

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development

SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The deployment of vehicles in Pennsylvania which utilize natural gas provides significant economic, energy security and air quality improvement opportunities. Expert input to the Commission suggests that, as the necessary fueling infrastructure is built out and new natural gas vehicle production is expanded, a critical first step in this deployment is the availability of bi-fuel vehicles which can use both diesel fuel and natural gas. However, the adoption by Pennsylvania of certain Low Emission Vehicle regulations promulgated by the state of California has made it extremely difficult to convert vehicles to utilize natural gas.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

The Pennsylvania Clean Vehicles Program, which incorporates by reference certain regulations promulgated by the California Air Resources Board related to Low Emissions Vehicles, should be modified to repeal those provisions which discourage the conversion of vehicles in Pennsylvania to bi-fuel vehicles which utilize natural gas as a fuel source. Pennsylvania would abide by bi-fuel vehicle conversion standards established by the U.S. EPA.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Yes. HB 1089 (Rep. Scott Perry) amends the Air Pollution Control Act and would implement this recommendation.

POTENTIAL FISCAL IMPACT:

No apparent fiscal impact.

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Workforce & Economic Development

SUBMITTED BY COMMISSION MEMBER(s): Vincent J. Matteo

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Christopher Gray at chrgray@state.pa.us no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The availability of an adequate and well trained workforce will become more of a challenge as the Marcellus Shale gas play continues to grow. Not only will the natural gas industry have problems finding qualified workers, but incumbent or legacy businesses will find it difficult to find enough employees as well. This problem is multiplied because a great percentage of the Marcellus Shale region is in rural sections of the Commonwealth with lower populations. Training programs are in place and more are being started and recommended but without sufficient number of employees these programs will not achieve their intended purpose. The challenge is to locate potential employees in large enough numbers to offer employers an adequate number of trained employees regardless of their industry.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Utilizing the Workforce Investment Boards, CareerLink system, the Department of Labor & Industry and other private and public sector workforce development entities, develop a systematic approach to identify and pursue potential employees from throughout Pennsylvania and the nation to relocate to areas in Pennsylvania where jobs are in abundant supply. The state must act aggressively seek and forge partnerships wherever possible. It is not enough to simply post a listing on a web site. For example, there is a program entitled "Troops to Roughnecks" that is offered to military personnel who are preparing to leave military service. The program is free and offers graduates of this 9 week course the opportunity to interview with various companies. Their website is <http://www.troops2roughnecks.com/careers-in-oil-and-gas/index>. It is proposed that the Career Link and WIBs work together to reach out to this program and employers in Pennsylvania through a number of methods including but not limited to advertising in military and other journals, creating new programs including one that would attempt to reverse some of the brain drain suffered by Pennsylvania over the past couple of decades- "Come home to Pennsylvania" campaign. Our Career Links and WIBS need to institute

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cooperative programs with our hundreds of colleges and universities in Pennsylvania to actively recruit employees. The employees sought should be for all types of positions with all types of companies. As previously stated, incumbent/legacy companies are starting to feel the pinch from the natural gas industry's large scale hiring.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Uncertain – I would think a directive to establish such a cooperative and aggressive program would be necessary. Just as economic development groups are being asked to work more cooperatively and think regionally, employment programs throughout Pennsylvania must do so as well and if it takes a regulatory change then it should be done.

POTENTIAL FISCAL IMPACT: To be effective and aggressive some financial expenditure will be necessary. I believe the amount can be determined when a program is developed. Much of the funds needed would be spent on advertising and other forms of outreach to potential employees.

MARCELLUS SHALE ADVISORY COMMISSION
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SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson

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SUMMARY OF CHALLENGE OR OPPORTUNITY:

An educated public is critical to understanding the economic, social and environmental potential, opportunities and risks associated with natural gas extraction, so that citizens as well as policymakers can make informed decisions on issues related to this subject.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Pennsylvania should undertake a comprehensive effort to develop and disseminate educational material and/or curriculum for utilization in primary and secondary educational institutions regarding the development, extraction and uses of natural gas within the Commonwealth. This effort should utilize expertise from within industry, environmental, public health, academic, government and other sectors and include partnerships with academic institutions to incorporate fact-based and unbiased information into educational material or school curriculum.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Much of this implementation can be accomplished without the need for legislation or regulation, though incorporation of educational material into school curriculum may require regulatory changes.

