Breaking Ground

THE MAGAZINE OF THE MASTER BUILDERS' ASSOCIATION OF WESTERN PENNSYLVANIA

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Focus On ENERGY

Alternative Solutions
Alternative Opportunities

Mid-year forecast adjustments

Exploring the opportunity side of the energy crisis

The city-county merger is part of a bigger trend

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Wind Farm
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FEATURES & DEPARTMENTS

Publisher's Note

I'd love for *BreakingGround's* readers to give us credit for bringing such a timely issue as the energy crisis into focus. In the interest of full disclosure, however, I should note that the editorial calendar for 2008 was set over a year ago, so consider us lucky instead.

Having disclaimed any ESP in advance, I will say that this edition takes as close a look as possible at what to expect the impact of the energy situation to be on the region's construction market. There is no such thing as a consensus forecast for energy pricing right now, so you won't read a prognostication here; however, I believe you'll learn some things that will allow you to make your own decisions about what form the future of the energy market will be.

One very shocking reality that I encountered in researching some of the articles was the lead/lag time for developing new sources of energy. Only wind power offers generating solutions that can be rolled out inside a couple of years, and even that method can be stalled by local objections to turbine placement. For the creation of new fossil fuel generating plants, hydroelectric generation, or God forbid, nuclear reactors, the regulatory and construction cycles are half a decade, or even half a generation (no pun intended).

The municipal and state review process is a necessary, if protracted, set of steps to allow for public input on projects with significant impacts on the local environment. What that process means in the current short supply status is that today's solutions won't be providing relief until another four or five years pass. You only have to look back to summer 2005 to note that the energy market can change a lot in only three years.

For the power facility portion of the construction industry, the skyrocketing cost of energy is having a similar effect to what the Sarbanes-Oxley Act did for the accounting business, as power providers scramble to get more facilities in place. The investment had begun even before the current cycle. Hundreds of millions of dollars are being spent by Allegheny Energy in Cheswick and Armstrong, and approximately $1.2 billion dollars is being invested in the Hatfield's Landing and Martin's Ferry plants for scrubber installations. Construction continues on a new billion dollar coal-fired plant in Longview, near the border in Monongalia County, WV.

According to the Planning Engineering & Construction (PEC) Report, nearly 50 projects have been proposed in PA for the production of energy or fuels, in one form or another. If this cycle is anything like previous ones, more of these projects will be abandoned than built. Like the early 1980's, proposals today include a variety of alternative energy options, many of which are beginning to have questionable economic feasibility. Corn-to-ethanol, for example, appears to cost more per gallon to produce than to sell, not a good equation.

Even if 75% of the projects proposed fall by the wayside (and that's not a bad estimate), the number of large construction projects that will result from the push to move away from our reliance on oil will still be many times more than what has been built in a generation.

The one subject that is covered in this edition of *BreakingGround* as a result of recent activity is the trend toward city/county mergers. Since the last edition was published, Pittsburgh and Allegheny County have moved forward in efforts to get the state legislature to allow the merger to happen. The progress has stirred up editorial debate and rhetoric, some of which has been based on fear instead of fact.

Allegheny County Councilman Chuck McCullough wrote a recent editorial in the Pittsburgh Post-Gazette (titled 'Merger Schmerger'), deriding the merger for a variety of reasons. His primary objections were the loss of local municipal control, and the resultant ceding of sovereignty to a county government that he characterized as poorly run and spendthrift.

McCullough's criticism of the county's governing was interesting, in that he is one of the governing council. The more objectionable argument was the loss of local sovereignty, since no proposal has been floated that would allow any merger except the city of Pittsburgh and Allegheny County. Anything else would be political suicide, but that reality didn't fit McCullough's argument.

We'll look at the realities of what has been proposed preliminarily (remember that nothing will be officially proposed until well into 2009) for the Pittsburgh/Allegheny merger, and with some detail at what has been involved in merging similar regional governments in cities like Indianapolis, Jacksonville and Louisville.

It looks like an interesting summer, with high gasoline prices, high political stakes, and low expectations for the economy. With a regional economy that is still producing, it should be a hot summer.

Jeff Burd

News From The Street

Employee Legislation Update

On June 9, the White House released an Executive Order that would require contractors and anyone else doing business with the federal government to verify that their employees are eligible to work in the United States. Federal Contractors would be required to use the E-Verify system, formerly known as Basic Pilot, to check the status of new hires and others working on federal projects in the U.S. The controversial system is the electronic employment eligibility database maintained by the Department of Homeland Security.

Also on June 9, the Pennsylvania House of Representatives passed House Bill 2400 by a vote of 122-76. The bill penalizes employers who "intentionally misclassify workers as independent contractors for the specific purpose of evading their obligations as an employer to pay payroll tax, to pay the minimum wage, to pay the prevailing wage and to pay into the workers' compensation fund," said bill sponsor Bryan Lentz, D-Delaware County.

A first offense would draw a fine of up to $15,000 or a prison term of up to three and a half years, while a subsequent offense would result in a fine of up to $30,000 or a prison term of up to seven years. An employer that negligently misclassifies an employee could be charged with a summary offense, punishable by a fine of up to $1,000.

A group of Republican representatives opposed the legislation as being too punitive and having too high a risk of applying to small businesses which inadvertently violate provisions of the bill. The bill now goes to the state Senate.

Best Value Contracting Resumes

After getting the green light from the courts to resume the use of request for proposals in its Best Value contracting method, the Department of General Services (DGS) has advertised the New Convocation Center at the Indiana University of Pennsylvania as a Best Value project. The new building, which will likely cost between $40 million and $50 million, is 143,500 square feet, and was designed by L. Robert Kimball & Associates and Ellerbe Beckett.

DGS will accept separate proposals for general, HVAC, plumbing and electrical construction, and is expected to draw interest from contractors not usually interested in state-funded projects. The proposals will be due in mid-July.

The state pursued a favorable decision on Best Value contracting because it believed the method produced a better project for PA's taxpayers, and has pointed to the new $107 million Pennsylvania Judicial Center in Harrisburg as an example of the success of that process. The team is lead by Pittsburgh-based general contractor Mascaro Construction, and the project has been marked by excellent coordination among the prime contractors, and changes of less than 1%.

GREEN BUILDING NEWS

Green Schools Passes LEED Milestone

One school a day. That's the rate America's schools are registering for the U.S. Green Building Council's (USGBC) LEED certification program for green schools, signaling their intent to build and operate schools that are more energy and water efficient, which will save taxpayers money. There are about 100,000 public and private schools in the U.S., and fully one-third of their facility costs are in heating/cooling buildings, providing water, electricity, and other energy/utility functions.

"LEED buildings have a demonstrated track record for lowering energy use by up to 40% and reducing water use by up to 50% over conventional buildings," Michelle Moore, Senior Vice President, USGBC. "Between climate change, skyrocketing energy prices, and growing concerns about water, building green schools and operating and maintaining them using green best practices should be a top priority in every community across the country."

Pennsylvania is one of the states with the most LEED certified schools. The State of Ohio has adopted the LEED for Schools Rating System as part of its school design standards. The Ohio School Facilities Commission's studied the operating impact, determining it could save $1,415,529,914 in taxpayer money over the next 40 years by reducing the energy consumption of school buildings.

The newly-formed Green Schools Caucus in the U.S. House of Representatives has lent a federal voice to the green schools agenda. Created by co-chairs Rep. Darlene Hooley (D-Ore), Rep. Michael McCaul, (R-Texas), and Rep. Jim Matheson (D-Utah), the goals of the caucus are to raise awareness of the benefits of green schools, lead the policy discussion on the topic in various forums, create legislative opportunities for the collective efforts of the caucus members, and provide members of Congress with constituent outreach resources.

The LEED certification program was developed by USGBC for parents, teachers, school boards and communities as a tool to measure and manage their school buildings. For more information on green schools, visit USGBC's green schools site: www.buildgreenschools.org. To find green schools in your neighborhood: www.buildgreenschools.org/leed/leed_schools_maps.html

NAIOP Commits to Reducing Energy Use in Commercial Development

The National Association of Industrial and Office Properties (NAIOP), the trade association for developers, owners, investors and other professionals in industrial, office and mixed-use real estate, announced an official association policy on energy. In a proactive approach to engage its members and the commercial development industry in advancing an economically prosperous and sustainable built environment, NAIOP commits to:

- Encourage the real estate development industry to employ every technically feasible, cost-effective, sustainable strategy available to increase energy efficiency of new and existing buildings, and to employ cleaner, low carbon energy alternatives (including onsite energy), wherever possible.
- Advance public policies that accelerate ongoing energy efficiency and sustainability gains; support cleaner energy alternatives; and promote, wherever practical, less carbon intensive transportation options to and from buildings.
- Engage in educational programs, seminars and conferences to help employ best practices for energy efficient development.

NARI Goes Greener

The National Association of the Remodeling Industry (NARI) has updated its Green Certified Professional (GCP) certification, making the program more inclusive. Requirements to take the GCP exam are five years in the remodeling industry and 16 hours of continuing or formal education in green or sustainable remodeling practices.

NARI's Green Remodeling certification is designed to benefit remodelers and homeowners. "The requirements for becoming a GCP will allow contractors to demonstrate their knowledge in green remodeling. They can more readily convey to homeowners that they have a good understanding of this type of remodeling, and to work with residents to produce results that everyone can celebrate," says Chris Donatelli, CR, CKBR, the chair of the Green Education Sub-Committee.

For a contractor to become a GCP, NARI must first approve the submitted application, and then, each applicant must pass an exam consisting of about 200 questions.

NARI is a professional association whose members voluntarily subscribe to a strict code of ethics. Consumers can search http://www.nari.org or http://www.RemodelToday.com to find a qualified remodeler who is a member of NARI.

LEED 2009 Released for Public Comment

The U.S. Green Building Council (USGBC) has opened the first public comment period on LEED 2009, the next evolution of the LEED green building certification system. LEED 2009 represents a reorganization of the existing LEED rating systems for commercial buildings, combined with a series of major technical advancements focused on improving energy efficiency, reducing carbon emissions, and addressing other environmental and human health outcomes.

"Continuing to seek the right balance between technical advancement and market transformation was a driving force behind the LEED 2009 work," explained Scot Horst, Chairman of the volunteer LEED Steering Committee, which leads the technical development of the LEED rating system. "The 'big ideas' we've proposed include transparent weightings of LEED credits so the highest-priority credits achieve the most points, a new mechanism for incorporating bioregional credits, and a more nimble framework that supports rapid response to emerging environmental and human health issues."

The LEED Green Building Rating System was developed by USGBC to drive market transformation in the building industry by defining a consensus metric for leadership in green building that forms a basis for continuous improvement. The evolution of LEED is based on technical, scientific and market-based advancements.

"When it was introduced in 2000, the LEED Green Building Rating System helped to spark a revolution that is changing the way we build and operate our offices, schools, hospitals and homes," said Rick Fedrizzi, President, CEO & Founding Chair, USGBC. "LEED 2009 resets the bar for green building leadership because the urgency of our mission has challenged the industry to move faster and reach further."

Detailed information about specific proposed technical changes to the rating system can be found in the number of background documents that accompany the public comment forms on USGBC's Web site (wwww.usgbc.org). Further information about the expansion of the certification process and improvements to LEED Online

as well as future technical improvements, including the integration of Life Cycle Assessment (LCA) into LEED, will be forthcoming in late summer.

AIA Studies Sustainable Rating Systems

The American Institute of Architects (AIA) has released a study of three green building rating systems (Green Globes, SBTool 07, and LEED NC 2.2) that assesses their effectiveness in supporting the goals of the AIA sustainability position statement. "We reviewed these particular systems because they are the most broadly used in the U.S. market and they take a comprehensive approach to evaluating an entire building," added AIA President Marshall Purnell, FAIA. "With new sustainability continuing education requirements in 2009 for AIA membership the results of this study can help better inform our members and the profession on green rating systems as they relate to our carbon reduction goals." The study's findings on each system are summarized below.

Green Building Initiative's Green Globes: The system offers a broad based evaluation of projects in both the design process and based on environmental criteria. When used to certify a project, more stringent and specific requirements in the areas of energy reduction and operational performance are needed, as these are the two areas that most influence carbon production.

U.S. Green Building Council's LEED NC 2.2 system: This is a good example of a rating system which provides a measurement of environmental achievement. Continued developments in life cycle assessment, requirements for renewable energy or carbon reduction targets for certified projects will continue to make this system an effective resource for architects.

International Initiative for a Sustainable Built Environment's SBTool 07: SBTool 07 is a toolkit for designing a rating system. If used as a rating system providing certification, SBTool 07 would be stronger if there was an increase in the number of "required" items vs. those that are simply "encouraged" and required project documentation. Specific requirements in the areas of energy reduction and operational performance would supply any rating system approach that comes out of SBTool 07 with performance-based requirements necessary for reaching carbon reduction goals. BG

Work continues on the structure of the Majestic Star Casino on the North Shore (photo courtesy Mosites Construction).

REGIONAL MARKET UPDATE

With six months of contracting completed, the short-term outlook for construction in the region is becoming clear. After a slow bidding start in the first quarter, activity picked up briskly in the second quarter, both in terms of competitive hard bidding and the subcontractor bidding for projects with construction teams already in place.

The executive summary version of the first half of 2008 goes something like this: housing start activity backtracked from the recovery that was occurring in the second half of 2007, and non-residential contracting remained strong, with activity levels slightly higher than had been forecasted.

Housing starts for the first six months are estimated to be approximately 1,150 single-family detached units, and 625 single-family attached and multi-family units. This level compares with 1,254 and 640 units respectively, during the first six months of 2007. The 8% decline in single-family housing, while not as severe as the national market, nonetheless marks four years of steadily declining volume.

Like the rest of the country, the problem here is the result of softer demand for housing in general. Unlike other markets, however, most Pittsburgh regional submarkets are still seeing modest price appreciation, and the average days on market for existing home sales are roughly the same as in recent years. Again, this suggests that the builders in this region are reacting quickly to slower traffic, and keeping the supply/demand balance close to equilibrium. There's some comfort to that, since that kind of reaction helps ensure that our housing prices will stay firm. If you are in the single-family construction business, however, flat demand is not a good thing at this point in the business cycle.

