

Avoiding the Boom-Bust Cycle



The Case For An Effective Community Strategic Plan

Shale energy holds significant promise as a low-cost source that can move America toward energy independence. U.S. shale deposits are extensive and can be found nationally. According to an estimate by the U.S. Energy Information Administration's [2012 Outlook Report](#), at the 2010 rate of consumption level, America has enough recoverable shale energy to last 90-years.



Photo courtesy of Jim Samuel, [Capitol Integrity Group](#)

Boom or Bust?

BOOMTOWN IMPACT MODEL

“As population grows at boom rates, existing local services fall short of need. School classrooms, retailing inventories, housing, and the number of physicians in the community do not grow as rapidly as the number of people increases. Many peoples’ recreational requirements are not satisfied by the available opportunities. The quality of life in the community is degraded.

As a result, it is difficult to attract people to this isolated community which has no substantial indigenous labor force to serve the economic growth. There is apt to be an inadequate supply of labor, which is unstable and dissatisfied at best. Workers and their families do not want to stay in the community and some of those who do stay are pirated back and forth among employers. Industrial employee turnover rates and absenteeism go up rapidly. It is difficult to attract and retain a satisfactory work force, whether it is a workforce for building and operating a power plant or gasification plant, for operating a restaurant, or for maintaining the county’s roads and bridges. Industrial productivity and profits drop.

Because of declining productivity, or at least the absence of expected increases in productivity and profits, there is less money coming in to support public sector needs. Insurance companies even stop writing casualty coverage in boom towns.

Thus the situation is back where it started in the problem triangle, with the local services and facilities finding it even harder to keep up with increasing population and demand.”

The real challenge facing your community is to either 1) leverage the shale energy industry as a catalyst for sustainable economic prosperity or 2) fall victim to experiencing the negative economic impact of a boom-to-bust cycle.

Obviously most communities would rather avoid experiencing a boom-to-bust cycle.

I read an article in the February 28, 2012 Cincinnati Enquirer newspaper that described the experience of Towanda, PA (population 3,000). This is a classic description of a community impacted by the shale energy industry that has yet to determine which path it will journey.

Towanda is outside of Wilkes Barre on the Susquehanna River. It was once an industrious manufacturing town, but has been steadily losing population like many communities in the region. But, then came the shale energy industry. “Workers from Texas and Oklahoma arrived. New hotels and restaurants opened. Heavy trucks carrying pipes, rigs and tankers rumbled over rural roads. Housing grew scarce. Bars got busier. An easy ride over the Susquehanna River Bridge became a 25-minute traffic jam during peak hours.”

The change in the culture of Towanda has been offset by the money being generated. Unemployment dropped to 3 percent. Local laborers were trained to work in the new industry and soon had high paying jobs.

But, it has also brought other changes to the community. For example, the population increase added 1,800 new students

that need to be absorbed into a district that has had to cut its operating budget by \$2 million. The Towanda borough manager is quoted as asking “What becomes of us in 10, 15, or 20 years when the boom is over?”

That is, in fact, the right question. And, the answer depends on the job local leadership in Towanda, PA does to create an effective long-term strategic plan capable of guiding the development of their community through the boom phase in such a way that the choices made do not result in being a casualty of the Boomtown Impact Model.

If You Can Envision It You Can Plan For It

The impact of the shale energy industry on communities is the subject of study by several well respected academicians. Their findings suggest a pattern of effect. While no two communities are impacted in exactly the same way, there is clearly a set of common impacts you can use as input to developing a strategic plan.

