

By Bruce Buckley, Mary B. Powers and Debra K. Rubin

Labor Gaps Bring Steady Pay Raises

AGC says half of contractors have boosted craft base pay, but issues are tense in some markets



With construction activity at a high level in many parts of the U.S., a majority of contractors face a tight labor market. As some firms report offering higher wages to attract workers, craftworkers continue to see steady increases in base pay.

In August, the Associated General Contractors of America reported that 69% of construction firms are having a hard time filling hourly craft positions, according to its survey of 1,460 contractors. Craftworker shortages are the most severe in the Midwest, where 77% of contractors report having a hard time filling positions, says AGC. More than 70% in the South and West also report difficulties

Although more than two-thirds of surveyed firms have had trouble filling available positions this year, that demand is down from last year, when 86% of re-

sponding firms reported a tight labor market. Stephen Sandherr, CEO of AGC, said that between July 2015 and July 2016, construction employment expanded in 239 out of 358 metro areas, according to federal employment data.

AGC added that 75% of firms say it will remain hard—or get harder—to find hourly craftworkers in the next 12 months. U.S. Bureau of Labor Statistics' data show construction unemployment rates continuing to drop. Construction unemployment fell to 4.6% in June and 4.5% in July, the first time the rate dipped below 5% in nearly a decade. "These shortages have the potential to undermine broader economic growth by forcing contractors to slow scheduled work or choose not to bid on projects, inflating the cost of construction," Sandherr said in a statement. To help address the tight labor market, nearly half of AGC's surveyed con-

struction firms increased base pay rates for craftworkers because of the difficulty in filling positions. In addition, at least 22% of the employers have improved employee benefits for craftworkers, and 20% report that they are providing incentives and bonuses to attract workers.

Union Pay Hikes Are Gradual

Despite promises of higher wages, increases in base pay have been gradual. For union labor, first-year settlements saw a 2.5% increase nationally in 2015, says the Construction Labor Research Council, which tracks collective-bargaining.

Executive Director Carey Peters says the first-year settlements in 2016 are tracking at about 2.8% through mid-September. That rate continues a gradual and steady upward trend in settlements since 2011, when they bottomed out at 1.7%. But the hikes remain well below previous levels, he points out. Before the recession, first-year settlements averaged 4.4% in 2007 and 4.6% in 2008.

While settlements for most trades remain close to the national average, Peters says electricians and plumber-pipefitters are trending above average this year, while bricklayers are below average. Settlements in the South Central region—Arkansas, Louisiana, New Mexico, Oklahoma and Texas—are trending above the national average, with other regions clustered around the national average, he adds.

The length of settlements also has increased. Peters says that, anecdotally, he has seen fewer one-year pacts and more multi-year ones. "We're seeing five-year settlements now," he says. "We're a number of years removed from the Great Recession, so

UNION CRAFT WAGE-FRINGE TRENDS

ENR 20-CITY AVERAGES, SEPTEMBER 2016-SEPTEMBER 2010

	2016		2015		2014		2013		2012		2011		2010	
	RATE	% CHG.	RATE	% CHG.	RATE	% CHG.	RATE	% CHG.	RATE	% CHG.	RATE	% CHG.	RATE	% CHG.
BRICKLAYERS	51.96	+2.6	50.65	+2.1	49.59	+2.3	48.48	+2.1	47.50	+2.1	46.52	+2.0	45.61	+2.8
CARPENTERS	53.19	+1.2	52.58	+2.4	51.34	+4.0	49.36	+2.0	48.40	+2.6	47.17	+2.0	46.26	+5.2
CEMENT MASONS	49.17	+0.9	48.74	+2.3	47.64	+4.2	45.72	+1.8	44.93	+2.1	43.99	+1.7	43.24	+2.3
ELECTRICIANS	61.58	+4.8	58.78	+1.8	57.73	+3.6	55.73	+2.0	54.62	+1.2	53.99	+1.7	53.09	+4.4
ELEVATOR CONSTRUCTORS	75.94	+2.8	73.87	+1.6	72.69	+4.4	69.63	+4.5	66.62	+1.2	64.08	+2.2		+0.0
GLAZIERS	51.35	+3.2	49.74	+1.3	49.11	+2.5	47.90	+2.6	46.67	+1.5	45.99	+1.9	45.12	+5.9
INSULATION WORKERS	59.88	+3.5	57.83	0.0	57.82	+5.1	55.01	+4.2	52.81	+1.1	52.23	+1.5	51.46	+6.4
IRONWORKERS														
REINFORCING	56.95	+1.6	56.07	+2.2	54.87	+3.0	53.25	+1.0	52.74	+2.6	51.41	+1.7	50.57	+4.2
STRUCTURAL	59.04	+2.7	57.49	+3.8	55.36	+2.2	54.15	+1.2	53.49	+2.5	52.21	+2.0	51.20	+4.3
LABORERS														
BUILDING	42.24	+2.1	41.36	+3.9	39.80	+2.4	38.88	+3.8	37.45	+1.6	36.86	+1.6	36.27	+3.8
HEAVY AND HIGHWAY	42.62	+3.6	41.12	+2.1	40.27	+1.8	39.57	+3.3	38.32	+4.8	36.57	+1.4	36.08	+3.8
MILLWRIGHTS	54.80	+0.1	54.76	+0.1	54.73	+5.5	51.87	+2.9	50.39	+1.7	49.57	+1.6	48.78	+5.2
OPERATING ENGINEERS														
CRANE OPERATORS	58.29	+2.9	56.67	+4.9	54.04	+4.4	51.76	+1.8	50.85	+2.2	49.77	+2.9	48.37	+4.0
HEAVY EQUIPMENT	55.37	+3.2	53.64	+2.0	52.57	+4.8	50.14	+1.9	49.19	+1.1	48.67	+1.9	47.74	+4.4
SMALL EQUIPMENT	53.98	+8.7	49.64	+2.7	48.33	+1.4	47.64	+2.2	46.63	+2.4	45.53	+1.1	45.02	+5.6
PAINTERS	46.57	+0.8	46.19	0.0	46.19	+3.9	44.45	+1.1	43.97	+1.2	43.43	+2.1	42.52	+8.4
PIPEFITTERS	62.33	+1.3	61.54	+1.8	60.45	+3.9	58.18	+3.1	56.41	+2.7	54.94	+1.4	54.17	+4.9
PLASTERERS	48.27	+0.6	47.99	+0.3	47.86	+4.4	45.83	+1.8	45.04	+1.2	44.51	+1.4	43.91	+3.9
PLUMBERS	62.73	+2.2	61.40	+2.6	59.86	+3.1	58.07	+1.7	57.08	+1.2	56.38	+2.0	55.25	+3.3
ROOFERS	45.01	NA	45.65	0.0	45.65	+3.0	44.32	+2.2	43.35	+1.3	42.78	+2.1	41.89	+4.6
SHEET-METAL WORKERS	60.78	+0.5	60.45	+2.0	59.25	+3.9	57.00	+2.0	55.87	+2.4	54.58	+5.6	51.71	+1.7
TEAMSTERS	46.55	+2.7	45.33	+4.1	43.55	+3.7	41.99	+1.4	41.40	+2.9	40.25	+2.4	39.29	+3.7