POTENTIAL FISCAL IMPACT:

Potential fiscal impacts to be determined based on scope of implementation.

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MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): David L. Porges

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

This Commission has received several presentations detailing the economic and environmental benefits of natural gas vehicles (NGVs) and natural gas consuming technologies. Incentives should be established for the promotion of NGVs, natural gas consuming technologies, and related infrastructure.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

A fee should be imposed on natural gas producers for the next fifteen years dedicated to the promotion of NGVs and related infrastructure. For example, using 2010 production data, a fee of five cents per Mcf of natural gas produced would result in collection of approximately \$9.7 million. Dedicated funds would be available for loans and/or grants to transit authorities; governmental or quasi-governmental entities and schools to convert existing fleets to natural gas vehicles. Dedicated funds would also be available for pursuit of natural gas consuming technologies including, but not limited to, fuel cells and similar technology. The Department of Community and Economic Development should be responsible for collecting, administering and disbursing the fund. Decisions regarding grant and loan approval should take into account

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recommendations of a Pennsylvania Natural Gas Use Advisory Council, appointed by the Governor and consisting of natural gas producers, the Pennsylvania Association of County Commissioners, the Pennsylvania Department of Transportation, the Pennsylvania Department of Environmental Protection and a representative of the public transportation industry. The Department of Community and Economic Development should also be authorized to issue revenue bonds to fund qualifying funding requests for which sufficient revenue has not been generated from the production fee.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

The General Assembly has previously approved funding to provide grants and loans for projects involving clean, alternative fuels for transportation. Senate bill 1100 proposes that 40 percent of the local impact fee be directed to statewide environmental and infrastructure impacts. The majority of the 40 percent allocation is directed to the Commonwealth Financing Authority (CFA) to fund projects. A portion of the CFA's local impact fee should be dedicated to funding grants or loans for transit authorities, municipalities and schools to convert fleets to NGVs. Statewide fleet conversion would not only improve air quality but also signify an important step towards energy independence for the Commonwealth.

POTENTIAL FISCAL IMPACT: none

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Infrastructure
SUBMITTED BY COMMISSION MEMBER(s): David L. Porges

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

This Commission has received several presentations detailing the economic and environmental benefits of natural gas vehicles (NGVs) and natural gas consuming technologies. NGVs reduce greenhouse gas emissions compared to diesel or gasoline vehicles. Present regulations adopted under the Pennsylvania Clean Vehicles Program have constrained growth of alternative fuel vehicles. The Commonwealth should be promoting public policies which encourage the use of cheaper, locally-produced and cleaner transportation fuels to improve our air quality.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

The Commonwealth should reconsider its exiting regulatory requirements under the Pennsylvania Clean Vehicles Program to allow NGVs that are EPA-approved. The allowance of EPA-certified NGVs, including bi-fuel vehicles, will increase the sales and use of NGVs in Pennsylvania. This will improve air quality, accelerate the building of NGV refueling stations and other infrastructure job creation and spur economic development.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

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An immediate regulatory change modifying the Pennsylvania Clean Vehicle Program is required. Existing regulations based on certified emissions established by the California Air Resources Board have the unintended consequence of restricting bi-fuel vehicles. Until adequate NGV refueling infrastructure is built, bi-fuel vehicles will be necessary . House Bill 1089 Repeals California Air Resources Board (CARB) section 2030 to eliminate costly duplication of EPA and CARB certifications for natural gas vehicles.

POTENTIAL FISCAL IMPACT: n/a

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): David L. Porges

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

One of the greatest opportunities presented by the production of Marcellus Shale gas deposits is the potential for economic development through Natural Gas Liquids(NGLs). During the processing of natural gas, liquid hydrocarbons are separated and sold as feedstock to petrochemical plants and refineries. Rather than transport valuable NGLs such as ethane and propane out of state, the Commonwealth should provide incentives and recruit industries that utilize NGLs to establish operations in Pennsylvania.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

The Commonwealth should provide direct incentives and tax credits to petrochemical industries to expand operations or relocate to Pennsylvania. The benefit of using the natural resource to initiate new business and commercial development rather than transport NGLs out of state. Direct loans and incentives could be used for acquisition of land, buildings and equipment.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

The Commonwealth has existing economic development programs administered through the Department of Community and Economic Development; the Commonwealth Financing Authority and the Governor's Action Team. These entities should tailor programs based on the opportunities presented by NGLs.