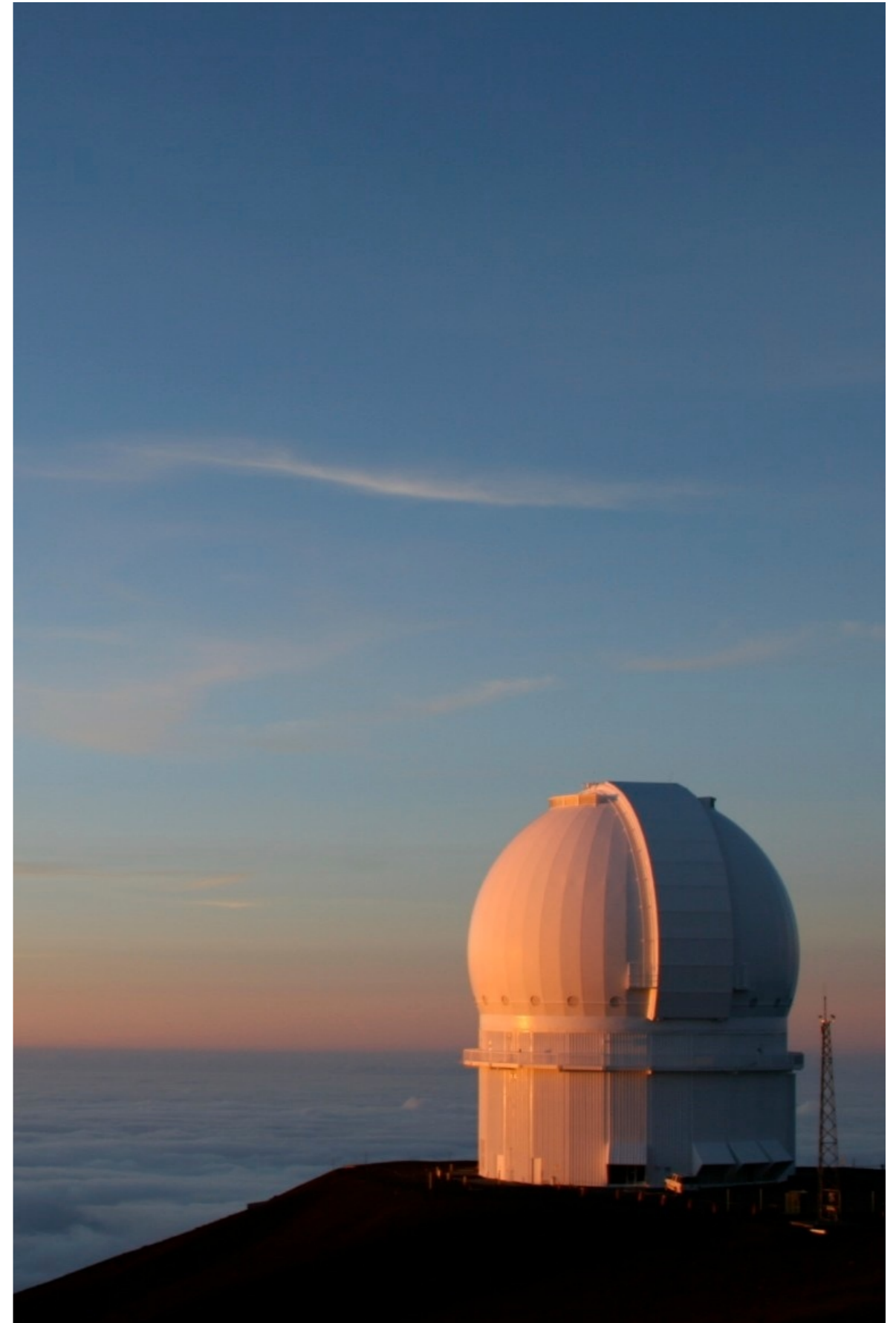


Photo by Ed Burghard, [The Burghard Group LLC](#).

The Typical Impacts You Need To Plan For

One of the better discussions of the subject is a 2011 paper authored by Susan Christopherson and Ned Rightor as part of a working paper series. The paper title is *“A Comprehensive Economic Impact Analysis of Natural Gas Extraction in the Marcellus Shale”*. The authors describe the boom-bust cycle as a rapid increase in economic activity followed by a rapid decrease. The increase occurs when specialized labor required for the drilling process moves into a region, and then the bust occurs when the drilling stops and the wells move into the production phase which is less labor intensive.

The authors take lessons from the Barnett shale play as a way to predict the likely shale energy industry community impacts.

Social Impacts

- Population increase
- Traffic increase

- Accidents increase
- Student body increase
- Demands for housing increase
- Rents increase
- Demands for government services increase

Infrastructure Impacts

- Demands for road repair increase
- Demands for regulation monitoring services increase
- Demands for skilled labor increase

The authors quote from a paper authored by Feser and Sweeney (1999:33) about the mining industry.

“During the boom period, the county’s physical infrastructure was planned and installed to accommodate an expanding population. The nature of infrastructure such as roads, sewer and water facilities, and schools is that once built, it generates ongoing maintenance costs (as well as debt services costs) even if consumption of the facilities declines...the departure of mine workers and higher income, mobile professionals left the burden of paying for such costs to the remaining smaller, lower-income, population.”

