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The purpose of this study is to evaluate the impact of Marcellus Shale on housing, specifically, to evaluate the changes in the cost and stock of single family home, new construction, low income, and rental rates.

## Executive Summary

### The Impact on Housing in Appalachian Pennsylvania as a Result of Marcellus Shale

A project funded by the  
Appalachian Regional Commission

The **INSTITUTE** for  
Public Policy & Economic Development

*A partnership among Keystone College, King's College, Luzerne County Community College, Marywood University, Misericordia University, Penn State Wilkes-Barre, The Commonwealth Medical College, University of Scranton, & Wilkes University*

## Introduction

The presence of vast natural gas reserves in the region known as the Marcellus Shale – an area including much of Pennsylvania and stretching from New York to West Virginia – has been known for decades. This geography represents a large portion of Appalachia. However, recent emphasis on domestic energy production, coupled with new technologies that make the recovery of these natural gas reserves cost effective, have led to increasing interest and activity directed toward developing these resources.

Most of the counties within the Marcellus Shale area are rural, and the potential impact of widespread gas development is expected to be profound. Such development can be an economic boon. However, housing in the shale area can be affected in a number of ways; some positive and some negative. This study explores those impacts.

The goal of this research project was to evaluate the impact on housing as a result of Marcellus Shale drilling in twelve counties involved in various stages of drilling throughout the Commonwealth. The research data serves as a baseline for future longitudinal study; however some emerging trends and issues are noted in this research. In creating this study, we used for primary and secondary data to evaluate each county. Data came from federal, state, and private licensed databases. Additionally, qualitative interviews took place in each of the counties in the study sample. The Institute correlated and analyzed datasets from this source.

## Research Methods

Counties were selected for inclusion in the study based on two criteria. First, only counties located in a Marcellus Shale region were possible options. Pennsylvania Department of Environmental Protection data and maps were used to determine eligible counties. The number of permits and wells were also taken into consideration. Because the study area consisted of twelve counties, we felt it was important to include those with varying levels of development.

### Pennsylvania Marcellus Region



Source: Pennsylvania Department of Environmental Protection

Second, counties were selected for inclusion based on their economic status, as determined by ARC. Each Appalachian county is assigned one of five economic status designations based on its position in the national ranking. Those designations are as follows:

- **Distressed** - Distressed counties are the most economically depressed counties. They rank in the worst 10 percent of the nation's counties. (Forest County)
- **At-Risk** - At-Risk counties are those at risk of becoming economically distressed. They rank between the worst 11 and 25 percent of the nation's counties. (Fayette County)
- **Transitional** - Transitional counties are those transitioning between strong and weak economies. They make up the largest economic status designation. Transitional counties rank between the worst 25 and best 25 percent of the nation's counties. (Blair, Bradford, Cambria, Clearfield, Clinton, Luzerne, Lycoming, Susquehanna, Tioga, and Wyoming)
- **Competitive** - Competitive counties are those that are able to compete in the national economy but are not in the highest 10 percent of the nation's counties. Those ranking between the best 11 and 25 percent of the nation's counties are classified as competitive. (None)

The 12 Pennsylvania counties selected were: Blair, Bradford, Cambria, Clearfield, Clinton, Fayette, Forest, Luzerne, Lycoming, Susquehanna, Tioga, and Wyoming. Two counties in Texas and two in Arkansas were also examined as case studies. The Texas counties are Dimmit and LaSalle and the Arkansas counties are Faulkner and White. The case study counties were selected based on the number of unconventional wells they contained.

Additionally, The Institute conducted 32 interviews. The interviews responded to a semi-structured questionnaire and represented the following sectors housing authorities, realtors, social service agencies planning departments, nonprofits, economic development organizations and elected officials. The purpose of the in state interview was to secure real time information on housing and resulting social impacts, identified challenges and needs.

