Is the New Cracker Plant an Opportunity?

by Bob Zaruta, President/CEO, NWIRC

You may have heard that a cracker plant will be built in western Pennsylvania, but are you aware of what this means to our region and could mean for your business? Last June, Shell Chemical Appalachia LCC selected a site in Monaca, PA (Beaver County) to build a multi-billion dollar ethane cracker plant, the first to be built in more than 20 years in the U.S. that is not situated in the Gulf Coast area. It will include the cracker, polyethylene plants, water treatment facilities, and a gas-fired co-generation power plant. Project construction is underway and is expected to be completed by 2021.

In short, a cracker converts ethane into ethylene and then into different grades of polyethylene. The manufacturing chain continues with different grades of polyethylene as the raw material to create commonly used everyday products such as houseware goods, toys, diapers, trash bags, bottles, tires, solvents, paints and, related products to name a few. But, why here in Pennsylvania? The simple answer is ‘supply chain’. The natural gas deposits required to make ethane exist in the Marcellus and Utica Shales and 70 percent of the polyethylene market is within 700 miles of the site. Shorter and more reliable supply chains mean increased opportunities and growth. Regional companies downstream of the ethylene supply chain are likely to benefit.

Plastics and rubber products manufacturers, which is historically a major industry sector in Northwest PA, and chemical manufacturers are likely to realize the best opportunities followed by oil and gas extraction, wholesalers, and transportation and warehouse.

To paint a picture of what this could mean for our area, here is some background on a similar plant in Louisiana*. In 2014, Sasol began construction on an ethane cracker plant at their site in Westlake, LA (Calcasieu Parish region) and expect the plant to be operating in 2018. They have coined the initiative “Louisiana First” by committing to use the state’s businesses first for their procurement and contracting needs, as well as hiring local. As of June 2016 (per an infographic on their website), they have awarded contracts to 83 suppliers spending a total of $350M+. Of that, $75M is with the Calcasieu Parish suppliers, the region where the cracker plant is located. These stats demonstrate that over 75% of the spending is within the state, but outside of the area where the plant is situated. From this, we might conclude that there is plenty of opportunity for companies in northwest PA.

While the Investment Phase (building of the facility) is expected to create 11,000 jobs, $727M in worker wages, and $42M in state tax revenue, the most significant long term gains will be in the Operation Phase (ongoing production). The plant is projected to create 17,000 permanent jobs in the chemical industry and supply chain, more than $1.2B in wages for PA workers, and $140M in state and $240M in federal tax revenues. For small and mid-sized manufacturers, the exciting numbers are the industry revenue projections. While the Investment Phase is projected to generate $1.7B of industry revenue, the Operation Phase is projected at $8B. What opportunities exist for your company? How do you best position your company and what technologies, capabilities and improvements will be needed to gain a competitive advantage? How can your company’s existing and potential new offerings solve a customer problem? To win new business, these are some of the key questions to consider.

The NWIRC can be a resource to help answer these questions. We can help you evaluate, plan, and pursue opportunities related to the new plant. The Investment Phase is still forth coming and the Operation Phase is a few years away, so you may be thinking “we have some time”. Perhaps, but as the old adage goes, “the early bird gets the worm”.

A forum will be held at Cross Creek Resort in Titusville on March 8th to discuss opportunities. Featured presenters are leaders from Louisiana to share experiences. I encourage you to attend and get more informed. Contact the Keystone Community Education Council at (814) 677-4427 or lhummer@keystoneec.org for more details. We hope to see you there!

*Source: www.sasolnorthamerica.com
**Lean Together™ Off to a Great Start**

NWIRC hosted an exciting Kick-Off meeting on January 17th for Lean Together™, a working group for operational excellence. Keynote speaker, Shawn Gross, Engineering Manager at Viking Plastics, provided insights and inspiration as he shared Viking’s challenges and steps taken during their Lean journey. During the meeting, the group was introduced to their facilitator, Jerry Sobrowski, who set the prerequisites for the group as: passion to achieve business excellence, open mind, desire to learn and improve, trust, and respect for peers. Once the groundwork was set, everyone received their first assignment of reading 2 Second Lean™ by Paul A. Akers and answering the question, “What bugs you?”.