Therein lies the real challenge. Making choices that strike the right balance and don’t ultimately bankrupt a community.

Another paper in the working series titled “**Workforce Development Challenges in the Natural Gas Industry**” authored by Jeffrey Jacquet dives deeper into the demand for skilled labor. The planning challenge is that the type and quantity of jobs change as wells go from the development phase to the production phase.

“...many workers associated with developing the gas wells will only be needed in a particular area while the wells are being drilled, while others related to the long-term production of natural gas will stay at a particular location for decades.”

The Penn College of Technology’s **Marcellus Shale Education and Training Center (MSETC)** has studied the regional workforce needs associated with the Marcellus shale play. They estimate drilling a single well requires over 400 people across 250 different occupations. The authors note that many of those people are only required for a few hours a day though, so on a full time equivalent (FTE) basis the number translates to roughly 13 FTEs to complete a well (MSTEC 2009; 2010). In the production phase, only 0.18 FTEs are required for each well.

Think of the implications of that swing in labor requirements on employment and tax revenue. Your plan to meet the short-term labor requirements will be different than your plan to address the industry’s sustained labor needs. Similarly, the expected economic impact associated with resident spending and taxes will be different between the development and production phases. These implications should be taken into account in your community’s strategic planning.

Penn State has done some great research on the impact of the shale energy industry on communities. A paper titled “**Local Business Impacts of Marcellus Shale Development: The Experience in Bradford and Washington Counties, 2010**” provides some excellent insight into what communities need to plan for.

In their study, the businesses reporting an impact from the shale energy industry included hotels and campgrounds, restaurants and bars, construction, wholesale trade and financial services firms, and to some degree tourism related businesses. The author’s conclusion is that the net impact of the shale energy industry on local business was generally positive. Two caveats were provided - 1) the study was done in the development phase and may not be predictive longer-term, and 2) higher local business sales do not directly affect local tax collections by counties or most municipalities or school districts. [Note, this is dependent on the specific state and local tax structure. For example, in Ohio sales tax on those products is a major income source for the county, but not local governments.]

The author also made the following observation, “The different results [between the two counties] suggest that the size of the ‘host’ county is an important factor affecting the scope and visibility of the impact on businesses due to natural gas drilling. The relative impacts will likely be greater in smaller counties, yet this also means greater risk of a ‘bust’ when drilling activity slows.” This suggests strategies that include regional collaborations may be a way to minimize the downside economic risk.

Another study in the Penn State series titled “**Downtown Business Communities and Marcellus Shale Development in Pennsylvania**” concluded “...natural gas development activity is affecting downtowns in regions with Marcellus shale, creating both opportunities and challenges.” With respect to the challenges, the paper’s author notes “The most pressing challenges appear to be related to traffic and parking, which are vitally important because customers need to feel able to safely visit downtown shopping districts.”

Another paper in the Penn State series worth reading is titled “**Marcellus Shale Exploration and Development: Organizing a Community Task Force**”. This paper goes into a reasonable amount of detail on describing the potential impact areas that a community will need to address, and raises some important considerations.

Here is a fairly comprehensive list of potential impacts reported in the paper -

Environmental and Natural Resources

- Habitat loss, fragmentation
- Natural diversity
- Erosion, sedimentation, storm water
- Brine disposal
- Aesthetic concerns (viewsheds, pipelines, etc.)

Water Resources

- Water quality - ground and surface
- Water quantity - ground and surface

Local Infrastructure

- Road damage (posting and bonding)
- Water and Sewage
- Housing
- Schools

Sociodemographic Changes

- Changing business opportunities
- Population growth and change
- Income growth
- Community conflict

Local Economy

- Capturing investment and revenues
- Type and number of local jobs
- Workforce development
- Business development opportunities

- Tourism impacts
- local government costs and services
- Ability to attract future economic development

- Labor migration

Health and Safety

- Increased traffic
- Fire, hazardous materials

Consumer Protection

- Leasing
- Drinking water and other protection
- Tax and financial implications/options
- Noise, viewscape, etc.
- Public access
- Property values

Legal and Regulatory Landscape

- Enforcement capacity
- Taxing and revenue issues
- Evolving case law

- Regulatory jurisdictions

Local Governments

- Planning and land use
- Intergovernmental coordination
- Costs and revenue changes