POTENTIAL FISCAL IMPACT:

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Public Health, Safety & Environmental Protection

SUBMITTED BY COMMISSION MEMBER(s): David L. Porges

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The Oil and Gas Conservation Law was adopted in 1961 to foster and encourage the development of natural gas reserves in the Commonwealth. The stated purpose of the Conservation Law was to encourage the discovery, exploration, and development of natural gas without waste. Included in the Declaration of Policy in the Conservation Law is the protection of correlative rights refers to the rights of each owner of oil and gas interests in a common pool or source of supply of oil or gas, to have a fair and reasonable opportunity to obtain and produce his just and equitable share of the oil and gas in such pool or sources of supply, without being required to drill unnecessary wells or incur other unnecessary expense to recover or receive such oil or gas or its equivalent. Enactment of pooling legislation would also maximize the number of mineral owners who will benefit by the development of the natural resource by limiting the ability of a minority owner in a development unit from prohibiting development of the unit.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Pooling is authorized under the Conservation Law but is not available for wells which do not penetrate the Onondaga horizon. Comprehensive pooling provisions should reflect similar laws in other gas producing states to prevent a minority of owners of a tract of property from delaying or prohibiting development of natural gas reserves by the majority of the owners.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Amendments to the Oil and Gas Conservation Law to clarify correlative rights and expand the definition of deep wells to include Marcellus wells and comprehensive pooling

POTENTIAL FISCAL IMPACT: none

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): David L. Porges

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

This Commission received a presentation from the Pennsylvania College of Technology detailing the efforts to educate and train students for Marcellus Shale jobs. The challenge is increasing educational opportunities for Pennsylvanians to increase employment opportunities within the natural gas industry.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Workforce training initiatives should be expanded by offering degree programs and certifications at community colleges based upon the Penn College of Technology model. The Pennsylvania Department of Labor & Industry has existing grant funding that could assist in the development of programs for individuals seeking Marcellus Shale employment. In addition, industry could partner with certain community colleges to fund the training and certification of potential employees.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

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none

POTENTIAL FISCAL IMPACT: n/a

MARCELLUS SHALE ADVISORY COMMISSION

WORK GROUP: Economic & Workforce Development Workgroup
SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson (Governor's Energy Executive)*

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The Workforce Development system wants local people in good, family-sustaining jobs and the industry wants local people. The challenge is to sell the workforce system as a whole, not just training, to a complex industry. The industry may be unfamiliar with all of the resources the workforce system can offer and it needs to be made clear that we have the same workforce goals. We have to prove our system and be on the forefront of the workforce needs of this industry.

The PA CareerLink® can provide sustainability, leveraging resources by not only providing assessment, screening, training referral and pre-employment counseling for applicants for the High Priority Occupations. Terminology, job descriptions, skill sets, training requirements and needed experience can vary, so the process for the local workforce is gradual.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Expansion of PA CareerLink® Services. L&I will perform the following activities: connect the unemployed to available jobs, expand marketing to offices in counties outside of Marcellus Shale areas, and help coordinate Career/Job Fair's for the Marcellus Shale industry.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

None

POTENTIAL FISCAL IMPACT:

Resources, infrastructure and expertise exist within Pennsylvania Department of Labor to absorb this impact.

* In partnership with Pennsylvania Department of Labor & Industry

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MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development Workgroup
SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson (Governor's Energy Executive)*

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Workforce development needs to be comprehensive and include educating the general public and school systems about the industry and its career paths. Occupations, skill sets, educational levels, wage levels, transferable skills, safety training, commitment, experience required to move up the career ladder, how to connect with the employment opportunities outside of direct jobs; all of this information needs to be accessible. Training availability is important, but utilizing that training properly, with the right people, making the right connections, is vital.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Development of recruitment programs and pre-training activities. Target recruitment efforts, provide educational information to employers and higher education, create, expand and align internships, externships and training programs specific to the Marcellus Shale industry.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Explore funding support of ongoing and continuous training.

POTENTIAL FISCAL IMPACT:

Resource, infrastructure and expertise exist within Pennsylvania Department of Labor to absorb this impact.

