital/financing, the low demand for products and the uncertainty of the timing for recovery, have all stifled manufacturing production and ensuing capital construction programs."

DPR says its best growth potential is in computer-chip fabrication plants, battery plants and solar-panel manufacturing. One example is a new solar-cell plant manufacturing facility in Norcross, Ga, built for Suniva Inc. The 45,000-sq-ft design-build facility—one of the first of its kind in the U.S.—was completed in 16 weeks earlier this year and includes advanced ele-

ments such as high-purity water systems, onsite waste-treatment systems, chemical-delivery systems, chemical bunker and high-purity piping.

Solar-panel manufacturing is quite hot, say industry sources. The Houston-based research firm Industrial Info Resources Inc., estimates there are at least 12 such facilities under development but not yet under construction in the U.S., totaling \$780 million. The largest currently under way is a \$210-million facility near Austin, Texas, by Austin-based Solar Array Ventures. The project broke ground in June. DPR Construction is lead contractor on the plant.

Not Gloomy

"It is not all gloom and doom out there," says Michael Bergen, vice president of marketing with Industrial Info Resources. There are roughly \$10 billion of semiconductor chip plants planned or under construction in the U.S. Intel, for example, is spending \$3 billion to expand a chip plant in Chandler Ariz. Another similarly sized expansion is under way at Intel's existing plant in New Mexico.

Global Foundries Inc., Sunnyvale, Calif., began site preparation earlier this year for a new \$4.2-billion greenfield semiconductor manufacturing plant in Saratoga Springs, N.Y. Delaney Construction Corp., Mayfield, N.Y., is providing civil/site prep for the project.

The downturn is changing how semiconductor plant owners engage contractors, says Bart Eberwein, CEO of Hoffman Co., Portland Ore. With less work and more hungry contractors, owners are squeezing every penny from their supply chain. "We're seeing a shift in purchasing strategy," says Eberwein. "It is becoming super-cost driven."

Some manufacturers are even moving away from preferred providers, Eberwein says. "They are saying, 'This is going to be all about costs, this is all about fees.'" Hoffman has seen a 30% drop in manufacturing volume since last year. "We see no indication there is going to be a quick turnaround," says Eberwein. "You are looking at years and not months of a slower market."

In the pharmaceutical and biotechnology manufacturing sector, opportunities also have diminished but contractors see it as a steady, growing market. More than \$20 billion of capital projects are planned through December 2010, according to Industrial Info.

One example of a recently completed project is a 203,000-sq-ft manufacturing, research and office facility for United Thera-

peutics Corp. in Raleigh, N.C. DPR's Keith says his firm worked closely with UTC as the project's design-build contractor to integrate the manufacturing facility with the office and R&D components of the facility.

Major projects continue in the steel sector. The sector has been hampered by the economic downturn, but still has more than \$26 billion of projects slated to start by December 2010, says Industrial Info's Bergen. One of the largest is a \$1 billion-plus, 1.6-million-sq-ft greenfield complex and mini-mill for manufacturing pipe for oil-and-gas pipelines in Gregory, Texas, near Corpus Christi. The owner is TPCO Enterprises, Houston, a subsidiary of China's Tianjin Pipe Group Corp. The facility will be the largest single investment to date by a Chinese company in the U.S., says a TPCO spokesman.

Auto-Sector Blues

The auto sector has been roiled by the economic recession. The impact for contractors is less greenfield work, a lot more re-tooling of existing facilities and intense competition for available work. Events unfolded earlier this year that are leading to a fundamental change in the auto sector. In June, General Motors filed for bankruptcy protection, citing \$82.3 billion of assets and \$172.8 billion of debt. It emerged from bankruptcy 60 days later, but as a shell of its former self. In the process, GM has shut down plants in Michigan, Indiana, Ohio and Delaware, and plants in Tennessee and elsewhere in Michigan have been put on standby.

Chrysler filed for bankruptcy on April 30 and emerged as a new entity 31 days later with Italy's Fiat as the new controlling owner. Fiat will have a 20% ownership stake in the new entity, called Chrysler Group, but will have effective management control going forward.

Meanwhile, in West Point, Ga., work is nearing completion on Kia Motor Corp.'s \$1-billion-plus greenfield auto-assembly plant. The plant is located 80 miles southwest of Atlanta and is Kia's first in the U.S. Construction began in 2007 and it will produce its Sorento sport utility vehicle when completed. So far, Kia has received over 43,000 applications from people seeking work in the new plant.

The world's largest automaker, Toyota Motor Corp., has had

THE TOP 10 IN STEEL AND NONFERROUS METAL PLANTS

RANK*	FIRM	\$ MIL.
1	Fluor Corp.	2,168.5
2	Bechtel	1,686.0
3	Zachry Group	368.2
4	AkerSolutions	189.8
5	Walbridge	129.0
6	CCC Group Inc.	123.2
7	The Kokosing Group	111.9
8	H&M Co. Inc.	87.2
9	Bowen Engineering Corp.	25.9
10	Industrial Contractors Inc.	21.8

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.