Changing Local Service Demands

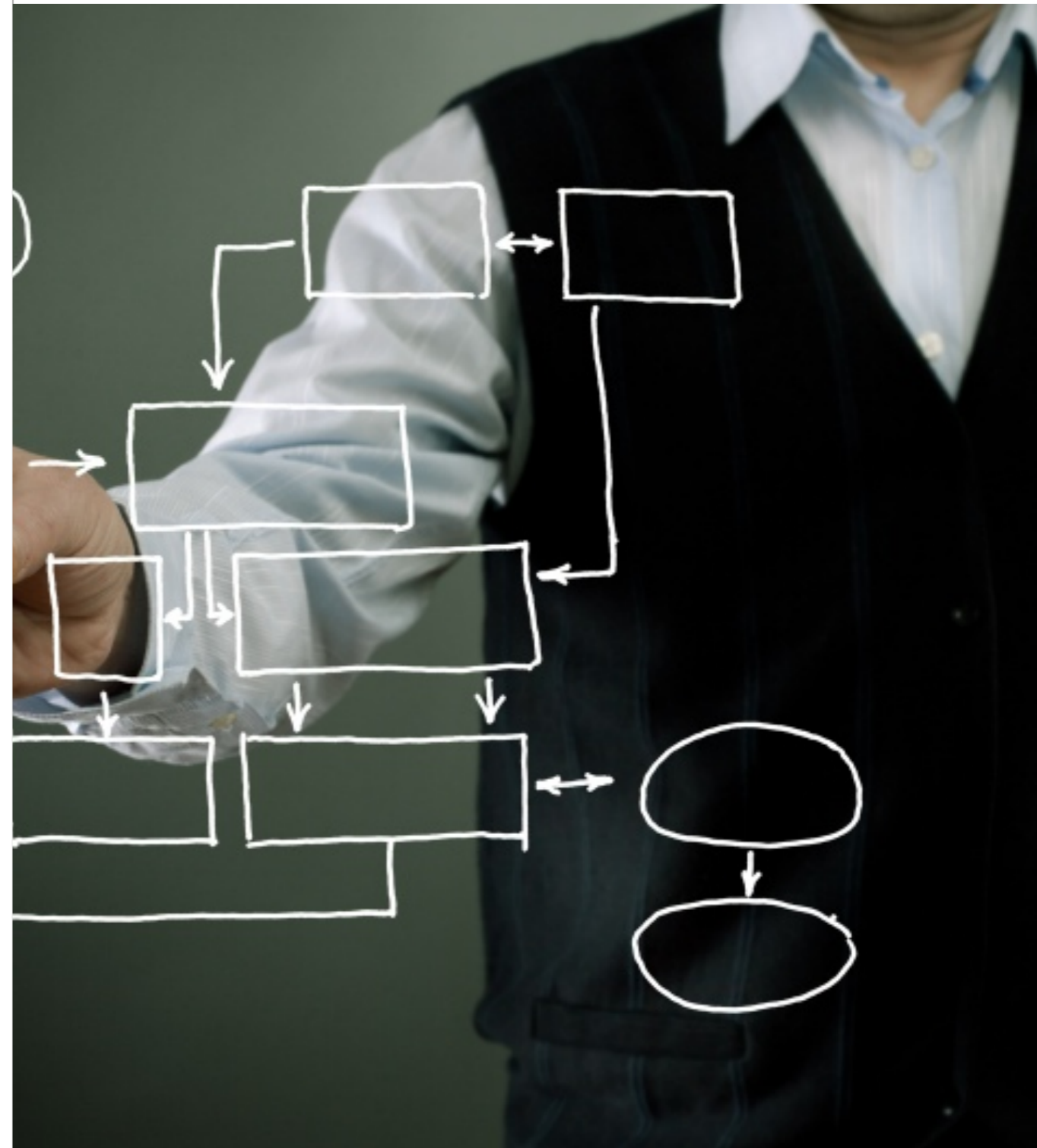
- Regulatory consistency
- Emergency preparedness
- Communication with the public

Between the work done by the professors at Cornell University and that done by the professors and students at Penn State, the potential community impacts from the shale energy industry that leaders need to create plans for are fairly clear.

The good news is that if you can envision the changes you can create a plan to effectively minimize the risk your community experiences a boom-bust cycle.

The Process

Strategic planning is all about making an interdependent set of choices on where to play and how to win in order to achieve a specific objective. There are any number of processes to help you make those choices. The process described in this chapter is designed to achieve the objective of leveraging a partnership with the shale energy industry to create sustainable wealth for your community. The net result will be to minimize the risk of experiencing a boom-bust cycle.