The table below details the number of permits and wells from 2008 to July of 2011.<sup>1</sup> Additionally, permit and well figures are ranked.

| <b>Permits &amp; Wells 2008 through July 2011</b> |                |              |                |              |                |              |                |              |                |              |                |              |
|---|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|
|   | <b>2008</b>    |              | <b>2009</b>    |              | <b>2010</b>    |              | <b>2011</b>    |              | <b>Total</b>   |              | <b>Rank</b>    |              |
|   | <b>Permits</b> | <b>Wells</b> |
| <b>Blair</b>                                      | N/A            | 0            | 2              | 0            | 5              | 5            | 2              | 1            | 15             | 6            | 11             | 9            |
| <b>Bradford</b>                                   | N/A            | 14           | 430            | 113          | 830            | 386          | 433            | 241          | 1,693          | 754          | 1              | 1            |
| <b>Cambria</b>                                    | N/A            | 0            | 6              | 2            | 9              | 1            | 7              | 2            | 22             | 5            | 9              | 11           |
| <b>Clearfield</b>                                 | N/A            | 4            | 72             | 27           | 76             | 39           | 66             | 38           | 214            | 108          | 5              | 5            |
| <b>Clinton</b>                                    | N/A            | 3            | 41             | 12           | 48             | 35           | 30             | 26           | 119            | 76           | 8              | 7            |
| <b>Fayette</b>                                    | N/A            | 18           | 88             | 55           | 77             | 19           | 29             | 16           | 194            | 108          | 6              | 6            |
| <b>Forest</b>                                     | N/A            | 0            | 5              | 4            | 2              | 2            | 0              | 0            | 7              | 6            | 12             | 10           |
| <b>Luzerne</b>                                    | N/A            | 0            | 1              | 0            | 14             | 2            | 0              | 0            | 15             | 2            | 10             | 12           |
| <b>Lycoming</b>                                   | N/A            | 13           | 107            | 24           | 254            | 107          | 216            | 150          | 577            | 294          | 3              | 3            |
| <b>Susquehanna</b>                                | N/A            | 32           | 155            | 60           | 230            | 92           | 146            | 82           | 531            | 266          | 4              | 4            |
| <b>Tioga</b>                                      | N/A            | 8            | 300            | 114          | 564            | 266          | 247            | 146          | 1,111          | 534          | 2              | 2            |
| <b>Wyoming</b>                                    | N/A            | 0            | 11             | 1            | 88             | 15           | 88             | 11           | 187            | 37           | 7              | 8            |
| <b>Total</b>                                      | <b>N/A</b>     | <b>92</b>    | <b>1,218</b>   | <b>412</b>   | <b>2,197</b>   | <b>969</b>   | <b>1,264</b>   | <b>713</b>   | <b>4,685</b>   | <b>2,196</b> |                |              |

The twelve counties we have identified for this study are in various stages of drilling: little or no activity to extremely active, as detailed below. Bradford and Tioga rank 4 or very active with the most wells drilled in the study region. Blair, Cambria, Clinton, Forest, Luzerne, and Wyoming rank 1 with little or no activity; and Clearfield, Fayette, Lycoming, Susquehanna rate as a 2 or low activity. Ranking counties in this fashion demonstrates that the potential for drilling (by factoring in permit data) is significant.

| <b>Drill Rating by Wells Drilled</b> |                       |                               |                           |
|--------------------------------------|-----------------------|-------------------------------|---------------------------|
| <b>Score</b>                         | <b>Category</b>       | <b>Definition</b>             | <b>Number of Counties</b> |
| 1                                    | Little or no activity | 0-100 wells drilled           | 6                         |
| 2                                    | Low activity          | 101-300 wells drilled         | 4                         |
| 3                                    | Mid-level Activity    | 300-500 wells drilled         | 0                         |
| 4                                    | Very active           | 500-999 or more wells drilled | 2                         |
| 5                                    | Extremely Active      | Over 1000 wells drilled       | 0                         |

The Institute identifies limitations surrounding the availability of current and consistent county data and the time lag of existing secondary data. Also, existing datasets regarding realty transfer tax information included commercial and industrial and thus could not be included in this study which deals only with residential housing. The Institute's Right-to-Know application was refused indicating no other data than what was on the website was available wording. Information requested from the Pennsylvania State Association of Realtors was found to have a flaw in it and could not be corrected in time for inclusion in this publication.

