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Clearfield County

CORE PA – Provides a Distinct Advantage and an Ideal Location for Energy Intensive Industries

Paul A. McCloskey, VP of Energy and Business Development Clearfield County in Core PA makes the case why Energy Intensive Industries should relocate to CORE PA in an interview with Gloria Towolawi - USAOGM.

USAOGM - Tell us about yourself, and what you do?

CAD - I am Paul A. McCloskey. I hold a business degree from Penn State University and began my career in economic development when I was hired as “VP of Energy” with the Clearfield County Economic Development Corporation CCEDC in 2011. At that time, I was focused on assisting companies in the upstream sector of the oil & gas industry that were involved in the development of the Marcellus Shale. A lot of my time was spent developing relationships with the exploration & production companies that were leasing properties & exploring for natural gas in Clearfield County, Pennsylvania. I was charged with being a local liaison for these companies to learn about and be responsive to their needs in our community. I was very involved with helping E&P companies educate the local business & political leaders, as well as the general public, about the unconventional drilling process.

In addition to assisting the E&P companies, I also worked with oil & gas service companies that were moving into the area. I provided them with assistance

to meet their real-estate, logistics, & workforce needs as well as introduce them to partners in the local business community. As the price of natural gas began to decline and companies weren't drilling as actively, I began to focus on outreach & attraction to downstream energy-intensive companies that would find our low-cost energy environment advantageous.

In 2013, I was promoted to VP of Energy & Business Development and took over management of a local business financing program along with increasing Clearly Ahead's efforts to attract foreign direct investment. I'm reaching out to all types of industries interested in Clearfield County as a location for their business but with a focus on energy-intensive industries.

USAOGM- Give us a brief history of clearly Ahead development-you objectives and goals?

CAD- The Clearfield County Economic Development Corporation CCEDC is

a private, non-profit 501(c)(6) corporation that was incorporated in 1999. The mission of the organization is to “Proudly Serve the Community to Create Growth and Opportunity in Clearfield County, Pennsylvania.” Due to the confusion of many different entities using the acronym “CCEDC”, the organization was rebranded and began operating as “Clearly Ahead Development” in 2015.

Our objectives include business retention, business expansion, and increasing the economic base for Clearfield County, Pennsylvania. We accomplish those objectives through offering economic development services relating to:

- land & building identification & procurement
- business financing programs which include grants, loans, & tax-exempt bonds
- workforce identification & training
- infrastructure development
- brownfield redevelopment

USAOGM- Why do you think that CORE PA is an ideal location for energy intensive industries?

CAD- Energy intensive industries use energy either as a source of power or as an input in their manufacturing process; and sometimes both. With regard to the inputs for any type of manufacturing



operation, two things come to my mind; price and supply. If a company is going to use “input A” in their process, they will want to make sure that the price of “input A” is affordable & relatively stable wherever they decide to locate. Additionally, they will want to make sure that wherever they locate has an adequate supply of “input A” since a lack of supply will cause an increase in the price of it. Let’s talk about both the price and supply of energy in CORE PA and why it is an ideal location for energy intensive industries.

The United States Energy Information Administration’s reserve data, which estimates the total amount of technically recoverable natural gas contained in U.S. shale plays continues to steadily increase and by 2018, the United States is projected to be a net exporter of natural gas. This is very significant because when you produce more of something than you consume, it generally leads to lower prices and less price fluctuation which are both good things from the consumer’s standpoint. To understand how much of a game-changer this is for the United States, we have to go all the way back to the 1950’s to find the last time that the U.S. was a net natural gas exporter. Since the 1950’s, we’ve historically used more natural gas than we’ve produced and it was only just a few years ago, that LNG terminals were being constructed on our shores for importation and now those terminals are being reconfigured to become LNG export terminals.

So the United States as a whole is producing more natural gas than ever before and shale plays across the country are the reason for that increase in production. Out of those shale plays, one in particular has been the driving force behind the growth in production and CORE PA is strategically situated on top it; the Marcellus Shale. The Marcellus is the 2nd largest natural gas field in the world with an estimated amount of 141 trillion cubic feet of technically recoverable gas. In addition to the estimates, oil and gas companies are constantly employing best practices & increasing efficiencies so the amount of gas they are able to extract continues to increase. All of these factors combined ensure that CORE PA will have a sufficient supply of affordable natural gas for decades to come. And we haven’t even mentioned the Utica Shale or the formations above & below the Marcellus which will provide additional sources of energy! Suffice it to say that CORE PA certainly has an abundant supply of energy which is vital for an energy-intensive manufacturing operation.