Looking towards the remainder of 2008 for signs of a housing recovery is no more certain now than in January. The region's job creation performance remains much stronger than the national average, particularly in higher paying professions. The stability in pricing and days-on-market help boost confidence for trade-up buyers that their homes will sell for a fair price within a few months. On the other hand, inflation of food and energy prices continues to erode disposable income, often by several hundred dollars per month, or roughly what most trade-up or first-time buyers expect to add to their existing monthly house payment or rent.

If you were to look for a signal in the coming months, it may be (perversely enough) the expected fall increase in interest rates. While falling interest rates are almost always the spark for new housing, the circumstances surrounding the recent 300 basis point slashing are so tied to bad economic news that fewer buyers took advantage of the lower lending costs. And the bulk of the rate cuts did not

find their way into the mortgage market. As has happened in the past, it's more likely that a quarter point jump in rates may signal the bottom for mortgage rates, and act as an incentive to buyers sitting on their hands.

Non-residential construction has remained much more constant of late than the housing market. Very few of the dynamics have changed in this market since the beginning of the extended growth cycle.

The principal source of the new construction has been private sector development since 2005, but a larger portion of the activity for 2008 so far has been in the public sector. Several large infrastructure projects have been contracted, including more than $50 million by Allegheny County. Likewise, several school districts have bid projects that were $20-40 million in size, giving the contractors who normally serve that market some substantial projects to work.

On the whole, however, the region's non-residential market is being driven by the institutional market, with hundreds of millions of dollars contracted or planned for the hospitals and universities; and by the office and industrial market, which continues to experience declining vacancy rates. Two submarkets in particular are experiencing growth that will continue throughout 2008. The downtown office market continues to see positive absorption, and construction is underway on a half-dozen tenant fit-outs of 60,000-80,000 square feet or more. And the Cranberry market remains both underserved and active, as construction for the Westinghouse Nuclear facility ramps up.

The other aspect of the market that has a 'Groundhog Day' feel to it is the predominance of large projects. In 2006 and 2007 there were six projects over $100 million started each year, and five in 2005. Already by mid-year, construction has started on two such projects, Westinghouse Nuclear and Dick's Sporting Goods, and pricing has been done on the largest pieces of the Pittsburgh Arena and the UPMC Monroeville project. Later this summer contracting is expected for the VA Hospital, Butler Hospital and perhaps, the first phases of the UPMC Cancer Center projects. In addition, several industrial and power plant projects are in the works that would exceed $100 million.

Contracting volume through June 30 was roughly $1.6 billion in metropolitan Pittsburgh, with one billion of that coming in the second quarter. Assuming that the construction material pricing inflation remains within levels that developers have budgeted, contracting in the second half of 2008 should be between $1.2 billion and $1.5 billion. The forecast of $2.8 billion for all of 2008 seems like it will be on the light side.

The looming black clouds that could chill the regional construction market during the rest of 2008 are the continued escalation in energy and material prices, and an unanticipated spillover from the residential mortgage crisis into the non-residential market. Prices for fuel have risen dramatically, with the cost of diesel potentially topping $5 per gallon this summer. Such high pricing has added double-digit increases to materials because of transportation and manufacturing costs, and have resulted in a decline in driving, which is pinching public revenues. For projects without provision for accelerating costs these levels will almost certainly cause deferment, and may render the project's business plan untenable.

Because lending standards did not loosen significantly in this region, the effects of the clamp down in capital markets have been less pronounced in Western PA. It's worth keeping an eye on the progress of the financial market turmoil, however, since the local sources of capital are inadequate to meet all the lending needs of the construction and real estate market in the region. A continued decline in liquidity will effect non-residential lending in all regions, including our own. BG

PROJECTS STARTED/UNDER CONSTRUCTION IN 2008

Project	Location	Developer	Cost
Dick's Sporting Goods New Headquarters	Findlay Township	Dick's/Horizon Properties	$105,000,000
Majestic Star Casino	Pittsburgh	Barden PITG	$450,000,000
Westinghouse Nuclear Office Building	Cranberry Township	Westinghouse/Trammel Crow	$140,000,000
Bakery Square	Pittsburgh	Walnut Capital Ventures	$110,000,000
3 PNC Plaza	Pittsburgh	PNC Financial Services	$170,000,000
Meadows Racetrack & Casino	North Strabane Township	Cannery Casino Resorts	$125,000,000
Providence Point	Scott Township	Baptist Homes of SW PA	$120,000,000
Projects Pending for 2008			
Pittsburgh Arena	Pittsburgh	Sports & Exhibition Authority	$290,000,000
VA Hospital Ambulatory Center	Pittsburgh	VA Pittsburgh Healthcare	$100,000,000
Butler Hospital Expansion	Butler	Butler Memorial Hospital	$90,000,000
Don Allen' Mixed-Use	Pittsburgh	DOC-Economou	$250,000,000
Penn State Millennium Science Center	State College	Penn State University	$82,000,000
USS Clairton Works Upgrade	Clairton	United States Steel	$1,000,000,000
UPMC East Hospital	Monroeville	UPMC	$150,000,000

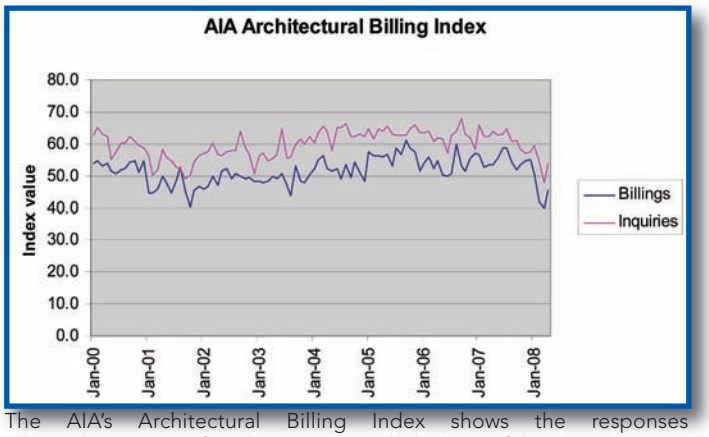
NATIONAL MARKET UPDATE

What a difference six months makes to some national forecasters

Professional economists (ones that are paid to forecast rather than profess) are faced with putting their reputations on the line each year by foretelling the future. Forecasting is a matter of assessing what you know and don't know about the economy, and then taking a flyer at what you don't know that you don't know.

For construction economists, the end of 2007 was pretty straightforward. They knew the housing market was bad and not getting better. They knew non-residential construction was probably going to keep its head above water for another year. And they knew the price of construction materials and inputs was going to rise faster in 2008 than in 2007. What they couldn't know that they didn't know was that the market still had more downside than they thought, and that the increase in costs could go so high, so fast.

"Unquestionably the biggest surprise for me was that fuel and steel prices have increased much faster than I imagined," says Associated General Contractors of America's Chief Economist, Ken Simonson. "I'm not alone. No one I know thought rebar and structural shapes would keep going up, or that #2 diesel would be $4.70/gallon." For American Institute of Architects Economist Kermit Baker, not much has changed since January, but then, a lot changed in January. "The market for architects was pretty strong right through the end of 2007," Baker observed. "The Architectural Billing Index (ABI) collapsed more sharply in January than I would have expected. The surprise was that the decline was as steep and as steady."



The AIA's Architectural Billing Index shows the responses rebounding in May after dipping to match the lows of this decade.

	Monthly Figures (1)	Actual	Forecast				
	8-Mar	8-Apr	2005	2006	2007	2008	2009
Northeast	97	117	189	171	143	127	144
Midwest	121	144	357	284	206	151	198
South	498	516	1,001	912	675	543	658
West	227	269	551	444	317	225	274
Total	954	1,032	2,073	1,811	1,341	1047	1274
Total Single-family	704	692	1719	1,474	1,034	724	928
Total Multi-family	250	340	354	338	307	323	346

Forecasts and table: Reed Construction Data. Monthly figures are seasonally adjusted at annual rates. Actual figures are from U. S. Dept. of Commerce, Freddie Mac

Like the AGC's Simonson, Reed Business Information's Jim Haughey has also been caught short by the magnitude of the rise in prices. "We forecasted an overall increase in prices of 4% more than 2007, but costs are up 6.5% through April, and are continuing to accelerate," admitted Haughey. "A lot of the energy frenzy has spilled over into other commodities, primarily in metals, where producers continue to ask more, and are getting a lot of it."

The AIA's Billing Index is a simple percentage of the number of firms who report gains versus declines. While it can be argued as an oversimplified view of the market, the history of the ABI suggests it's a good lead indicator. "The last time there was a decline like this there was a four year downturn, so I went back and looked closer at the index," says Baker. "The ABI was strong through 2000, and then dropped 10 points in early 2001. I don't think conditions are nearly as bad as they were then, but you only have to get a whiff of the housing market to get an idea of how bad things could get."

As June closes out there are a couple of trends in the market worth noting. The housing market remains in its slump, with starts holding at an annualized rate of 700,000 units of single-family housing, and 300,000 multi-family units. May's starts were 674,000 single-family and 301,000 multi-family units. Without any further improvement, total housing starts would end up just over 1 million units, or roughly 20% lower than 2007, and half of the record high levels of 2005. For those who predicted a bottom and the beginnings of recovery by late 2008, there are almost no signs pointing to a vindication of that forecast.

House inventories for sale remain high, foreclosures continue to add supply to already high backlogs of houses, and housing prices have dropped further. While there are some indications that the slide in prices has started to entice buyers off the sidelines, any renewed interest is not expected to ease the declining values. Henry Kaufman, president of financial consulting firm Henry Kaufman & Company Inc. said U.S. home prices have slumped 12 to 17 percent from their peak in the summer of 2006 "and it wouldn't surprise me to see a further decline, to 25 percent nationally in housing prices."

The value of new construction starts in April climbed 9% to a seasonally adjusted annual rate of $553.5 billion, according to McGraw-Hill Construction, a division of The McGraw-Hill Companies. Excluding residential building, new construction starts in the first four months of 2008 rose 3%.

April's data produced a reading of 117 for the Dodge Index (2000=100), up from a revised 108 for March, and equal to the average for January and February. "While housing is still in the process of reaching bottom, and tighter lending standards are raising concern about the prospects for commercial building, publicly-financed construction is expected to hold up relatively well during 2008," stated Robert A. Murray, Vice President of Economic Affairs for McGraw-Hill Construction.

Reed's Jim Haughey also feels that non-residential construction should be OK for the remainder of the year. "The market, excluding housing, should be plus or minus a couple of points compared to last year on a square foot basis," he says. "I'm seeing easing in the financial constraints that were in place from September through March; it's not problem #1 anymore. If I build it will anyone rent it is now problem #1."

Ken Simonson sees 2008 on slightly thinner ice. "The number of projects started should be positive compared to last year, but profitability is getting out of whack," he notes. Simonson's concern is that higher costs will soon erode developer confidence. "The prospects for the future are darker. The government revenues will be lower, money supply will be tighter, and higher budgets won't pencil out with the developer's expectations for rent."

One sector where the financial markets are having an impact is in hospital construction, which was one of the bright spots of the market. For the first half of the year the combined healthcare categories were up 5% over 2007, compared to growth rates of 14-20% in previous years. Simonson is concerned that problems with February auction rate securities may foretell future problems financing hospital capital plans. "The hospitals try to moderate the changes in interest rates by rolling out new bonds monthly," explains Simonson. "Suddenly the banks that bought these bonds in the past weren't interested." A lack of financing could halt hospital capital plans temporarily, while the bond markets sort themselves out, even though the demographics and demand support more healthcare facilities.

Kermit Baker sees the increase in ABI's May inquiries and billings as a relief, even if it's temporary. Still he's cautious about the end of 2008. "The implications of a (billing) slowdown like we had are that things should be healthy through the third quarter," he says. "But after that there could be a quick slowdown." BG

WHAT'S IT COST?

It's oil and steel again.

Are we headed for the perfect storm of inflation of raw materials, energy, fuel and labor that will cripple construction as the year winds down? There are certainly plausible scenarios that would suggest such an apocalyptic end to the construction cycle. As we head into summer months there is no denying that the costs for energy and steel have caused major headaches for budgets, and will probably wreck a few projects in the months to come. In coming months, we should also see the effect of another storm brewing overseas that will accelerate the price of steel higher.

In the face of such a doomsday scenario, there is growing sentiment that relief may be in sight on the energy front, with some signals that commodity prices may be reaching the bursting bubble stage.

First the bad news: The rise in worldwide demand, and soaring energy costs have pushed steel prices to record highs again. Scrap charges are now above $500/ton. Iron ore has risen 65% to over $140/ton. Spikes in the price of natural gas and oil for heat, and diesel for transportation have all combined to reach a structural steel price of $1,200 per ton.

As high as that number is, another 10% to 30% increase could be looming because of the limited supply of iron ore, or more accurately stated, iron ore producers. High quality ore is produced largely in two countries, Australia and Brazil. Roughly two-thirds of the world's iron ore comes from these nations, and the producers there have been exploiting the supply/demand imbalance to charge steadily higher prices since mid-2007. Absent any political pressure, which seems unlikely, the only market force that will halt these ore price increases will be a dramatic reduction in demand. Such a chill will only come from a large-scale deferment in construction, or a radical shift in design. Unabated iron ore price increases could mean delivered steel in the neighborhood of $1,500 per ton.

One reason for hope is the potential for a shift in China's internal supply/demand ratio later this year. The Chinese economy has demanded higher consumption of steel than most nations since the decade began. In the five year run up to the Olympics, China's domestic steel production has grown from 200 million tons, to a projection of 540 million tons annually. But a slowdown in Chinese demand would change China to a net exporter.

It's hard to separate the demand driven in China by the run up to the Olympics this fall from that arising from the organic growth of their economy. If steel demand has grown from organic growth that cannot be scaled back after the Olympics, it's unlikely that China will shift to being a seller of steel. If the theory that China's demand will back off after the Olympics proves correct (assuming that the Chinese government would want that), China will become an exporter of steel, adversely affecting the price of steel.

As oil flirts week-to-week with new record highs, and natural gas steadily inches towards its post-Katrina records, no cause for optimism seems credible. Yet, there are a couple of signals that predictions of $150/barrel oil may not come to pass.