<sup>1</sup> Permit data for 2008 was unavailable at the time of this publication.

The Institute then synthesized the information in order to identify specific problems, community needs, and state and local policy reform needed to mitigate the issues.

## Secondary Data

The following datasets are examined in this study:

### **Demographics**

- Population: 2000 and 2010
- Race and Ethnicity: 2000 and 2010
- Household Income: 2000 and 2010
- Educational Attainment: 2000 and 2010

### **Employment & Wages**

- Unemployment: 2005-2010
- Business Patterns: 2005-2010
- Annual and Weekly Pay: 2001-2010

### **Housing**

- Housing Units: 2000 and 2010
- Home Values: 2000 and 2010
- Building Permits: 2000-2010
- Home Sales: 2006-2010
- Median Home Price: 2006-2010
- Home Loan Originations by Purpose: 2004-2009.
- Fair Market Rent: 2005-2012
- 50<sup>th</sup> Percentile Rent Estimates: 2005-2012
- Housing Affordability: 2005-2009 Estimate
- Affordable Housing Search: 2011
- Building Capacity: 2009
- Public Housing: 2005-2008
- Section 8 Vouchers: 2005-2008
- Point-In-Time Counts

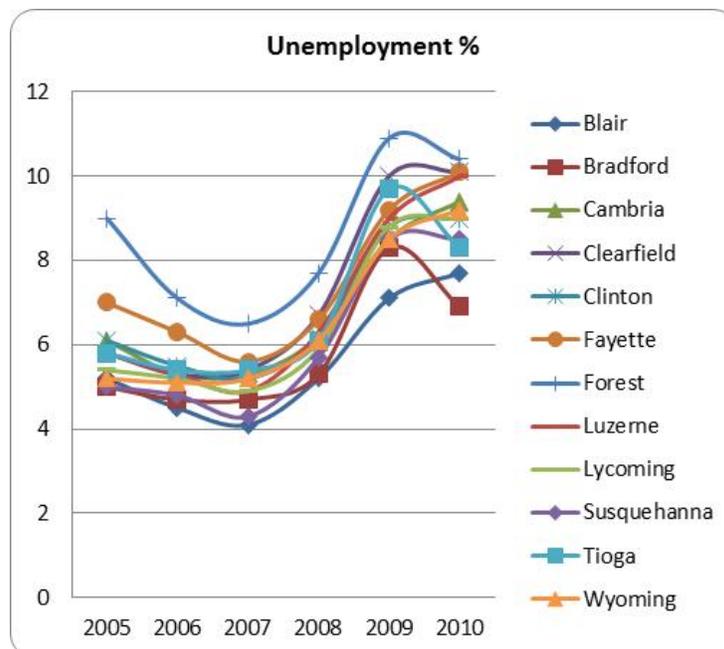
Although we are keenly aware of issues facing many counties being explored and developed, at this point only a portion of the data begins to validate some of these issues. Some of the issues appear to have begun prior to major shale development and could be the result of both the recession and the natural forces of supply and demand. The Marcellus Shale play became the “catalytic” event that exacerbated the situation.