So we have discussed supply but what about price? Natural gas is more difficult and expensive to transport than a liquid, such as oil, since it has to be compressed and transported to market through a network of pipelines. That reality has resulted in natural gas being more of a regional commodity and sold at various “hubs” across the country where multiple pipelines

intersect. The most familiar hub is the “Henry Hub” in Louisiana and the price for natural gas there sets the benchmark for all other trading hubs across the U.S. The “Henry Hub” price is also what the NYMEX is based on so particular attention is given to that hub by companies & markets across the world. As of June 16, 2016, natural gas was selling for \$2.59/MMBtu at the Henry Hub.

CORE PA is home to the “Leidy Hub” which is a natural gas trading hub and local price point for companies buying and selling gas produced in the Marcellus region. Tremendous natural gas production from Marcellus wells combined with a lack of pipeline infrastructure to get the gas out of the region has resulted in natural gas produced in CORE PA currently trading well below the Henry Hub price point. As of June 16, 2016, natural gas was selling for \$1.46/MMBtu at the Leidy Hub; which is a discount of \$1.13 per unit below Henry Hub. Obviously this is a huge advantage for any company that uses natural gas but particularly for an energy intensive company such as a fertilizer company or power plant that would use millions of units of natural gas per year. Now of course, the price changes daily and the Leidy Hub’s advantage is not always going to be that pronounced but I can tell that over the past two years, natural gas at the Leidy Hub in CORE PA has averaged about \$0.60 below the price at the Henry Hub so it is certainly a significant advantage to an energy-intensive company.

I would like to make one last comment relating to the anticipated longevity of the low-cost energy environment in the United States. Many of the foreign companies I speak with are concerned about how long natural gas prices will remain low in the U.S. Of course, no one can predict the future with 100 per cent certainty, but I can point you to the U.S. Energy Information Administration’s Annual Energy Outlook report from 2015. In that report, they forecasted average gas prices at the Henry Hub in 2015 at \$3.73/MMBtu, in 2020 at \$4.88/MMBtu, and in 2040 at \$7.85/MMBtu. With gas at the Leidy Hub almost certain to be selling at or below Henry Hub prices, you can see how CORE PA is positioned to have low-cost energy for decades. Lastly, from the work with E and P companies earlier in my career, I’ve also established relationships with companies that would entertain natural gas supply contracts either on a fixed price basis, tied to some type of index, or even a tolling arrangement. All of these options can be explored further to give an energy-intensive company a certain level of comfort and security about the future.

USAOGM- What is unique about the CORE PA location?

CAD -Besides the fact that CORE PA is located on top of the 2nd largest natural gas field, being the “Keystone



Pipeline Infrastructure in Clearfield County, PA



- Empress Hub -Canada - \$2.25/MMBtu

USAOGM - Price is key- but there are other factors that companies will consider before relocating- What infrastructures are in place to influence companies to relocate here?

CAD -Certainly! Price is key but another major factor relating to natural gas in particular is actually being able to access it. In other words, you have to locate near a pipeline and/or construct a pipeline to your facility in order to take advantage of it. Additionally, the types of energy-intensive industries we are targeting are going to use volumes of gas that are going to necessitate a large diameter pipeline which tends to cost \$1 million per mile, or more, to construct. In anticipation of

attracting large-volume users, we've worked with our GIS department and mapped out the locations of the existing major transmission pipelines in Clearfield County that can source natural gas from the Leidy Hub. We currently have 3 gas transmission lines ranging in size from 16" to 30" and an 8" LPG pipeline also in the county.

More than likely, if a company is utilizing a large amount of natural gas, they will also need a large amount of electricity and Clearfield County is fortunate to have a 600MW power plant also located in our county. The web of transmission powerlines that emanate from that plant crisscross through the region and we've identified multiple locations where major natural gas pipelines and electricity powerlines intersect. These intersections would be ideal locations for an energy-intensive company to consider locating since it would reduce both the cost & timeline for a company to access those major utilities.

Other existing infrastructure in the region includes excellent railroad infrastructure from the timber & coal mining era. Many of the railroads tended to follow local waterways which provide excellent access to water resources as well.

Access to international airports, ports, & of course traditional interstate routes are all readily available throughout the CORE PA region.

USAOGM - Who are the major players in energy intensive industry in this region?

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Clearfield County Pipeline Infrastructure

State", we are also strategically positioned in the US and able to service many of the major markets on the east coast including New York, Philadelphia, Baltimore, & Washington D.C., to name a few, within one day's drive. Interstate-80 is the major east-west corridor connecting New York & San Francisco running right through the heart of CORE PA.