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**Consider Benefits of an EMS**

*by Korin Giles, Urban Engineers, Inc.*

Environmental management systems (EMS) emerged in the early 1990s to provide organizations with a proactive, systematic approach for managing the potential environmental consequences of their operations. These systems have become globally adopted and are proven highly effective at improving environmental performance. Whether you choose an EMS that is ultimately audited and registered by a third party or an EMS that is self-certified and self-monitored; there are benefits to implementing and maintaining an EMS in your facility. Here is a summary of just a few:

**Internal Management/Communication:** proactive management philosophy reduces environmental concerns; integration of environmental issues into business practices and decisions creates a “green” organization; environmental goals become company-wide shared responsibilities

**Compliance/Incidents:** improves regulatory compliance records; results in fewer environmental incidents; eases the burden of efficient demonstration of compliance

**Environmental Performance:** reduces environmental impacts of facility activities; reduces raw material use through integration of environmental stewardship into product and process designs

**Cost Savings:** savings through waste minimization, energy efficiency, resource optimization, reduction of environmental incidents; less time required for regulatory inspections

**External Stakeholders:** improved relationships with customers through credibility of certified EMS; improved relationships with regulators; public recognition of company’s commitment to the environment

If you are striving toward registration of your EMS, the typical EMS will take between 12 and 24 months from development to registration. A good EMS takes time, like a good stew. It takes time to develop written procedures, accumulate objective evidence, change attitudes, and get everyone’s ‘buy-in’ to the program.

Korin Giles is the Environmental Practice Leader for Urban Engineers, Inc. She is a certified ISO 14001 Environmental Auditor and obtained her B.S. and M.S. in Health, Safety and Environmental Engineering from Gannon University.

Special Note: NWIRC will offer an Introduction to ISO 14001 by Korin Giles on March 15, 2017 to guide you through the steps of developing and implementing an EMS to registration and beyond.

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**Northcentral Video Contest in Motion**

*by Pam Streich, North Central Workforce Development Board*

The First Annual ‘What’s So Cool About Manufacturing’ (WSCM) Video Contest is in progress in North Central PA. Ten middle schools and manufacturing companies are partnered for the program where teams of 7th and 8th graders, led by a teacher coach from each school, have been busy filming with a GoPro at their partner company. The contest is made possible by grant funding secured by the Manufacturing Resource Center (MRC) located in Allentown. The PA Department of Labor and Industry Funding Workforce Solutions for North Central Pennsylvania, Inc. (North Central Workforce Development Board) is overseeing the project in collaboration with partner agencies, including the Potter County Community Education Council (CEC), DISCOVER Partnership of the Elk and Cameron County CEC.

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NWRIC, Clarion University SBDC, and North Central PA Regional Planning and Development Commission.

Participating manufacturers for the contest include: Organic Climbing; Gasbarre Products, Inc.; Interfuse Manufacturing; Gas Field Specialists; The Carpenter’s Shop; American Refining Group, Inc.; McCourt Labels; Horizon Technology, Inc.; Alpha Sintered Metals; and Kane Hardwood – Collins Pine. The community can view the videos and vote on their favorite to receive awards. Voting will take place March 22-24th with Awards Ceremony on March 28, 2017. Stay tuned for more information about the contest and voting page by following their Facebook page (facebook.com/WSCMNCPA).

Dream It. Do It. PA is a partnership directed by the Manufacturers Resource Center (MRC) in Allentown, Pa., and is dedicated to changing perceptions and attitudes in the Keystone State about advanced manufacturing careers

Pam Streich is the Director of Planning for Workforce Development for Workforce Solutions for North Central Pennsylvania, Inc. (North Central Workforce Development Board).

