

Time to get ‘cracking’

Shell petrochemical plant expected to fuel region’s economy

By JON HAAG
Staff writer

The Keystone Community Education Council is gearing up for the projected economic impact stemming from the construction of the Shell cracker plant.

Lance Hummer, executive director for the Keystone Community Education Council, thinks it is an unprecedented opportunity for western Pennsylvania, an area that has seen manufacturing mainstays such as Joy Global and GE Transportation lay off workers.

What is a cracker plant?

Although it was speculated for years, Shell Chemical Appalachia announced in June that Potter Township in Beaver County would be the site of a new petrochemical plant.

But just what does a cracker plant do?

It doesn’t manufacture crackers as the name would suggest, it actually converts ethane from natural gas into ethylene, which is then used for everyday products that many take for granted. The process through which this occurs is called “cracking,” which refers to the breaking apart of molecules to create new ones through high-tech processes.

It’s just one step in a long process that begins with extracting natural gas from the ground via drilling and fracking. Once the gas is extracted from the ground, the next step is to process it. The extracted gas needs to be treated and processed to separate the ethane from the natural gas liquids. The natural gas liquids are sent to a facility called a fractionator, which pulls ethane, propane and butane from the liquids.

The next step is to ship the ethane to the cracker plant through pipelines that lead directly to the plant, which then begins the cracking process to turn the ethane into ethylene.

Ethylene is the most commonly produced petrochemical, serving as the base for a variety of plastic products. These products are found in almost everything you use on a daily basis. It’s often formed into materials such as PVC, vinyl chloride, ethylene glycol, styrene and polystyrene, which are then used to manufacture a plethora of common products.

The products include pool liners, window siding, trash bags, carpet backing, detergent, insulation, flooring and pipes.

Almost everything bought from a grocery store comes in some sort of packaging derived from ethylene, including bottles and cups.

It’s also likely that clothes have some sort of ethylene product.

That’s not all. Ethylene also serves as the basis for toys, tires, sealants, paint, antifreeze, adhesives and much more.

What can it do for the region?

The Shell Cracker Plant, which will take years to fully

construct, is expected to spur temporary job growth by the thousands.

The plant is expected to cost about \$6 billion to construct.

Reports from June indicate that Shell believes approximately 6,000 workers will be involved in its construction, which is projected to last the next few years. As cracker plants are largely automated, roughly 400 to 500 jobs will be permanent once the plant is fully operational.

The property, a repurposed industrial site that formerly housed the Horsehead zinc smelter, was bought by Shell in November 2014 for \$13.5 million after a \$3.9 million land option.

Hummer believes the investment will spur economic growth in a 200-mile radius of the plant, citing the construction of a cracker plant in Louisiana that has had profound economic impact in that area. So profound that he and other organizations involved in the Northwestern Pennsylvania Oil and Gas Hub Taskforce have pulled together a conference that Hummer described as “huge.” The conference is set for early March. Officials from Louisiana will be on hand to discuss the impact their area has felt from the cracker plant.

“It’s projected in all the studies that you’re looking at a 200-mile radius from Erie to West Virginia. You’re talking from midstate and over into Ohio,” he said.

The conference will host representatives from the Louisiana Chemical Association and the Southwest Louisiana Economic Development Alliance as well as local education leaders and oil and gas coalitions.