Counties with some of the highest numbers of wells and permits e.g. Bradford and Lycoming showed decreases in population between 2000 and 2010. Tioga, which has over 1,100 permits and 500 wells saw a 1.5 percent increases in population. The Commonwealth experienced a 2 percent increase in population for the period. Only Clinton and Susquehanna counties surpassed that. While some of the

core shale counties saw population increases, some did not.

| Population  |         |         |          |
|-------------|---------|---------|----------|
| County      | 2000    | 2010    | % Change |
| Blair       | 129,144 | 127,089 | -1.6%    |
| Bradford    | 42,458  | 41,995  | -1.1%    |
| Cambria     | 152,598 | 143,679 | -5.8%    |
| Clearfield  | 83,382  | 81,642  | -2.1%    |
| Clinton     | 37,914  | 39,238  | 3.5%     |
| Fayette     | 148,644 | 136,606 | -8.1%    |
| Forest      | 4,946   | 7,716   | 56.0%    |
| Luzerne     | 319,250 | 320,918 | 0.5%     |
| Lycoming    | 120,044 | 116,111 | -3.3%    |
| Susquehanna | 42,238  | 43,356  | 2.6%     |
| Tioga       | 41,373  | 41,981  | 1.5%     |
| Wyoming     | 28,080  | 28,276  | 0.7%     |

There are many negative effects of the recession that can be seen in the data. However, looking closely, it is apparent that in some cases development may have shielded some of those affects. For example, Wyoming County, maintained the lowest poverty rate in the study area. Since the county is advancing in the level of shale development and is adjacent to one of the most active drilling counties in the state, the development may be a reason for consistently low poverty numbers. Bradford and Tioga experienced the lowest unemployment for 2010 in the study area with 6.9 percent and 8.3 percent respectively. They counties have the first and second highest number of permits and wells so industry jobs may have also shielded them from increases as significant as in other counties. In addition, building permits are higher in counties with a high number of wells.



Home sales fluctuated through the 2006-2010 period. Median home prices were a bit less predictable than home sales and fluctuated throughout the period. Wyoming County showed the highest median prices as the only county to go over the \$100,000 mark each year. The lowest median sale prices occurred in Clearfield County. Evaluating counties using home sales and even valuation is risky given that the most recent recession and the lending crisis caused a number of issues not related Marcellus Shale.

|                          | Number of Home Sales |       |       |       |       |
|--------------------------|----------------------|-------|-------|-------|-------|
|                          | 2006                 | 2007  | 2008  | 2009  | 2010  |
| <b>Blair County</b>      | 3,751                | 3,249 | 2,791 | 1,220 | 422   |
| <b>Cambria County</b>    | 53                   | 52    | 20    | 22    | 1,933 |
| <b>Clearfield County</b> | N/A                  | 2     | 9     | 984   | 236   |
| <b>Clinton County</b>    | 757                  | 696   | 552   | 480   | 99    |
| <b>Fayette County</b>    | 2,105                | 1,944 | 1,616 | 1,571 | 1,243 |
| <b>Luzerne County</b>    | 11,470               | 3,437 | 4,795 | 4,412 | 3,732 |
| <b>Lycoming County</b>   | 2,139                | 2,017 | 476   | N/A   | N/A   |
| <b>Tioga County</b>      | 429                  | 421   | 431   | 358   | 39    |
| <b>Wyoming County</b>    | 389                  | 101   | 228   | 206   | 247   |

Source: PolicyMap

\*Data for Bradford, Forest, and Susquehanna were unavailable.

Also examined was the issue of building capacity. Many of the counties in the study area have primarily very small businesses that do residential and commercial contracting. Counties such as Bradford and Tioga are under enormous stress with housing stock and affordability and the county has limited contractors within its boundaries to meet construction needs for new housing. Further, many foundation contractors are working to build well pads and other commercial development associated with drilling thereby further affecting capacity for new residential construction.

Overall, the most significant issue observed in the data analysis is the issue of affordable housing. Counties that are experiencing significant development do not have an adequate number of affordable properties. This situation is exacerbated by the influx of gas workers that are in need to places to live. Also renters in these counties earn significantly less than other counties in the study are and the state as a whole. Residents in the top two counties in terms of development have median incomes so low that they cannot afford a two bedroom FMR apartment. This is evident using data from 2009.

