



Hope, Faith and Love - Rising Above the Rubble of the Aftermath of Natural Disasters

As we near the end of 2011, we at Pegasus-Global reflect on the importance of our quality of life—a cherished gift that so many of us take for granted as we watch it vanish for others in an instant in the wake of unforeseen natural disasters.

Over the past decade, we have all had to endure the painful news of the destruction of homes, infrastructure and the loss of hundreds and thousands of lives as a result of natural disasters around the world. As the skies open up above us, the seas swell around us and the earth shifts below us, we reflect that we know not what the future holds in store for us in 2012 and beyond. However, what we have learned from the natural disasters that we have faced is despite the devastation that occurred, the people of the countries, cities and small communities who survived never lost hope, and continued to have faith in their communities and never lost their love of the place where they lived. Together, hope, faith and love was the recipe for recovering from the disaster and rebuilding what they had lost.

In this spirit of rebuilding we, as corporate executives and program and project managers, must recognize the opportunity to not just reconstruct a more secure, stable and enduring infrastructure, but also seize the opportunity to meld together the engineering and technical aspects of these projects with the needs of the society we are helping to rebuild. In recognition of this challenge we must bring engineers and constructors together and encourage them to use innovative thinking in deciding how best to design and construct the world's reconstruction mega and gigaprojects to not only withstand future natural disasters, but to also respond to the individual needs of the people we are building for.

Past writings regarding public megaprojects have focused on the government's desire to *improve* an existing quality of life, and many large public infrastructure projects were often criticized for underestimating the costs merely to get them approved and funded to only see project costs blow out of proportion as the project progressed. However, today we see the mega and gigaproject design and construction due to natural disasters focusing on a much more fundamental need – the reconstruction of the base infrastructure in order to *provide* a quality of life as the population once knew it.

Hurricanes continue to batter the Gulf of Mexico, the Caribbean, and the Mid-Atlantic regions. Earthquakes have wreaked havoc from Haiti and Japan, to New Zealand and Pakistan. Historical flooding has been seen in China, Australia, and across the United States. Record heat has scorched parts of Europe and Russia. All these massive disasters have occurred since the year 2000, a period in time that has resulted in approximately US\$1.15 trillion in total damages from natural disasters. The result: A staggering amount of monetary damages in addition to an incredibly tragic number of lives lost and people displaced. While the term “Megaproject” is typically used to define a massive single-scoped project, we can see similarities in the recovery process from major natural disasters where the various components of recovery can be small, but the overall cost and complexity of recovery makes

disaster recovery a megaproject.

Reinsurance giant Munich Re has reported that the first six months alone of 2011 resulted in US\$265 billion in economic losses, eclipsing the previous record of \$220 billion set in the full 2005 year, a year that saw Hurricane Katrina leave New Orleans and much of the Gulf Coast region of the United States in shambles. Peter Hoppe, of the Geo Risks Research/Corporate Climate Center for Munich Re, stated that while trends for earthquakes, tsunamis, and volcanic eruptions are relatively stable, severe weather events are on an upswing, adding there is *“more dates per year during which storms can develop.”* Bob Hartwig, of the Insurance Information Institute, commented that *“we are rewriting the financial and economic history of disaster on a global scale,”* also stating the fact that three of the 15 most expensive events globally have happened since 2010, adding if the series of catastrophic tornadoes that swept through the American Midwest in the spring of 2011 were taken as a single event, that would make the list as well. It appears that the concept of megaprojects must soon encompass the rebuilding of entire portions of nations.

While the number of earthquake and tsunami occurrences has remained fairly constant, the resulting damages from such events has steadily risen, as highlighted by the Tohoku earthquake and resulting tsunami that struck Japan on March 11, 2011. Estimates from the Government of Japan suggest the material damage alone from this event could surpass \$300 billion. To help put this enormous sum in perspective, that figure would fall somewhere between the 2010 GDP of Colombia and Denmark. Faced with such a substantial price tag from damages, governments as well as private organizations have a number of critical decisions to make on how to best allocate the available public funds in order to effectively rebuild and repair after a disaster. Given the impact natural disasters have from an individual level all the way up to national and hemispheric levels, it is imperative that these decisions are made expediently. The traditional process of planning and executing such projects often must be condensed as the very lives and health of the people dependent on the projects is almost always immediately at risk. So the question is asked, what projects get approved? And what priority, if any, is given to the various projects once approved?