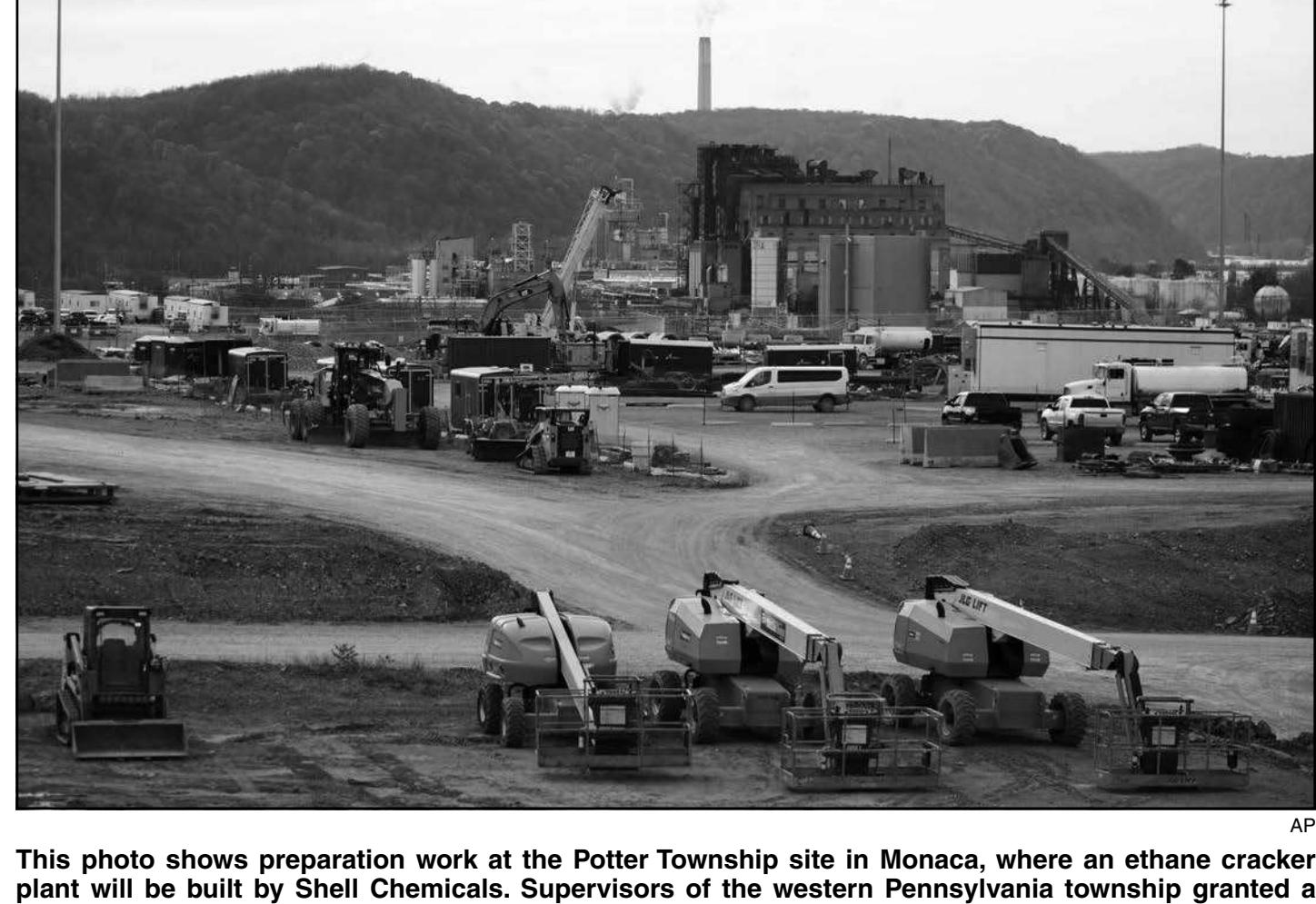
“They are going to talk about what impact there is going to be to have a petrochemical plant in Pennsylvania. We will be bringing up people from the Louisiana area who have already gone through this to talk about development issues and the education and training needs,” he said. “It’s learning from them as to what we should expect.”

While the plant is unlikely to directly affect this area, Hummer and many others believe that the plant will have a shockwave effect of which local businesses, schools and entrepreneurs should take note.

“Our businesses and industry really need to be aware as to what this could mean to them,” he said.

In a report issued by Denise Brinley, special assistant to the secretary for Strategic Industry Initiatives, part of Pennsylvania’s Department of Community and Economic Development, speculation is that the state’s former mainstay industries of manufacturing, coal and steel have laid the framework to support the advanced industries that the plant could affect.

The report claims there is “enormous upside potential for advancing plastics manufacturing” because Pennsylvania is already home to many manufacturers of plastics.



This photo shows preparation work at the Potter Township site in Monaca, where an ethane cracker plant will be built by Shell Chemicals. Supervisors of the western Pennsylvania township granted a conditional use permit for the \$6 billion ethane cracker plant on Jan. 11.