SOURCE: ENR CONSTRUCTION ECONOMICS DEPT. RATE PER HOUR INCLUDES BASE RATE PLUS FRINGE BENEFITS. PERCENT CHANGE ANNUAL.

perhaps the bargaining parties are feeling more comfortable now with multiyear settlements than during an unsettled economy.”

Keeping Pace

Merit-shop craftworkers are seeing similar trends, with average wage hikes of 3.6% in 2015, says a survey by research firm Personnel Administration Services. It noted that contractors anticipate giving, on average, a 3.5% hike this year, although firms tend to report increase estimates conservatively, says PAS President Jeff Robinson. “Even level at 3.5%, that’s still ahead of what other industries are reporting,” which is about 3%, he adds. “The industry knows it has to pay to keep folks,” Robinson says.

The researcher also notes that construction wage increases outpace the federal BLS Employment Cost Index, which reported a 12-month, 2.4% increase for private industry workers between June 2015 and June 2016. Robinson says some analysts are predicting the index could top 3% by year-end. “Unless something dras-

tic happens, I can’t see the [rate of increase] coming down anytime soon,” he adds. Industry economists’ predictions of an uptick in construction growth next year likely will further squeeze workforce costs. Associ-

ated Builders and Contractors chief economist Anirban Basu in August predicted that nonresidential construction spending will rise 3% to 4% in 2017, led by the private commercial sector and aided by

MULTI-YEAR SETTLEMENTS BY CRAFT

CRAFT	FIRST YEAR			SECOND YEAR			THIRD YEAR		
	COUNT	AVERAGE	MEDIAN	COUNT	AVERAGE	MEDIAN	COUNT	AVERAGE	MEDIAN
BRICKLAYERS	44	2.1%	2.0%	20	2.1%	2.0%	13	2.4%	2.4%
CARPENTERS	21	2.7%	2.9%	8	3.3%	3.2%	4	3.4%	3.6%
CEMENT MASONS	34	2.6%	2.5%	18	2.1%	2.5%	15	2.6%	2.4%
ELECTRICIANS	34	2.7%	2.6%	20	2.5%	2.7%	14	2.6%	2.5%
INSULATORS	11	2.5%	2.2%	< 3	-	-	< 3	-	-
IRONWORKERS	92	2.5%	2.5%	6	3.1%	2.9%	5	2.6%	2.6%
LABORERS	41	2.3%	2.8%	13	2.7%	2.8%	8	2.8%	2.8%
MILLWRIGHTS	16	2.4%	2.6%	6	3.2%	3.4%	4	3.6%	3.6%
OPERATING ENGINEERS	22	2.8%	2.7%	11	2.8%	2.7%	10	2.4%	2.6%
PAINTERS	25	2.5%	2.5%	9	2.7%	2.6%	3	2.7%	2.8%
PIPEFITTERS AND PLUMBERS	23	2.3%	2.1%	7	2.8%	2.9%	6	2.9%	2.9%
PLASTERERS	20	3.0%	2.7%	6	2.4%	2.5%	4	2.5%	2.5%
SHEET-METAL WORKERS	21	2.2%	2.3%	11	2.5%	2.5%	10	2.4%	2.3%
TEAMSTERS	7	3.3%	2.6%	< 3	-	-	< 3	-	-
UNITED STATES	416	2.5%	2.5%	141	2.7%	2.7%	101	2.7%	2.6%

SOURCE: CLRC. ANNUAL PERCENT CHANGES FOR DECEMBER 2015 DATA.

some improvement in energy construction. The National Association of Home Builders forecasts low mortgage interest rates will enable residential construction growth, “but it will be constrained by shortages of labor and rising regulatory costs.”

New Rules

But changing labor cost dynamics will continue to fuel tension in wage and benefit negotiations in some key markets. Nearly 700 glaziers in July staged a three-week strike in Washington state’s booming Puget Sound area against the 13 contractors in the Western Washington Glass Contractors Multi-Employer Group, the first such action in 30 years, according to media reports. Members of glaziers’

union Local 188 rejected the employers’ final offer for an additional \$8.50 in wages and benefits per hour over four years. But the strike was settled when the two sides agreed to an \$8.00-per-hour raise over three years, Lisa Daroja, union business manager, told ENR. “The economy is doing well here,” she says. “We’re making up lost ground.”

In New York City, after months of negotiation in 2015, building trades and developers could not agree by a January deadline on a deal to set prevailing wages on residential construction to continue the city’s 421-a tax abatement program, a key catalyst for affordable housing to be built. The incentive was set to end if there were no deal by that date.

Gov. Andrew Cuomo (D) in August proposed a replacement, a new wage subsidy for large projects in Brooklyn and Queens, say real estate-sector media. But some of the city’s largest contractors have opted not to renew union collective bargaining, as nonunion firms make inroads in key private-sector building sectors, said The Wall Street Journal last April.

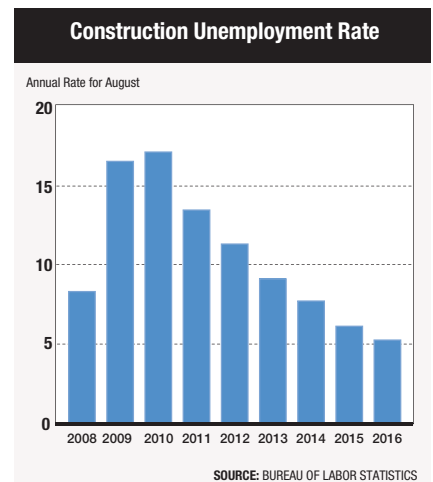
In Jersey City, N.J., the future of a nine-year-old municipal rule tying city tax abatements to project-labor-agreement wage rates on private projects above \$25 million may see changes after a U.S. appellate court upheld a challenge from open-shop firms (see story, p. 18).