| <b>Renter Income and Cost</b> |                             |  |  |
|-------------------------------|-----------------------------|--|--|
|                               | <b>Renter median income</b> | <b>Rent affordable at renter median income</b> | <b>Percent of median renter income needed to afford 2 bdrm FMR</b> |
| <b>Pennsylvania</b>           | \$29,342                    | \$734  | 114%   |
| <b>Blair County</b>           | \$22,143                    | \$554  | 113%   |
| <b>Bradford County</b>        | \$24,866                    | \$622  | 94%  |
| <b>Cambria County</b>         | \$21,045                    | \$526  | 112%   |
| <b>Clearfield County</b>      | \$21,550                    | \$539  | 109%   |
| <b>Clinton County</b>         | \$23,342                    | \$584  | 110%   |
| <b>Fayette County</b>         | \$20,638                    | \$516  | 136%   |
| <b>Forest County</b>          | \$20,596                    | \$515  | 114%   |
| <b>Luzerne County</b>         | \$24,576                    | \$614  | 111%   |
| <b>Lycoming County</b>        | \$24,591                    | \$615  | 103%   |
| <b>Susquehanna County</b>     | \$25,737                    | \$643  | 94%  |
| <b>Tioga County</b>           | \$21,553                    | \$539  | 114%   |
| <b>Wyoming County</b>         | \$31,614                    | \$790  | 86%  |

Source: National Low Income Housing Coalition

## Interviews

### Pennsylvania

Most participants became aware of shale development in their county or a nearby county three-four years ago. Most key informants were positive about the impacts on the economy in their prospective area but acknowledged there were some negatives. Several issues came to light during the interviews. First, in counties where shale drilling is in an advanced stage, there are many housing issues affecting residents. The issue of most concern is a dramatic increase in rents. Due to the influx of gas workers from other states (most in the region temporarily) there is a shortage of rental units. In addition, because these workers tend to earn more than local residents, they are willing to pay higher rents. Landlords have capitalized on this by increasing rents upwards of 100 percent to 150 percent. Since the existing local residents cannot afford this increase, this results in current local tenants being forced to move out while gas workers move in. Second, this causes a problem with regard to the Section eight housing choice voucher program administered. Many landlords that have participated in the program are dropping out and renting to gas workers in order to increase their profits. A third issue that was uncovered dealt with the sale of vacant lots. Several of the counties in the study area are rural in nature and often large vacant lots were sold by owners. According to many realtors we spoke to the sale of vacant lots has decreased quite dramatically. First, the asking price of this land has increased significantly since a buyer may potentially be able to lease this land to a gas company at some point.

A number of social service issues came to light as well. For example, social service agencies have had to take children from their parents because the parents cannot provide adequate and ongoing shelter. Additionally, tents have been supplied to people who have become homeless. The agency in one of the study counties is running out of money to supply families with tents.

### **Texas & Arkansas**

In the four counties studies, located in the two other states, median household income increased from 14 – 23 percent and average household income from 25 - 54 percent from 2000 to the 2005-2009 ACS. During the same time period, the median mortgage increased from 26 – 63 percent and the median rent from 31 – 66 percent. In all counties income levels did not grow as fast as housing costs. The Arkansas Counties have been drilling since 2004 and have a combined 1,500 wells while the Texas Counties have been drilling since 2009 and have a combined 56 wells.

The programs and initiatives in other shale rich states have some similarities to Pennsylvania. Arkansas is more limited in its initiatives. However, Texas has more local and statewide programs. The Texas housing trust fund is mentioned later in this section. Texas has some local programs and private non-profit programs that operate without government funding. These resemble community development organizations as discussed later in this section. Based on a review of these initiatives, it appears that they were in place prior to the development of their respective shale plays not as a result of them.

### **Issue Identification**

- Rising rental costs in counties in rapid drilling phases
- Limited or no new building
- Local housing agencies have no financial or human capacity to address new stock, redevelopment or other support issues
- Questionable evictions – no tenant protections
- Local construction industry capacity is questionable, regional picture brighter
- Redevelopment/infill opportunities
- Limited or no planning, land use, or zoning regulations

We know that as shale drilling expands, so does the need for temporary and permanent housing. In most cases, the housing stock needed is not readily available, and, therefore, with supply exceeding demand the costs rise and price out many in the market. Most average Pennsylvania residents are not natural gas lease holders nor do they work in the drilling industry (where in many cases wages are higher), therefore, average residents are priced out of the home purchase and rental market in shale rich counties with extensive drilling activity.