Besides our energy resources & strategic positioning, I think what sets CORE PA apart is the work ethic of our citizens. From timber harvesting, to coal mining, and natural gas development, natural resource extraction has been at the core of our local economy for generations and the work ethic that goes along with the nature of those industries has been passed along as well. The first oil well was drilled in the CORE PA region in 1859!

USAOGM- What is the price of natural gas in CORE PA against other locations in the USA e.g. Texas, that can influence companies' decision to re-locate?

CAD -I mentioned above that the current Henry Hub price in Louisiana is \$2.59/MMBtu and Leidy Hub price in CORE PA is \$1.46/MMBtu. Some other hubs in the U.S. include:

- Agua Dulce Hub -South Texas - \$2.25/MMBtu
- Carthage Hub -East Texas - \$2.64/MMBtu
- El Paso Permian Hub -West Texas - \$2.61/MMBtu
- Chicago NIPSCO Hub -Midwest - \$2.70/MMBtu
- CIG Hub -Rocky Mountains - \$2.59/MMBtu
- California Regional Avg. -California - \$2.88/MMBtu



CAD -Let me begin answering this by identifying the 7 energy-intensive industries that we feel would enjoy a distinct advantage here: Power Generation, Gas-to-Liquids, Pulp & Paper, Fertilizer, Cement & Brick, Chemicals, and Food & Beverage Processing.

We feel that not only are those industries energy intensive, but we also possess other inputs/advantages in this region that would be attractive to companies in those industries. For instance, CORE PA is a leading source of hardwood timber which provides spin-off opportunities for the Pulp & Paper industry to take advantage of. Commerce Park in Clearfield, PA is the first industrial park to be certified by a 3rd party for food & beverage processing in Pennsylvania. CORE PA used to have a robust brick manufacturing industry due to our access to various shales & clay used in brick manufacturing, etc.

The power generation industry has been the first industry that I'm aware of to really embrace our natural gas resources in order to replace the aging plants that utilized coal for power generation for decades. In that sector, you have NRG Energy, Panda Power Funds, Moxie Energy, and EmberClear that have all announced power generation projects utilizing Marcellus gas that I am aware of.

IMG Midstream is a company that is taking advantage of the low-cost natural gas to launch distributed generation facilities or in other words "mini-power plants". Compass Natural Gas is currently developing the "virtual pipeline" concept whereby they will deliver natural gas to your facility via CNG tanker trucks if you do not have access to a physical pipeline. Lastly, at their manufacturing facility in Wyoming County, PA, Proctor & Gamble decided to drill Marcellus wells on the 1,400 acres that their plant is located on and now they are energy-independent and operating 100 per cent off the grid! And of course, you are aware of the Shell cracker plant in Beaver County, PA.

As far as the major players in those other industries, I am currently working with some companies but they are confidential at this point.

USAOGM - Tell us about shell cracker plant coming to CORE PA and how this will benefit the economic well-being of the community and businesses?

CAD -I am excited about what it means for the rest of Pennsylvania's economy! The Shell cracker plant will be located in Beaver County, PA which is actually just outside of the CORE PA region. Regardless though, it's a fantastic announcement and this decision will essentially create an entirely new industry in western-PA.

USAOGM -How does the location of cracker plant by Royal Dutch shell helps build your case?

CAD -Well, I think it helps to vindicate all of the reserve estimates and production potential that many of the geologists have been suggesting since Shell certainly believes that there will be sufficient ethane available at affordable prices for the foreseeable future. Otherwise they wouldn't have decided to move forward with it right?

USAOGM - What other incentives the region offer companies interested in re-locating here?

CAD -We do not have time to discuss all of the incentives available in detail but the Commonwealth of Pennsylvania offers competitive incentive packages relating to tax abatements, job creation tax credits, job training programs, low-interest business financing, ethane tax credits, among other things. Companies interested in establishing locations in Pennsylvania work directly with the Governor's Office through the Governor's Action Team GAT to coordinate an incentives & financing package. Additionally, GAT works with the company and any other relevant state departments to ensure efficient communication as well as acquisition of any necessary permits in an expeditious manner.

Additionally, the Commonwealth of Pennsylvania has an Office of International Business Development OIBD with representatives stationed in countries around the globe. OIBD provides guidance to foreign companies interested in investing in Pennsylvania on a variety of topics including legal & corporate structuring, taxes, workforce development, logistics & business partner identification.

USAOGM - Your final word if you have any- to say about this initiative?

CAD -We are just over a decade since the first well was drilled in the Marcellus Shale in 2004 by Range Resources and the Marcellus has already been a game-changer in terms of capital investment, job creation, and most notably, sheer energy production in the form of natural gas. I look forward to assisting energy-intensive companies take advantage of this historic opportunity by locating to the CORE PA region and utilizing our low-cost energy to meet their manufacturing needs.