The Associated Builders and Con-

2016 OPEN-SHOP WAGE-FRINGE PACKAGE FOR CRAFTWORKERS, BY REGION									
LOCATION	BRICKLAYERS		CARPENTERS		CEMENT MASONS		ELECTRICIANS		ANNUAL PERCENT CHANGE
	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	
NEW ENGLAND ¹	23.10	23.5	24.95	21.7	25.25	21.4	29.83	21.1	
NEW YORK AND NEW JERSEY	24.60	20.0	25.26	21.1	25.01	20.9	29.43	21.8	
MID-ATLANTIC ²	25.54	22.5	24.35	20.2	24.65	20.5	28.21	19.8	
SOUTHEAST ³	25.25	21.3	23.32	19.3	23.36	20.0	26.60	18.2	
GREAT LAKES ⁴	24.93	22.9	24.43	20.2	25.01	21.2	28.13	21.0	
SOUTH CENTRAL ⁵	25.15	21.2	24.30	19.4	24.94	20.2	27.96	18.2	
CENTRAL ⁶	24.02	22.6	24.74	20.3	24.66	20.6	28.09	20.0	
CENTRAL MOUNTAIN ⁷	24.94	21.5	25.09	20.2	24.84	20.3	27.92	19.7	
WESTERN ⁸	24.77	20.5	25.02	19.5	24.60	20.0	27.99	17.6	
NORTHWEST ⁹	28.37	25.7	25.60	20.6	25.08	20.2	28.38	19.9	
2016 U.S. AVERAGE	25.66	22.3	23.87	20.5	23.81	20.9	27.50	20.1	
ANNUAL PERCENT CHANGE	+3.5	—	+3.4	—	+3.5	—	+3.7	—	

LOCATION	HVY. EQUIP. OPERATOR		LABORERS		PLUMBERS		IRONWORKERS		ANNUAL PERCENT CHANGE
	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	RATE (IN \$)	FRINGE (ADDED %)	
NEW ENGLAND ¹	28.31	21.7	16.79	18.3	27.98	22.3	28.84	21.6	
NEW YORK AND NEW JERSEY	30.70	21.6	16.72	17.3	28.02	21.6	29.02	21.0	
MID-ATLANTIC ²	29.19	21.1	16.23	17.7	26.75	22.5	28.19	19.6	
SOUTHEAST ³	28.00	19.0	15.42	17.1	23.70	17.9	28.21	17.3	
GREAT LAKES ⁴	28.65	21.6	17.24	18.6	28.61	20.0	28.34	20.1	
SOUTH CENTRAL ⁵	29.85	18.7	16.37	16.4	24.47	17.1	28.35	17.0	
CENTRAL ⁶	28.64	19.9	16.92	17.7	29.28	25.3	27.42	20.0	
CENTRAL MOUNTAIN ⁷	29.11	20.4	17.16	17.1	26.11	21.0	28.07	19.3	
WESTERN ⁸	30.59	18.6	17.25	16.6	24.60	15.1	28.55	16.9	
NORTHWEST ⁹	28.22	20.3	17.83	18.7	28.32	18.8	28.21	18.9	
2015 U.S. AVERAGE	27.48	20.4	16.57	18.4	26.31	19.5	27.44	18.6	
ANNUAL PERCENT CHANGE	+3.4	—	+3.4	—	+3.7	—	+3.5	—	

SOURCE: PERSONNEL ADMINISTRATION SERVICES INC., SALINE, MICH. WAGE RATES SHOWN ARE AVERAGE HOURLY BASE RATES EXCLUDING FRINGES. BASE: ¹CONN., MASS., MAINE, N.H., R.I., VT., ²DEL., MD., PA., W.VA., D.C. ³ALA., FLA., GA., KY., MISS., N.C., S.C., TENN., ⁴ILL., IND., MICH., MINN., OHIO, WIS., ⁵ARK., LA., N.M., OKLA., TEXAS, ⁶IOWA, KAN., MO., NEB., ⁷COLO., MONT., N.D., S.D., UTAH, WYO., ⁸ARIZ., CALIF., HAWAII, NEV., ⁹ALASKA, IDAHO, ORE., WASH.



tractors’ state chapter, which brought the suit, “seeks a level playing field for all contractors to bid and win work,” says Dominick Mondini, president.

But according to Rutgers University labor-law professor Alan Hyde, the appellate court position “seems to be that a local government may require project labor agreements when it funds development, as the U.S. Supreme Court has held, but not when the funding comes by way of a tax abatement, instead of an appropriation. This is a pretty stupid line to draw, and there is no precedent supporting it.” Hyde adds, “The case now goes back for trial, so the decision by itself will not have any impact on construction labor relations.” ■

By Gary J. Tulacz

Executives Believe Growth in Building Market Is Slowing

Many say projects, now placed on hold pending the presidential election, will break loose in 2017

The construction market has been growing steadily for the past few years. Many industry executives are predicting a slowdown in this growth, however. Some execs see this potential slowdown as a natural part of the construction cycle. But for many, there is a wait-and-see attitude pending the results of November's presidential election.

The ENR Construction Industry Confidence Index for the third quarter shows that, of the 245 executives of large construction and design firms responding to the survey, most believe market growth will begin to level off in 2017. The CICI index was 58 on a scale of 100, down four points from the second quarter.

The CICI measures executive sentiment about the current market and reflects the respondents' views on where it will be in the next three to six months and over a 12- to 18-month period. The index is based on responses to surveys sent out to more than 6,000 U.S. firms on ENR's lists of leading

general contractors, subcontractors and design firms. The latest survey was conducted from Aug. 30 through Sept. 28.

As with last quarter, the buildings sector showed a sagging level of confidence among construction executives. The CICI ratings fell in five of the nine buildings sectors in this quarter, after the ratings in six of the nine sectors sagged in the previous quarter. The executives polled in this quarter now see the markets in the commercial buildings, retail, and entertainment and cultural sectors as effectively flat over the next 18 months.