From each disaster recovery plan we examined, we see the importance of having clearly defined objectives. In fact, they are the same key points found by the GAO in their 2009 report on Disaster Recovery:

- Develop and communicate common goals to guide recovery.
- Leverage resources to facilitate recovery.
- Use recovery plans to agree on roles and responsibilities.
- Monitor, evaluate, and report on progress made toward recovery.

These characteristics are among those that exist in traditional megaprojects. In disaster recovery there are certainly additional factors not faced in a standard megaproject, not the least of which is that for disaster recovery to take place there must first be a disaster. However, much remains common in the form of the processes involved, the way various components must be able to effectively work towards a larger goal and the controls in place that track schedules and budgets. Much can be learned by studying and applying practices across the two realms, leading to greater success in taking on both disaster

recovery and traditional megaprojects.

As we continue moving forward in life, it is important that we understand the impacts we can have on making the world a better place, even in the aftermath of massive disasters. This starts with an individual sense of striving for improvement, and leads to a collective effort to put these ideas and actions into motion combined with learning from past experiences so that we are able to contribute and offer the greatest opportunity for success, without hesitation and often on a moment's notice in the case of disaster recovery. The success of the reconstruction mega and gigaprojects that arise from the rubble of natural disasters will be important aspects of the healing process. Looking back and remembering past events and experiences will allow us to move forward together, relying on our common hope, faith, and love to continue our growth and both provide and improve a quality of life for all.

Have a Merry Holiday Season and a wonderful new year,

Pat, Kris and Jack

This introduction is a précis of a longer article. To read the article in its entirety please click [here...](#)

Industry Sectors

Power

Dr. Kris Nielsen provided written and oral testimony in the state of Georgia regarding Georgia Power Company's Plant Vogtle Units 3 and 4 Construction Monitoring Proceeding. The testimony was provided to the Georgia Public Service Commission.

Dr. Patricia Galloway and Dr. Kris Nielsen provided written and oral testimony in the state of Indiana regarding Duke Energy Indiana's Edwardsport IGCC Clean Coal Energy Plant Construction Rate Proceeding. The testimony was provided to the Indiana Utility Regulatory Commission.

Infrastructure

Dr. Galloway has been appointed by Washington State Governor Christine Gregoire and the Joint Transportation Committee as the Chair of the Independent Expert Review Panel (ERP) for the \$3.1 billion Alaska Way Viaduct Replacement Project in Seattle, Washington. The ERP had been requested by the Legislature to conduct an independent financial and technical review of the Project's Finance Plan including the Project's key assumptions, funding sources, financial plan, program management plan and the Project's risk management plan. The ERP will present its report to the Washington State Legislature in February 2012. For more information, please click [here...](#)

Dr. Galloway was featured in an article in the Engineering News Record (ENR) magazine *ENR New York* titled "Changing the Face of Construction and Engineering" tracking her success as an engineer and business woman. To read the article, please click [here...](#)

Energy

Pegasus Global Holdings assisted Nomura in their analyses of CAPEX investments by Oil & Gas

companies and how that CAPEX translates into investment and backlog in the Oil Services Engineering and Construction (E-C) companies. Data from Pegasus-Global Final Investment Decision Project Tracker (PFIDPT) was used in Nomura's analyses. Christyan Malek, Executive Director, Global Oil & Gas, Nomura Equity Research, cited Pegasus-Global several times throughout the 200 page report. Mr. Malek performs energy sector analyses for Nomura, who he recently joined.

Arbitration

A paper entitled "Saving Time by Using Experts Effectively in Arbitration," written by Dr. Patricia Galloway will be presented at an American Arbitration Association panel entitled "Building the Construction Arbitration Process to Optimize its Advantages" during the December Superconference in San Francisco on December 16th. For more information, please click [here...](#)

Dr. Galloway and Dr. Nielsen recently completed Pepperdine University's 42-hour course on "Mediating the Litigated Case".

Dr. Galloway has been selected as the Chair for the National Construction Dispute Resolution Committee (NCDRC) Committee of the American Arbitration Association (AAA). The NCDRC consists of over 25 member organizations that collaborate on alternative dispute resolution (ADR) and provide guidance to the AAA on various ADR issues regarding construction arbitration.

"Engineer's 'Study Notes' for Understanding the Arbitration Process," authored by Dr. Galloway and Dr. Nielsen, was published in the May 2011, Volume 3, Number 2 edition of the American Society of Civil Engineers publication *Journal of Legal Affairs & Dispute Resolution in Engineering and Construction*.