* In partnership with Pennsylvania Department of Labor & Industry

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MARCELLUS SHALE ADVISORY COMMISSION

WORK GROUP: Economic & Workforce Development Workgroup
SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson (Governor's Energy Executive)*

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Understanding employment, wage, and establishment dynamics of Pennsylvania's Marcellus Shale industry sector is critical. Anecdotal information points to a lack of good information around the employment related impact of this sector (current and potential). Continuous research and targeted outreach is necessary to take full advantage of this opportunity as it relates to Pennsylvania jobs (employment, wages, new hires, job postings).

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Creation of a Marcellus Shale Labor Market Information Report (2011). Information from this report will be disseminated effectively.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

None

POTENTIAL FISCAL IMPACT:

Resources, infrastructure and expertise exist within Pennsylvania Department of Labor to absorb this impact internally. No external fiscal impact exists.

* In partnership with Pennsylvania Department of Labor & Industry

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic & Workforce Development Workgroup

SUBMITTED BY COMMISSION MEMBER(s): Patrick Henderson (Governor's Energy Executive)*

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Marcellus Shale industries have grown dramatically in Pennsylvania and brought employment opportunities in a variety of occupations. Using Pennsylvania Department of Labor & Industry (L&I)'s High Priority Occupations (HPOs) process, a system can be created to guide issuance of workforce development monies to job seekers through both Pennsylvania Departments of Labor & Industry and Education. This will help Pennsylvanians understand:

- What are the occupations, wages, and training programs specific to Marcellus Shale industries?
- Which Marcellus Shale related occupations are eligible for workforce development funding?

An outreach strategy will help disseminate the findings to make the public aware of the jobs/occupations in this sector.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Creation of a Marcellus Shale High Priority Occupation (HPO) list. This will be based on current and expected future growth of Marcellus Shale and will be the basis for a comprehensive report on occupations specific to Marcellus Shale.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED?

None

POTENTIAL FISCAL IMPACT:

Resources, infrastructure and expertise exist within Pennsylvania Department of Labor to absorb this impact internally. This will open up use of federal and statewide funds for training/education by both Departments of Labor & Industry and Education.

* In partnership with Pennsylvania Department of Labor & Industry

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic and Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): Scott C. Blauvelt On behalf of Terry Pegula – East Management Services, LP.

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Pennsylvania has an opportunity to become the first “natural gas vehicle state” in the United States. This can be accomplished with minimal government assistance and would potentially attract billions of investment dollars into Pennsylvania.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Develop Keystone State Natural Gas Vehicle Task Force to incentivize the investment in natural gas vehicles. If natural gas vehicles are to become a reality, the entire supply chain to construct vehicles, manufacture parts, maintain vehicles, develop the necessary infrastructure and train the necessary workforce needs to be developed. Pennsylvania would benefit economically, from locating many of the elements of that supply chain for natural gas vehicles in the Commonwealth.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

- Replace requirement for CARB certification with EPA certification
- Clarify AFIG program to allow grants to be used for heavy-duty vehicles over 26,000lbs
- Develop NGV corridors in Pennsylvania
- Develop a marketing campaign to educate the public about the benefits of natural gas vehicles

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- Develop and pass legislation similar to the “Marcellus works” that will incentivize the growth of a natural gas vehicle industry and infrastructure in the Commonwealth

POTENTIAL FISCAL IMPACT:

- Given the large reserves of natural gas in the Marcellus Shale, utilization of natural gas as a vehicle fuel will drive demand for a Pennsylvania resource while incubating the natural gas vehicle industry in the Commonwealth.
- Rather than simply creating jobs on the supply-side (drilling), Marcellus works will boost job creation on the supply and demand-side (natural gas vehicle industry)
- Pennsylvania becomes a net exporter of natural gas by 2014
- Potential elimination of Pennsylvania personal income tax.

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP :Economic and Workforce Development

SUBMITTED BY COMMISSION MEMBER(s): Scott C. Blauvelt
On behalf of Terry Pegula – East Management Services, LP.

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Pennsylvania has the opportunity to become the epicenter of the second largest natural gas field in the world. The workforce and infrastructure developed will service not only the Marcellus Shale, but other shallower and deeper unconventional and conventional reservoirs. The Appalachian Basin is often described as one of the most drilled, but least explored basins in North America because much of the previous development occurred at depths less than 3,000 feet. Once the workforce and infrastructure are in place, they will facilitate further exploration and development of other reservoirs making the natural gas industry the most significant economic engine in the history of the Commonwealth.