PERCENTAGE CHANGES IN COSTS

	May 2008 Compared to—			
	1 mo.	3 mo.	1 yr.	Dec-03
Consumer, Producer & Construction Prices				
Consumer price index (CPI-U)	0.8	2.3	4.2	17.5
Producer price index (PPI) for finished goods	1.6	4.3	7.2	24.3
PPI for materials and components for construction	2.1	4.0	5.5	30.7
Costs by Construction Types				
Highway and street construction	4.0	10.2	15.0	65.6
Nonresidential buildings	2.6	6.1	8.7	37.5
New warehouse construction	0.1	0.6	4.1	N/A *
New school construction	-0.2	0.3	2.2	N/A *
New office construction	0.0	0.3	2.2	N/A *
Multi-unit residential	1.9	4.6	6.3	34.7
Single-unit residential	1.6	3.3	4.7	27.4
Costs for Specific Construction Inputs				
#2 diesel fuel	9.1	38.9	75.8	305.9
Asphalt paving mixtures and blocks	5.1	7.5	10.0	70.2
Concrete products	0.0	1.5	3.2	35.6
Brick and structural clay tile	0.1	0.3	-0.5	19.2
Plastic construction products	1.4	0.8	1.7	31.8
Gypsum products	-1.2	1.1	-14.4	17.7
Lumber and plywood	3.6	3.9	-2.6	-6.4
Architectural coatings	0.0	-0.4	3.8	32.1
Steel mill products	10.7	23.3	20.8	105.2
Copper and brass mill shapes	1.4	8.8	1.6	176.9
Aluminum mill shapes	-0.1	7.2	2.0	36.6
Fabricated structural metal	2.2	9.3	13.3	55.5
Prefabricated metal buildings	5.7	14.1	19.8	75.8
Crude petroleum (domestic production)	11.1	36.6	105.6	319.3
Iron and steel scrap	9.0	46.1	93.3	229.1
Copper ores	3.4	13.8	8.4	308.5

Source Bureau of Labor Statistics
Compiled by Ken Simonson, Chief Economist AGC

* Note: Costs for office, school & warehouse not available

First, the earliest indicators of summer consumption are showing that Americans have begun to modify their behavior to reduce consumption. Sales figures for trucks and heavy vehicles have dropped dramatically, according to both Ford and General Motors. If this trend continues, gas usage will drop significantly for the long haul. No hard data exists yet to judge the effect of the high transportation costs on America's vacation plans, but the earliest anecdotal evidence (including reduced Memorial Day travel) suggests that there will be much less travel by consumers this summer.

Why that matters is that the United States is still the largest consumer of energy in the world, using roughly 25% of the global supply of oil and electricity. A reduction of 10% in American demand would have a big impact on supply, and Americans have shown the capacity to respond to crises in past by reducing consumption much more than 10%.

The other factor which could reverse the price run up is a shift in speculative investment in oil. A weakened dollar and the perception of increased risk in financial instruments like commercialized or securitized debt, has driven global investment in oil. If there was an accurate way to measure the speculation premium, the range of estimates would probably be closer than between $30 and $70 per barrel. Reed Business Information's economist, Jim Haughey, offers some insight that may be simple enough to be right: Since January, oil consumption worldwide has declined slightly, supply has grown slightly, and the dollar (while weak) has remained roughly the same, relative to other currencies; yet, the price per barrel of oil is up $40.

Analysts looking for the next big thing have begun speculating that commodities in general and oil specifically, are another bubble market ready to burst, a la housing or the tech bubble of 2000. These scenarios require factoring in some unknown events, or an emotional reaction that can't be quantified. Jim Haughey's $40 premium is pretty easy to find, and requires no extra influences to be recognized. A drop back to $90-100/barrel could come by summer's end if these supply and demand factors are reinforced, or if more traditional dollar denominated investments continue to recover.

In the meantime, budgeting for projects in design should assume that construction costs will continue to rise during the balance of 2008. It's very difficult to envision that the market won't be damaged in some way by construction inflation. The good news for metropolitan Pittsburgh is that most of the bigger projects are under construction or contracted, so the last ride of this three-year wave that the region's construction industry has been riding, should still be a smooth one. BG

ENERGY AND CONSTRUCTION

Construction and energy are two industries that have always been intertwined. Now, with energy costs skyrocketing, the relationship has become keenly love/hate, as soaring costs endanger both planned construction and profitability, while the need for new energy sources spurs billions in construction project spending.

Oil and natural gas have been spiking intermittently since the hurricane season of 2005. The effects have been detailed ad nauseum, but the summary version is that these increases have caused spikes downstream because of transportation costs, the prominence of diesel fuel in heavy construction, the cost of heat, the power needed for construction activities and in the building products (such as plastics, asphalt and adhesives) which derive from the refinement of these commodities.

Behind the unusual rise in the price were two factors, about which there is growing disagreement over which is more prevalent. Like all commodities, energy products are priced in response to the balance in supply and demand. The rise in price mirrors, more or less, a corresponding rise in energy consumption worldwide, increasing demand more than 25% since the beginning of the decade. At the same time geopolitical factors and infrastructure weakness have kept the supply of oil (and therefore electricity) at or below the levels of 2000.

The second factor given increasing influence over the oil market is speculative investment. As the turmoil in financial markets and the fear of higher energy costs have driven the value of stocks down, investment funds have shifted to energy for higher returns. In a similar manner, the extended weakness of the U. S. dollar has also made energy investments appear safer and more lucrative to worldwide investors. Just as an increase in demand for the energy drives prices up, so does the increase in demand for investments in the energy sector.

The extent of the influence of speculation on the oil price is debated by experts, and varies from a premium of $30 to $70 per barrel, depending on which expert you're listening to. What isn't debated is the influence of growth in demand from heretofore lesser-developed economies.

Oil Consumption Rankings of Nations over 2 Million Bbls/Day

Rank	Nation	Barrels/day
1	United States	20,800,000
2	China	7,000,000
3	Japan	5,353,000
4	Russia	2,916,000
5	Germany	2,618,000
6	India	2,438,000
7	Canada	2,290,000
8	South Korea	2,130,000
9	Brazil	2,100,000
10	Mexico	2,078,000
11	Saudi Arabia	2,000,000
	Worldwide	**80,290,000**

10 Highest Electricity Consuming Nations

Rank	Nation	Kilowatt hours
1	United States	3,816,000,000,000
2	China	2,859,000,000,000
3	Japan	974,200,000,000
4	Russia	779,400,000,000
5	Germany	545,500,000,000
6	Canada	540,200,000,000
7	India	488,500,000,000
8	France	451,500,000,000
9	Brazil	368,500,000,000
10	South Korea	352,500,000,000
	Worldwide	**16,560,000,000,000**

The ten largest consumers of oil and electricity make up two-thirds of worldwide demand.

The most popular culprit in the growth of energy consumption is China. While it's true that the Chinese economy has required dramatically more energy than in the 1990's, what is often overlooked is that the champion of worldwide energy consumers is still the United States.

For this reason the greatest potential for relief from this version of the oil crisis is for a significant decline in American consumption. To get a sense of the opportunity, take a close look at the charts below. U. S. oil consumption is 25% of the world's 80 million barrels per day, or almost three times that of China's. A 10% decline in U. S. demand would virtually offset the entire consumption by India, another emerging Asian economy. In fact, that 10% decline would cover the daily consumption of oil by all but seven of the world's nations.

Aside from the global benefits from reducing American consumption, conservation of energy doesn't match well with a thriving economy, which, of course, is one of America's main goals. The size of the opportunity to reduce dependence on oil in the American economy is an exceptional incentive for businesses to develop alternative sources for energy. And it's the search for those sources that is driving a national, and regional, boom in the construction of power facilities.

Fossil Fuel Plants

Over the past few decades, power plants fired by natural gas or coal have been the predominant style developed. Fossil fuel plants burn coal, gas or oil to create heat that will be converted into mechanical energy by steam or gas turbines. The mechanical energy of the turbine operates the electrical generator. This type of plant allowed for much greater control of output, which could be ramped up by increasing combustion. The model is based, however, on the assumption of ample and cheap fossil fuels. It also operates with a number of conditions that are harmful to the environment.

One of those conditions, the emission of hazardous chemicals and excessive carbon dioxide from combustion, has already fueled a wave of construction in Western PA. The natural gas or coal plants in Cheswick, Armstrong, Homer City, Seward, Martins Ferry and Hatfield Landing have been undergoing retrofitting with scrubbers to reduce the emission of sulphur dioxide. In the case of the latter two plants, Allegheny Energy is investing $1.2 billion to reduce the SO^2 emitted from the two plants from approximately 250,000 tons to less than 25,000 tons, in 2010.

The other fossil fuel trend that was expected to drive additional plant construction in Western PA was the use of waste coal, or gob, to fire the generating plants. Waste coal plants were to be an inventive solution to

the problem of disposing or cleaning up large amounts of gob, which remained from coal mining operations. Gob is high in mercury content, however, which aroused the ire of environmental protestors, and lengthened the process of approval and financing.

Waste coal plants, each expected to cost $1 billion or more, were planned for the Clearfield area, plus two in southwestern PA. Wellington Power, based in Morgantown and owned by Bill Derby and Anthony Julian, planned a plant in Nemacolin. And Robinson Power, headed by Ray Bologna, planned the Beech Hollow plant in Robinson Township of Washington County.

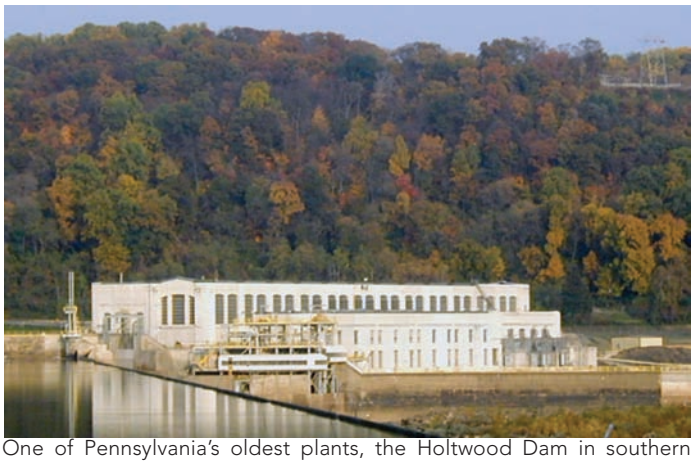
Both of these projects have drawn significant opposition and experienced multi-year delays from the originally proposed schedules. Environmental groups claim that the permits for the Wellington plant have expired without work substantially starting. And both plants have undergone the lengthy development process during a period of dramatic cost increases that may have rendered the projects unfeasible. In any case, no progress seems likely on these projects in 2008, and the outlook for construction is less certain.

Hydroelectric Power

Water is currently the leading renewable energy source used by electric utilities to generate electric power. Hydroelectric plants operate where suitable waterways are available; many of the best of these sites have already been developed. Generating electricity by using water has several advantages. The major advantage is that water is a source of cheap power. In addition, because there is no fuel combustion, there is little air pollution in comparison with fossil fuel plants and limited thermal pollution compared with nuclear plants. Like other energy sources, the use of water for generation has limitations, including environmental impacts caused by damming rivers and streams, which affects the habitats of the local plant, fish, and animal life.

The United Nations estimates that the total "technically exploitable" potential for hydropower is 15,090 terawatt-hours per year, or 15 trillion kilowatt-hours, equal to half of projected global electricity use in 2030. Only about 15 percent has been developed so far.

Hydropower provides one-fifth of the world's electricity, second only to fossil fuels. Worldwide capacity is 776 gigawatts (GW), with 12 percent in the United States, nine percent in Canada, and eight percent in Brazil. When completed, China's Three Gorges Dam, poised to become the largest hydroelectric project in the world with 18.2 GW of capacity, will move China ahead of Brazil. Globally, hydroelectric capacity has more than doubled since 1970, and another 100 GW is currently under construction.



One of Pennsylvania's oldest plants, the Holtwood Dam in southern Lancaster County is being expanded.

An analysis of the U. S. hydroelectric picture shows some interesting trends. For one, the volume of production dropped in 2007 by 14%, to 248.3 million megawatts (MW) generated. Only four states have more than 10 million MW generated on their rivers, and all four have more than 20 million MW. Those states, Washington, Oregon, California and New York, account for 67% of the total generated in the nation in 2007; and hydroelectric plants generating in Washington and Oregon accounted for 45% of the output for the entire country.

In the United States, hydropower has grown steadily, from 56 GW in 1970 to more than 95 GW today. As a percentage of the U.S. electricity supply mix, however, it has fallen to 10 percent, down from 14 percent 20 years ago, largely as a result of the rapid growth in natural gas power plants. In terms of electricity production, hydropower plants account for about seven percent of America's current power needs.

For all its rivers, however, Pennsylvania produces less than 1% of the total energy generated by dams; yet, the state ranked 19th in output in 2007 with only 2.322 million megawatts. One of the limitations keeping PA's rivers from taking up more of the power generating slack is the relatively low volume flow of its rivers. Rivers in western states fall from the highest mountains on the continent, creating more rapid flows, and allowing for much deeper dams. While low volume turbines have been developed to generate electricity from slower, shallower rivers, the economics of replacement didn't make sense until recently.

Electrical power will be deregulated after 2009 here in Pennsylvania. The deregulation is expected to result in a 50% increase in rates (Allegheny Energy anticipates nearly 60% in Western PA). The impact of those numbers is more likely to make the investment in low turbine technology worthwhile.

The current pipeline of hydroelectric projects seems to bear out the relatively low interest in that method of generation in the region. Statewide, the only pressing major hydroelectric project is PPL's $260 million expansion and upgrade of the Holtwood Dam in Lancaster County, on the Susquehanna near the Maryland border. Locally, BPUS Generation, from Liverpool NY, has plans for small generating projects at eight existing locks and dams. Total investment in each is relatively small, with the largest project being a $100 million, 50MW expansion on the Montgomery Lock & Dam in Monaca. All other projects are smaller than $50 million (most are $20-25 million), and the total output is roughly 180 MW.

The New Nuclear Power

For Pennsylvanians, 1979 was a watershed year as it relates to energy. Like all Americans, we were dealing with the first taste of more-than-one-dollar gasoline, lines at the pumps, and alternative day rationing. Unlike other Americans, Pennsylvanians got to experience the eerie prospect of facing a near-apocalyptic meltdown of a nuclear reactor at Three Mile Island, south of Harrisburg.

That event threw a chill into the nuclear energy market, and galvanized objection to the industry worldwide. The Chernobyl disaster five years later seemed to be the death knell for nuclear power.

As another oil crisis bears down on the consumer, however, the nuclear option is being re-examined, particularly in light of the fact that the industry has moved towards safety as a top priority, and no further incidents have raised fears in two decades. The nuclear industry has also gone out of its way to be a good neighbor, and the efforts are working.