Strategic planning helps your community define priorities by creating a framework for decision making. It creates a working snapshot of where you are today, highlights the most important challenges you are going to face and describes the pathway to successfully achieve your end objective.

It is important to view a strategic plan as an integrated set of choices that will position your community to create sustainable wealth for its citizens.

The key questions a strategic plan should answer are:

- What is the goal we are trying to achieve?
- Where should we be placing our efforts?
- How can we win in those selected areas?
- What assets can we leverage or need to create?
- What capabilities do we have or need to develop?

Note that while the strategic planning process will be the same, the answers to the key questions will be dependent on the unique assets and aspirations of your community, and the specific characteristics of the shale play in your area. A recent study entitled *“An Analysis Of The economic Potential For Shale Formations In Ohio”*, completed by faculty and staff from Cleveland State University, The Ohio State University and Marietta College highlights a number of different dynamics associated with the Utica Shale Play which is expected to yield a mixture of oil and gas. The authors state “Higher potential profits will

stimulate companies to invest resources in the Utica Shale development at a pace exceeding the early history of the Marcellus. The higher liquid content of the Eagle Ford Shale in Texas generated exactly that sort of rapid development.”

The strategic plan will need commitment from both the public and private sector leadership in the community. You will need discipline to remain focused on delivering the plan and in the process you use to make changes to the plan. The strategies you chose should be “results focused” and as helpful in defining what you won’t do as they are in defining what you will do.

A good strategic plan starts with a clearly articulated statement of your community’s promise. The promise should be relevant, competitive and authentic. It defines the experience people can expect from living and working in your community. This is what you want to preserve and strengthen as your community seeks to leverage the upside benefits of collaborating with the shale energy industry.

Every strategic plan is built around critical success factors. Things that must be true in order for your community’s promise to be authentically delivered. These “must haves” should be written and will be referred to when you test the robustness of your community’s strategic plan.

With a clear understanding of your community promise and critical success factors, you are ready to look forward at the journey that lies ahead.

The SWOT (strengths - weaknesses - opportunities - threats) analysis is a structured way of describing what it will be like for your community on the journey. Strengths and Weaknesses force you to objectively assess your community's readiness. Strengths are factors that give your community an advantage during the journey. They will help you either minimize the risk of experiencing a boom-bust cycle or maximize the benefits of collaborating with the shale energy industry. Weaknesses are factors that could prove to be a major disadvantage if not dealt with directly. These factors put your community at great risk of falling into the boom-bust cycle pattern. To be successful, these negative factors need to be neutralized. In this exercise, you should focus on the Opportunities presented by the shale energy industry that you can take advantage of in order to further improve the delivery of your community promise. And think of Threats as those community impacts that come with the development of shale energy that you need to have a proactive plan in place to successfully deal with.

The rest of the strategic plan consists of your Where to Play choices and your How to Win choices.

Where to Play is broken into Objectives and Goals. Objectives represent what you are trying to accomplish. You write these as sentences. Goals are the quantitative way you will measure the progress in achieving your Objectives. Goals are written as milestones and should contain numbers.

One Objective to consider is to "Create a sustainable wealth critical to family and community well-being that fully leverages but is not totally dependent on the shale energy industry."

This Objective will have seven capital goals as defined by the Ford Foundation Wealth Creation model.

1. Financial capital - the amount of unencumbered monetary assets that can be invested.
2. Natural capital - the quality of environmental assets (air, land, water).
3. Social capital - the engagement of citizens in building trusting relationships and networks that support civic efforts.
4. Individual capital - the health and well-being of citizens.
5. Built capital - the quality of the community infrastructure.
6. Intellectual capital - the quality of education, innovation, creativity and entrepreneurship in the community.
7. Political capital - the trust and goodwill held by public and private community leadership.

Quantitative measures, baseline scores, and 10-year targets should be established for each. This is an area where contracting outside expertise can be extremely helpful to the process.

How to Win is broken into Strategies and Measures. Strategies are the steps you will take to achieve your Goals. Strategies are written as sentences. Measures are the benchmarks

you will use to determine if you are on track to deliver your strategy choices. Measures are articulated as numbers.

The Strategies you select need to be evaluated in the context of your Objectives. You need to evaluate four aspects.