Our most significant challenge in realizing the economic benefits of this opportunity is opposing the campaign of misinformation that is being successfully waged in the media and by special interests who are suggesting that in order to realize the economic benefits, we must sacrifice our environmental quality and public safety.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

One of the most important work products of this Commission must be a public relations program to educate the public directly about some of the most controversial issues such as hydraulic fracturing, and methane in ground water, and a way to continue this effort after the work of the Commission is done. Significant public opposition to the Marcellus development could jeopardize the economic benefits realized by the Commonwealth. The consequences this type of opposition is manifested by the moratorium in New York and the Delaware River Basin in Pennsylvania. The challenge in conducting the aforementioned public relations plan is the balance that must be maintained between the economic benefits and the public perception that the Commission is invalidating their concern over environmental integrity

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and public safety. Much of the public concern is rooted in misinformation about many key issues such as hydraulic fracturing. Education is the key to altering public opinion about many of these negative myths about Marcellus development. Underestimating the power of public opinion can result in negative political consequences as demonstrated by the ongoing moratorium in New York. The unintended consequence of the misinformation on public perception is the increased demand for services placed on regulatory agencies.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Use public education work product developed by this Commission to brief USEPA work group studying hydraulic fracturing.

POTENTIAL FISCAL IMPACT:

The potential positive fiscal impacts to the Commonwealth are outlined above. If the opposition to the development is successful, the greatest economic engine in the history of the Commonwealth may not be realized.

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic and Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): Vincent J. Matteo

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The Marcellus Shale has been referred to as the largest natural gas formation in the nation and the second largest in the world. It also represents the single largest economic development opportunity the Commonwealth of Pennsylvania has ever experienced. **The creation of a supporting infrastructure in the Commonwealth is critical to maximizing the potential of this opportunity.** How government and industry responds to the creation of this infrastructure will directly influence the degree of success and economic development realized from this tremendous opportunity.

One of the primary foundations of creating the support infrastructure is education and training for the various stakeholders including industry, government and municipalities, and the community. There are many questions concerning what natural gas is, where its located, how its extracted, what are the job opportunities, what are the environmental issues, how do I obtain the education and skills required by the industry, what should landowners consider in the leasing process, etc.

As Pennsylvania develops its overall infrastructure plan to support this industry, education and training should be one of the strategic items considered for funding support. One of the primary questions state government officials should be considering is: "How can Pennsylvania implement an effective statewide education and training plan to support its citizens, the industry, and industry workers?"

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Consideration should be given to the creation of statewide funding to support education and training related to the natural gas industry. Other states that contain natural gas plays have implemented funding mechanisms to education centers to support the industry and its service providers. Funding strategies vary from state to state, but generally include support from energy companies, industry associations, education, and government agencies at the federal, state, and local levels. **As "tax" or "fee" proposals are refined and passed, consideration should be given to utilizing a portion of those funds to support education and training initiatives including tuition for unemployed/underemployed workers, incumbent workers, government and municipal officials, and emergency response support personnel.**

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The benefits are numerous including providing skills to unemployed workers to move them off of tax-supported programs; increased safety on job sites, and better educational programs to inform Pennsylvania residents of the facts regarding this important industry.

Normally, the challenge to implement an initiative like this on a statewide basis would be problematic. However, Pennsylvania is fortunate to already have an existing infrastructure in place to facilitate the implementation of a statewide education and training resource. For the past 12 years, DCED has funded the Guaranteed Free Training Program through the WEDnetPA initiative. Over 800,000 workers have been trained under this initiative through a network of training providers statewide. Staff and software already exist to maintain the infrastructure and required controls and reporting. The fiscal agent for this statewide initiative is Pennsylvania College of Technology in Williamsport, PA, the same institution that has assumed a lead role in training and education for the natural gas industry. Contractual mechanisms already exist for the transfer of Commonwealth funds to Penn College to administer the WEDnetPA network of statewide training providers. This same administrative structure could be used to administer funding for community and workforce training initiatives.

The current expansion plans of the industry combined with the need for government policy to address a supporting infrastructure provides an excellent opportunity to address the need for a sustainable mechanism to support the education and training needs of the industry and the community.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (if yes, please summarize)

No regulatory changes are foreseen, however, a mechanism to provide funding would need to be established which may (or may not) include legislative initiatives. One proposed funding mechanism would be to support this initiative from the proceeds obtained from a revenue stream generated by a use tax/fee.