"Public opinion polls show that nuclear power is being viewed favorably again, particularly by the neighbors surrounding the plants," says Nuclear Energy Institute (NEI) spokesman Steve Kerekes. "There are even states and local municipalities passing ordinances calling for increased use of nuclear generation."

Nuclear power offers clean and efficient generation, but questions of safety will have to be answered before the American public accepts it.

For an industry which built its last new reactor in 1996 at the Tennessee Valley Authority's Watts Bar Lake, renewed acceptance comes at a critical time. Nuclear plants were licensed for 40 years, when commissioned, and a significant number will be renewing their licenses in the next decade. Operators are leveraging those renewal processes to propose capital investment in new technologies or new reactors. As of summer 2008, nearly 30 projects are being contemplated nationwide, with two in PA.The principal problem with nuclear plants, as it relates to the current energy crisis, is the extended lead time for approvals and construction. Even with the Nuclear Regulatory Commission giving higher priority to nuclear plant reviews, an accelerated process will take three years. The average NRC review is 42-45 months. Add an average construction schedule of four years, and the first wave of four or five projects being proposed now would end up coming on line in 2016 or 2017. All you need to do is look back eight years to the gas price at the pump to judge how uncertain this makes the investment.

For Western PA businesses interested in participating in the nuclear generation boom that is pending, travel will be a prerequisite. At this writing, plans are for a $280 million generator replacement at Three Mile Island in tandem with its license renewal prior to 2014. Construction is scheduled for 2012-2016. And Pennsylvania Power & Light is proposing another reactor at its Susquehanna plant. In early regulatory review now, that project would be perhaps a year or so behind the TMI project.

Wind Power

A more practical, or at least renewable, solution to the alternative energy search is wind power. Travelers on the Turnpike east of Somerset have seen a half dozen gargantuan wind turbines operating since 2004. What isn't as apparent are the turbines from several other projects that have developed in southern PA in the past few years.

Wind power capacity is growing rapidly in the U. S. Wind farms have been operational in Europe for considerably longer, with more than half the world's capacity for wind generation located in that continent. Including the nearly 6,000 megawatts of capacity currently under construction, wind farms in the U. S. will soon approach 25,000 MW, which is roughly half that of Europe's (and almost one-third the world's) capacity. By the end of 2007, only Germany had more installed wind power than the United States.

A new forecasting report from the U.S. Department of Energy (DOE) asserts that wind power could generate 20 percent of U.S. electricity needs by 2030.

The report, "20% Wind Energy by 2030," was released May 12. The DOE notes that the report does not compare the 20 percent wind scenario to other energy options, nor does it lay out any specific action plan. Rather, it was written to examine the costs, challenges and key impacts of obtaining 20 percent of the nation's energy from wind power in 2030.

More than 300 gigawatts (GW) of wind power capacity would be needed to meet the DOE's 20 percent scenario, up from 11.6 (GW) in mid-2007. Wind turbines currently generate a little more than 1 percent of the country's total capacity.

To reach that level, the wind industry would have to quicken its pace of installations more than five times by 2018, to 16 (GW) a year, and then sustain that pace through 2030. Such a development pace would require improved turbine technology, significant changes in transmission systems to deliver power through the electrical grid, and larger expanded markets to buy the power, the report says.

Transmission facilities for power and fuels will be the next bottleneck in the expansion of energy options.

"To dramatically reduce greenhouse gas emissions and enhance our energy security, clean power generation at the gigawatt-scale level will be necessary, and will require us to take a comprehensive approach to scaling renewable wind power, streamlining siting and permitting processes, and expanding the domestic wind manufacturing base," said Andy Karsner, DOE Assistant Secretary of Energy Efficiency and Renewable Energy.

Other impacts the DOE notes are a new source of income for rural landowners from leasing land for wind farms, tax revenues for municipalities in local communities, and the creation of well-paying jobs in a green industry.

One investor who is taking wind power seriously is legendary Texan, T. Boone Pickens. His company, Mesa Power, is in the process of developing a mega-farm in Pampa, in west Texas, which could ultimately generate 4,000 MW by 2014. That's enough electricity for one million homes. Mesa Power recently ordered 667 turbines for the first phase, which will cost $2 billion, and power 300,000 homes.

Closer to home, there are plans for a half dozen new wind farms. PPM Energy, which has developed the wind farms operating in Somerset County, plans to build another four to five farms, including one east of Uniontown that should start by 2009. Also in Somerset, Edison Mission Group from New York, plans wind farms in Berlin Brothersvalley and Bent Tree. In Cairnbrook, Somerset County, Airtricity has plans for a $103 million facility. Winenergy LLC of Shirley NY, has proposed a wind farm in Erie, and there is the proposed Highland Wind Farm in Adams Township, outside of Johnstown, a $50 million project for Everpower Global in New York

Other Alternatives

One alternative source of fuel that was quick to receive support, particularly here in Pennsylvania was ethanol. Using corn as the ethanol source, plans advanced with Harrisburg's support in Mt. Pleasant, where Commonwealth Energy planned a $175 million project at the Sony facility; in Clearfield, where a 108 megawatt, $250 million ethanol plant was planned by BioEnergy International from Norwell MA; and in Aliquippa, where a $250 million plant was proposed by Consus Ethanol.

After the initial rush toward distilling ethanol, it became apparent that ethanol might not be the alternative fuel solution of choice, at least not corn-distilled ethanol. With estimates of production costs of $1.25 for each $1 produced, the economic feasibility of using corn diminished. The use of corn would also cause shortages in the food use of the commodity, adding other negatives to the picture.

What is emerging as ethanol is studied further is that other raw materials may produce better yields. Wild grasses, and especially cellulosic ethanol, appear to offer much more economic production, and would put little or no strain on the food chain. The impact of the changing sentiment about ethanol's raw material source, and ethanol as an alternative hasn't decided the fate of the projects proposed.

Making the Energy Play

Construction of new energy sources and facilities still face a number of obstacles. Regulatory agencies are battling to balance energy progress with diligent review to protect the taxpayer and the environment. The pace of construction is almost certain to outpace the ability to transmit the new energy in short term, requiring that very difficult decisions about updating and expanding the energy infrastructure be made. Expansion of the electrical 'grid' is critical to ensure that the expanded capacity can be distributed to the power customer.

The pain of this energy crisis has the potential to far outstrip the inconveniences of the problems of the 1970's. That pain will be felt by the consumer, and at the ballot box, which is certain to inspire government investment as well. Much uncertainty lies ahead, but so does much construction.BG

CASSELMAN WIND FARM

Developing new and renewable energy resources to meet the growing demand in the United States requires that producers adapt their businesses to alternative generating methods and more effective uses of conventional methods. It turns out that the same is true of contracting in the power industry.

Cranes lift a section of the 80-meter turbine tower (Photo Courtesy Walbridge East).

The management team of Walbridge East had long resumes in the power plant and industrial markets, much of it as former Ragnar Benson executives. One of Walbridge's long term clients, General Electric, gave them a 'heads up' in the early part of the decade that has lead to their involvement in the burgeoning wind farm construction market, and directly resulted in Walbridge's success in landing the Casselman project.

"We worked with GE on 14 different gas-turbine projects at four plants going back to the late 1990's," says Walbridge principal Bill Lemanski. "When Enron had its problems they sold their wind assets to GE, and GE encouraged us to start looking into the wind farm market." Lemanski says that Walbridge began researching the industry, identifying the developers, engineers and specialists who were doing the groundbreaking work at wind farms. One of those firms was Atlantic Energy, which had begun developing projects in Pennsylvania. Walbridge heard about an Atlantic Energy project in Meyersdale and began making inquiries.

During the planning process the Meyersdale project was sold to Florida Power & Light, who invited Walbridge to bid on that job. While they weren't successful, Walbridge got valuable experience, and made a contact that would lead to another opportunity.

Atlantic Energy's project manager was Gary Verklereen. A short time later, after Atlantic had been acquired by PPM Energy, Verklereen and Walbridge began collaborating on a new wind farm to be built in Somerset County.

Wind farms function most efficiently when they are positioned in areas where there are steady, moderate winds, like along the ridges of the Alleghenies. The farms cover large areas, but the structures have relatively small footprints. Of course, they also have turbines that reach a few hundred feet into the sky. Because wind farms are built in rural or naturally pristine property, and do intrude on the natural settings, the regulatory process takes a long time. As PPM Energy started into the process of doing its environmental studies and regulatory due diligence, Gary Verklereen began working with Walbridge East to assist with budgeting and constructability issues.

"Before construction started we worked on the project for about three years," remembers Bill Lemanski. "We helped PPM with budgeting and bidding some early items, and helped with some parts of the regulatory review."

The regulatory process involves avian research, environmental studies for the U. S. Fish & Wildlife Commission, and of course, lots of reviews with the PA Department of Environmental Protection (DEP) to ensure best stormwater management practices and adequate erosion and sedimentation controls. There are also local municipal reviews that can be equally stringent.

The base unit of a wind turbine is delivered to the Casselman site (Photo Courtesy Walbridge East).

> "IT WAS DIFFICULT, BUT IN THE END WE TURNED ABANDONED MINE LAND INTO SOMETHING USEFUL, AND DESIGNED SOMETHING THAT WORKED ECONOMICALLY."

"To be economically feasible, the farms are made up of 25 or 30 wind turbines spread out along the mountain ridges," explains Gary Verklereen. "There will always be people who don't want to see a string of turbines along a ridge. At least in Somerset County there is an ordinance that is pretty reasonable, if we're responsible about the development."

While the Casselman project was progressing through its regulatory journey, the business plan got some boosts when the DEP awarded the project a production incentive grant from the TRF Sustainable Development Fund (for reclaiming hundreds of acres of surface mine area), and First Energy agreed to purchase the 34 megawatts of output prior to the start of construction. During the process, PPM Energy also was acquired by Iberdrola Renewables, the world's largest operator of wind farms.

When the project was given the green light in spring 2007, Walbridge East was asked to compete for the project with several other firms with wind farm experience. While Walbridge didn't have any completed wind farms on its resume, the preconstruction experience proved invaluable. "At the end of the day, we just had more comfort with the different aspects of the project," says Lemanski. "We had the best understanding of working in PA, the characteristics of the mountains, and we were very familiar with the project."

Walbridge's scope of work for the Casselman project involved the 'balance of plant' work, the foundations, roads, site and civil construction, operations and maintenance facilities, acceptance and erection of the turbines, tower wiring, and the commissioning of the stations. PPM Energy contracted separately for the turbines, electrical substation, and electrical collection system between turbines and stations. The total cost of the project was $70 million, including the turbines. Walbridge East's portion of the work came to $13 million.

As it turned out, the DEP grant was needed as more than an incentive. Eight of the turbines were constructed on reclaimed strip mine spoils, requiring specialty foundation work. "Some of the mine spoils were 90 feet deep, and had been reclaimed less than three years, which is not the required settlement period," explains Verklereen. Minneapolis-based Barr Engineering was brought in to design solutions which included inverted 'T' spread footings and micropiles. Foundation subcontractor Nicholson Construction handled the work. At $500,000, the foundation cost was four times the norm.

Gary Verklereen observed, "It was difficult, but in the end we turned abandoned mine land into something useful, and designed something that worked economically."

"The subsurface conditions were the biggest single obstacle on the project," recalls Bill Lemanski. In addition to the abandoned mines, Walbridge encountered significant subsurface rock that required blasting to break up and excavate. Lemanski also noted that the natural phenomenon that made the project feasible, the wind, could be a problem as well. "The locations are exposed to the wind, but that could cause delays," says Lemanski. "You can't erect turbines 200 feet in the air with 25 MPH winds blowing."

Casselman Wind Farm was started in May 2007, and the final 80-meter tower and 77-meter diameter turbine was erected and commissioned in December. As trying as the entire process can be, the success of projects like Casselman has made southwestern PA a good spot for Iberdrola. Gary Verklereen says that the company expects to develop a project per year for the next five years or so, with the next one planned for central Fayette County.

For power plant veterans like Walbridge's Bill Lemanski, building wind farms represents a return to growth in the generation industry. Asked about his company's interest in other projects like Casselman, Lemanski replied, "Well, we're on our third one already." BG

Casselman Wind Farm Team	
Owner/Developer	PPM Energy/Iberdrola Renewables
General Contractor	Walbridge East LLC
Engineer	Somerset Engineering
Electrical Subcontractor	W. R. Casteel
Foundation Subcontractor	Nicholson Construction
Turbine Manufacturer	General Electric

CLT Efficient Technologies Group

Troy Geanopulos, one of the founders and President of CLT Efficient Technologies Group, was working in the lighting retrofit business in the late 1990's when he thought he saw an opportunity. As his company began to get involved in projects based on energy performance contracts, he observed the companies doing that work then and believed it could be done better differently.

"The market seemed to be made up of these ESCO's (energy service companies), like Trane, Honeywell and Siemens, that were tied to their own equipment," Geanopulos remembers. "These are all great companies but I thought there would be room in the industry for someone who didn't have to make recommendations that would lead to sales of his own equipment."

Geanopulos discovered that the Guaranteed Energy Savings Act 57 (GESA) of 1998 had given public entities the authority to enter into energy performance contracts with ESCO's for the purpose of doing renovations that would be paid for by the savings realized from the improvements and guaranteed by the ESCO. The Commonwealth identified ESCO's as equipment-based, utility-based, energy-based, or fee-based consultants. Geanopulos's research uncovered few of the latter category, and in 2000, Geanopulos and his partners founded CLT to fill that niche.

What GESA and Act 77 of 2003 enabled, was for public owners in the state of Pennsylvania to make decisions about energy conservation like a private business might, based on the return on investment and the capital needs of the owner. And it set up guidelines for selecting an ESCO that were based primarily on qualifications and the ideas presented in the proposal. The smallest percentage of the ESCO's score was based on the cost of the proposal.


Troy Geanopulos, CLT President

The rationale behind this process, which is admittedly counterintuitive for construction, is that the decision to hire is based only on the perception that the facility in question may benefit by energy conservation measures. When the request for proposal is prepared there is no defined scope; in fact, the scope of the work is part of the proposal. This means that different ESCO's can, and do, propose very different solutions. And the proposal that involves the largest expense will most likely provide the largest savings to the owner.