On the infrastructure side, some of the euphoria has worn off over the passage of the federal Fixing America's Surface Transportation (FAST) Act, and execs are getting impatient for the outcome of the pending vote on the federal Water Resources De-

velopment Act. As a result, confidence in the growth of the transportation and water-and-waste markets have moderated.

The soon-to-be-released results of the latest Confindex survey from the Construction Financial Management Association, Princeton, N.J., demonstrates that executives are more worried

about the current market than what is coming in 2017. CFMA polls 200 CFOs each quarter from general and civil contractors and subcontractors.

CFMA: Wait Till Next Year

While a Confindex rating of 100 indicates a stable market, higher ratings show growth is expected. "Our Confindex rose one point, from 121, in the second quarter to 122 [on a scale of 200] in this quarter,"

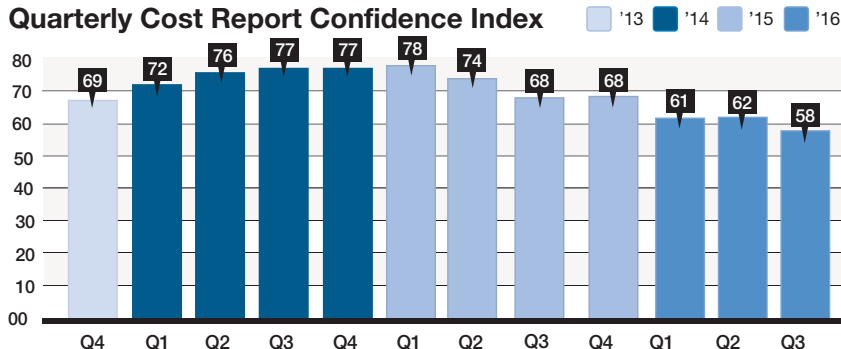


PROSPECTS BY INDIVIDUAL SECTORS BY FIRMS WORKING IN THOSE MARKETS	NUMBER OF FIRMS	CURRENTLY (%)			3-6 MONTHS (%)			12-18 MONTHS (%)		
		DECLINING ACTIVITY	STABLE ACTIVITY	IMPROVING ACTIVITY	DECLINING ACTIVITY	STABLE ACTIVITY	IMPROVING ACTIVITY	DECLINING ACTIVITY	STABLE ACTIVITY	IMPROVING ACTIVITY
COMMERCIAL OFFICES	146	15	64	21	19	60	21	29	53	18
DISTRIBUTION, WAREHOUSE	94	14	56	30	16	59	26	21	52	27
EDUCATION K-12	109	17	55	28	17	52	31	12	61	28
ENTERTAINMENT, THEME PARKS, CULTURAL	68	18	59	24	24	57	19	32	51	16
HOSPITALS, HEALTH CARE	133	11	54	35	8	52	40	5	54	41
HIGHER EDUCATION	135	10	61	30	10	58	32	11	66	23
HOTELS, HOSPITALITY	108	8	60	31	11	63	26	23	63	14
MULTI-UNIT RESIDENTIAL	95	13	52	36	19	54	27	38	44	18
RETAIL	110	20	55	25	24	52	25	29	54	17
INDUSTRIAL, MANUFACTURING	106	22	55	24	21	58	21	16	49	35
TRANSPORTATION	70	13	53	34	13	49	39	7	50	43
WATER, SEWER AND WASTE	69	16	57	28	14	54	32	12	55	33
POWER	48	23	48	29	25	46	29	15	44	42
PETROLEUM, PETROCHEMICAL	38	55	37	8	42	34	24	13	32	55
ENVIRONMENTAL, HAZARDOUS WASTE	26	4	77	19	12	65	23	4	65	31

ENR FIGURES MAY NOT ADD UP TO 100% DUE TO ROUNDING

shows construction executives believe the overall U.S. economy is growing slower than the construction market

Quarterly Cost Report Confidence Index



SOURCE: ENR

says Stuart Binstock, CEO of CFMA.

The individual categories that make up the Confindex rating show reasons for contractors to be optimistic about 2017, says Binstock. The survey's "current business conditions" component fell three points, to 126, but the "year ahead" rating rose six points, to 117.

Binstock attributes the sag in current business conditions to the uncertainty surrounding the presidential election. He says many projects have been put on hold until owners know who will be president and get a sense of the policies of the new administration. "This uncertainty will be over by the start of 2017," Binstock says.

For the industry, it doesn't matter so much who gets elected. A bigger problem is that projects are being put on hold due to the uncertainty during the run-up to the presidential election, says Anirban Basu, CEO of economic consultant Sage Policy Group Inc., Baltimore, and CFMA economic adviser.

"We are beginning to see some pent-up demand as owners defer building decisions until after the election. Irrespective of who is elected, we will know what the regulatory environment will look like after the election," Basu says.

Basu says firms in the infrastructure sector should be happy, regardless of who is elected. "Secretary Clinton has proposed a five-year, \$250-billion infrastructure spending plan—plus an infrastructure bank, to encourage added spending, and Donald Trump has proposed to double this amount for in-

frastructure improvements," Basu notes.

The buildings market, which has been booming over the past few years, is beginning to see some bumps in the road. Some sectors, such as multi-unit residential and commercial buildings, may be getting overbuilt in some cities. Multi-unit residential, long one of the highest-rated sectors in the CICI survey, dropped eight points, to a 55 rating, this quarter.

Uncertainties in Project Financing

Part of the problem may be the availability of project financing. Each quarter, ENR asks survey respondents whether the availability of project financing is easier or tougher now than it was six months ago. For the first time in several years, more people said project financing was tougher to obtain than those who believed it was easier. While 60% of survey participants say project financing has been unchanged over the past six months, 22% now say it has become tougher to obtain financing.

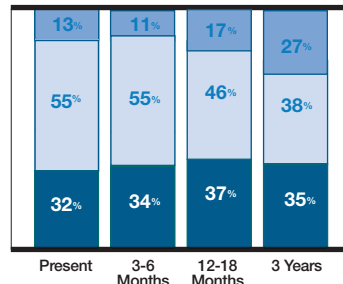
Binstock says this concern is mirrored in CFMA's Confindex survey. "The percentage of our CFOs that are very concerned about the lack of bank lending for projects jumped to 14% from 7% in this quarter," he notes.