POTENTIAL FISCAL IMPACT:

Funding assistance in the range of \$1,000,000 - \$2,000,000 annually would allow the sustainability of an education and training network that would serve the industry, Pennsylvania job seekers, and provide community information programming on issues related to the exploration and development of the Marcellus shale play.

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Environmental/Public Health Economic/workforce
SUBMITTED BY COMMISSION MEMBER(s): Nicholas S. Haden

*NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than **May 31, 2011**.*

SUMMARY OF CHALLENGE OR OPPORTUNITY:

In order to create a transportation fuel market for the Marcellus Gas use, the "Marcellus Works" legislation has been proposed/sponsored.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Under the proposed "Marcellus Works" transportation fuel legislation, any and all tax credits, tax incentives, grants, etc. must include provisions not only for CNG (compressed natural gas) and LNG (liquidized natural gas), but the same tax credits, tax incentives, grants, etc. must apply for synthetic diesel/jet fuel manufactured from natural gas using the Fischer- Tropsch process.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

First the legislature must repeal CARB and the Governor must sign it into law. Additionally the current transportation fuel tax must still be included for our road repairs.

POTENTIAL FISCAL IMPACT:

Our nation spends over \$1 BB daily on foreign oil imports. I do not know exactly what PA's total is in relationship to this \$1 BB. The revenues PA contributes to this daily burden should stay in this Commonwealth.

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MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

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Economic
Workforce
Dev.

WORK GROUP: Local Impact and Emergency Response

SUBMITTED BY COMMISSION MEMBER(s): George Greig, Secretary of Agriculture

*NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than **May 31, 2011.***

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Impact on Farm businesses

The available worker pool for farmers has been severely diminished because of the demand for workers with similar skills as those working on farms. Competition for farm and construction materials is also growing. Gas speculating has led to a sharp increase in land values, and values for properties on the fringe of the currently developing areas have increased 50-70% since 2008. Questions arise as to whether this land will remain in agricultural production, and – given current commodity prices – how will rental rates for farm ground be affected?

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

The Administration, through the Department of Agriculture and other public/private partnerships, should examine the workforce and other business decision-making issues which affect the future of agriculture in the Marcellus shale region of Pennsylvania.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

None

POTENTIAL FISCAL IMPACT:

Unknown at this time

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Economic & Workforce
Development

MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

WORK GROUP: Economic and Workforce Development

SUBMITTED BY COMMISSION MEMBER(s): David M. Sanko (PSATS)

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Local Governments are constantly looking for ways to offset the costs of providing services to their residents. Alternative fuel vehicles, specifically compressed Natural Gas (CNG) vehicles would serve as an excellent opportunity for local governments to reduce these costs as well as reduce consumption on imported oil through the use of local alternative fuels. The use of such vehicles would also benefit the economy and environment throughout the Commonwealth.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

It is recommended that the Commonwealth and the industry work to ensure that optimal funding that is available through grant programs including, but not limited to, the Alternative Fuels Incentive Grant Program.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

The Commission should consider requesting that the Department of Environmental Protection form a partnership with the industry to ensure grant funds are available to offset the costs of switching to Alternative Fuel Vehicles for municipalities. The partnership should ensure that costs covered by these funds include obtaining the necessary equipment and facilities as well as the cost of training municipal staff to maintain the vehicles.

POTENTIAL FISCAL IMPACT:

Would result in minimal fiscal impacts due to growth in demand for natural gas.

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

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No *26*
member
Com.

WORK GROUP: Economic and Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): David M. Sanko (PSATS)

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

The training and development of Pennsylvania workers to sustain the demands of the drilling activity in the Marcellus Shale region is vital. Pennsylvania workers must receive the proper skill sets so that they are able to work in these positions and others, enabling them to provide for their families and sustain local economies. The training and skill sets that will be needed to sustain this new industry must be defined and partnerships established with technical schools and universities to ensure that we have a properly trained work force with the skills needed by the industry.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

It is recommended that the industry define the specific types of short-term and long-term jobs that will be available and the skill sets that Pennsylvania workers will need to fill these jobs in future years. They must work with technical schools and universities to develop curriculum and fund grant and scholarship programs for Pennsylvanians to obtain these necessary skills. These steps must be taken now so that our citizens will be ready to step into these positions immediately and as additional positions become available in the future.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize):

The Department of Labor & Industry and the State System of Higher Education should be directed to form partnerships with the industry to develop the training and curriculum needed to ensure that Pennsylvania workers are properly trained and prepared for impending jobs appropriately. The industry should be encouraged to develop and implement scholarships and work force development grants to offset the costs to Pennsylvanians.