Rob Campbell, CLT Chief Operating Officer

Geanopulos likes the open ended nature of the energy performance contract, and feels it plays to CLT's strength. "Our advantage is in the ideas we come up with while we're preparing a proposal, and translating those ideas into measurable savings," he explains. "We're vendor neutral so we can recommend measures that create the best result for the building owner."

To come up with the best ideas, CLT works hard at building a staff of talented and experienced engineers and project managers, many of whom worked previously for the equipment manufacturers that sparked Geanopulos's interest in energy performance contracting. Chief Operating Officer Rob Campbell shares Geanopulos's vision of the vendor-neutral energy services company. CLT's other key managers are Dave Clark, who is Manager of Construction Services, and Greg Lok, who serves as Manager of Engineering & Project Development.

What strikes an observer most about CLT's business is that there is a real element of risk associated with what they do. It's important to remember that the GESA 57 and Act 77 enable energy performance contracts with guaranteed savings, and no upfront capital outlay. CLT must fully guarantee that the measures they propose will yield the agreed upon savings within fifteen years, or make up the difference. Even the proposal itself requires the investment of hundreds of hours of research and analysis in order to produce a document that can explain how the result will be achieved. And that's just a first step.

Once selected, CLT prepares a detailed, investment-grade energy audit and a plan for the conservation measures that will be done, including specifications, commissioning plans, and measurement and verification plans. The client is then able to choose only the work that they wish to do, or they can retain CLT in a construction management role to carry out the

> "OUR ADVANTAGE IS IN THE IDEAS WE COME UP WITH WHILE WE'RE PREPARING A PROPOSAL, AND TRANSLATING THOSE IDEAS INTO MEASURABLE SAVINGS"

renovations under a guaranteed energy savings contract. Their clients include private firms like Kennametal, whose $200,000 lighting retrofit is producing $63,000 in annual savings, and the Westmorland Co. Housing Authority, where CLT is building a $5.1 million energy retrofit of the Authority's buildings to produce $5.6 million in savings over 12 years. In recent years, CLT has done work for the City of Erie, Central Cambria School District, Carnegie Museum, Penn State and the City of Pittsburgh, providing plans for energy savings that involved replacement of windows, boilers, chillers, lighting, controls, roofing, plumbing fixtures, and traffic signals.

CLT's growth has been steady and strong, averaging more than 36% per year. Geanopulos isn't concerned about the size of the market limiting CLT. "The Berkeley National Laboratory did a study in 2007 and estimated the industry is currently at $4 billion annually," he noted. When asked what the company's share of that market is, Geanopulos answers and then quickly asks to keep that off the record. He grins and says, "I'd rather people just think of us as this little company under the Parkway in Carnegie." BG

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PROFESSIONAL LIABILITY RISK MANAGEMENT FOR GENERAL CONTRACTORS IN DESIGN/BUILD PROJECTS

By Joseph J. Bosick, Esquire

What does a Design/Build Contractor do when his subcontracted design professional (architect/engineer) has an inadequate limit of insurance coverage? The corollary question is how does a Design/Build Contractor protect its bottom line from design-related errors that result in cost overruns, time delays, and reworks? One option is to obtain Contractor's Professional Liability Coverage, which protects a Contractor from uninsured claims from third parties resulting from the negligent act, error, or omission of a design professional under contract.

> "Contractor's Professional Liability Coverage is a risk management option when the Design/Build Contractor's subcontracted design professional has a low limit of insurance coverage."

As an illustration, suppose a subcontracted Architect in a Contractor-led Design/Build delivery system makes a design error that is not discovered until the building has been completed. This design error is safety-related and results in portions of the building being reconstructed at a cost of $2 million. The subcontracted Architect has an aggregate limit of liability coverage of $2 million on its own Errors & Omissions policy. The owner of the building makes a claim against the Design/Build Contractor. The Contractor attempts to pass the claim on to the Architect, but the Architect's $2 million aggregate limit of liability has been exhausted by claims on other projects. If the Design/Build Contractor has purchased Contractor's Professional Liability Coverage, it can successfully turn the claim over to its own insurer. Furthermore, in this same example, if the Architect's $2 million limit was eroded to $1 million from previous claims in the same policy period, the professional liability insurance purchased by the Contractor would cover the additional $1 million required to cover the claim (depending on the limits purchased by the Design/Build Contractor).

A third illustration involves similar facts except the Architect has available $2 million of coverage that has not been exhausted but the claim is for $4 million. If the Design/Build Contractor has purchased Contractor's Professional Liability Coverage, it can successfully turn the claim over to its own insurer. Again, assuming there is an error by the design professional that causes damage, the insurer would pay the difference between the available coverage and the total amount of the claim.

While these are basic and general examples in the very complicated world of design claims, it clearly portrays that Contractor's Professional Liability coverage should be considered on projects performed in Design/Build delivery systems. More particularly, it should be considered on any project where a Contractor holds subcontracts with any design professional. Design professionals in Design/Build delivery systems are most often Architects/Engineers, but can also be Structural Engineers, Mechanical Engineers, and Electrical Engineers.

Contractor's Professional Liability Coverage replaces a specific exclusion for professional services contained in a Contractor's General Liability policy. To avoid the gap in coverage, consider purchasing Contractor's Professional Liability insurance, which provides the excluded coverage on a separate insurance policy form.

It is important to note that the Contractor's Professional Liability Coverage is a claims-made policy and not an occurrence policy, which means that the Contractor's Professional Liability policy must be in effect at the time the claim is made for there to be coverage. In other

words, if the policy period has expired before the claim is made, then there would not be any coverage. Furthermore, Contractor's Professional Liability covers design negligence that results in economic damages only. The Contractor's Professional Liability policy does not afford coverage for bodily injury or property damage claims.

Below are some of the advantages and benefits of Contractor's Professional Liability Coverage:

The Design/Build Contractor maximizes its opportunity for protection against the errors of its subcontracted design professional through a combination of the design professional's limit of liability on its own professional practice policy and the Contractor's Professional Liability Coverage.

It gives the Design/Build Contractor the opportunity to retain the services of a qualified design professional who would have been rejected otherwise because of the inability of the design professional to obtain an affordable higher limit of professional practice coverage commensurate with the project.

Contractor's Professional Liability Coverage is priced as though a large deductible was in place, and so the insurance premium is less than if the Contractor purchased the coverage for dollar one exposure.

Contractor's Professional Liability Coverage is less expensive than Project-Specific Professional Liability Coverage and has the added benefit of keeping the architect/engineer more accountable because the architect/engineer's own professional practice policy is exposed.

The Design/Build Contractor maintains control over the nature and availability of professional liability coverage.

In conclusion, Contractor's Professional Liability Coverage is a risk management option when the Design/Build Contractor's subcontracted design professional has a low limit of insurance coverage. BG

Joseph J. Bosick serves as Chair of the Construction Practice Consortium for the law firm of Pietragallo Gordon Alfano Bosick & Raspanti, LLP, which has offices in Pennsylvania, Ohio, and West Virginia. For questions, you are welcome to contact Joe Bosick at 412-263-1828 or e-mail him at JJB@Pietragallo.com .

Financial Perspective

A Financing Checkup One Year After the Sub-Prime Meltdown Started

It was a year ago, as the dog days of summer 2007 set in, that the whispers of an impending crisis in the residential mortgage market escalated into the full cry of panic, as one institution after another revealed that its mortgage portfolios were riddled with loans that would not perform. Within months, some of the nation's largest lending companies were effectively out of the market, or out of business altogether.

For the commercial construction market, the so-called subprime meltdown provided a cautionary tale of lending without rational support. There was little fear that commercial portfolios contained the same kind of unsupported loans. What *was* on the minds of developers and lenders was the extent to which the sources of commercial capital were exposed to some piece of the home mortgage market, and the reaction of credit providers for future commercial loans.

How much poisonous mortgage-backed security had commercial financial institutions swallowed? What would the crisis do to underwriting standards? When would the write-downs get all of these bad loans out of the system?

What these and many other questions amounted to was an uncomfortable level of uncertainty about financing in the development and banking communities. And there are few things as uncomfortable in real estate development and financing as uncertainty.

Western PA was not insulated from the problems, but the impact has been mild in comparison to the majority of the country. The lack of rapid appreciation in home values, and the misperception of Pittsburgh as a no-growth region, kept firms like Countrywide Financial from targeting this region with lots of loans. Moreover, when the rubber hit the road, lenders here found they had fewer competitors and more profitable conditions.

As the Federal Reserve aggressively lowered rates throughout the winter and spring, the majority of the rate cuts weren't aimed at the consumer market, but at creating more favorable borrowing rates for banks. "Almost overnight the rates went from 150 over the 10-year Treasury to 300 over," noted Gregory Sipos, Senior Vice President at First Commonwealth Bank. "Swap rates moderated to the point where banks are making two or two and a half points for the first time in a while."

For banks that had focused on providing conventional banking services, which describes most of the regional lenders in Western PA, the rate cuts meant that they had more breathing room to focus on commercial lending and banking.

Another legacy of the turmoil for the regional banks has been a shift in the threshold of loan size that they would compete for. Bigger lenders have stepped back from the mainstream commercial loan arena, opening up opportunities for smaller lenders, and even for larger institutions that had eschewed the commercial real estate marketplace. Banks that were more focused on traditional banking services found they had more opportunities than before. And the smaller institutions could compete for larger loans as well.

Jim Noland is President of Pentrust Real Estate Advisory Services, which invests combined pension funds for labor. He's seen two differing effects arising from the financial problems: more opportunities for smaller regional lenders, and more participating levels of financing.

"I saw something come across my desk today where a small bank was looking at a $76 million transaction," he said. "A couple of years ago that bank would not have competed for that deal because of the size." Noland explained that it wasn't a capabilities question before, simply that there were bigger banks that filled that niche.

Noland also pointed to one of Pentrust's recent deals, the Bridgepointe II office on Second Avenue, as an example of the added layers that were involved in the current environment. "Bridgepointe II had URA funding, incentive money, and was more complicated than an average commercial loan," he explains. "That project had seven different lenders and levels of financing. It's more and more the trend to see multiple lenders on larger and more complicated deals." Noland believes that the trend toward sharing the risk of a deal with other institutions will continue until the mortgage crisis is a distant memory.

As you might imagine, the focus in financing has shifted from generating business to reducing, if not eliminating, the risk of default. Commercial real estate can't be risk free, but lending standards have tightened, and smart lenders are expanding their loan review to include in-depth examination of the development team, including the architect and the contractor.

The contractor's role has become more prominent in the process. "Lenders are asking developers for GMP's (guaranteed maximum price) much earlier," says Bernie Kobosky of P. J. Dick Inc. "We've had developers tell us that it helped them get financing because we were on the team." Kobosky clarified, "It's not that it was P. J. Dick, per se, but the developer needed to have a contractor with a competent estimating staff to make the lender feel comfortable about the credibility of the GMP."

Jim Noland feels the deeper scrutiny makes more sense than more traditional methods. "Banks have always been about guarantees, but there's never enough guarantee to cover a default," Noland says. "I think the lenders get confused. The better approach is to look more closely at the details that can cause problems for the project, like market conditions, or design or construction problems."

Like all markets, the current conditions also call for more of what makes any deal go smoother. "Cash," laughs Bob Cornell, President of PA Commercial Real Estate. "We're seeing more equity required in the deals we're doing. Lenders want to see better coverage from the borrower." Cornell says his firm has seen a number of projects where the equity contribution required exceeds the time-honored 20% level.

Pittsburgh is a market with very little or no presence of large institutional investors who can afford to park cash in new construction or acquisitions, with the expectation of making their money on the later sale of the building. Developers in the region tend to have asset values in the tens of millions, and they leverage the holdings efficiently, which means that their return on investment relies on rent.

It's this last fact that makes the inflationary trend in building costs discomforting. Local developers could well find themselves caught between inflexible lending standards, and pro formas that don't work with the rents that can be charged. Without cash fat developers in the market, the region's new construction could be without financing.

That's not a scenario that Bob Cornell sees happening. "We'll be fine here," he says. "Pittsburgh never got carried away; it's very steady. I haven't seen any projects stopped because the costs got carried away, and I don't expect to."

MBE/WBE Company Spotlight

Rhea Engineers and Consultants

Like most entrepreneurs, Marcella Gallick always had a feeling that she should be her own boss. The University of Pittsburgh-trained civil engineer had never acted on that feeling, even though she had been involved in a startup geotechnical firm, Earth Inc., in the early 1990's. Following that gig, she had spent a decade working at the opposite end of the size spectrum, first at engineer Henry C. Rizzo & Associates, and later as the manager of the Pittsburgh office of construction manager, J. A. Jones, of Charlotte, NC.

As she was in the process of growing the J. A. Jones operation, Gallick's entrepreneurial feeling got a kick start, although a rude shove is a more accurate description. After the September 11, 2001 attacks, she was concerned about Jones' business, especially since the majority of her work was for the Navy. One month after the attacks, after being assured that all was well, and two weeks after hiring another engineer, Marcy Gallick was told that J. A. Jones was closing down the Pittsburgh office. "I wasn't very attentive to office politics," she remembers. "My boss had recently retired under pressure, and I didn't realize that he was probably protecting our office."

When she started contacting her customers to say goodbye, Gallick discovered that they had been blind-sided by the change as well, and not happy about it. "Several of the customers encouraged me to go out on my own," she explains. "They told me to go through the (WBE) certification process, and that they would be interested in working with me still."

When reminded that her decision to start a new business coincided with a particularly calamitous time, Marcy Gallick laughed and noted that bad market timing wasn't the only obstacle to the startup. "I was a single mom, and the first of my kids was about to start college, so I also didn't have a lot of money!" Faced with these obstacles, Gallick nevertheless decided, "It was now or never."

At the time, Pennsylvania had a program for startup businesses that allowed for business owners in situations like Gallick's to receive unemployment compensation during business planning and training. Marcy Gallick doesn't mince words about the program. "That program absolutely saved me," she says. "I don't think I could be in business without it."

Rhea Engineers founder Marcella Gallick Johnson

In relatively short order, Rhea Engineers was able to reestablish contact with Marcy's former Department of Navy contacts, and succeeded in securing environmental remediation work for the Navy throughout the mid-Atlantic. The contracts didn't result in overnight success for Rhea Engineers. Growing the contract base also meant building the firm's staff of engineers (which included her last-minute hire at J. A. Jones), and overhead. "My friends and advisors all told me that I needed to be patient, that I would notice a difference after three years," Gallick says. "And it turned out that way. In year four we got some breathing room and it's been going great ever since."

