

Asset-Based Economic Development: Building Sustainable Small and Rural Communities

A briefing paper from the ICMA Center for Sustainable Communities



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Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 1: Industry and Industry Clusters

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Anna Read, ICMA

Choosing the right economic development strategy can pose a challenge for small towns and rural communities. When it comes to economic development, rural communities often struggle to reach the critical mass required to attract employers and sustain economic growth. This is particularly true for rural communities that are more sparsely populated or farther removed from metropolitan areas.¹ Difficulty attracting jobs or employers often results in population loss, which in turn results in difficulty attracting employers.

Rural communities, whether facing challenges due to remoteness and population decline, or due to proximity to metropolitan areas and rapid population growth, can benefit from pursuing asset-based economic development strategies.

This is the first in a series of briefing papers that will explore asset-based economic development, focusing on how small towns and rural communities can build on their natural and working landscapes, local institutions, existing infrastructure, historic and cultural resources, industry clusters, and human capital. These papers will highlight case studies of what rural communities have done to leverage their assets into successful economic development.

This briefing paper—the first in the series—will start by defining asset-based economic development and exploring two specific assets: industry and industry clusters and human capital. These will be illustrated with case studies of Pella, Iowa; Lamar and Prowers County, Colorado; and Phillips County, Arkansas.

What is Asset-Based Economic Development?

Asset-based economic development is a bottom-up approach to economic development that builds on existing local resources to strengthen local and regional economies. Asset-based economic development focuses on a community's natural environmental, socio-cultural, and economic advantages and how these can

Rural communities, depending on their economies and geographies, can look very different from one another. As a result, rural can be a challenging term to define. In fact, there is no one clear definition and most federal agencies define it differently. Yet, how rural is defined has important implications for policy and economic development decisions.

Nearly 75 percent of the nation's land can be considered rural, and this area is home to 51 million people, or roughly 16.5 percent of the population. Between 2000 and 2010, rural communities as a whole saw much slower population growth than during the previous decade. Many agricultural or resource-based economies and those remote from metro areas lost population, while high-amenity counties in proximity to metropolitan areas saw population growth. Over the decade rural America became both older and more diverse.² Rural communities are, in the second decade of the 21st century, varied places, facing different challenges and opportunities.

be leveraged into sustained economic growth and productivity. It focuses on building capacity in communities and strengthening connections within regions.³

For asset-based economic development to be successful, it requires strong leadership at both the local and regional levels. It requires innovation, collaboration, and a rethinking of traditional economic development paradigms. And, like any form of economic development, it requires sources of financing.⁴

Asset based economic development differs from more traditional needs-based economic development, which is focused on identifying gaps and deficiencies in the local

economy and attracting new investment or industries to fill those gaps. Needs-based economic development can be more subject to the boom-and-bust cycle, or to changes in the state or federal policy environment.⁵

When pursuing asset based economic development, it is important for communities both to identify assets, and to evaluate them and their potential benefit to the local economy as part of an economic development strategy. When evaluating assets, communities should look at how assets can be leveraged into economic development, what the value of developing on a particular resource will be, who the development of a particular asset will benefit, and what additional inputs will be needed to fully leverage the asset.⁶

Asset-Based Economic Development and Building Sustainable Communities

Asset-based economic development is a strategy for sustainable economic growth, as it builds upon the community's existing assets, making it a strategy for long-term, sustained economic growth and development—one that can build on economic, socio-cultural, or environmental assets. And, because asset-based economic development builds on existing local assets, the return on investment is local.

As with traditional economic development approaches, the benefits of asset-based economic development include retaining existing jobs and creating new jobs, increasing per capita income, and increasing the local tax base. In addition, asset-based economic development can help enhance the community's quality of life or sense of place. It can strengthen community pride by building on local traditions or creating new ones. Asset-based economic development can also help build stronger regional networks.

This briefing paper will explore different types of assets and present case study examples of successful asset-based economic development in communities that have leveraged their existing assets into economic opportunities. Future papers will explore more assets which communities can invest in and leverage for economic development.