Hummer said that the effects of the plant as far north as Venango County depend largely on local businesses, schools and entrepreneurs taking the initiative to capitalize on the opportunities the construction and operation of the plant presents.

While areas local to the plant will see growth in service jobs, retail, restaurants and hotels, Venango County will be faced with a different sort of growth.

“We won’t see that kind of growth here, ours will be in the manufacturing and production of products that relate to what the cracker plant actually produces,” he said.

Hummer hopes that the conference will enlighten local institutions and entrepreneurs. He cited pipe manufacturers in Titusville as an example of a business that could directly benefit from an operational ethane cracker plant.

“The economic impact will depend on what our businesses and industry choose to do. What kind of involvement they choose to have with the petrochemical industry, part of it is just them becoming aware,” Hummer said. “The entrepreneurial growth is just absolutely incredible, but people have to know. They have to have ideas of things they can possibly work toward. That’s one of the things we hope comes out of this conference so that we will have this opportunity to provide the entrepreneurial support to people who have the concepts and ideas.”

He elaborated that the benefits won’t be immediately apparent as the plant still needs to enter construction, which could last into the early 2020s.

“It’s not coming as quickly as people would like, they want it now, they want it yesterday,” he said. “It’s not going to happen like that. This is

a five- to 10-year process.”

Within that five to 10 years, he said, businesses must get involved if they manufacture a product that can be used at the plant.

“It takes them doing their due diligence to see what is actually needed,” Hummer said.

Hummer wants entrepreneurs in the area to look for new investment and business opportunities related to the plant and said that he has already heard talk of local investors wanting to back innovative ideas.

“What (entrepreneurs) are going to need is mentors for entrepreneurial efforts. That’s something that we will potentially work towards building, making sure that it’s there so when a person comes in with a good idea, we can give them the support to move forward,” Hummer said.

“From what we are told, there are people within our area that would be willing to invest in new and exciting potential initiatives. It’s where all our small businesses come from — from people who have the concept and the will to work for it. They’re really the mainstay of the economy,” he said.

Through his interactions with officials in Louisiana, Hummer believes there will be a need to improve education related to careers the cracker plant will need.

He said schools all throughout the area will play a major role in fostering the sort of economic growth the Keystone Community Education Council hopes to see over the years.

“You have a ninth-grader, what careers can you prepare them for in western Pennsylvania,” he said.

One of the positions the cracker plant might require is a process technician, a trade that has already been implemented in community colleg-

es in southwestern Louisiana.

It’s an intense program, requiring eight hours of classes five days a week for sixteen weeks.

The end result: an associate’s degree directly tailored for the job.

“It’s intense, get them in, get them through and get them a job,” he said. “These are really good paying jobs.”

Hummer said Beaver County Community College is developing a process technician program in anticipation of the incoming plant.

Before the plant is operational, Hummer said he expects demand for gas and oil welders to significantly increase.

One of the more common sentiments surrounding the plant is skepticism. With manufacturing in Pennsylvania struggling, Hummer said people have been skeptical of the plant actually coming to Beaver County. He hopes the upcoming conference will assuage that attitude.

“A lot of people said it’s never going to happen, but we were trying to be proactive and very positive,” he said. “Now we have moved forward and it is being built. Individuals and businesses seem to be very excited about what this conference can provide us. It’s kind of a kickoff to what can happen in our region within the next five to 10 years.”

“We haven’t had this kind of opportunity for a very long time, and given what has happened with all the layoffs especially with Joy manufacturing and GE and how that’s affected our area, this is the positive story that’s out there.”

Recent developments

Early 2017 has already brought progress for the future plant.

In January, township supervisors in Potter Township approved a motion for their

solicitor to draft the proper permits for Shell to begin construction.

Actual construction on the site is expected to wait a bit longer. According to the Pittsburgh Post-Gazette, the construction isn’t expected to begin for an additional two years, as Shell needs time to obtain the proper state and federal permits.

That doesn’t mean preliminary work has stalled. Shell has already spent time surveying land and talking with property owners about the proposed Falcon ethane pipeline. The pipeline, one of three slated for the project, will collect ethane from plants in Houston in Washington County, as well as two plants in Ohio. It’s expected to be 94 miles long.