In order to mitigate these issues, many policy changes must occur, including special programs and financing instruments as well as changes in planning, zoning and community ordinances.

We must recognize that Pennsylvania's Marcellus Shale industry is in the early stages of its development and it will be superseded by additional shale exploration and development, including Utica [Shale],

another Devonian Shale and Black River Shale, which lies below the Marcellus Shale. The Utica Shale, for example, is located several thousand feet below the Marcellus Shale and its footprint is more expansive. This will be even more cost effective for drilling companies because the infrastructure of drill pads, pipelines, rights-of-way, other investments and permit data will have already been in place for the Marcellus Shale. Given that there are other natural gas options and well production is long-term (some wells can produce for up to 50 years), Pennsylvania is looking at a “generational” cycle from shale, rather than a short term “boom and bust” cycle.

Since 2008, Marcellus Shale wells drilled have increased from roughly seven per month to 103 per month in 2011. Wells drilled from 2009 to 2010 more than doubled, and, at the current rate, there should be approximately 28% more wells drilled by the end of calendar year 2011 than in 2010. Bradford and Tioga Counties show the most wells drilled and rank four on the Marcellus Drill Rating scale. Clearfield, Clinton, Fayette, Lycoming and Susquehanna Counties are rank two on the scale. Blair, Cambria, Clinton, Forest, Luzerne and Wyoming Counties are at the lowest end of the scale as of July 2011.

## Policy Recommendations

The policy recommendations outlined in this study include participation from the public, private, and non-profit sectors; identify a regional approach to development and implementation and require state, local, non-profit, and private sector financial commitments.

They include rental ordinances requiring rental registrations and rent stabilization programs. Rent stabilization programs were once known to be big city solutions to big city problems. Any area that undergoes rapid growth is subjected to the same problems that have occurred in major cities. In an effort to reduce gentrification and homelessness, rent stabilization programs provide a solution to the problem without deterring private investment.

Land banking is a local option. This tool would be most effective if there were collaborations of multiple counties that agree on infill, high density development, inclusionary zoning, and redevelopment parameters. This would level the playing field for private developers and avoid county competition. Housing Trust Funds are another tool. Currently, Pennsylvania has an unfunded trust fund. This requires immediate state intervention. Regional trust funds, formed through multi-jurisdictional and multi-county collaboratives are also encouraged.

Housing trust funds provide funding for single-family homes and multi-family rental units. Such trust funds provide funds to governments, housing authorities, non-profit organizations, or quasi-public entities (not individuals). Housing trust funds also help to support acquisition, construction or rehabilitation of affordable housing units for those earning below a certain percentage of the average

median income or for those with special needs. Depending on the state's authorizing legislation, trust funds can provide rent subsidies, first-time home owner assistance, mortgage insurance and mortgage subsidies. Most housing trust funds provide both grants and loans, depending upon need or circumstances. Loans with flexible, deferred repayments or forgivable repayments are common. Housing trust funds are usually administered by a state agency. On November 23, 2010, Pennsylvania Governor Ed Rendell signed into law House Bill 60, which created the Affordable Housing Trust Fund. Under this law, the Pennsylvania Housing Finance Agency (PHFA) can build, rehabilitate and/or preserve housing for low- to moderate-income people, the elderly and those with disabilities. Pennsylvania's Housing Trust Fund currently has no appropriations attached, but will rely on the National Housing Trust Fund, which is poised to distribute \$1 billion to the states, of which Pennsylvania is expected to receive \$35 million; 30 percent of the money is targeted to those at 50 percent of area median income (about \$30,000 a year or less). Given the economic changes in Pennsylvania's core drilling counties, the recession, and stiffer lending requirements, a housing trust fund is a viable solution, adequate and ongoing funding is a must if we truly want to address the housing issues just beginning in the Commonwealth.