Basu says bank regulators are becoming increasingly concerned about the percentage of bank portfolios invested in real estate. "Building sectors, particularly in residential and commercial, may be getting overbuilt in some cities, causing lenders to reassess their exposure to the real estate market," he says. ■

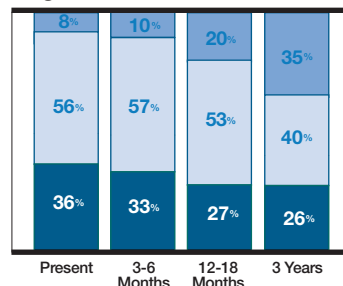
How Different Types of Firms View the Overall Market

Improving Stable Declining

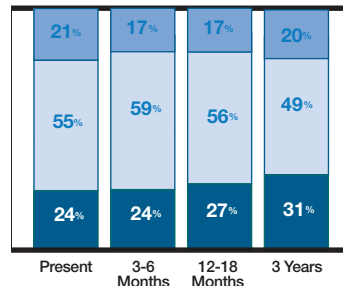
Designers



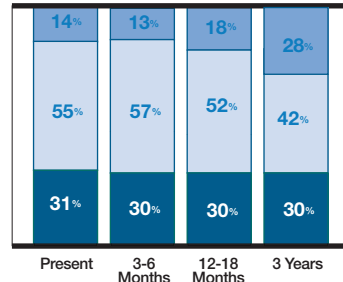
General Contractors, Construction Managers, Engineer-Constructors



Subcontractors



All Firms



SOURCE: ENR
FIGURES MAY NOT ADD UP TO 100% DUE TO ROUNDING.

By **Tim Grogan**

Inflation Blindsided by Bidding, But Input Costs Are Subdued

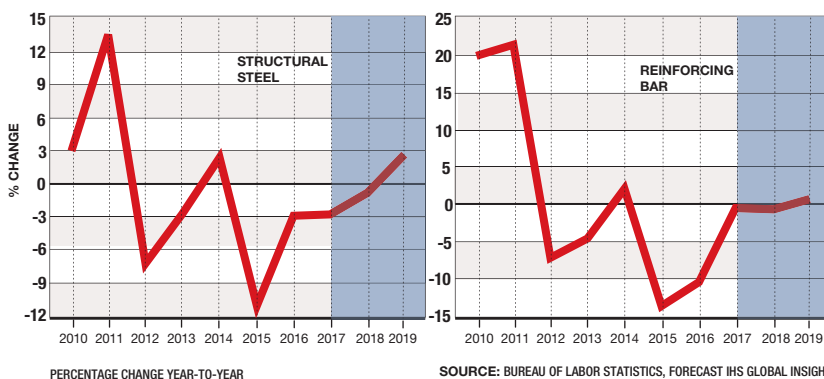
Steel prices caught in a squeeze—too much supply and not enough demand, despite recovery

Despite several years of recovery, construction inflation is still feeling the impact of the recession that reduced the number of subcontractors and, in turn, still is pushing up bids. “There is plenty of demand out there, and we see a lot of general contractors, but they are all chasing the same subcontractors,” says John Moreno, chief estimator for the cost consulting firm Sierra West.

This pressure can be seen in selling price indexes when they are compared to the general building index, which mostly measure the input costs of materials and labor (see table, p. 42). For example, in its latest report, the materials component of Sierra West’s general building index was up 0.7% for the year, while the labor component was up 1.6%. In contrast, the firms’ in-place subcontractor costs was up 10.8% for the year.

This trend also is reflected in the Rider Levett Bucknall selling price index, which is up 5.8% for the year compared to an average 2.2% increase for five general-purpose cost indexes. “These sub shortages are not the norm for a standard economy,” says Moreno.

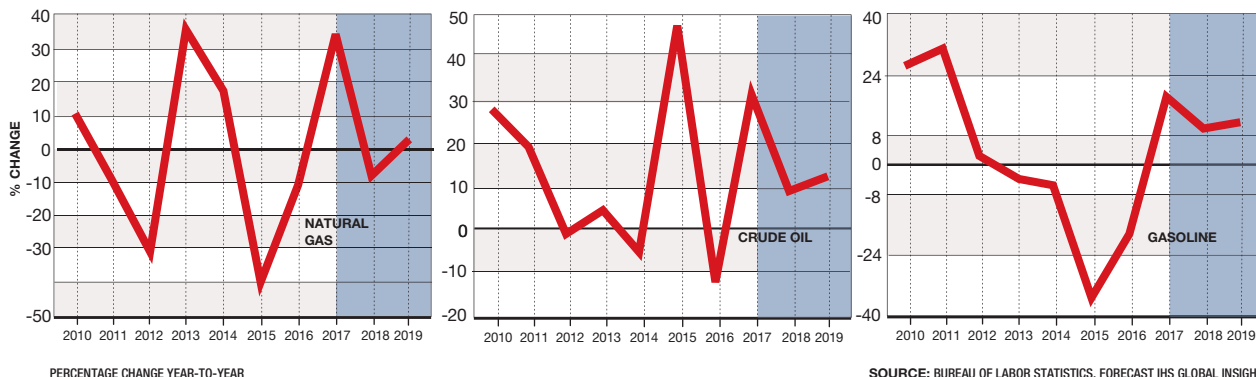
Steel and Rebar Prices Predicted to Remain Low



Inflation in the residential building market is getting a push from higher lumber prices, which in August were up 7.3% for the year, according to the Bureau of Labor Statistics. Partly as a result, the cost index for new single-family construction jumped 2.6% this quarter, following a 2.0% gain during the previous quarter, according to the U.S. Commerce Dept., which compiles the index. The two strong quarters have pushed the index 5.0% above a year ago. By contrast, Commerce’s cost index for new warehouses

increased just 1.4% during the last year. “We predict that lumber prices will begin to flatten out soon,” says Deni Koenhems, construction-materials analyst for the forecasting firm IHS Global Insight. She expects an increase in Canadian imports to dampen U.S. lumber prices and that prices will end the year averaging a 3.2% annual gain, followed by another 3.5% annual increase in 2017. However, she predicts prices will start to weaken in 2018 and 2019. “In fact, I see little inflationary pressure on most construction materials,

Low Energy Cost Has Helped To Dampen Inflation



which are generally oversupplied and have low input costs,” Koenhems says. In addition, she notes, “demand from China has not been as robust as in previous years.”