Types of Assets—Identifying Your Community's Assets and Building on Them

There are many different types of assets that communities have. These include natural amenities, cultural and

Benefits of Asset-based Economic Development

Asset-based economic development can have many benefits for communities, including:

- Long-term, sustained economic growth
- Local return on investment
- Job creation and retention
- Increase in per capita income
- Increase in local tax base
- Strengthening regional networks

historic resources, and human capital. They include current industries, as well as the potential for new and emerging industries—such as renewable energy. Assets can include the presence of an institution, such as a college or university, or a hospital or medical center. For some communities, their resource base will remain a key asset and central to economic development. It is important for communities to identify and evaluate assets, and to see how these assets complement other economic development policies or programs underway.

The assets discussed and explored through case study examples below are not meant to be exhaustive, but rather to look at some of the more common assets that communities have and how local governments have leveraged them into successful, sustainable asset-based economic development.

Industry and Industry Clusters

Clusters of existing or emerging industry—or geographic concentrations of interconnected companies and related supporting institutions—can result in a competitive advantage for a region as the clustering of industries can reduce costs for firms for many reasons, including workforce availability and a specialized infrastructure that develops to meet the needs of the industry cluster. Companies within an industry cluster both compete with one another and collaborate, fostering innovation. Clustering of industry also leads the development of supporting associations and institutions, such as trade associations and job training programs at local universities or community colleges.⁷

Case Study—Pella, Iowa, Population 10,352

The City of Pella, located in central Iowa, has a strong manufacturing industry cluster. Vermeer Corporation, a



Pella, Iowa has a thriving downtown with many locally owned businesses. The local businesses are supported by both the local manufacturing and tourism industries. The downtown design guidelines emphasize the city's Dutch heritage. Photo courtesy of the city of Pella.

manufacturer of agricultural, environmental, and construction equipment, and the Pella Corporation, a door and window manufacturing company are headquartered in Pella, as well as Precision Pulley, Inc., Van Gorp Corporation, and several smaller manufacturing companies.

The manufacturing base in Pella has provided steady employment—both in manufacturing and in supporting sectors—and the city has continued to see steady population growth over the last five decades, while comparable Iowa communities have had at least one decade of population decline.⁸ Manufacturing jobs attract commuters from communities up to 90 minutes away—an area stretching into northern Missouri and covering 18 counties in Southeastern Iowa.

Manufacturing is the largest employer in the Marion County—where Pella is located—and manufacturing jobs account for 37 percent of all employment in the county and over \$300 million in total gross wages. The average annual wage for manufacturing jobs in the county is \$50,284, compared to \$27,404 in agriculture, natural resources, and mining, and an average of \$22,750 across the service sectors. Between 2009 and 2010, the average annual wage for manufacturing workers in Marion County increased 9.7 percent, while wages in agriculture and construction fell and wages across the service sector increased more modestly. Overall, Marion County has ranked eleventh out of Iowa's 99 counties in average weekly wages, with the most of the counties with higher weekly wages being those with Iowa's major cities.⁹

The Pella Area Development Corporation (PADCO) is working to continue the expansion of current industries, as well as assisting local start-ups.¹⁰ "Growth is really going to come from those small companies and that is what we are trying to cultivate," said Karen

Eischen, the Executive Director of PADCO. "We are really trying to make sure they have what they need here in terms of workforce, suppliers, transportation and infrastructure."

A recent example of success with this strategy is the partnership between Vermeer Manufacturing—a longstanding local manufacturer—and Lely, a Dutch company that chose to open its North American operations in Pella in 2011. After site analyses of several sites in both the US and Canada, Lely formed a partnership with Vermeer. Vermeer built a new facility on its campus, which it leases to Lely.

"The partnership was very positive for both companies and very positive for Pella and for the area," Eischen said. Since Lely began its operations in Pella, two other companies from the Netherlands have inquired about setting up their US operations in Pella.

City Policies Support Industry Clusters

The city of Pella works closely with PADCO to recruit and develop industries that are compatible with the existing local industrial base. "It's a three part strategy: economic development is a component of this strategy from the city's perspective—maintaining and growing the existing industry base and focusing on new companies that complement the existing base," said Mike Nardini, Pella's City Administrator. "The city also works to meet the needs of the existing industry with zoning, transportation, and utilities. The last part of this strategy is providing amenities to attract individuals to come live and work in Pella, Iowa."