Community Development Corporations (CDCs) are non-profit, community-based organizations that use local capital through the development of both residential and commercial property, ranging from affordable housing to shopping centers and even owning businesses. CDCs in shale drilling counties should be a regional or local response to specific issues. CDCs are 501(c) 3 non-profit corporations with full-time staff and volunteer boards. Funding can come from individual donors, Community Reinvestment Act (CRA) bank investments, foundations, or government. Long-term sustainability should come from proceeds of sold property. CDCs can adopt any number of strategies to solve local problems. For example:

- the purchase, renovation, and resale of blighted, abandoned or foreclosure property
- redevelopment of existing commercial structures into residential units
- new construction
- rehabilitation loans for low-income families

The CDC can offer loan programs, down payment assistance, collaborative funding with local banks or no financial assistance at all. The purpose of a local CDC is to identify local community development priorities. Most of the issues identified thus far have been the lack of available housing coupled with affordability. Additionally, some of these programs can be supplemented from counties. County redevelopment agencies across the country implement these kinds of programs as well.

NeighborWorks America is a national organization that was established by congress in the 1970s. NeighborWorks receives annual direct appropriations, as it is a congressionally chartered corporation. NeighborWorks America administers its own housing programs, but also funds local CDCs in their effort to create affordable housing and community improvement. NeighborWorks America offers grants, programs, training, and technical assistance. It currently identifies 235 housing partners serving over 4,500 communities across the country. Neighborworks America also works with financial companies to create more funding opportunities and loan programs.

The loss mitigation process is an opportunity for mortgagers and mortgagees to work with an independent consultant to evaluate programs, loan modifications, and other initiatives that would allow

the homeowner the opportunity to stay in their home and satisfy their obligation. As of September 2011, Pennsylvania Housing Finance Agency (PHFA) has no resources to fund this type of program. Many banks have their own loss mitigation departments and specialists, but an independent, third party may be the best homeowner advocate. A state-run program should be implemented to provide these services.

In order to rebuild downtowns and neighborhoods, communities are blending land “uses.” Housing, combined with services, schools, recreation, and jobs built near public transit, create mixed uses or multi use development. It promotes redevelopment of existing land and buildings, as opposed to new construction. This new type of zoning limits sprawl, reduces congestion, and rebuilds/revitalizes neighborhoods and downtowns by allowing residents to be closer to goods and services they need on a daily basis. Additionally, it helps landlocked communities to increase/improve existing housing stock.

Increasing the maximum allowed density for infill areas and new development in a community’s zoning regulation can also be an incentive. Higher densities permit more intensive development of a parcel and allow the developer the opportunity to spread development costs over more units. Local governments can also provide to developers of infill sites "density bonuses," which designate a certain percentage of housing units as affordable. As such, localities can both encourage efficient land use and promote the inclusion of affordable housing units within a project.

Inclusionary zoning (IZ) is a tool used to ensure the low to moderate income housing is developed. A community with inclusionary zoning sets guidelines for housing affordability based on size of developments. It requires developers to make a percentage of housing units in new residential developments available to low- and moderate-income households. The housing units, whether rentals or for sale, should be comparable in size and structures. Various incentives are then provided to developers, For example, developers could receive non-monetary compensation in the form of density bonuses, zoning variances, and/or expedited permits that reduce construction costs. Connecting the production of affordable housing to private market development, IZ expands the supply of affordable housing while dispersing affordable units throughout a city or county to broaden opportunity and foster mixed-income communities. A single development can require a specific number of units be tied to several income groups. For example, X number of units to low-income, X number of units to moderate-income and the remainder at market rate. IZ should be mandatory. IZ can be adopted on a local or state level. The larger the geographical area for IZ, the more effective the policy. Therefore, in Pennsylvania, adjacent communities or multiple counties would be the best approach since it is anticipated that there will be a spillover effect with regard to increasing housing costs (i.e., those counties located adjacent to drilling counties may see an increased demand for housing and therefore the same gentrification could occur in non-drilling counties that occurs in drilling counties).