One of the cornerstones of IHS’s modest forecast for construction-materials costs are extremely low energy costs. However, the firm warns that prices may bounce back in 2017 before settling down again. Natural-gas prices have fallen 60% over the past two years. They are expected to rebound 34.3% next year before falling again in 2018, IHS predicts. A similar trend is forecast for crude-oil prices. Gasoline prices have fallen for four consecutive years, including last year’s 35.8% drop and this year’s expected 18.2% decline. Next year, gasoline prices are forecast to return to 2015’s low level, which still should leave plenty of bargains at the pump, according to IHS.

“Steel prices are at or past the bottom but are still a lot lower than last year,” says John Anton, steel analyst for IHS. Reinforcing-bar prices fell to \$499 at the start of this year from around \$683 a ton at the beginning of 2014; since then, they have been “wiggling sideways” in the low \$500-a-ton range, says Anton.

“Structural-steel prices did not fall as far as rebar, so they still have more of a downside,” says Anton. He predicts that structural-steel prices will follow last year’s average annual decline of 11.1%, with another 3.0% drop this year. Structural-steel prices will continue to decline 2.8% in 2017 and 0.9% in 2018, before posing a modest increase of 2.5% in 2019, according to the IHS forecast.

Scrap prices, from which most construction products are made, fell “too far,” says Anton, going to \$155 a ton now from \$379 a ton in 2014. Prices will rebound to only \$165 for most of the rest of the year. “It’s a good time to be a buyer,” says Anton. “There is not much of a chance of overpaying.” ■

ENR’s cost indexes for 20 cities and a detailed report on pipe prices can be found in ENR’s Construction Economics section, on page 43.

BUILDERS’ CONSTRUCTION COST INDEXES							
NAME, AREA AND TYPE	JULY 2015	OCTOBER 2015	JANUARY 2016	APRIL 2016	JULY 2016	% CHANGE	
						QTR.	YEAR
GENERAL-PURPOSE COST INDEXES:							
ENR 20-CITY: CONSTRUCTION COST ¹	934.43	942.90	943.52	957.02	966.79	+1.0	+3.5
ENR 20-CITY: BUILDING COST ¹	815.65	820.60	823.08	833.78	838.05	+0.5	+2.7
BUREC: GENERAL BUILDINGS ²	356.00	356.00	355.00	358.00	362.00	+1.1	+1.7
FM GLOBAL: INDUSTRIAL ³	315.00	NA	320.00	NA	319.00	NA	+1.3
SIERRA WEST: GENERAL BUILDING	930.72	941.71	958.29	960.53	957.53	-0.3	+2.9
LELAND SAYLOR, MATERIALS/LABOR ¹	935.00	928.97	935.09	950.11	959.53	+1.0	+2.6
ECC, EDWARTOSKI COST CONSULTING ⁵	175.42	176.99	177.28	176.92	178.33	+0.8	+1.7
SELLING PRICES INDEXES—BUILDING:							
SIERRA WEST, SELLING PRICE	1068.4	1070.2	1109.8	1177.9	1191.1	+1.7	10.8
LELAND SAYLOR, SUBCONTRACTOR ¹	956.70	960.29	976.01	984.25	993.32	+0.9	+3.8
TURNER: GENERAL BUILDING ¹	949.00	959.00	970.00	983.00	NA	NA	NA
RIDER LEVETT BUCKNALL ⁶	166.85	169.05	171.38	173.84	176.48	+1.5	+5.8
SPECIAL-PURPOSE BUILDING COST INDEXES:							
U.S. COMMERCE: ONE-FAMILY HOUSE ⁷	114.90	114.40	115.10	117.60	120.70	+2.6	+5.0
U.S. COMMERCE: NEW WAREHOUSES ⁷	140.80	142.20	141.70	143.40	142.80	-0.4	+1.4
U.S. COMMERCE: NEW SCHOOL BUILDINGS ⁷	149.50	151.20	150.40	151.40	NA	+0.6	+2.4
POWER ADVOCATE: POWERPLANT ⁸	182.05	180.55	178.68	174.29	179.41	+2.9	-1.5

¹BASE: 1967=100; ²BASE: 1977=100; ³BASE: 1980=100; ⁴BASE: 1993=100; ⁵FORMERLY SMITH GROUP, 1992=100; ⁶BASE: APRIL 2005=100; ⁷BASE: 1992=100; ⁸POWERPLANT FOR A 550-MW COMBINED-CYCLE FACILITY.