Pella updates its comprehensive plan every five years and works to keep a good mix of uses that maintains buffer zones around heavy manufacturing, while also allowing for future growth. To address the transportation needs of local industry, together with the city of Oskaloosa and Mahaska County, Pella is investing in a new regional airport, expected to be completed in the next 10 years. The airport will accommodate business jets and provide easier access to the region—a key consideration for companies making location decisions. Pella is also working with its regional partners to improve connections to Interstate 80.

The city, which operates a municipal utility, is making utility improvements and upgrades to support industry and to remain a competitive environment for industrial operations. These improvements have included burying power lines (70 percent are currently underground and the remaining 30 percent are expected to be underground in the next five years), and investing in new substations and switching stations. One of the major concerns when there



Pella, Iowa has a robust manufacturing industry cluster, with companies that manufacture equipment such as the directional boring equipment seen here. Manufacturing jobs account for 60% of all labor income in Marion County, Iowa, where Pella is located. Photo courtesy of PADCO.

are heavy industrial customers is being able to keep rates competitive. To address this, Pella has entered into a long-term power supply contract with Missouri River Energy Services, a joint action agency. Through this contract, the city is expected to recognize between \$10 million and \$30 million in energy cost savings over the initial 10 years of the contract.

Pella has invested in a number of amenities to make it an attractive place to live. In the 1990s, the Bos Landen Public Golf Course was developed, and was ranked as the number one golf course in Iowa for five years. The city also opened an aquatic center, funded with a local option sales and services tax, and is currently building a sports complex, also funded through the local options sales and services tax. The city's investments have paid off—over the past ten years, the city's property tax valuations have increased by \$277 million and for the last eleven years, the city has been able to maintain its property tax rate at \$10.20 per \$1,000 of valuation. As Nardini sees it, the industrial base is essential to the city's economy and these investments are needed to support the local industries: "If you don't make the investments, you wouldn't have the degree of growth that we've had," he noted.

Pella also has a thriving downtown area with locally owned businesses, which is supported by both its manufacturing industry and the local tourism industry. The city was founded in 1847 by 800 Dutch immigrants. Today, Pella celebrates its Dutch heritage and has long been a heritage tourism destination. The city emphasizes its heritage in downtown design—a set of design guidelines guides new commercial development and designs are reviewed by an architectural review committee—and Pella has a historic Dutch village with the largest working windmill in the United States, and hosts Pella Tulip

Pella, Iowa

Population (2010): 10,352

Asset: Industrial Cluster

Summary: Pella has a manufacturing industry cluster, which provides steady employment and high-wage jobs. The City of Pella is making investments in infrastructure and quality of life to attract and retain industry and the Pella Area Development Corporation is working to support the expansion of existing companies, as well as local start-ups.

Key takeaways:

- Invest in local-start ups that support the existing industrial base
- Make infrastructure investments that support industrial base
- Make quality of life investments that make your community an attractive place for companies to locate and for employees to live
- Look at compatible assets and how these can fit together in an economic development strategy

Time, an annual Dutch heritage festival that draws over 100,000 visitors to the city the first weekend in May.

"The tourism events help recruit employees to industries because the community is very vital and has an overall sense of community, and activities are happening all the time—those factors that really lend themselves to a vital community," Eischen noted. "There are always things for corporate travelers to do. The tourism and manufacturing work hand in hand."

Case Study—Prowers County, Colorado, Population 12,551 and Lamar, Colorado, Population 7,804

In 2003 a site for the Colorado Green Wind Power Project was selected in Prowers County Colorado, just south of the city of Lamar. The county, located in the Arkansas River Valley in the southeast portion of the state, is one of the richest areas for renewable area potential in the country.¹¹ "We feel that we are the Saudi Arabia or Qatar of wind energy here in Prowers County," said Gene Milbrand, Prowers County Commissioner.

The project was initiated by Public Service of Colorado and was selected through a competitive bidding process, which examined wind in comparison to other



At the time of its construction in Prowers County, the Colorado Green Wind Energy Project, which has 108 1.5 MW wind turbines was the largest wind farm in Colorado and one of the largest in the country. Photo courtesy of Prowers County Economic Development, Inc.

forms of energy generation, including coal and natural gas. Wind was found to be the lowest cost alternative.