A TDMI Story to Grow Business

The easiest way to explain technology-driven market intelligence (TDMI) is by telling a short story. NWIRC had the privilege of working with Advantage Metal Powders, Inc. (AMP), located in Ridgway, PA, to help their goal of increasing revenue through expanding customer base and entering new markets. AMP was founded in 2001 and supplies quality re-mill and virgin powder metal mixes. A TDMI project was initiated with the planned deliverable of a compiled list of potential customers for their existing products and services, as well as documented research of other industries that have a need for powder and blending services.

Michael Griffith, Manufacturing Technology Engineer with NWIRC, conducted market research of the metal powder industry including market size, competitors, material uses, industries and processes using metal powders. Through his research, he identified fourteen (14) markets that utilize metal powders in their operations, of which five (5) were viable markets for AMP to direct business development resources. In addition, he identified ten to twenty prospects in each market for AMP to contact and inquire need and fit. The impact of the project will be most evident after one year, but the goal was to use the information to create 1-3 new customers within a year and increase revenue by $4-5M over 5 years. Upon receiving the final deliverable, AMP began their work of contacting the identified leads, and the first two leads contacted have already become customers. “The research and report identifying 14 potential markets for our industry, and 10-20 prospects in each market, is extremely beneficial for future sales and business growth. We are now getting business from companies we didn’t know existed,” said Jason Gabler, Advantage Metal Powders.

In a nutshell, TDMI is a market research process designed specifically for technology-based assets. TDMI helps you understand whether investing resources in a product idea or market diversification opportunity is worthwhile, while which markets and applications are most promising, and what steps to take to exploit market opportunities. Ideal scenarios for using TDMI are companies that have a new technology or product they want to commercialize or companies that have maximized opportunities in current markets and need to diversify. Manufacturers that have declining business, whether due to a reduction in Department of Defense spending or other customer losses, are also good candidates for TDMI. NWIRC uses internal resources, and subject matter experts at research partner RTI International, to lead TDMI projects that help our Northwest PA manufacturers increase revenues and grow their business profitably. Contact Michael Griffith to learn how this service can benefit your company’s growth plan.

ISO 9001:2015 Graduates

Congratulations to the recent graduates of the ISO 9001:2015 Internal Audit class held in Erie from January 17-19. The next training is scheduled for May 2-4, 2017 in Corry.

Front L-R: Roger Leopold, Finish Thompson; Liisa Maenpaa, Matric Limited; Amanda Wander, Klein Plating Works; Jennifer Knepp, Great Lakes Metal Finishing; Heather Parker, EnTech Plastics; and Instructor, Kevin Smith, Vie Associates

Back L-R: Victor Masone, NMA; Chris Manning, American Refining Group; Henry Moffatt, American Tinning; Ralph Wagner, American Molding; and Scott Putnam, American Molding
YOUR STRATEGIC BUSINESS ADVISORS

If you have questions, or would like to speak with someone from NWIRC about services, please contact your Strategic Business Advisor:

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**UPCOMING EVENTS**

**Apply Six Sigma Tools Now for Big Results**  
**February 22**  
**Location:** Erie  
Small organizations may not have the resources (time, people, and money) for Six Sigma and the training required. Learn how to leverage basic elements of the DMAIC (Define, Measure, Analyze, Improve, and Control) methodology of Six Sigma without significant investments and bearing the expense of training belts.

**Failure Modes & Effects Analysis**  
**March 15**  
**Location:** Meadville  
A failure modes & effects analysis (FMEA) helps uncover potential failures before they occur, while investigating at-risk processes, components, or products. Learn how to conduct and analyze product and process FMEAs and add this to your quality management toolbox.

**Root Cause Analysis**  
**March 28**  
**Location:** DuBois  
Root Cause Analysis (RCA) is a methodology for finding and correcting the most important reasons for performance problems. Don't just put a bandage on a problem- discover a disciplined approach to problem solving.

**Developing and Applying Instrumentation and Control Documentation**  
**March 29 and 30**  
**Location:** Erie  
Do you need to design and develop control systems documentation? ISA (International Society of Automation) will instruct this two-day course beneficial for engineers, designers, software programmers, system integrators, and technicians.

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For more information or to register for training, visit www.nwirc.org