



PEGASUS-GLOBAL SOLUTIONS

THE MONTHLY PEGASUS-GLOBAL NEWSLETTER...THE MONTHLY PEGASUS-GLOBAL NEWSLETTER...THE MONTHLY PEGASUS-GLOBAL NEWSLETTER

February, 2010

Greetings,

The world is holding its breath. Spring. Recovery. Will we make our first hesitant steps into the unknown or sit back and wait to see what happens? It's almost like waiting to see who draws first in a western, or who blinks first in a showdown.

This month we discuss the wait-and-watch/spring-into-action dichotomy in the “industry sectors” portion of the newsletter. Many governments are trying to figure how best to stimulate their economies, and in many countries the political capital necessary to make needed changes is a little tight right now.

The private sector is awaiting some sign of a resurgent economy before investing in long term capital projects. Money is tight. Newly healthy banks and investment firms have redesigned their credit/risk and asset rating criteria to preclude the inclusion of many projects in their loanability profiles.

And as Dr. Kris Nielsen pointed out in his blog last month, private investors want a measure of stability and predictability in the market that does not exist right now before they commit assets to long term projects.

We know this - those who take the risk now will be the winners in the future. Those who position themselves to be successful now will be wildly successful in the future. And there's always such a thing as too safe. The individuals and institutions who can successfully navigate the rocky shores of this recession with vision and courage, will be the leaders of tomorrow.

Excelsior!

Pat, Kris and Jack

The American Arbitration Association (AAA) and the Dr. Patricia D. Galloway Interview:

In the past many structural impediments have kept women from entering the science, mathematics and engineering fields. Issues from mentoring, course availability and just plain “women aren't good at math” have made the engineering fields disproportionately male. Dr. Galloway has succeeded as a civil engineer, construction consultant, and arbitrator, having worked in these industries for over 30 years. She is currently the CEO of Pegasus Global Holdings, a consulting firm specializing in the infrastructure, power, and oil and gas industries.

Throughout her career she has never lost sight of the need to encourage young women to pursue their chosen careers, and has worked to remove the blockages that keep young women from entering technology fields. The AAA has a short interview with Dr. Galloway on their website where she talks about the perception of women in the Arbitration specialties.

Dr. Patricia D. Galloway moderates panel at the 2010 AAAS Annual Meeting.

The 2010 AAAS Annual Meeting will be held in San Diego, California, from February 18 – 20, bringing together an exceptional array of speakers addressing some of the most crucial and timely areas of science, technology, engineering, education, and policy-making. Dr. Galloway is scheduled to moderate a panel presentation titled “The Future of Science and Engineering Research and Education as the National Science Foundation Celebrates Its 60th Anniversary”.

Titled "Bridging Science and Society," the meeting is a call for scientists and engineers to make their work both useful and understandable to serve society, and help the public rediscover the excitement and hope that research and its findings offer.

For more information about the meeting, visit the [Annual Meeting Web site](#)

Pegasus-Global hosts presentation on the history and culture of the Plains Indians.



Pegasus-Global staff and invited guests were treated to a very special presentation by Michael Bad Hand Terry on the history and culture of the Plains Indian tribes. His entertaining and informative perspective of this time period, along with his animated descriptions of day to day life, made the presentation more than rote history. The three-hour show also included hundreds of artifacts and hand-made recreations of Native American weapons, clothing, tools and ceremonial dress.

Michael is an expert in the history and culture of the Plains Indians from 1740 to 1860. Michael says, "Thru the various mediums I use, whether it be my book, "Daily Life in a Plains Indian Village", lecturing, making replicas, or doing films, I try to share with people my enthusiasm for and knowledge of the 18th & 19th Century Plains Indian culture. Bringing it to life in living color, smells and textures helps all people feel in touch with that culture. I believe it reminds people of all races that we share the same roots . . . "

Michael has devoted his life to learning about and reliving as closely as possible the aspects of the Plains Native American culture. Through his various works and activities, he tries to dispel many misconceptions, stereotypes and historical inaccuracies while sharing in a positive, upbeat way what he has learned from his studies and experiences.