- Are the strategies selective? Are they written in a way that makes it clear what you are NOT going to do as well as what you are planning to do? One of the biggest challenges with poorly written strategies is no real choice gets made and as a result resources get spread too thin to be effective.
- In total, are the strategies sufficient to deliver the objectives? If the strategies are not sufficient, you will fall short of success and your community will be at risk of experiencing a boom-bust cycle.
- Are the strategies synchronized? Do they work together or are they at odds? Can you easily link each strategy to at least one specific objective? Are there any synergies created from the set of strategies you've selected?
- Are the strategies sustainable? Does successful execution of the strategies provide a platform you can build from to maintain the momentum of your community wealth creation across all seven goals when the shale energy industry moves from the drilling phase into the production phase?

Once you have defined the Objectives, Goals, Strategies and Measures for your community, the next step is creating Action Plans. Action Plans are tactical plans that define who needs to

do what by when. Action Plans also help define the resource requirements for successful execution.

Effective Action Planning will require participation of the key constituencies in your community. This is where people put “skin in the game” and are held accountable for delivering planned results on time and on budget.

Every key constituency should have a specific Action Plan that describes their unique contribution and directly ties back into the community's strategic plan.

You will need a defined process to manage delivery of the activities deployed through the Action Plans. It is often helpful to take advantage of one of the commercially available project management tools that have been created to support the Total Quality efforts in the private sector. In addition, it is helpful to assign the responsibility for managing Action Plan tracking to a single person in the community leadership structure. This person will be responsible for identifying emerging problems and for working with community leadership to reallocate resources and/or knock down barriers to success. This role should be viewed as a leadership role rather than an administrative one.

Failure in execution of the Action Plans will result in failure of the Strategic Plan no matter how brilliantly it is written. The worst strategy is the one that is not well executed.

Strategy Template

Now it is time to put it all together. Strategic Planning is something you can try to lead on your own, or you can seek the help of outside experts. If you seek the help of a consultant, consider providing a copy of this paper as part of your RFP. Every consultant will have their own twist on process, and you will want to make certain your community follows this one. If not, the risk is your strategic plan may be too broad in scope to address the specific risk of falling into a boom-bust cycle.



PROMISE: _____

CRITICAL SUCCESS FACTORS:

1. _____
2. _____
3. _____



Your strategy document should be structured so it is easy to read and understand. At the top of the page you should write your community **Promise**. This will ensure everybody understands the most important outcome is to ensure the promise your community makes is kept.

Highlighting the **Critical Success Factors** is good practice. It reminds people what must be true for you to successfully deliver your community’s promise. You will revisit both the Community Promise and Critical Success Factors often as you communicate and manage the strategic plan.

Then you need to articulate your Where to Play and How To Win choices.

For this exercise, an Objective you should give consideration to is “Create a sustainable wealth critical to family and community well-being that fully leverages but is not totally dependent on the shale energy industry.” And include all measures of wealth from the Ford Foundation model in the Goals column. You can add another Objective if you want. But, may find that it is not necessary.

The simpler you can make this exercise the greater

likelihood of executional success. Add another Objective only if you feel it is mandatory and will lead to an even better outcome. Otherwise, forego the temptation to complicate your strategic plan.

The next column reflects the choices you have made to accomplish the Objective(s). Getting to those choices is not easy and requires collaboration across key constituencies with a stake in the direction your community’s economy will go and collaboration with the

shale energy industry leaders from companies doing business in your community.

You should minimally have a specific strategy for each major impact category.

- Environmental and Natural Resources
- Water Resources
- Local Infrastructure
- Sociodemographic Changes
- Economic Considerations
- Health & Safety
- Consumer Protection
- Legal, Regulatory, Public Policy Changes

This is where you will invest most of your time and energy. Aligning on a set of strategic choices is hard work. For example, under Economic Considerations you should have a strategy defined for supplying required labor and a proactive strategy for retraining reemploying idled labor when the industry moves from the drilling phase to production phase.

Spend the time required to get true alignment. If you do not, the resources you are counting on will not materialize. This is where contracting with an outside consultant to facilitate the

process may be a wise investment. It is mission critical to have an aligned set of strategies.

Once your strategic plan is in place and aligned, the focus shifts to Action Planning for execution. Each strategy needs to be cascaded into tasks and a timeline. Once cascaded it needs to be rolled back up to ensure nothing critical has been missed.