Will it affect local drilling?

The short answer, probably not. At least not immediately.

“I don’t know that we’re going to see a big uptick or a return to a lot of leasing and drilling in the three-county region,” said Dan Brockett, an educator with the Penn State Marcellus Education Team.

The plant requires ethane, the lightest liquid found in natural gas and also relatively uncommon locally.

“Even though they will be using over a 100,000 barrels a day, they’ll easily meet that number at current production numbers,” he said.

That relies on keeping an active rig count of 50, which will eventually require exploration, although Brockett believes that will focus on the southwestern part of the state.

“I’m not sure that we have an abundance of wet gas in Venango, Clarion and Forest counties. We may have some, but not as wet as areas in southwest Pennsylvania,” he said.

Wood Mackenzie in a Dec. 19 UPI story said he thinks the Permian Basin could see a production increase of 750,000 barrels a day in 2017.

At prices about \$50 a barrel, U.S. investment could increase “as much as 25 percent.”

The OPEC agreement is at least a short-term gift to U.S. producers.

The bottom line is that no one knows where oil prices will be this time next year. There are too many variables for accurate forecasting.

What is known, however, is that the market works and if there is money to be made by producing more oil, more oil will be produced, which will put in place the forces that produce oil price cycles.

Increased domestic production and inevitable cheating in the absence of strong economic growth here and in China limit 2017 price increases.

Bill O’Keefe wrote this article for the Associated Press.

Leaders to discuss plant’s benefits to area

By BILL O’KEEFE

The Northwestern Pennsylvania Oil and Gas Hub Taskforce plans to host leaders of industry, economic development and education from Louisiana at their meeting March 8 at Cross Creek Resort in Titusville.

The conference aims to educate local industrial, economic and education institutions on possible economic growth resulting from the development of the petrochemical cracker plant in Beaver County.

Because of the construction of a \$3 billion cracker plant in Lake Charles, Louisiana, experts from that area will speak of their experience on the various economic effects they have seen since construction of the plant began in June.

Registration is at 8 a.m.

The Shell Cracker Plant,

which will take years to fully

Oil prices get jump, but stay slippery

By BILL O’KEEFE

When OPEC announced that it had agreed to cut production by 1.2 million barrels per day and non-OPEC producers agreed to support that by cutting 558,000 barrels a day, the market responded.

The price of crude oil has increased from the low of \$40 a few months ago to about \$52, an increase of more than 20 percent.

The euphoria with rising oil prices, which is good for producers, needs to be tempered with history and economics.

OPEC members have been notorious for agreeing to cuts and quotas and then cheating because OPEC lacks an enforcement mechanism.

Dennis Gartman of The Gartman Letter put it succinctly:

OPEC “cheats no matter what happens. They have no choice. And I think that cheating ... will simply continue.”

All producing countries need revenue; Venezuela needs it desperately and Russia needs it to offset sanctions.

Increased prices create an incentive to produce more where the marginal

cost of production is less than the current and projected market price.

When the price of crude oil collapsed a few years ago, Saudi Arabia kept pumping to regain market share and drive out high-cost producers.

It’s expectation that shale oil would be rendered uneconomical proved wrong.

As prices have risen, the U.S. oil rig count has started to increase from 450 at



the start of November to 510 in late December, according to the American Oil and Gas Reporter.

Wood Mackenzie in a Dec. 19 UPI story said he thinks the Permian Basin could see a production increase of 750,000 barrels a day in 2017.

At prices about \$50 a barrel, U.S. investment could increase “as much as 25 percent.”

The OPEC agreement is at least a short-term gift to U.S. producers.

The bottom line is that no one knows where oil prices will be this time next year. There are too many variables for accurate forecasting.

What is known, however, is that the

market works and if there is money to be made by producing more oil, more oil will be produced, which will put in place the forces that produce oil price cycles.

Increased domestic production and

inevitable cheating in the absence of

strong economic growth here and in

China limit 2017 price increases.

Bill O’Keefe wrote this article for the Associated Press.