CONSTRUCTION MATERIALS PRICE MOVEMENT IN 2016									
		JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.
AGGREGATES	MONTHLY % CHG.	1.5	0.4	0.2	0.4	0.3	0.3	0.2	0.2
	ANNUAL % CHG.	4.8	4.9	4.7	4.7	4.6	5.0	4.8	4.5
ALUMINUM SHEET	MONTHLY % CHG.	0.1	-0.4	0.3	-0.5	1.2	0.1	0.1	0.4
	ANNUAL % CHG.	-9.2	-9.8	-9.3	-8.9	-7.0	-4.4	-2.6	-1.0
ASPHALT PAVING	MONTHLY % CHG.	0.8	-0.1	-0.1	0.0	0.0	0.0	-0.1	0.2
	ANNUAL % CHG.	-2.0	-1.8	-1.9	-1.8	-1.8	-2.0	-1.8	-1.5
CEMENT	MONTHLY % CHG.	3.3	-1.0	0.1	1.7	0.1	0.1	0.2	0.1
	ANNUAL % CHG.	6.5	5.3	5.7	3.7	4.1	4.6	4.7	4.4
CONCRETE PIPE	MONTHLY % CHG.	0.0	0.4	-0.8	1.1	-1.1	0.5	0.0	1.6
	ANNUAL % CHG.	1.6	1.8	1.1	2.4	0.7	1.2	0.9	2.5
COPPER PIPE	MONTHLY % CHG.	-1.4	1.6	4.4	-2.2	1.4	-2.3	3.9	1.2
	ANNUAL % CHG.	-17.9	-13.8	-10.8	-14.4	-15.8	-15.6	-8.8	-4.2
DIESEL FUEL	MONTHLY % CHG.	-8.9	-4.9	5.4	3.5	17.2	6.1	2.5	-5.2
	ANNUAL % CHG.	-34.7	-40.8	-38.1	-32.8	-28.5	-22.7	-18.8	-21.1
FABRICATED STEEL	MONTHLY % CHG.	-0.2	0.7	-0.6	1.4	1.7	-0.7	1.5	-0.4
	ANNUAL % CHG.	-3.2	-3.1	-3.6	-2.9	-2.6	-2.1	-0.8	0.1
GYPSUM PRODUCTS	MONTHLY % CHG.	3.5	0.0	-0.8	3.9	-0.3	-1.4	-0.3	0.4
	ANNUAL % CHG.	-1.6	-3.7	-2.7	2.5	2.1	2.0	2.2	3.4
LUMBER, SOFTWOOD	MONTHLY % CHG.	0.7	-0.4	2.8	2.6	2.2	0.0	0.4	1.5
	ANNUAL % CHG.	-7.0	-6.2	-1.5	1.9	6.3	5.2	3.0	7.3
PLYWOOD	MONTHLY % CHG.	0.1	-1.6	0.3	0.6	-0.1	0.7	1.7	1.2
	ANNUAL % CHG.	-6.2	-6.2	-6.4	-5.7	-4.2	-3.0	-0.7	1.9
PVC PRODUCTS	MONTHLY % CHG.	-0.7	0.1	-0.5	0.2	0.6	0.2	0.3	-0.3
	ANNUAL % CHG.	0.2	-0.6	-1.7	-1.6	-1.1	-1.0	-0.8	-0.1
READY-MIX CONCRETE	MONTHLY % CHG.	0.8	0.3	0.2	1.1	-0.3	0.2	0.9	-0.1
	ANNUAL % CHG.	3.7	3.4	3.4	3.2	3.1	3.2	4.3	3.9
SHEET METAL	MONTHLY % CHG.	0.1	-0.4	0.1	-0.1	0.2	-0.1	0.1	0.8
	ANNUAL % CHG.	0.4	-0.1	-0.5	-0.6	-0.4	-0.4	-0.3	0.8
EQUIPMENT	MONTHLY % CHG.	0.6	0.0	-0.1	0.0	0.1	0.0	0.0	0.0
	ANNUAL % CHG.	0.7	0.8	0.7	0.7	0.8	0.8	0.8	0.8

SOURCE: BUREAU OF LABOR STATISTICS. MONTHLY AND YEAR-TO-YEAR PERCENT CHANGES FOR PRODUCER PRICE INDEXES FOR LATEST EIGHT-MONTH PERIOD.

ENR's 20-city average cost indexes, wages and material prices. Historical data and details for ENR's 20 cities can be found at ENR.com/economics

Construction Cost Index

+3.7%
OCT. 2016

ANNUAL INFLATION RATE

1913=100	INDEX VALUE	MONTH	YEAR
CONSTRUCTION COST	10434.56	+0.3%	+3.7%
COMMON LABOR	22172.53	+0.2%	+4.0%
WAGE \$/HR.	42.36	+0.2%	+4.0%

The Construction Cost Index's annual escalation rate rose to 3.7% from 3.4% the previous month, boosted by a 0.2% gain in the indexes' labor component.

Building Cost Index

+2.6%
OCT. 2016

ANNUAL INFLATION RATE

1913=100	INDEX VALUE	MONTH	YEAR
BUILDING COST	5681.63	+0.4%	+2.6%
SKILLED LABOR	9927.94	+0.3%	+2.8%
WAGE \$/HR.	54.82	+0.3%	+2.8%

The Building Cost Index's annual escalation rate rebounded to 2.6% from 2.1% in September but is still below August's 2.8% annual rate.

Material Cost Index

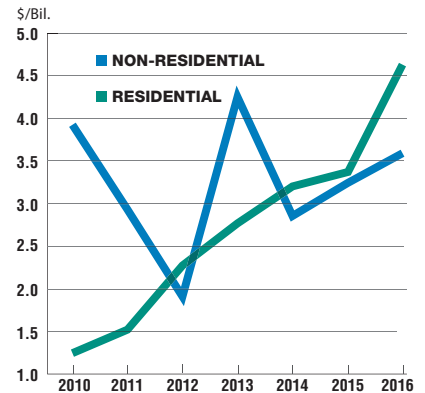
+0.6%
OCT. 2016

MONTHLY INFLATION RATE

1913=100	INDEX VALUE	MONTH	YEAR
MATERIALS COST	3136.69	+0.6%	+2.1%
CEMENT \$/TON	110.75	-1.0%	-2.0%
STEEL \$/CWT	49.92	+0.1%	+0.4%
LUMBER \$/MBF	510.83	+2.0%	+3.8%

The MCI rose 0.6% this month, based on the strength of higher steel and lumber prices.

Construction starts in the San Francisco metro area are forecast to increase 24.6%, to \$8.2 billion, in 2016, according to Dodge Data & Analytics. If correct, the starts rate would be up from a low point of \$4.2 billion in 2012. Most of this year's gain comes from a 38% hike in residential construction starts, which are forecast to reach \$4.6 billion in 2016. The non-residential market is expected to rise 10.8%, with an anticipated \$3.6 billion in new starts this year.