POTENTIAL FISCAL IMPACT:

Would financially impact gas drillers while offsetting the cost burdens to Pennsylvania's work force seeking training for needed positions.

27

~~Chris Gray~~
unfiled

MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

WORK GROUP: Local Impact and Emergency Response
SUBMITTED BY COMMISSION MEMBER(s): Jeff Wheeland
RR

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

~~Local legacy companies losing employees for higher paying Gas Industry jobs.~~

- Best Trained Professional Staff and Middle Management are being taken from local companies.
- Brain drain is seen specifically in many government agencies such as DEP, Conversation District, and others.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

- Adequate staff and fund personnel in regulator agencies where Senior Leadership is leaving.
- Accelerate training programs – to get new hires up to speed quickly.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

None.

POTENTIAL FISCAL IMPACT:

- Negatively affect local companies because they can not compete with the wages of the gas industry.
- Local companies may consider moving to places where they do not have to compete with gas companies for skilled labor.
- Detrimental to the local economy if can not find middle management to fill positions that are lost.

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

28
~~0/8~~ refer
to
COH+WW
Dev

WORK GROUP: Local Impact and Emergency Response
SUBMITTED BY COMMISSION MEMBER(s): Jeff Wheeland
KH

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

There is a shortage of stone (aggregate) in the counties that are experiencing gas drilling. The quarries cannot keep up with the demands of the industry. As a result there is a shortage and prices have increased.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Permitting of new quarries should be accelerated.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Possibly.

POTENTIAL FISCAL IMPACT:

- Cost of aggregate to locals/municipalities has doubled over the last five years.
- Further deterioration of roads/highways will result due to aggregate being hauled from longer distances.

MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

29
~~29~~
revised
2/20/11
Hunk

WORK GROUP: Local Impact and Emergency Response
SUBMITTED BY COMMISSION MEMBER(s): Jeff Wheeland
BK

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than May 31, 2011.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

fully develop secondary industry opportunity

RECOMMENDATION (including benefit, challenges to implementation, and timing):

Recommend state actively promote the creation of secondary industries to gas development. Such industries include but are not limited to compressed natural gas vehicles, cogeneration of electricity etc. It is the secondary industries that represent the real, long term back bone of employment once the majority of the drilling activity ceases.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (if yes, please summarize)

Incentivize the purchase of gas generated electricity in a manner similar to renewables. Provide state "start up grants" for the development of compressed natural gas vehicle conversion program.

POTENTIAL FISCAL IMPACT:

Adjust DCED budget to adequately fund the initiatives.

MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

30
~~19~~
Per ref
Econ. +
Work for
Dev.

WORK GROUP:

SUBMITTED BY COMMISSION MEMBER(s):

Ray Walker

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to work group chair no later than XXXX in order to be considered by full commission for submission into final report.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

Incentivize the use of natural gas for vehicles and for power generation.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Recommendation for the incentivization of the use of natural gas in vehicles and for power generation.

The legislature will need to move with legislation for incentivizing the use of natural gas. Additionally, in some instances, permits may be required. The use of natural gas in different applications will be dependent upon how quickly these happen.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

While this will include some legislation to incentivize the use of natural gas, this can be performed in several ways, including:

- (1) Allowing for tax rebates for changing to natural gas
- (2) Allowing for tax credits for changing to natural gas
- (3) Expediting permitting for when a power plant would change from coal-fired electric generation to natural-gas fired electric generation.
- (4) Allowing for credits to be traded if incentivizing the use of natural gas through tax credits.