Dr. Nielsen and Dr. Galloway have authored a paper entitled "Mapping Strategies for A Successful Mediation" published this month in the IBA Publication *Construction Law International*. To read the article please click [here...](#)

Speaking Engagements

Dr. Galloway will be traveling to Rapid City, South Dakota to give the Commencement Address to the graduating class of the South Dakota School of Mines & Technology on December 17, 2011. This school has been a national leader in turning out world-class engineers and scientists.

Dr. Galloway spoke recently at the Discovery-Siemens STEM Institute in Washington, DC on the importance of providing education for Science, Technology, Engineering and Mathematics (STEM) in our K-12 schools. Dr. Galloway was recently interviewed in a book written by Camille Cole titled *Connecting Students to STEM Careers*, published by the International Society for Technology in Education, or [ISTE](#). In the interview Dr. Galloway talks about how young women can increase their chances of success in technical careers. The book may be purchased at the ISTE's online bookstore [here...](#)

Dr. Galloway was invited to participate in the National Science Foundation funded Lifelong Learning Imperative workshop in Washington, DC in September of 2011. The workshop focused on international competitiveness and our nation's attitudes towards learning.

Anthony Fasano, the author of *Engineer Your Own Success: 7 Key Elements to Creating an Extraordinary Engineering Career*, interviewed Dr. Patricia Galloway for his BlogTalk radio show, which focuses on engineers and professional development. His show is entitled *Engineer Your Own Success*. For more information, please click [here...](#)

Dr. Galloway was the keynote speaker at the 4th Annual Kiewit "Women's Construction Leadership Seminar" in Omaha, Nebraska in November, 2011. The seminar is intended to inspire and promote the increased participation of women in construction and engineering. Kiewit sponsored free travel and participation for 55 young women from universities across the United States for the conference. The seminar is an annual event and included a tour of a multimillion dollar project, interviews and learning opportunities with Kiewit managers and a chance to create camaraderie with other women currently employed in the construction industry. For more information, please click [here...](#)

Dr. Galloway and Mr. Albert Bates of [Duane Morris LLP](#) will be conducting an arbitrator training session entitled "Building the Construction Arbitration Process to Optimize Its Advantages," at the American Arbitration Association's Neutrals Conference in Scottsdale, Arizona on March 9-10, 2012. For more information click [here...](#)

Announcements

Philanthropy

Dr. Galloway and Dr. Nielsen are very excited to announce their latest book on The Patricia Galloway and Kris Nielsen Foundation. The Patricia Galloway and Kris Nielsen Foundation, established in 2009, supports original research that seeks to create innovative products and services which integrate science and engineering with management concepts in the context of global cultures that address sustainability, solve global problems and evolve society so as to improve the quality of life for our society. The book, accompanied by the sumptuous photography of Bruce Coe, serves as an introduction to the Foundation and its mission and discusses the future of the Foundation as well. If you are interested in a copy, please contact Brenda Pearson [here...](#)

The Patricia Galloway and Kris Nielsen Foundation awarded its 2011 Grant to the Institute for Innovation and Entrepreneurship (I4IE), an institute within the Central Washington University College of Business. To read more, click [here...](#)

Upcoming Events/Meet and Greet

Mr. Jack Dignum is giving a speech regarding risk management in the energy/power sectors together at the Hands-On Relay School on March 16th, 2012 in Pullman, Washington. This professional development course is offered to train protective relay technicians, electrical power plant technicians and protective relay test specialists in their individual fields and is a part of a continuing education

program hosted by the Western Energy Institute. To read more please click [here...](#)

Dr. Galloway is speaking on March 24th, 2012, in Seattle at the Women in Nuclear Conference. U.S. Women in Nuclear is the premier network of over 5000 women and men who work in nuclear and radiation-related fields around the country. For more information click [here...](#)

Dr. Galloway is the moderator for a panel discussion at the Platts Nuclear Energy Conference in Bethesda, Maryland. The Panel discussion is entitled, “The Nuclear Industry Post - Fukushima”. Pegasus-Global is also a sponsor for the conference. For more information click [here...](#)

Dr. Galloway is speaking to The Construction Critical Path Method (CPM) Conference in Orlando Florida on January 23, 2012 on the topic of “The Business of Planning and Scheduling”. For more information please click [here...](#)

Please visit us at any of the above conferences or locations to see how Pegasus-Global Holdings can assist you in your business. Our motto “Solutions – Refined by Experience” lies at the heart of each of our engagements.

Merry Christmas!!