OBJECTIVE: Same Words from OGSM

STRATEGY: Assigned Strategy from OGSM

GOALS: Relevant Numbers from OGSM

MEASURES: Assigned Measures from OGSM

ACTION PLANS	TARGETS	RESPONSIBILITY
<p>ACTION PLAN 1 Activity 1 Activity 2 Activity 3</p> <p>ACTION PLAN 2 Activity 1 Activity 2</p> <p>Steps that will be taken to meet the specified strategy.</p> <p>Statements should specify Direction, What Measured, What Worked on.</p> <p>Actions should be limited to a few key choices.</p>	<p>Quantitative measures that equals success</p>	<p>Defines who is responsible</p>

Everybody involved should have action items assigned and a personal action plan to execute against. That ensures ongoing ownership of the strategic plan and increased the probability of executional success.

The Upside

This paper focused on making the case for proactive strategic planning to minimize the downside risk that a community will experience a boom-bust cycle. You could also make a compelling case that effective strategic planning will improve the probability your community successfully leverages the shale energy industry to create sustainable economic prosperity. In fact, you could hypothesize that if developed prudently, the shale energy industry could enable many counties in America's Appalachian Region to achieve national average levels of economic prosperity or potentially even above national average levels.



The potential upside for a community that proactively plans well and creates a strong collaboration with the shale energy industry can be impressive.

The availability of shale oil and gas can lower energy costs, drive investment in industries that supply equipment to the natural gas industry and to those that can use natural gas in production (e.g. chemical industry).

It can help families in your community that use natural gas for heat, and/or use electricity made from natural gas. It can help manufacturing businesses in your community by lowering their heating and electric costs, providing margin flexibility to become more competitive.

Local businesses can benefit from becoming part of the supply chain that serves the development of the shale energy industry in your Region. Other industries such as the steel, chemical and plastics sectors will benefit from access to low cost natural gas, and the feedstock of both crude and natural gas liquids that can spur significant long-term manufacturing development as shale energy wells transition into the production phase.

Stable energy cost is an important factor for company's Profit & Loss performance. The promise of abundant, low cost energy can be a key differentiator to attracting capital investment in your community.

Companies are finding creative ways to leverage shale energy for competitive advantage. A great example is Procter & Gamble's manufacturing plant in Mehoopany, Pennsylvania. The

plant manufactures several of P&G's most recognizable brands - Charmin, Bounty, Pampers and Luvs. It employs over 2,000 workers who live in a six-county area around the plant. P&G has drilled several natural gas wells on its property and has benefited from a significant reduction in energy costs. It is a model other companies in energy intensive industries will likely be interested in better understanding for potential reapplication.

Along the same line of thought, there is potential to leave a lasting positive legacy by **permitting drilling in park lands or school property**. Lease payments can be put into a capital fund that can be invested in programs with potential to catalyze economic development (e.g. workforce training). Royalty payments can be put into a long-term endowment fund to finance schools or some function of the government that will benefit the community.