For the past couple of years Rhea has focused its efforts on growing its business in Western PA. Gallick has been a visiting professor at Pitt's Engineering School, and is re-kindling relationships with the University and with local design firms. Rhea Engineers is currently working with Gannett Fleming to develop a guidance manual for rock slope stability design for PennDOT. They also are collaborating with L. Robert Kimball & Associates researching the catastrophic slides along Route 65 in Kilbuck and Route 28 in Harmar.

Marcy Gallick is excited about Rhea's growth plans. With work expanding in both Pittsburgh and the mid-Atlantic she sees the next challenge as balancing the staffing. "I think the ideal size will be about 25 people," she explains, "with about half here and half in Virginia or North Carolina." Asked if she could envision stepping into an administrative role only, Gallick says, "I wouldn't want to get to a point where I wasn't still doing the work." BG

Company Facts

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Management Perspective

Navigating the Change in the Market Requires Courage and Discipline

Markets and governments may try all sorts of measures to perpetuate good times or stave off bad, but the inevitability of the business cycle is like death and taxes. The only thing you can do about it is plan for it, and let natural forces run their course.

By almost any measure the national construction economy has peaked, and the overall economy is struggling. In Western PA, the characteristics of the regional economy indicate a better fate than the national slowdown, and the extended boom in construction here is an indication of a healthy region. Expecting that Pittsburgh will somehow be immune to the larger malaise however, is a poor management approach. For the first time in half a decade, construction, design and real estate professionals should be planning to navigate a tougher market.

One of the more intriguing aspects of human nature is that we tend to look at times of prosperity as times of status quo, thinking that whatever we're doing must be working. It's normal then, that business management starts to look at change as the remedy for improving bad circumstances.

Bersin & Associates is an Oakland, CA management training research firm. One of their indexes asks talent management executives about their practices in response to the market conditions. In January of 2008 Bersin's study showed that there was 21% greater interest in cost-reduction, 18% lower focus on product introductions, and an 18% increase in focus on building new leadership. These responses show that corporate management is in downturn mode.

As our industry starts to look at fewer projects in the pipeline in 2009 and 2010, it's time to start focusing on putting the downturn strategy into practice. Of course, that presumes you have a downturn strategy (and you should) to rely on in the first place. If you don't, summer 2008 would be a great time to plan for what your business would look like with a 20% decrease in revenue. Construction cycles always turn down, and planning for that should be as inevitable. The rising tide of construction in Western PA has made most business people look pretty smart, but as Warren Buffett is credited for saying, "Only when the tide goes out do you know who has been swimming without a bathing suit."

Your plan will have a lot of moving parts, but if nothing else falls out of the planning, focus on two strategies that may seem counterintuitive. First, use the downturn as an opportunity to build your staff; and second, beef up your marketing efforts. Increasing these investments during lean times may seem risky, but one thing should give you courage: most of your competitors won't be doing these strategies either.

Your People are Your Company

Right now is the time to start communicating what you know and what you believe will happen in the next couple of years. This is actually good practice all the time, but ahead of a slowdown it's critical to building confidence. Your organization's success is totally dependent on your workforce's ability to innovate, reinvent itself, provide excellent customer service, and remain loyal and dedicated when tough times come. You cannot build this culture during a crisis. You must build it before the crisis, and use it to weather the storm.

This means several things: do not sacrifice your values, principles, and people. If you do need to lay people off, do it surgically, focusing on the people, projects, and departments that most need change. Across-the-board layoffs will dramatically impact your employee loyalty and effort.

Reward your high performers. Even during a downturn you will find many people performing at high levels. You are likely to find that many people rise to the occasion and perform at greater levels during stress. You should recognize and reward these people in the ways you did when times were better. Such an approach will build an enduring culture, one which will help you survive a downturn and grow when the good times come back.

Continue to search for great talent. If there is a broad downturn, the job market will soften. This means that many of the best engineers, sales people, marketing people, managers, and executives will be looking around. Rather than freezing all hiring, you should use this as an opportunity to upgrade your own organization.

One of mankind's most enduring good qualities is it's tendency to pull together during trying circumstances. You need to capitalize on this trait by increasing your communications at all levels. Your staff is looking to its leaders for a plan to navigate the tougher waters. That plan will likely include some bad news, but resist the temptation to gloss over the tough parts, or avoid sharing your plan. First, if you have a good team, they already know there will be bad news. Second, and more important, not sharing your plan as a leader is likely to be viewed as having no plan. What would your reaction be to working for a company that was slowing down and didn't seem to have a direction?

Turn Up the Marketing Heat

If you are faced with lower revenues it is impossible not to plan for lower expenses as well. One of the most tempting places to cut is your marketing effort. Not many executives really understand marketing, and even fewer can see a direct return on investment. Yet, cutting marketing is not a direct path to more sales, and reduced marketing resources are poorly equipped to grab market share when growth returns to the marketplace, which is, after all, the time you are trying to reach eventually.

Marketing consultant Harding & Company specializes in supporting the design and construction markets. Founder Ford Harding recently posted his thoughts on marketing in a slowdown on his blog (www.hardingco.com/blog/), under the heading of "Selling Professional Services During a Downturn." Aside from good advice, Harding offers a formula to illustrate what neglecting your prospects can cost.

"…In a period of two to three months, the professional firms go from working flat out while desperately trying to find more people to recruit to famine, with many of their people sitting around in the office dazed and unbilled, trying to figure out what happened.

Anyone who hasn't been through a downturn will find this hard to believe. Let me show you what happens. Your revenue (R) is the product of three numbers:

the number of people you talk to about your services (N)
the percentage you persuade to buy your services (B)
the average fee charged per client (F)

So, N x B x F = R

Or, if N = 100, B = 10% and F = $100, your revenue can be calculated as:100 x 10% x $100 = $1,000

When the downturn comes, the percentage of people in your network who buy shrinks and those who remain have smaller budgets. In other words B and F decline. If we assume this decline is ten percent, the revenue calculation looks like this:
100 x 9% x $90 = $810

Whoa! What happened? The percent buyers and the fees per client each declined ten percent, but revenues dropped nineteen percent! That's because the variables are multiplied against each other resulting in a geometric fall. This shows how relatively modest declines in the buying power of our market can result in a devastating reductions in revenue.

This is an indirect path to reveal the importance of N, network size. You can't control B or F (the percent of your contacts who buy from you and the average fee of earned from each). But you can control N, the size of your network. N is a function of the number of people in the market that you stay in touch with. That number is largely within your control.

But today, you are awash with work. You are so far behind that you don't have time to maintain your network. In fact, you are afraid to call people for fear that they will want you to do some work which you don't have time for. So, you don't call and over the months your network begins to slide, too. In other words N declines by, let's say, ten percent, too. Our equation now looks like this:
90 x 9% x $90 = $729

This is a decline of twenty-seven percent. That's eight percentage points less than we would have to deal with, if only people had kept up their calls and meetings. How many jobs saved does that translate into?

So, keep up your calls and meetings, even when you are fully loaded with client work. When a downturn comes, it won't be as steep, nor last as long if you do."

Focus on your employees; step up your marketing. Not complicated stuff, these rules of thumb are easy to set aside when the cutting starts. That's why it's critical to think about a bad year before it happens. Putting off downturn planning is a little like expecting the slow uphill climb of the Phantom's Revenge to continue all afternoon. The other side of the rollercoaster is coming. Be ready for the ride.BG

Trend to Watch

Government Consolidation: Pittsburgh and Allegheny County Aren't the Only Ones

On April 3, the task force headed by University of Pittsburgh Chancellor Mark Nordenberg released its report on the consolidation of the city and county government. The public release kicked off what will be an extended season of campaigning from both sides of the argument, but what might be getting lost in the public debate is that the idea of merging local governments isn't unique to our region; it's an example of a solution to modern governance that is being proposed in more and more places.

Municipal consolidation isn't a new fad. Since 1900 there have been consolidations of 28 metropolitan areas in the country. Even here in Pittsburgh, voters were given the opportunity to merge in 1925 and 1929, but voted the measures down. But over the past decade a handful of large metropolitan areas have consolidated, signaling a trend that had been dormant since the late 1960's and 1970's.

What is at the heart of the renewed interest in consolidations is the same as was driving them thirty years ago, finances. Two major financial headaches are driving municipal governments across the nation towards stagnation or insolvency: pensions and financial market turmoil.

The pension issue is one that all public and private entities are facing in light of the demographics. There's a lot of data to cut through on this issue, but the problem boils down pretty simply. Pensions were built on expectations of how long we'd live after retirement. Contributions were tied to those expectations, with assumptions about how much the accruing funds would grow through investment. The investments are mostly living up to expectations, but we're not dying as fast as expected. For the city of Pittsburgh, that total obligation is growing towards $800 million, and the annual pension expense is ten percent of the $423 million operating budget.

Municipal governments finance their operations through taxes, which tend to ebb and flow as the economy does. Capital projects are financed through the sale of municipal bonds. Muni bonds are popular with investors for their tax-free status, which allows government to pay lower yields, and their perceived safety. The recognition of hundreds of billions of dollars of bad debt by the nation's financial system in the past year has had a related effect on the municipal bond market. Demand for bonds has slowed, and the increased debt service has pushed some municipal governments to the breaking point.

In May, Vallejo CA entered Chapter 9 bankruptcy protection. More California cities, hit hard by the housing market collapse there, are likely to follow. More ominous is the threatened Chapter 9 filing from Jefferson County, AL, home to Birmingham, the state's largest city. Jefferson County is teetering under the weight of a sewer bond issue which saw its interest rate climb steadily over the past year. The county has delayed its $53 million monthly debt service since April in hopes of a restructuring, but looming is a $3.2 billion default that dwarfs the Orange County CA default of the early 1990's.

The best remedy for these kinds of long-term financial problems is to grow the top line of the budget. Since no reasonable tax increases can begin to meet the growing obligations, metropolitan governments are stepping up their efforts for economic development. Almost universally, consolidated municipalities are pointing to this benefit as the best argument for merger.

In January 2003, the city of Louisville merged with its county, Jefferson, growing from 256,231 residents to 693,604, becoming the nation's 16th most populous city. Prior to the merger, Louisville proper was ranked 67th in the nation, and, more importantly, had fallen to second largest in the state of Kentucky, behind Lexington in the 2000 census. Lexington had merged with its surrounding county in 1973 when an earlier wave of mergers had occurred.

The Louisville/Jefferson merger had been presented to voters twice before in the prior decade, and had been twice defeated. But by 2000, not only had the city fallen

behind Lexington in status, but also the lack of a unified effort from metropolitan leaders (the mayor was for it, the county executive wasn't) may have been the deciding factor in the NBA's Charlotte Hornets choosing New Orleans over Louisville as their new home.

Proponents poured millions into advertising the benefits of the merger, and may have cinched the final result by putting popular former mayor Jerry Abramson in front of the effort. Ousted by term limits in 1998, Abramson was eligible to run again as the head of the merged Louisville Metro government, and won handily in 2003. Now in his second term as mayor (again), Abramson has presided over an expansion of services, a revitalization of downtown, and a 10% reduction in government size.

From 2003 to 2007 a unified Louisville was first in the U. S. in small business growth, and first in the southeast for manufacturing job growth.

In addition to Lexington KY, the wave of consolidations that occurred in the 1960's and 1970's included the city/counties of Nashville/Davidson TN (1963), Jacksonville/Duval FL (1967), and Indianapolis/Marion IN (1976).

William Hudnut was mayor of Indianapolis from 1976 to 1991, after the state Legislature merged the city with Marion County. In 1991, Indianapolis beat out 92 cities competing for a $300 million United Airlines maintenance facility. It also raised the extra $75 million needed to build a downtown mall from businesses throughout the county. Hudnut credits the merger for these successes. "It gave the mayor a much stronger hand in negotiating economic development deals," Hudnut says. "There was one voice speaking."

In Jacksonville every road in the new metropolis was repaved within two years of consolidation. It began cleaning up St. Johns River by eliminating sewer outfalls that were dumping almost 20 million gallons of raw sewage a day, and invested $60 million into downtown redevelopment efforts that in turn, attracted about $200 million in private construction. Property taxes were lowered each of the first nine years. To this day Jacksonville's millage of 18.75 is the lowest in the state of Florida.

In the face of such results at least seven other cities are currently exploring mergers: Buffalo and Erie County, N.Y.; Rochester and Monroe County, N.Y.; Memphis and Shelby County, Tenn.; Milwaukee and Milwaukee County, Wis.; Albuquerque and Bernalillo County, N.M.; Des Moines and Polk County, Iowa; and Fresno and Fresno County, Calif.

Here in Pittsburgh, the Nordenberg committee's 21-page report, entitled "Government for Growth: Forging a Bright Future — Built on Unity, Efficiency, Equity and Equality — for the People of Allegheny County and the City of Pittsburgh," recommends steps to take towards consolidation that permit continued fiscal improvement during the process. The three major recommendations are:

- Continued merging of city/county functions until duplication is eliminated, calling for 'zero tolerance" of redundancy.
- A formalized agreement between city/county governments to continue cooperation beyond the current administrations.
- To present a merger plan for referendum "at the earliest possible convenience."

Formalizing the cooperation will create a process for continuing the consolidation of functions beyond the terms of Dan Onorato and Luke Ravenstahl, two executives who have been uncharacteristically cooperative. Ravenstahl, whose job would likely be eliminated, supports the consolidation, saying at the time of the report, "If it's my duty to be the last mayor of the city of Pittsburgh, then so be it. My goal is to change this city and region forever."

In the aftermath of the report and executive endorsements has come outcry in support and opposition that is likely to grow until the referendum is decided. County Council President Rich Fitzgerald expects a lively debate, but cautions that voters need to focus on facts, not rhetoric. He's especially intent on clarifying the role of the 129 other municipal governments in the county.

"There are efficiencies that some of the local governments could get if they were merged as well," he explains. "But any other merger would be entirely voluntary. If you include the local municipal governments in the consolidation, the thing's dead politically."

Fitzgerald believes the city and county have been moving in this direction, if unintentionally, for decades, going back to the county-commissioner form of government. "It started when we got approval to create the Regional Asset District, which allowed regional tax authorities to support regional assets like Phipps Conservatory, the Zoo and the Aviary," he says. "Progress continued with Home Rule in 1998, and with the elimination of county row offices in this administration. It's all part of one evolution of local government and consolidation is just the next step."BG

Best Practice

Energy Analysis is the Right Thing To Do

In the feature article of this edition were some statistics that highlighted how profound an impact buildings have on our natural environment, economy, health, and productivity. Buildings account for most of our electrical consumption, and roughly 40% of the total energy, carbon dioxide emissions and raw materials used.