THE TOP 25 IN INDUSTRIAL PROCESS

RANK*	FIRM	\$ MIL.
1	Fluor Corp.	4,831.1
2	Bechtel	1,972.0
3	Jacobs	1,875.1
4	Fagen Inc.	1,657.8
5	Foster Wheeler AG	810.0
6	Zachry Group	801.9
7	URS Corp.	795.7
8	KBR	594.2
9	The Shaw Group Inc.	542.0
10	Parsons	532.5
11	DPR Construction Inc.	478.8
12	Alberici Corp.	450.2
13	Primoris Corp.	430.0
14	Stellar	409.5
15	Matrix Service Co.	369.4
16	CCC Group Inc.	295.1
17	Skanska USA Inc.	287.5
18	The Dennis Engineering Group LLC	270.0
19	McCarthy Holdings Inc.	249.0
20	Graycor	238.0
21	Bovis Lend Lease	224.9
22	Walbridge	194.0
23	AkerSolutions	189.8
24	Torcon Inc.	171.3
25	Haskell	159.3

*BASED ON 2008 CONTRACTING REVENUE FROM INDUSTRIAL PROCESS AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

THE TOP 25 IN PHARMACEUTICALS

RANK*	FIRM	\$ MIL.
1	Jacobs	1,245.5
2	DPR Construction Inc.	478.8
3	Parsons	416.4
4	Fluor Corp.	396.9
5	Skanska USA Inc.	286.4
6	Bovis Lend Lease	224.9
7	Torcon Inc.	171.3
8	The Turner Corp.	126.3
9	Gilbane Building Co.	124.2
10	Structure Tone	79.5
11	Dome Construction Corp.	76.8
12	F.A. Wilhelm Construction Co., Inc.	75.3
13	BMWC Group Inc.	64.5
14	The Whiting-Turner Contracting Company	40.0
15	McCarthy Holdings Inc.	32.0
16	Hunt Construction Group Inc.	24.0
17	CH2M HILL	20.5
18	Industrial Contractors Inc.	16.4
19	Oltmans Construction Co.	13.0
20	PCL Construction Enterprises Inc.	12.0
21	Perini Corp.	10.0
22	Irwin & Leighton Inc.	9.8
23	Foster Wheeler Ltd.	8.0
24	Riley Construction Co. Inc.	6.6
25	C. Overaa & Co.	5.2

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.

Industrial Process/Manufacturing

its own set of difficulties as consumer demand shifts. It is reconfiguring its portfolio of plants in the U.S. to reflect new consumer buying habits. At this time last year, Toyota was moving forward on construction of a major facility in Blue Springs, Miss., to produce a new version of its Highlander SUV. The \$1.3-billion plant was scheduled for completion in 2010. Last

December, Toyota said it would retool the plant to make Prius hybrid vehicles, but demand for that vehicle has slackened. Since then, completion of the plant is on indefinite hold, awaiting an upturn in the economy.

Conversely, Toyota in July said it would spend \$470 million to retool and upgrade its Princeton, Ind., plant to build its Se-

THE TOP 15 IN CHEMICAL PLANTS

RANK*	FIRM	\$ MIL.
1	Fluor Corp.	2,206.4
2	Foster Wheeler Ltd.	798.0
3	URS Corp.	794.4
4	The Shaw Group Inc.	541.9
5	Jacobs	408.2
6	Zachry Group	405.3
7	KBR	282.8
8	Matrix Service Co.	217.6
9	Bechtel	137.0
10	Parsons	109.9
11	Day & Zimmermann	106.2
12	Industrial Contractors Inc.	69.2
13	CCC Group Inc.	68.4
14	CB&I	56.0
15	Gray Construction	51.2

*BASED ON 2008 CONTRACTING REVENUE FROM SEWERAGE & SOLID WASTE AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

THE TOP 10 IN PULP AND PAPER PLANTS

RANK*	FIRM	\$ MIL.
1	KBR	293.5
2	CR Meyer	271.0
3	Jacobs	164.8
4	McCarthy Holdings Inc.	60.0
5	Turner Industries Group LLC	57.3
6	Layne Christensen Co.	40.2
7	BlueScope Construction Inc.	39.2
8	The Lauren Corp.	30.0
9	Zachry Group	28.3
10	AMEC	27.9

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.