His many skills include lecturing on Native American history, movie stuntman, replica maker and

artist.

To learn more about Michael Bad Hand Terry go to <http://www.warriorsplus.com/>

Updated discussion of risk management in Public Sector design-build infrastructure projects.

Pegasus-Global's Jack Dignum, along with Dr. Nielsen and Dr. Galloway have made available to the readers of the **Solutions Newsletter** an updated version of a study presented to the Construction Institute. The paper begins:

“The construction industry at large has utilized the Design-Build construction delivery methodology for a long time, yet until recently and for a variety of reasons, governmental agencies were limited to a design-bid-build construction delivery methodology. Over the past fifteen years, an increasing number of governmental agencies have turned to Design-Build in response to the need to control costs and streamline total project schedule, while at the same time effectively managing and controlling risk. As more and larger infrastructure projects are undertaken by government agencies, the benefits from utilizing a Design-Build construction delivery methodology will increase, but the governmental agencies must recognize and adjust to a different risk allocation and management environment than that which they have historically used.”

To read more, Please go to

Industry Sectors

Power

Is nuclear power really back?

We have written extensively about the power sector over the past few months, primarily because of the high level of activity in that industry sector globally and partially because a significant amount of our recent engagements have revolved around the power industry in this country and abroad. Over the past 3 to 4 years there has a huge project push in all power subsectors including life cycle extension of current aging generating plants, new generating facilities, transmission, and alternative energy production. Perhaps the most visible discussions have focused on the apparent rejuvenation of interest and activity in nuclear power generation.

Nuclear power has come back to the forefront of power generation for three reasons:

- **Environment** – Nuclear power, once cast as an extreme environmental hazard, is now seen as a significant possibility in the replacement of fossil power production facilities which, rightly or wrongly, are perceived as major contributors to environmental pollution. While there are questions which remain relative to long term storage of depleted nuclear fuel, those concerns are minimized in relation to the more immediate concerns relative to fossil fuel emissions and their link to changes in global weather patterns.
- **Public Perception** - Public perceptions of the danger and environmental impact of nuclear power facilities has changed with the realization that nuclear power plants built in the period between the mid 1970's and early 1990's have operated reliably without major safety incidents or environmental impacts for up to 40 years. These plants have been so successful and efficient that most have been successful in getting life cycle extensions from the US Nuclear Regulatory

Commission (NRC) and continue to produce nearly 20 percent of US base load power today.

- Base load demands – Alternative power generation (solar, wind, tide, etc.) has begun; unfortunately, the technology available today is not capable of generating the power necessary to meet the base loads required by the demands of a developed nation's population and its industries. Current nuclear technology can meet base load demands in developed countries. Developing countries need base load power to improve the lives of their populations while enabling that population to prosper and succeed in an increasingly global marketplace. Increased interest in small reactor technology combined with advances in operation safety would enable those countries to install them in order to meet (or exceed) current base load demands at a more reasonable cost.

The next 24 months will be a critical period for nuclear power; while the benefits are known, the project execution risks remain less uncertain. Will licensing be streamlined as promised? Will financing be reasonable? Will projected project costs be acceptable? Can projects be executed in a reasonable time frame? Will the sunk costs be rate recoverable? All of these are questions which need to be answered as utilities proceed with nuclear mega-projects. We will be addressing many of these questions throughout Solutions over time.

Infrastructure

Where are the cranes?

As 2008 came to a close and the real impact of the global economic impact hit, governments around the world announced that they would be embarking on huge new infrastructure construction programs as a way stimulate the economy, create jobs and address serious gaps in infrastructure created by years of neglect. One month into 2010 and the questions we consistently hear now are: "*Where are the cranes?*"? Where are all the road and bridge work that was promised? Where are the water and sewer upgrades? What has happened to the promise that needed repairs and upgrades to the aging and inadequate infrastructure would be the engine driving job creation and economic recovery?