POTENTIAL FISCAL IMPACT:

MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

WORK GROUP: Economic and Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): Terry Engelder

SUMMARY OF CHALLENGE OR OPPORTUNITY: *MAXIMIZING ECONOMIC BENEFIT FROM GAS RECOVERY WHILE MINIMIZING SURFACE DISRUPTION*

Goal #2: Designing well placement and other infrastructure to maximize gas production

Recommendation #1: Maximize efficiency of gas production

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

A number of factors can lead to redundancy and inefficiency during gas production including topography, lakes and rivers, towns, and leasing. Redundancy is manifest by more drill pads and gathering lines than necessary for prudent development of the Marcellus. In the future redundancy may appear as more drilling pads are required to produce pockets of stranded gas. Significant volumes of stranded gas may never be produced, all of which is lost to the PA economy. A smaller environmental footprint and less industrial disruption are also realized with a reasonable well spacing rule. Modern drilling technology allows drainage of one section (1 square mile) or more from a single pad. If the state is to move toward an average spacing of just a one pad per square mile it must implement these plans early in the development of the Marcellus. If pad placement is properly designed then the same pad may be used for Utica and Upper Devonian shale gas wells as well.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Unitization is the only means of eliminating redundancy which will minimize surface imprint and maximize economic gain by preventing the wasteful practice of allowing gas to become stranded. Unitization shall require political will and legislative approval should be implemented soon. The longer the delay, the greater the ultimate waste and lost economic opportunity.

POTENTIAL FISCAL IMPACT:

The economic success of Marcellus wells is maximized by allowing complete drainage.

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MARCELLUS SHALE ADVISORY COMMISSION
Work Group Recommendation Format

WORK GROUP: Economic and Workforce Development
SUBMITTED BY COMMISSION MEMBER(s): Terry Engelder

SUMMARY OF CHALLENGE OR OPPORTUNITY: *MAXIMIZING ECONOMIC BENEFIT FROM GAS RECOVERY WHILE MINIMIZING SURFACE DISRUPTION*

Goal #2: Designing well placement and other infrastructure to to maximize gas production

Recommendation #2: Incorporation of private property into the greater good

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Pad placement must take into consideration natural factors such as topography, lakes, and river and anthropomorphic factors such as the location of towns. However, leasing is one cause of redundancy that can be solved with the help of the state but then only when the land owners are provided with just and fair compensation. The most common leasing issue involves the patchwork that multiple operators may have created during competitive leasing where unleased property remains interspersed. The rule of one pad per square mile is possible only when operators are enabled to design a well placement program that is disrupted by neither irregular boundaries and minority lease holders nor small internal non-drill parcels. Only then will the state see minimization of environmental issues from stray gas, from forest fragmentation, from surface noise, from local truck traffic, and prudent water management. With implementation of the one pad rule, the rights of surface owners must be rigidly protected while leaving behind no pockets of stranded gas which will ultimately degrade benefits to both local lease groups and the state, in general.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

Unitization is the only means of eliminating redundancy which will minimize surface imprint and maximize economic gain by preventing the wasteful practice of allowing gas to become stranded. Unitization will require legislative approval.

POTENTIAL FISCAL IMPACT:

The economic success of Marcellus wells is maximized by allowing complete drainage. Unitization has the added benefit of incorporating all landholders into a system of just and fair compensation.

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MARCELLUS SHALE ADVISORY COMMISSION

Work Group Recommendation Format

Not Given + Approved 37

WORK GROUP: Environmental/ Public Health

SUBMITTED BY COMMISSION MEMBER(s): Nicholas S. Haden

NOTE: Each recommendation should be brief with a 2 page maximum upon completion. All recommendations are due to Chris Gray (chrgray@state.pa.us) no later than **May 31, 2011**.

SUMMARY OF CHALLENGE OR OPPORTUNITY:

In order to create a transportation fuel market for the Marcellus Gas use, the "Marcellus Works" legislation has been proposed/sponsored.

RECOMMENDATION (Including benefit, challenges to implementation, and timing):

Under the proposed "Marcellus Works" transportation fuel legislation, any and all tax credits, tax incentives, grants, etc. must include provisions not only for CNG (compressed natural gas) and LNG (liquidized natural gas), but the same tax credits, tax incentives, grants, etc. must apply for synthetic diesel/jet fuel manufactured from natural gas using the Fischer-Tropsch process.

LEGISLATION AND/OR REGULATORY CHANGE NEEDED? (If yes, please summarize)

First the legislature must repeal CARB and the Governor must sign it into law. Additionally the current transportation fuel tax must still be included for our road repairs.

POTENTIAL FISCAL IMPACT:

Our nation spends over \$1 BB daily on foreign oil imports. I do not know exactly what PA's total is in relationship to this \$1 BB. The revenues PA contributes to this daily burden should stay in this Commonwealth.

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