The Department of Housing and Urban Development produces the Fair Market Rent Guidelines for use in determining section 8 housing costs and implementing the Housing Choice Voucher program. HUD provides a detailed description of the data sources used to compile the 2012 FMRs. This data is located at the bottom of each FMR rent county page and presented here. The newly released 2012 guidelines

were produced using data from the 2005-2009 5-year American Community Survey (ACS). Should the estimate be smaller than the US Census Bureau's margin for error, the state non-metro estimate is used (for 2-bedrooms). HUD also includes a mover adjustment factor. The Institute is concerned about the timeliness of the inputs. . It is agreed that US Census data is a consistent source of data to use in that it is produced regularly, procured in the same manner of data collection and allows for equitable comparisons; however the information is dated and does not take into account any internal or external environmental factors that foster rapid change. Essentially, using 2009 data to calculate 2012 FMRs, presents an inaccurate assessment of the marketplace.

HUD allows entities to provide comment on FMRs for change. To that end it produces a document entitled "Preparing Fair Market Rent Comments Rental Housing Surveys A Guide to Assist Smaller Housing Agencies." This document identifies how housing authorities must collect and prepare data in order to comment on HUDs FMRs. The process certainly reflects a solid research methodology, but it puts the entire burden on small housing authorities. It is undetermined from the document the exact sample size that is acceptable and what happens after comments are submitted.

It is recommended that HUD re-evaluate their process for calculating FMR. Perhaps a blended approach of data collection using Census data and real time data or perhaps exemptions for counties that are experiencing unusual impacts would help mitigate current problems. HUD should also consider that local housing agencies do not necessarily have the fiscal resources to support annual market studies, therefore financial support, a modified market study, or some other collaborative process could be arranged.

## **Conclusion**

Several of the counties in this study have not dealt with population growth or industry growth for the past 60 years. Most have had declining populations and economies; therefore, retrenching has been the norm. Given the fiscal situation of almost all Pennsylvania local governments, these counties are too impacted by finances and human capacity to take on the extra work. All systems are being strained. Most counties do not have land use plans or zoning codes. Some of the counties studied are in the early phases and will benefit from planning, studying best practices, and lessons learned from more mature Marcellus Shale counties, and perhaps from new housing programs resulting from this study.

Even the most active drilling counties, like Bradford, have no new subdivisions for housing and no new low-income housing under construction. Another forthcoming challenge may be private developers trying to find land for development or finding land with an escalated price tag. Additionally, construction capacity in local counties is questionable. Many types of contractors are being used in well pad construction and commercial building leaving little or no capacity for housing construction (single, multi-family or apartments). Here again, a regional approach to problem resolution would serve most of the counties in the study well.

The rental ordinance should protect individuals from being evicted without justification. The rent stabilization programs will help to control current costs and minimize exorbitant increases, but is

unlikely to restore recent losses in Section 8 housing stock. Therefore, other programs such as land banking and CDCs can come in and rebuild. The private sector should as well, if the exclusionary zoning ordinances are adopted.

While many of the recommendations above will only work if done on a local level, they will work best if implemented in small regions or multiple counties joining together. This will provide economies of scale in costs, consistencies in regional economies, and promote collaboration not competition between the counties. The capacity issue still remains. This is where the Commonwealth must support the municipalities with access to technical assistance and program coordinators to help plan, form, and implement programs. The state can establish some minimum standards so the foundation, structure, and guidelines for each program are consistent, but then the local regions must have the flexibility to adapt them in order to solve specific problems at the local level, which may not be consistent statewide. The recommendation such as a land bank should be funded and coordinated on a statewide basis. This is another case where revenue from a severance tax can have a portion allocated to support these kinds of programs.