We wish there was a simple answer; unfortunately there is no simple answer. Certainly there are reasons for the gap between talk and action, among them:

- The allocation of the funds among various infrastructure projects is first and foremost **political** and like all political appropriations there are certain specifically defined steps which must be taken before that money ever is spent on an actual infrastructure project. First, the money does not flow immediately or directly into an infrastructure project with its appropriation by a political body; a process and procedure must be put in place within which the money can be distributed. Second, in appropriations for stimulus funds, the money actually flows from one political/governmental entity (federal) to another political/governmental entity (state), and sometimes even a third political/governmental entity (local) before it is actually allocated to a specific infrastructure project. Third, money from any level of government comes with strings attached and those strings define where the money can be used. It is not at all unusual for those strings to be a mismatch to the infrastructure needs of the community that needs an infrastructure project executed. Finally, every level of government is accountable to the next level of government, which means that every infrastructure project which is to be funded has to align with the strings attached, which means that the project planning and execution process is generally slower than one would expect.

- Prioritization of the infrastructure projects to be funded is *competitive* and inclusive. There are literally thousands of needed infrastructure projects, from replacement of hundred year old water lines to replacement bridges to new highway construction. Projects range from immediate public safety issues to improved access to facilities and services. What gets funded, and why? Do you take the infrastructure stimulus money as a bonus opportunity to undertake a single mega-project which consumes most of the money but has long lasting effects on a region or do you fund the 3,000 critical repairs which will enable you to increase the practical life cycle of an aging infrastructure system? Many at the receiving end of the stimulus appropriation have extremely hard decisions to make, and often those decision go through a number of different bodies (such as departments of transportation or water and waste water departments) before a final decision can be made on where the funds will be spent. In some instances, even after the initial decisions have been made, those decisions are subject to review and comment by the public at large and other governmental levels.
- All projects have a life cycle which adds a significant amount of time prior to and during construction which further extends out the date before the project is completed and in service. Depending of the type and magnitude of the project the benefits of that project may not be fully realized for several years after the project has been approved for funding and execution. Mega-projects, such as a complete replacement of a 100 year old water system under a major city, may have to be done in stages spanning 10 to 20 years so as not to interrupt water service during the construction period.

Unfortunately, when stimulus funding programs are announced, the public is led to believe that the projects will begin almost immediately, which raises everyone's expectations. The reality is that it takes time. It has been approximately one year since the initial announcements relative to an infrastructure stimulus package were made, and some projects are just now moving through the project planning and engineering stages.

The second most asked question recently is "Can't this process be speeded up?" Actually government at many levels is trying to find ways to streamline at least the project delivery time (if not necessarily the political time), one of which involves moving to other project delivery methodologies such as design-build. That is the topic of this month's Solutions Article by Dr. Kris Nielsen, Dr. Pat Galloway and Jack Dignum, "Execution Risk Management in Design-Build Infrastructure Projects". This article is an update of a presentation made by Dr. Kris Nielsen in May, 2004 to the Construction Institute.

Oil and Gas

What the heck is going on?

We have gotten more questions as to the short and midterm future of oil & gas projects over the past four months than at any time previously. Essentially, the industry which suffered a free fall in 2008 (the price of oil & gas fell sharply) had expected to rebound by mid to late 2009; after all, oil & gas prices had always recovered from such momentary slumps. The traditional thinking was that demand would force prices up, which would fund both upstream and downstream capital investment projects by the major private Oil & Gas corporations (Independent Oil Companies (IOCs) and Exploration & Production Companies (E&Ps) and the National Oil Companies (NOCs). As 2010 unfolds that recovery has been much slower than predicted and a slow recovery means a slowdown in pursuit of upstream and downstream capital projects. Understand - oil & gas projects are still "on the books" and "in process"; however, the impetus to aggressively pursue those projects is not yet in place. Simply, if oil & gas prices are moderate and the supply is sufficient to meet demand, why would a major oil & gas

corporation or a NOC invest in projects designed to increase supply? What could not have been foreseen by the oil & gas industry is that the fall in the oil & gas industry was matched by an even greater global financial crisis which would have dramatic impacts on economies in practically every nation on earth.