SOURCE: DODGE DATA & ANALYTICS

ENR's Cost Indexes by City

1913=100
1967=100
R=REVISED

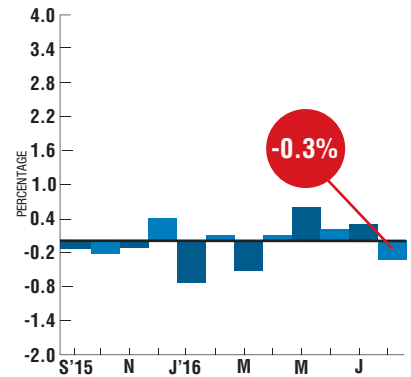
	CONSTRUCTION COST		BUILDING COST		COMMON LABOR		SKILLED LABOR		MATERIALS	
	OCT. '16: 1913	% CHG. YEAR	OCT. '16: 1913	% CHG. YEAR	OCT. '16: 1967	% CHG. YEAR	OCT. '16: 1967	% CHG. YEAR	OCT. '16: 1967	% CHG. YEAR
ATLANTA	6301.62	+0.7	4119.71	+0.1	813.65	+1.0	677.82	0.0	697.81	+0.1
BALTIMORE	7228.47	+4.4	4808.97	+1.5	953.76	+5.6	829.49	+1.8	658.67	+1.0
BIRMINGHAM	7038.46	+0.2	4297.30	+0.4	950.37	0.0	784.55	+0.3	646.17	+0.6
BOSTON	13514.27	+8.2	7066.32	+2.6	1477.68	+9.7	1327.97	+3.4	641.10	+0.5
CHICAGO	15232.93	+5.8	6961.58	+1.1	1531.38	+6.5	1242.24	+1.2	569.91	+0.9
CINCINNATI	9408.14	+7.1	4819.00	+1.8	962.05	+9.1	813.93	+3.1	649.88	-0.2
CLEVELAND	12050.62	+1.4	5698.19	+3.8	1074.10	+1.1	922.89	+4.2	639.62	+3.0
DALLAS	5631.49	+1.4	4244.97	+1.9	727.89	0.0	716.63	0.0	647.70	+4.1
DENVER	7137.53	+0.9	4551.16	+2.3	786.97	0.0	742.35	+1.6	655.47	+3.3
DETROIT	11134.85	+1.7	5960.55	+3.7	986.24	+1.1	962.06	+3.4	603.12	+4.5
KANSAS CITY	11288.98	+3.0	5960.39	+4.6	1297.51	+3.0	1208.66	+5.4	613.46	+2.8
LOS ANGELES	11526.02	+3.6	6037.41	+3.6	1077.35	+3.7	1030.82	+3.7	647.28	+3.2
MINNEAPOLIS	12117.59	+1.1	5843.55	+3.8	1253.46	+0.7	1106.37	+4.0	629.98	+3.4
NEW ORLEANS	5888.16	+0.3	3977.21	+0.8	725.09	0.0	645.29	+0.7	668.27	+1.0
NEW YORK CITY	16771.18	+3.0	8723.50	+3.1	1323.13	+3.5	1313.97	+4.2	693.72	-0.7
PHILADELPHIA	12527.38	+6.4	6643.49	+1.4	1412.53	+7.7	1188.22	+2.0	700.19	0.0
PITTSBURGH	9895.20r	+14.0r	5584.77	+4.8	1022.75r	+15.9r	907.43	+3.8	593.72	+6.7
ST. LOUIS	11798.24	+1.3	5831.22	+3.1	1064.50	+0.8	972.68	+2.6	771.39	+1.2
SAN FRANCISCO	11578.33	+3.8	6649.28	+4.0	994.24	+4.0	1059.33	+4.6	645.45	+2.7
SEATTLE	10621.73	+2.1	5854.12	+2.5	997.24	+1.9	1049.30	+2.2	751.57	+3.1

Prices for PVC pipe products declined 0.3% in August, offsetting last July's 0.3% increase, according to the Bureau of Labor Statistics' producer price index for plastic construction products, which consist mostly of PVC pipe. The August drop reversed four months of modest price hikes. Despite the August decline, year-to-year prices are just 0.1% below August 2015's level, according to BLS. This dip represents a marked slowdown in price cuts from July, when prices were down 0.8% for the year. ENR's 20-city average price for 4-in. PVC sewer pipe declined 0.5% in October and is 10% below a year ago, according to ENR.

PRODUCER PRICE INDEX

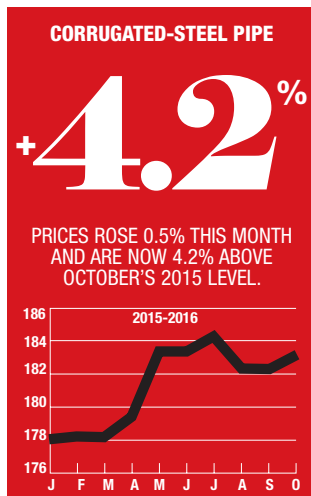
PVC PIPE

Monthly percent change



SOURCE: BUREAU OF LABOR STATISTICS

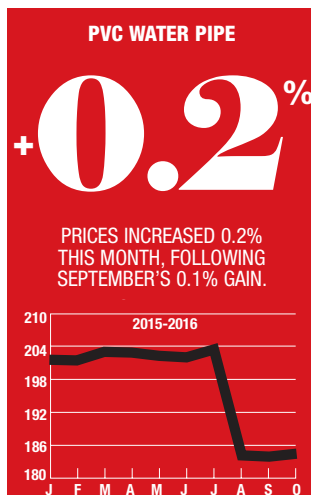
ENR's Materials Prices For October 2016



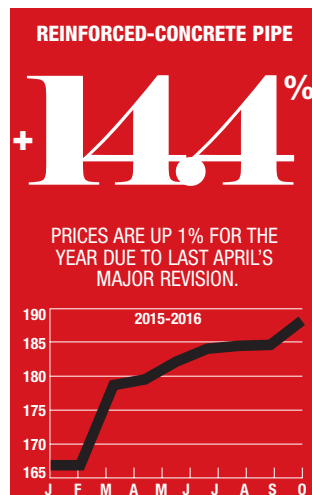
1992=100



1992=100



1992=100



1992=100

20-CITY AVERAGE

ITEM	UNIT	\$PRICE	%MONTH	%YEAR
REINFORCED-CONCRETE PIPE (RCP)				
12"	FT	17.14	-0.2	+8.3
24"	FT	33.39	+1.9	+14.4
36"	FT	66.74	+2.8	+11.8
48"	FT	109.40	+1.4	+11.1

CORRUGATED-STEEL PIPE (CSP)				
12"	FT	10.97	+3.2	+9.1
36"	FT	32.27	+0.5	+4.2
60"	FT	73.84	+1.2	+3.4

POLYETHYLENE PIPE (PE): UNDERDRAIN				
4"	FT	0.91	+4.8	-8.0

POLYVINYL-CHLORIDE PIPE (PVC)				
Sewer 4"	FT	1.41	-0.5	-10.0
8"	FT	4.76	+0.1	-6.2
Water, 6"	FT	5.58	-1.0	+4.2
8"	FT	9.17	+0.2	+1.9
12"	FT	17.67	+0.5	+2.5

DUCTILE-IRON PIPE (DIP)				
6"	FT	18.77	+1.3	+2.7
8"	FT	29.06	+0.2	+5.0
12"	FT	45.07	+0.6	+10.1

COPPER WATER TUBING				
½"	FT	1.59	+1.0	-15.7
1½"	FT	5.51	+7.8	+6.4

SOURCE: ENR