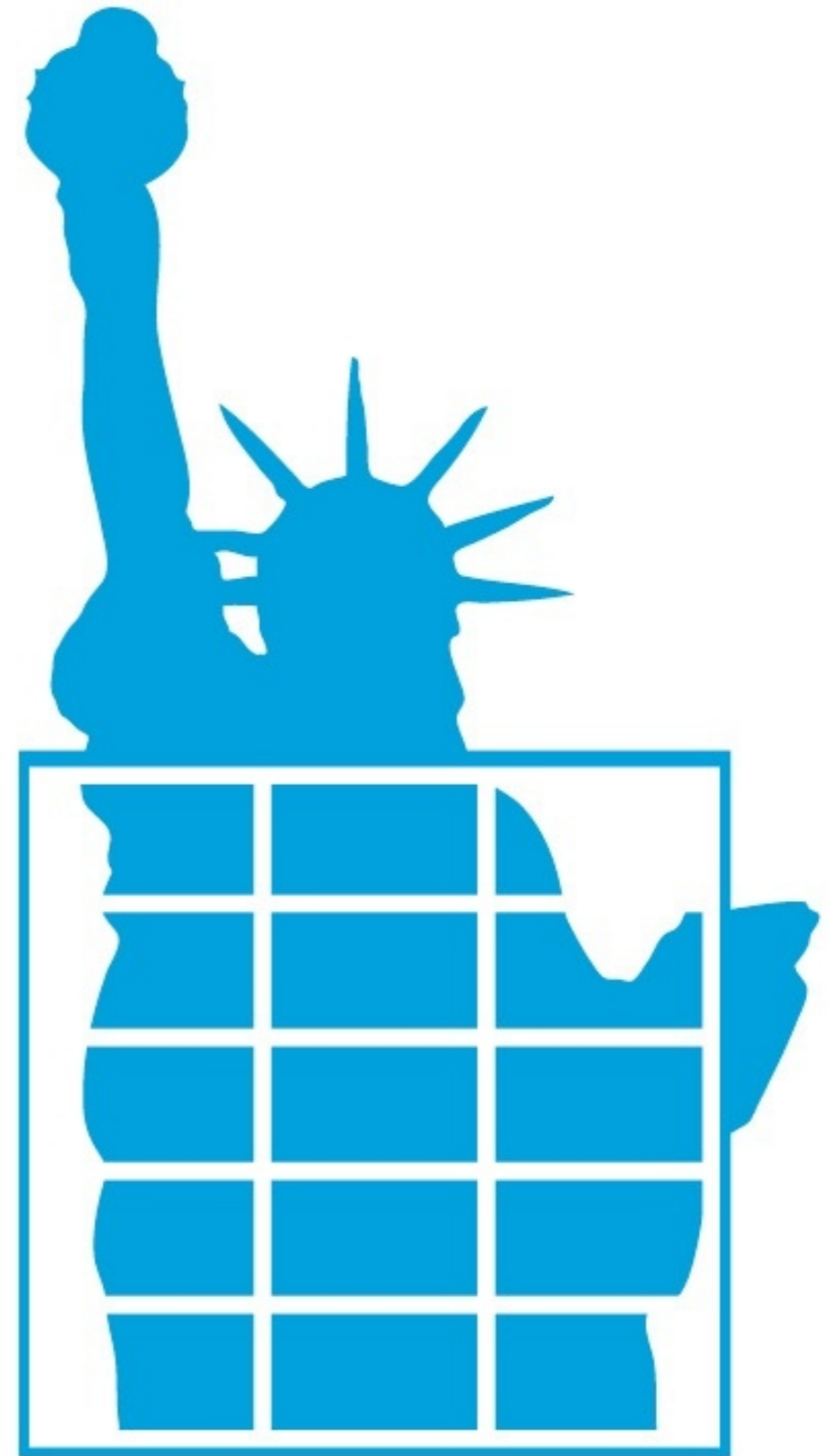
And of course, there is a positive impact on state and local taxes that can be a benefit shared by the majority of residents in your community.

But, the key to realizing the upside potential of the shale energy industry to enable your community to achieve sustainable economic vitality is forward focused strategic planning. Thoughtful, respectful collaboration between local public and shale energy industry leaders will result in responsible development of the industry and your community's economic future.

The upside potential of the benefit for your community is limited only by your willingness to develop a proactive plan and then work the plan you've developed.

Place BrandAid

Place Brand Aid is an initiative of the **Strengthening Brand America Project**. The focus is to help economic development professionals working in communities that are facing transformational change. This initiative provides the tools, knowledge and resources necessary to successfully help lead communities through the change process.



ADDITIONAL READING

You may find these Strengthening Brand America Project links interesting as supplemental reading on the subject.

Shale Energy - A unique Economic Development Challenge

Managing The Jed Clampett Effect

Shale Energy Industry Impact

Avoiding Fear Based Decision Making

The Promise of Shale Energy

Marcellus & Utica Shale - "Doing it Right"

You Can Avoid The Boom-Bust Cycle

Strategic Planning To Manage Change

Odds And Ends

Interview With The Honorable Tom Ridge

Interview With Robert Skaggs

Interview With Harlan Shober Jr.

The purpose of this Place BrandAID initiative is to help economic development professionals in communities impacted by the shale energy industry work collaboratively with both industry and local leaders to develop local long-term strategic plans that ensure the legacy of the industry is sustained economic prosperity rather than the economic destruction created by a boom-bust cycle. This initiative provides 1) **access to the resources** required to promote a factual understanding of the shale energy industry and 2) education on the process for creating effective long-term strategic plans.

Like the great work done as a professional community in making a positive difference in those communities impacted by the **BP oil spill**, we will make a positive difference in communities impacted by the shale energy industry. Collaboratively we will help ensure the commercialization of shale energy is good for both local economies and for our Nation.

SPECIAL ACKNOWLEDGMENT

Special thanks to Jim Samuel at **Capitol Integrity Group**. His help in reviewing and editing this book has been invaluable. I appreciate the support and encourage you to take a moment to read the information The Capitol Integrity Group provides on the **Ohio Shale Play**.