These are the kind of numbers that arouse emotions about protecting the environment. But, let's assume for a moment that business (and particularly the real estate business) is a cold-hearted entity that doesn't care all that much about the environment. (I know that's a stretch). This level of consumption also reflects big dollars expended, and that's something that business cares a lot about. In fact, in an environment where energy costs will have doubled between 2005 and 2010, energy efficiency has become a hot topic for businesses of all shapes and sizes.

Good design cannot be separated from energy-efficient design on new construction, but what do you do about buildings that are already in place? An energy analysis or audit of your buildings is the best way to judge where and how you are losing money, and how to remedy the problems.

GOOD DESIGN CANNOT BE SEPARATED FROM ENERGY-EFFICIENT DESIGN ON NEW CONSTRUCTION, BUT WHAT DO YOU DO ABOUT BUILDINGS THAT ARE ALREADY IN PLACE?

An energy audit isn't free. Performing a thorough, third-party analysis can take less than a week for a simple office building or months for a large institutional campus. One of the first steps in the process of analyzing your building or campus is to determine whether or not your buildings can really benefit from the effort. One set of guidelines that may prove helpful are those suggested by the Commonwealth for assisting public owners to make that judgment after the passage of the Guaranteed Energy Savings Act 57 (GESA).

The state recommends evaluating your property through a series of seven questions, with the answers weighted one through four, with four the most likely to benefit. A simple tally at the end is compared against a scale, with more than 15 points equaling a good chance of benefit, and more than 23 pretty well assuring you of a good return on investment. Those questions are:

Are all the facilities/buildings in one location? (yes = 4)
How many facilities/buildings are included? (1-7 = 4)
What is the average electricity price paid per kWh ? (> $0.12 = 4)
What is the area of the buildings/facilities? (>500,000 sq. ft. = 4)
What is the total annual energy bill for all fuels? (>$1 million = 4)
What is the average age of the facilities? (> 20 years = 4)
How many years since last significant upgrade?
(> 15 years = 4)
Source: PSU Facilities Engineering Institute.
www.seda-log.org/energy/lib/energy/paul_meister.pdf

Not surprisingly, the bigger, older, more complex and expensive the facilities are, the more likely that an energy audit can uncover areas to save.

For new construction, ASHRAE 90.1 is accepted as the code basis for doing energy analysis. Designed as a baseline for energy performance, ASHRAE 90.1 gives designers a means to calculate the energy implications of all the elements of a design, and the calculations offer options for offsetting inefficient elements, like lots of clear glazing, with additional energy savers, like beefed up insulation.

"ASHRAE 90.1 is good because it helps the A/E firms from designing an energy hog," explains James White, a mechanical engineer and partner in LLI Engineering. "A complete energy analysis takes a holistic approach to the building. We look at the how well the entire building envelope, the architectural system, is working, the lighting, controls, building automation systems, and of course, the complete HVAC system for the facility."

White echoes other engineers in talking about where some of the best areas for return exist. The building envelope (its windows, roofing and insulation) is the key to thermal loss, which in turn drives the demand for heat or cooling. Inefficient lighting systems offer big savings opportunities. More efficient fixtures and the use of motion or day lighting sensors can bring immediate ROI. And, of course, the HVAC system offers the opportunity for significant returns, even if the plant is not aging.

"I'd recommend running efficiency calculations on almost any system," says White. "The technology in heating and cooling is improving so rapidly that even good equipment with another ten years of useful life might be a candidate for a profitable replacement right now."

Another facet of effective energy analysis is to look beyond code requirements and manufacturer's recommendations to how the facilities actually function in the scheme of the business or government operation. For example, HVAC systems take in outdoor air to keep buildings healthy as well as comfortable. ASHRAE standards call for an air flow based on occupancy, usually peak occupancy. But since a primary purpose of the outdoor air intake is to maintain safe CO^2 levels, it often makes more sense to use CO^2 monitors to drive the intake. For example, buildings which have variable occupancy levels, like church sanctuaries, will be using 8,000 cubic feet per minute if the sanctuary seats 400 and the local code requires 20 CFM per occupant. Using a CO^2 sensor will bring in outdoor air only when carbon dioxide levels elevate, which may be for one hour on Sunday morning. During the remainder of the week, no outdoor air may be required.

In the public sector, the high cost of energy and focus on environmental stewardship is driving legislation like GESA 57 at both state and federal levels. In Pennsylvania, GESA gives any public owner the option to do energy-related renovations that it hasn't the capital to do, by using the cost savings to finance the construction over a 15 year term. In an unusual nod to the free market, GESA looks to private sector energy service companies to drive the savings, recognizing that their motivation will be to maximize the cost savings, since that maximizes their performance contract.

"The leadership of the Commonwealth of Pennsylvania has recognized the impact energy efficiency has on our economy and our environment," writes Rob Campbell, COO of Carnegie-based energy service company CLT Efficient Technologies Group. "The legislature provides clear direction and documentation to county governments as to how best to convert the wasted energy dollars…into deferred capital improvement projects guaranteed to be funded through the energy savings."

Whether the ownership is public or private, emphasizing energy efficiency makes the need for systems commissioning more obvious. An important component of LEED certification, commissioning establishes a plan for energy efficiency and documents the entire design, construction, operations and maintenance process. Commissioning is often viewed as redundant and expensive, but the process provides the road map to effectively managing the building systems to get the full benefit of the design.

LLI Engineering has been experiencing growth in what Jamie White calls 'retro commissioning,' a complete review of what would have been done to a facility that was not commissioned at occupancy. Recently LLI completed such a project at The Mall at Robinson Town Centre. The study found equipment warranty issues, overlapping or inadequate preventive maintenance contracting, and a variety of lapses that had inadvertently occurred in less than a decade of operation. The resultant conclusion may seem surprising given the issues.

"We discovered that the in-house maintenance staff was really doing a great job," says White. "There were things that could have been replaced or improved, but retrofitting their systems wouldn't have been all that cost effective. The real value is that the owners now have a detailed plan of what to do when its time for replacement." BG

AWARDS & CONTRACTS

UPMC selected A. Martini & Co. to do fast-track renovations for a Mental Health Crisis Center in the Regent Square/Homewood section of Pittsburgh. The $4 million project is a crisis center managed by UPMC for the Allegheny County Health Department. Image Associates is the architect.

A. Martini & Co. has begun construction on the first phases of the Vincentian Home Expansion in McCandless. The $22 million project involves renovations to the 10,000 square foot convent, renovating various resident spaces and construction of 100,000 square feet of new facilities. The architect is Cochran, Stephenson & Donkervoet from Baltimore.

A. Martini was the successful bidder on the $3 million Latrobe Hospital Neuroscience Center for Excela Healthcare. Burt Hill is the architect.

F. J. Busse Co. was the successful contractor on four separate projects at Carlow University, totaling approximately $500,000. The work includes renovations to Frances Warde Hall, Tiernan Hall and Antonian Hall. The architect is Gerard Associates.

Deer Lakes School District awarded a $7.2 million contract to Yarborough Development for the general construction package of the High School Renovation project. Foreman Architects & Engineers is the architect for the $28 million project.

Nello Construction Company was awarded the Project for Alterations and Additions to West Allegheny Senior High School for General Construction for $7,385,000. The Architect that designed the $28 million project is Foreman Architect Engineers, Inc.

Jendoco Construction Corp. was the successful contractor on the Tepper Hall First Floor at Carnegie Mellon University. Loysen + Kreuthmeier Architects designed the $1.4 million, 8,100 square foot renovation project. Jendoco was also successful on the $1.1 million, 3,700 square foot interior renovations to the 2nd floor of Hamerschlag Hall at CMU. Loysen + Kreuthmeier Architects were also the architects on Hamerschlag Hall

Carnegie Mellon also selected Jendoco Construction to be the construction manager for the GSIA West Entrance Addition phase of the Tepper Hall project. The 4,000 square foot addition will be designed by EDGE Studio.

Jendoco Construction is also doing interior renovations to the 7th floor at 960 Penn Avenue for Adagio Health, Inc. SPRINGBOARD is the architect.

University of Pittsburgh Medical Center selected John Deklewa & Sons for the UPMC Presbyterian University Hospital Operating Room's & CT ICU Level 2 project. Burt Hill is the architect on the $3 million project. Deklewa was the successful contractor on the $500,000 Crafton switch facility for AT&T. Teng Associates is the architect.

Mascaro Construction recently began construction of the 670,000-square-foot Dick's Sporting Goods Headquarters Building. Developed by Horizon D.G.S. Associates, the five-story building integrates five distinctive "pods" into one complex situated on a 116-acre site. Designed by Strada Architecture, the campus features numerous employee amenities including a full-service kitchen and cafeteria, recreation / fitness area, and daycare services.

Mascaro Contracting was the successful bidder on the Route 28 Etna project. The two-mile, $22.8 million project will renovate the northbound lanes beginning just south of the Route 8 junction and continue to the Highland Park Bridge. It is anticipated that the project will start in July 2008 and finish in the fall of 2009.

The Pennsylvania Department of General Services awarded a $4.12 million contract for general construction services to P. J. Dick Inc. for the SCI-Mercer New 230-bed Facility. Astorino is the architect for the overall $6.7 million project.

P. J. Dick Incorporated has been selected to provide Design Build services for the Cameron Portal Bath House in Marshall County, WV. The 42,000 square foot mine portal facility, owned by McElroy Coal Company, will provide offices, conference rooms, shower and locker facilities for approximately 900 miners. DGGP is the architect of the $5 million facility.

P. J. Dick was selected by UPMC to renovate core space in the Biomedical Science Tower. The renovations, valued at $1.5 million, include security upgrades to levels 2, 8, 9, and 10. Burt Hill is the architect for this UPMC project.

Fed-Ex Ground has selected Poerio Inc. to provide construction management services for several projects, including a $15 million addition to its Hagerstown, MD


The Blanchette Rockefeller Neuroscience Institute, constructed by Mosites Construction, at WVU in Morgantown.

center, a $1 million renovation in Carol Stream IL, and a new facility in Emporia VA, outside Richmond. Federated Department Stores also selected Poerio to renovate Macy's stores at the Millcreek Mall in Erie, and the Southern Park Mall in Youngstown, OH.

Poerio Inc. was the successful contractor on two University of Pittsburgh projects. The first is the $960,000 Cathedral of Learning Sprinkler Upgrade Phase 3, designed by Celli-Flynn Brennan Architects. Poerio is the contractor for Trees Pool Renovations. The $1.6 million project was designed by pool consultant James Goldman. PNC Financial Services selected Poerio Inc. to renovate its Washington, PA branch bank.

The University of Pittsburgh Medical Center awarded two projects to TEDCO Construction Corp. at its Oakland campuses. At Presbyterian University Hospital TEDCO will renovate G. I. Lab Scope Cleaning Rooms, and a Security Portal & Screen project is under construction at the Biomedical Science Tower. Burt Hill is the architect for both projects.

TEDCO Construction was the successful contractor on Allegheny General Hospital's CT Simulator & Stereotactic Accelator B Equipment Replacement for West Penn Allegheny Health System. The $1 million project was designed by Valentour English Bodnar & Howell.

Massaro Corporation has been awarded Phase III for the Foundation of Indiana University of Pennsylvania, Student Housing Project. Massaro has been the contractor for Phases I and II. This $51 million 355,600 square foot project includes a brand new suite-style dormitory, which will house 1,054 beds. WTW is the Architect on the project. Phase III is slated for completion in August of 2009.

Franciscan University has chosen Massaro Corporation for two projects totaling over $8 million. Massaro is the General Contractor for Phase V of the Egan Hall Project. This 10,260 square foot project includes renovations to the interior and 5,000 square feet of new construction to the academic building. Massaro Corporation is also the general contractor for the construction of the 24,000 square foot Holy Spirit Friary. MacLachlan Cornelius & Filoni is the architect for both projects.

Massaro Corporation was the successful contractor on Washington & Jefferson's Residence Hall Renovation's project. This $3 million fast-track project is slated to be completed by August of this year. MacLachlan Cornelius & Filoni is the architect.

Massaro Corporation joins Pirates Charities and the Josh Gibson Foundation in their efforts to renovate the Josh Gibson Field in order to encourage and revitalize little league baseball for Pittsburgh's youth. Massaro Corporation is the contractor performing design/build services for this project. The project includes field refurbishment, four new dugouts, and four sets of bleachers and fencing.

The African American Music Institute (AAMI) has chosen Massaro Corporation to provide preconstruction services for their renovation project. AAMI plans to renovate the space to allow for a more performance space and to upgrade ADA requirements. Radelet McCarthy is the architect on this project.

Massaro Properties, LLC purchased 421-427 Seventh Avenue, a six-story, 51,000 square foot office building located on the corner of William Penn Place and Seventh Avenue. The entire building is currently occupied by The Western School of Business. The building will undergo a $4,000,000 base building renovation and tenant improvements for The Western School of Business. The architect for this project is Desmone & Associates.

Massaro CM Services, LLC has been chosen by Penn State University to provide Preconstruction Construction Management Services for the Henderson Bridge Replacement project. This project, located between Old Main and the Hetzel Union Building, will include the demolition of the 'bridge' that currently connects Henderson North with Henderson South and construction of a new 78,500 square foot building on that site. This $36 million project will begin in the fall of 2009 and is scheduled to be complete by 2013. Bohlin Cywinski Jackson has been selected as the architect for this project.

Heritage Valley Health System selected Landau Building Co. as contractor for its new facility at The Medical Center in Brighton Township on its Beaver campus. The 45,000 square foot, $20 million expansion will include gastrointestinal labs, a heart center and new emergency department. Paul Slowik & Associates is the architect. Construction is scheduled to begin this summer.

Landau Building Co. was awarded UPMC Braddock MRI by the University of Pittsburgh Medical Center. Burt Hill is the architect for the $3 million project. UPMC also selected Landau as contractor for the $1.5 million Presbyterian University Hospital Outpatient Neurosurgery Phase 1 project.