THE TOP 15 IN FOOD PROCESSING

RANK*	FIRM	\$ MIL.
1	Stellar	409.5
2	The Dennis Engineering Group LLC	270.0
3	Haskell	159.3
4	Klinger Cos. Inc.	117.0
5	Big-D Construction Corp.	101.1
6	Facility Group	87.0
7	Gray Construction	72.3
8	Fluor Corp.	59.3
9	Jacobs	56.6
10	Oltmans Construction Co.	47.0
11	Kiewit Corp.	46.7
12	Miron Construction Co., Inc.	43.5
13	Alberici Corporation.	31.3
14	Kajima Construction Services Inc.	26.6
15	The Boldt Co.	25.1

*BASED ON 2008 CONTRACTING REVENUE FROM SEWERAGE & SOLID WASTE AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

THE TOP 25 IN MAUNUFACTURING

RANK*	FIRM	\$ MIL.
1	Walbridge	539.0
2	Barton Malow Co.	330.6
3	Hoffman Corp.	268.1
4	The Yates Cos. Inc.	217.9
5	Jacobs	198.5
6	The Turner Corp.	198.2
7	HK Systems Inc.	193.3
8	Haskell	164.9
9	Gray Construction	160.4
10	Anderson Columbia Co. Inc.	160.2
11	Fluor Corp.	153.0
12	Commercial Contracting Group	145.5
13	Kiewit Corp.	133.7
14	Skanska USA Inc.	117.4
15	Devcon Construction Inc.	100.0
16	Alberici Corp.	94.1
17	Aristeo Construction Co.	91.8
18	The Whiting-Turner Contracting Co.	91.0
19	Roy Anderson Holding Corp.	89.0
21	Roncelli Inc.	88.0
20	Facility Group Inc.	88.0
22	Structure Tone	79.5
24	Epstein	79.0
23	Angelo Iafrate Cos.	79.0
25	O'Neal Inc.	73.7

*BASED ON 2008 CONTRACTING REVENUE FROM MANUFACTURING AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

THE TOP 5 IN ELECTRONIC ASSEMBLY

RANK*	FIRM	\$ MIL.
1	Skanska USA Inc.	117.4
2	The Turner Corp.	94.0
3	Clancy & Theys Construction Co.	81.8
4	The Whiting-Turner Contracting Company	39.0
5	Perini Corp.	26.0

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.

THE TOP 10 IN SEMICONDUCTORS

RANK*	FIRM	\$ MIL.
1	Hoffman Corp.	156.6
2	Fluor Corp.	144.4
3	Jacobs	60.9
4	CH2M HILL	55.4
5	Pizzagalli Construction Co.	53.9
6	The Whiting-Turner Contracting Company	52.0
7	Klinger Cos. Inc.	37.0
8	PCL Construction Enterprises Inc.	21.0
9	The Yates Cos. Inc.	17.7
10	BMWC Group Inc.	7.0

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.

quoia and Highlander SUV lines. And in August, Toyota announced a \$147 million expansion of its four-cylinder engine production facility in Huntsville, Ala.

Changing Times

The reconfiguring of plants will be the dominant trend going forward, says Walbridge's Haller. "The auto sector is undergoing a fundamental shift in production," he says. "There will be fewer large projects, more re-tooling and a strong sense of uncertainty. We recognize that there is still meaningful opportunity, particularly for firms that can react quickly to the automakers' changing plans and we are actively pursuing these opportunities."

Haller sees a 50% drop in the pipeline of auto-related projects since last year. As a result, automakers are making contractors jump through even more hoops to secure work, he says. In a recent competition for a relatively small project, Haller says one major automaker took nine firms through the entire selection process before making a decision.

The impact on top contractors working in the auto sector, as in most other manufacturing sectors, is for even more blistering competition for available work.

"It is a buyer's market but there just are not a lot of buyers out there," says Haller. ■

THE TOP 15 IN AUTOPLANTS		
RANK*	FIRM	\$ MIL.
1	Walbridge	439.0
2	Barton Malow Co.	330.6
3	The Yates Cos. Inc.	200.2
4	Gray Construction	113.3
5	The Turner Corp.	104.2
6	Aristeo Construction Co.	91.8
7	Alberici Corporation.	86.4
8	Clark Group	51.9
9	Roy Anderson Holding Corp.	35.0
10	F.A. Wilhelm Construction Co., Inc.	32.1
11	Brice Building Co. Inc.	21.0
12	Messer Construction Co.	15.9
13	Kajima Construction Services Inc.	15.8
14	The Boldt Co.	14.0
15	Golder Associates Inc.	10.8

*BASED ON 2008 CONTRACTING REVENUE FROM SEWERAGE & SOLID WASTE AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

THE TOP 10 IN AEROSPACE		
RANK*	FIRM	\$ MIL.
1	Haskell	164.9
2	Jacobs	137.5
3	Kiewit Corp.	85.6
4	Hensel Phelps Construction Co.	50.8
5	Burns & McDonnell	46.0
6	Key Construction Inc.	24.0
7	XL Construction Corp.	15.0
8	O & G Industries Inc.	12.8
9	Big-D Construction Corp.	11.6
10	BMWC Group Inc.	11.0

*BASED ON SUPPLEMENTAL MARKET REVENUE DATA FROM 2008 PROVIDED BY INDUSTRY FIRMS PARTICIPATING IN ENR'S SOURCEBOOK MARKET SURVEY.