As we consistently remind our clients, one cannot view capital investment and construction as separate or apart from other industries or market forces. When asked if a particular project is a good investment one has to look beyond that project or that industry to the broader issues which are driving social and political discussions and decisions. This is as true in the oil & gas sector as it is in the power sector and the infrastructure sectors. For example, among the forces which are impeding the expected rate of recovery in Oil & Gas sectors are economic and social dynamics which at first glance would appear to have little to do with Oil & Gas:

- Economic – times are hard for the individual consumer right now. In hard time people become very conservative and risk averse; major purchases are postponed, money is allocated on the basis of priorities and not desires, and habits are modified to fit real conditions. What happens to the individual consumer ripples upward through the supply and production chain of goods and services used by those consumers. Fewer new cars purchased ripples through the production chain which manufactures and sells cars, which are both dependent on power generated by Oil & Gas and which produce a product which is dependent on Oil & Gas. Likewise if the cost of gasoline is such that the consumer is forced to make a choice between driving the car and purchasing warmer clothing because the heat in the house is turned lower to reduce the cost of power consumed or the cost of using those cars is so great that it does not allow purchase of other quality of life needs, the choice will be to reduce driving, lower the heat and buy clothing. One of the strengths of the Oil & Gas industry has been how pervasive it is throughout the human need chain; no one can escape the fact that some portion of their basic human needs are dependent on Oil & Gas. That same strength can also be a weakness as people are forced to make decisions as to which needs must be met and at what cost. If car manufacturing has been cut and gasoline sales are down, can the oil & gas firms make up the losses from those two consumer sectors by increasing the cost of fuel? What happens if the consumer turns down the heat? In short, no industry, and in particular the Oil & Gas industry, is immune from a harsh economy.
- Social dynamics – change occurs when enough people in a society accept that there is a reason and need for change. This is commonly referred to as a “tipping point”; that point at which the forces for change overtake the natural inertia of a society to resist change. Factors which drive a society to a tipping point for change tend to be diverse and cumulative; there are relatively few tipping points in history which were created by a singular event or issue. We recently discussed with various Oil & Gas investor clients our view that a tipping point relative to global environmental concerns was drawing nearer and that the Oil & Gas sector would be impacted when that tipping point arrived. The general reaction to that position was that the tipping point we were describing would never happen and that Oil & Gas would continue growing as it always had in the past, even though there would be minor “adjustments” along the way. We still believe that in the not too distant future the environmental tipping point will be reached when fossil fuels will become the exception rather than the rule. The signs are all around us that momentum for change is growing:
 1. The renewed interest in generating power using “clean” nuclear fuels;
 2. The social pressure to increase investment in alternative energy generation technologies;
 3. The increased investment in non-fossil fuel technology, such as hybrid vehicles, and

electric storage;

4. The increased social pressure to address climate change;

We also see a dramatic rise in the number of traditional large Oil & Gas corporations shifting their public image from fossil fuel providers to energy providers, investing in those technologies which are specifically intended to reduce the dependence on fossil fuels. While the actual tipping point may still be years in the future it will happen.

Will the Oil & Gas sector “come back”; the obvious answer is yes. We also think that the growth, retreat, growth cycle will continue for our lifetimes. However, with each passing year additional weight will be added to the push for change, making the cycles shorter and each recovery longer, until the actual tipping point is reached. Is this doom and gloom from us? No, Oil & Gas will always be a part of the energy answer and will always figure importantly in manufactured chemicals and products. What is important is to realize that “all things change” and so to will the Oil & Gas industry’s dominant position as a social necessity.

Pegasus-Global This Month

Dr. Nielsen discusses rural health in his monthly blog, “*A View From the Boardroom*” along with the challenges of delivering rural health care services that are contemporary with those services offered in more populated areas

Read Dr. Kris Nielsen’s please go to <http://aboardroomview.blogspot.com/>

Pegasus-Global People

The resumes of our Key Personnel have been updated and are now available for viewing [here...](#)

<http://www.pegasus-global.com/principals/>

Thanks!