Landau Building Co. is working at West Virginia University, renovating Woodburn Hall, and at Robert Morris University's Moon campus, doing renovations to Washington Hall dormitory

Pennsylvania Department of General Services awarded a contract to Volpatt Construction for the $16 million general construction portion of the Benedum Hall Upgrades & Deferred Maintenance Phase 2. EDGE Studio is the architect for the $45 million project at the University of Pittsburgh.

PDG Environmental, Inc., doing business as FlagshipPDG, a provider of environmental remediation and specialty contracting services, announced that it has recently been awarded contracts valued up to $19.7 million. Of the $19.7 million, $10.0 million is for asbestos abatement and the remaining $9.7 million is for reconstruction services. The abatement projects include approximately $8.9 million of contracts with governmental and other non-profit entities and $1.1 million with private commercial entities. The projects include the removal of asbestos in structures such as auditoriums, community centers, schools, courthouse, and retail businesses throughout the country. The reconstruction projects include $6.5 million of work for school systems in the State of California with the remaining projects for multi-family complexes in Texas, Utah, Ohio, Indiana and Mississippi.

Allegheny County selected Mosites Construction as the successful contractor for the $46.5 million renovation of the Rankin Bridge. Mosites recently completed the $25 million Blanchette Rockefeller Neuroscience Institute for the West Virginia University.

Mosites Construction is completing the site work and concrete flat work construction on the Majestic Star Casino on the North Shore for Barden Enterprises and Keating/Smoot Jt. Venture. The work involves 12,000 cubic yards of concrete foundations, and 11,000 cubic yards of flat work.

The Greater PA Council of Carpenters has selected Mosites Construction as contractor for their new 100,000 square foot Training Facility in Collier Township. Astorino is the architect for the $12 million project, which is expected to start in fall 2008.BG

FACES & NEW PLACES

Rycon Construction, Inc. is pleased to welcome several team members to their organization. Tessa Berkebile has joined as Marketing Coordinator. Tessa, a graduate of Indiana University of Pennsylvania, brings over four years marketing experience in the architectural industry to Rycon. Chris Burns, a LEED Accredited Professional and graduate of University of Pittsburgh, was named Preconstruction Manager, Capital Projects and will focus on projects $20 million and larger. Chad Cox has joined as Project Manager in the Special Projects Group. Chad has approximately 10 years experience in the construction industry and is a graduate of West Virginia University. Bill Keith was named Project Manager in the Building Group. A graduate of West Virginia University, Bill has over 18 years construction experience. Robert Pileggi, Jr. carries over two decades of construction experience to Rycon. Robert attended Fairmont State College and is Project Manager in the Special Projects Group. George Pirock has joined as Project Engineer. George, a University of Akron graduate, has over five years experience in the construction industry. Ron Smith was named Project Estimator in the Building Group. Ron has over 16 years working construction in the Pittsburgh area and is a California University of Pennsylvania graduate.

Jendoco Construction Corporation is pleased to announce that Rob Borland has joined our staff as Project Manager. Rob attended the University of Pittsburgh and received his Bachelors of Science in Civil Engineering in 1998. In recent years, he has specialized in stabilization and restoration of historic structures.

P. J. Dick Incorporated is pleased to announce the hire of Michael Roarty as a company Vice President. Mr. Roarty will report directly to Jeff Turconi, Executive Vice President, and will focus on profitable growth opportunities as P. J. Dick strives to expand its operational region and client base. Mr. Roarty has a Bachelors degree in Civil Engineering from the University of Michigan and a Masters from Stanford University.

P. J. Dick is also pleased to announce the promotion of Frank Babik to Regional Operations Manager. Mr. Babik, an employee of P. J. Dick since 1987, will oversee Pittsburgh-area At-Risk Project Operations and work closely with P. J. Dick Project Executives and Senior Project Managers. Edward Porter, a twenty-three year P. J. Dick veteran, has recently been promoted to Project Executive.

P. J. Dick Incorporated is pleased to welcome the following new employees to their team: Bryan Smith as the Project Coordinator for the Montour High School project, Jeffrey Yates as Project Manager at the Fairmont Hotel Fit-out Project at 3 PNC Plaza, Lauren Smith as Project Manager for the Small Projects Group, Michael Koza as Project Engineer at Bakery Square, Steven Sneddon as Project Engineer at Children's Hospital Clinical Services Building, and Roberto Fratangelo as an Estimating Engineer

P. J. Dick welcomes the following interns for its 2008 program: Jesse Takosky, Chelsea Dietrick, Brian Budny, Jared Carlson and Andrew Joseph.

Schneider Downs & Co., Inc., an accounting and business advisory firm based in Pittsburgh and Columbus, Ohio, announces the appointment of Joel M. Rosenthal as Shareholder and the Practice Leader for Schneider Downs Business Advisors. Over his 20 year-career, Mr. Rosenthal has worked as a consultant in the area of specialized business advisory services, including inventory management, financing procurement, fraud prevention and investigation, business planning and due diligence for mergers and acquisitions. Mr. Rosenthal is a graduate of the University of Michigan.

Duane Morris LLP is pleased to announce that Albert Bates, Jr., a partner in the firm's Construction Group in its Pittsburgh office, has been appointed to the Board of Directors of the American Arbitration Association (AAA) and has been named chairman of the organization's National Construction Dispute Resolution Committee (NCDRC). The NCDRC advises and consults with the association on conflict management practices and dispute resolution services for the construction industry.

Dick Corporation has named Jeffrey D. Sciullo Senior Vice President – North America. Mr. Sciullo will have full supervisory responsibility for all operations within the North America Region. Jeff has been with Dick Corporation for over 20 years, most recently as Vice President of Operations in the Building Division.

Dick Corporation has appointed Michael Havener Senior Vice President of Caribbean Operations. His background includes more than 24 years of experience in construction, particularly in the hospitality, theme parks, and general construction industries.

Dick Construction Co. has completed a restructuring plan, which includes transferring a portion of its assets to a new global company. The new company, dck worldwide, LLC, is led by Dick Corporation president and chief executive officer, Stephen DíAngelo, who joined the company in 2003. Currently, he is working with Douglas and David Dick, co-chairmen of Dick Corporation, to facilitate the restructuring.

Under a contractual arrangement, a segment of Dick Corporationís employees and management team will provide services for dck worldwide, while all of Dick Corporation employees will continue to complete and service Dick Corporationís existing projects.

Poerio Inc. announces that Gerri Poerio, project manager, has successfully completed examination by the USGBC's Green Building Certification Institute and has become a LEED Accredited Professional.

Massaro Construction Management Services, LLC Corporation welcomed Nancy Gorgas as an Assistant Project Manager. She graduated from Penn State University with a degree in Architectural Engineering and has worked in the construction industry for the past fourteen years.

Fred Jezzi was promoted to the General Manager position for Massaro Restoration Services, LLC. His responsibilities include overseeing the Business Development, Sales, Estimating, and Production departments. Mr. Jezzi has worked in the construction and insurance restoration industry since 1990. Chad Salerno joined Massaro Restoration Services, LLC as a Project Coordinator. Chad has worked in the construction industry since 1992 and has experience in a number of related positions such as concrete finisher, site foreman and operator, and construction manager.

Maiello Brungo & Maiello, LLP will be opening a new location in the South Side Works at the corner of 27th and Sydney, South Side Works Building #3, 424 South 27th Street, Suite 302, Pittsburgh, PA 15203. As the law firm for The Soffer Organization, developer of the mixed-use South Side Works, MB&M has initiated the opening of the new urban location to expand service for Pittsburgh area clients.

FAST-CAT, a software development company that provides technology solutions for the Architectural/ Engineering/Construction industry, announced May 8 that it is changing its name to FASTTAC. The name change will not have any impact on the company's organizational structure or day-to-day operations. FASTTAC's first software deployment, the FAST Document Control and Mobility System or FAST DCMS, provides a document and drawing control system to its users that permits the general contractor, subcontractors and material suppliers to work from the exact same set of drawings and specifications in real time throughout a project's duration. BG

THE INDUSTRY in the COMMUNITY

The Mascaro Construction crew with homeowners, (center) James and Barbara Bassano.

Elaine Prise of Alion Science, Ken Brown of Tom Brown Inc. & RTP Board member Melody O'Brien of PBE.

Rebuilding Together Pittsburgh Day

In 1993, leaders from the construction, labor, design and services sectors of our industry organized a day, called Christmas in April, for a full-scale effort to repair as many houses as possible for Pittsburghers who lacked the resources to maintain their homes. On April 26, the 16th annual effort, now known as Rebuilding Together Pittsburgh (RTP), mobilized more than 1,000 volunteers to make a difference in the lives of 30 homeowners and their families.

On a flawless spring day, RTP leveraged $149,734 in contributions and income to deliver just under $500,000 in modifications and home repairs. Almost 9,500 volunteer hours of labor contributed to the work, which included replacing 11 roofs, upgrading or replacing 18 electrical services, and installing 278 pieces of adaptive equipment.

AIA, MBA & Carpenters Hold Design/Build Contest for Rebuilding Together Pittsburgh

On Friday, May 9, 2008, the Greater PA Regional Council of Carpenters hosted the seventh Annual Design/Build Contest. Each year the Carpenters hold the competition in partnerships with the American Institute of Architects' Pittsburgh Intern & Young Architects Forum and the Master Builders' Association Young Constructors.


(left-to-right) Greater PA Carpenters Director Jack Brooks, Jacob Gillen, Jill Rukavina, JATC Chairman Howard Peiffer, Darin Curtis, and Rob Chambers, of Massaro Corp.

Rob Victor, of DMJM + Harris with wife Jen and State Rep. Dan Frankel.

Ironworkers' Employers Association's Bill Ligetti (l) with Rich Barcaskey, Exec. Director of the Constructors Association of Western PA (photo by Jodi Torboli).

The Design/Build Contest randomly pairs one carpenter apprentice, one young architect and one young contractor to construct a project on site during the day of the contest – May 9, from 7:00 a.m. to 4:00 p.m. This year's theme was to construct a transportation object that must include a sandbox. This year's winning project team was Darin Curtis of Bohlin Cywinski Jackson, Jill Rukavina of Nello Construction Company, and Jacob Gillen of Carpenters Local #84.

The winning project team constructed a Fire-Truck sandbox. Other projects included: U.S. Army Jeep; Train; Airplane; and three Ships. All seven projects will be donated to Rebuilding Together Pittsburgh and available for purchase at RTP's North Shore Club Noir to be held on Friday, July 11, 2008.

Construction Legislative Council Dinner

On May 1, the Construction Legislative Council (CLC), held its 33rd Annual Dinner at the LeMont. This event has been held every year since 1976, bringing elected officials together with design and construction professionals. The

Employees and friends of Mascaro Construction who participated in the Great Strides Walk.

CLC is a multi-discipline coalition of 12 construction industry organizations, representing the interests of thousands of contractors, architects, engineers, owners and material suppliers from Western PA, whose purpose is to advance an informed dialogue with elected leaders and policy makers who will advance the economic and political interests of our industry.

This year's dinner celebrated the city's 250th Anniversary, and the CLC recognized Mayor Luke Ravenstahl at the event. The group's Legislative Leadership Award was presented to Congressman Jason Altmire. The dinner was attended by 120 people.

Mascaro Walks for Cystic Fibrosis

On May 8, Mascaro employees participated in the North Shore Cystic Fibrosis Great Strides Walk, one of many walks held throughout the country to raise awareness of CF. Through the generosity of Mascaro Construction, its employees and their family and friends, the team raised almost $10,000 to support the Cystic Fibrosis Foundation. BG

MBA Membership

MBA MEMBERSHIP

The Master Builders' Association (MBA) is a trade organization representing Western Pennsylvania's leading commercial, institutional and industrial contractors. MBA contractors invest in a skilled workforce, implementing award-winning safety programs and offer the best in management and stability.

The MBA is a chapter of the Associated General Contractors of America, the nation's largest and oldest construction trade association. The MBA is committed to improving the construction trade association through education, promoting technological advancements and advocating building the highest quality projects for owners. To learn more go to www.mbawpa.org.

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Closing Out

Conserving Energy by Building to be 'Green'
By Maureen Guttman, AIA
Executive Director, Governor's Green Government Council

It seems not a day goes by without a news headline announcing another record price for oil. At the same time nationwide, natural gas and heating oil prices are spiking and electric utilities are imposing double-digit increases on consumers—a reality that has already confronted much of Pennsylvania, with the remainder expecting increases of as much as 60 percent by 2011. The building industry is positioned to help the nation address escalating costs by leading the effort to conserve energy and use it more efficiently.

Because Pennsylvania possesses an established manufacturing base and world-renowned academic and research centers, we have the capability to produce the talented and qualified professionals to meet this demand.

Building and renovating to be "green" today is more than just a trendy practice, it is a socially responsible strategic decision that yields financial benefits for businesses and a competitive advantage in the marketplace.

Buildings account for 70 percent of electricity use and about 39 percent of the carbon dioxide emissions in the United States, thus the design and construction industries can have a considerable influence on the amount of energy we use. Architects, developers and builders have a wealth of tools at their disposal—from renewable sources of energy to simple energy efficiency measures—that are easy to implement, functional and practical.

These tools are justifiable from a cost perspective too. The 1 to 2 percent premium for green construction is usually paid back within 24 months, with an average return on investment of 10 times that initial premium over the life of the building, according to the U.S. Green Building Council.

Given the rapid rise in energy costs, it is not surprising that the green building industry is growing exponentially. This growth, although still in its early stage, is opening the door to new job opportunities in the design and construction industries, as well as in the manufacturing sector that produces green products and supplies. And because of higher transportation costs, much of this growth will likely occur on a geographically distributed basis, which will benefit more than just one region.

One obstacle in realizing the full potential of these opportunities, however, is a shortage of trained professionals to design, build and verify the performance of green buildings. This shortage is due partly to the rapid pace at which this industry has grown, but because Pennsylvania possesses an established manufacturing base and world-renowned academic and research centers, we have the capability to produce the talented and qualified professionals to meet this demand.

Working with a focus on conservation, efficiency and sustainability is also forward thinking. As concern over global climate change grows, it is increasingly likely that protocols be put in place to discourage greater greenhouse gas emissions. The buildings that have renewable forms of energy at work or energy saving measures in place will have a leg up on the competition and will face reduced compliance costs in the future.

Although no one can say with certainty what energy costs will be years from now or what new technologies will emerge, the fundamental truth of the built environment's longevity surrounds us every day; what we build or renovate today will have a lasting impact on our society for generations still to come. Building professionals that adopt the tenets of being green now will be doing a service to their clients and future generations.

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