The Colorado Green Wind Power Project, which at the time of its construction was the largest wind farm in the state and one of the largest in the county, is located on nearly 12,000 acres and was developed by PPM Energy, Inc and Shell WindEnergy, Inc. There are 108 1.5 megawatt (MW) turbines that can produce up to 162 MW of electricity—enough to power 52,000 homes. The power is delivered through a 15-year power purchase agreement with Xcel Energy.¹² The land is leased from local landowners and the turbines do not interfere with ranching, grazing, or dry land farming activity.

Colorado Green brought economic benefits to Prowers County. Individual landowners who leased their land to the project receive annual lease payments. The county receives annual tax revenues, which were \$800,000 the first year and depreciate at a rate of four percent a year down to a capped minimum rate of 20 percent. The installations have also generated 15 full-

time permanent local jobs, in addition to the jobs that were generated during the construction phase. At the height of the Colorado Green construction, the project employed 400 people and many local businesses were contracted for phases of construction, including building access roads, pouring concrete for the bases, and building the substation. A local motel was also booked for much of the construction phase, and other local businesses reported increases in business.¹³

Due to the positive economic benefits associated with Colorado Green, Prowers County is actively trying to incentivize additional growth in the wind energy industry, but is facing challenges related to transmission capacity and finding interested power purchasers. The county is a founding partner and active participant in the Southeast Colorado Business Retention, Expansion, and Attraction (SEBREA) program—a regional economic development commission made up of six counties in Southeast Colorado. Through SEBREA, the county has explored building additional transmission capacity.

Prowers County, however, does not face one challenge that many areas of the country looking to wind encounter: “The aesthetics of wind—that could be a limiting factor in urban areas or coastal development,” Millebrand said. “That is an absolute non-factor in this area of the country. Rather than becoming a nuisance or an eyesore, they [the turbines] have actually become a tourist attraction for us.”

While Colorado Green was under construction, Lamar Light and Power, the city’s municipal utility, decided it was time to undertake a wind energy project of their own. Recognizing the local renewable energy potential as well as the price stability inherent in renewable energy technologies such as solar and wind, Lamar Light and Power commissioned the Lamar Wind Energy Project.

“People hear a lot about wind, and there were lots of inquiries from the public, and we’re publically owned. And at the time gas prices were skyrocketing,” said Houssin Hourieh, the Electric Superintendent for the Lamar Utilities Board. “So we said let’s look into it and see how we can pursue it.”

Equipment was already mobilized for Colorado Green installation and city contacted companies working on that project. In all, the Lamar Wind Energy Project only took six months to bring online. The project is located on leased land to the southeast of the city and consists of four 1.5 MW wind turbines, providing about 15 percent of the utility’s energy needs. The site was selected due to a combination of the wind power potential and the availability of existing infrastructure. Three of the turbines are owned by the Lamar Utilities Board

and one is owned by the Arkansas River Power Authority (ARPA), which is a seven-member joint action agency, of which Lamar is part. There is also a fifth turbine in the nearby community of Springfield, owned by ARPA and maintained by Lamar Light and Power.¹⁴

The community has been very supportive of the installations and the utility offers tours so that residents can learn more about the installation and how wind energy works.

Human Capital

Human capital—the knowledge and skills local workers possess—are two important assets for a community to consider. Higher levels of human capital not only contribute to individual economic success, but also to local economic vitality. Regions with more human capital tend to have more economic activity, see more rapid economic growth, and the workers in these regions tend to be more productive and earn more.¹⁵ Investing in human capital can also help build important connections between rural residents, businesses, and institutions and the surrounding regional networks.¹⁶ Human capital at this larger, regional scale is linked to both economic vitality and long-term economic success.

Prowers County, Colorado

Population (2010): 12,551

Lamar, Colorado

Population (2010): 7,804

Asset: Renewable Energy Potential and Emerging Wind Energy Industry

Summary: Southeast Colorado has significant wind energy potential, and in 2003, the Colorado Green Wind Power Project was initiated in Prowers County. The project has brought land lease revenue to land owners, tax revenue to the county, and inspired the Lamar Wind Energy Project. Prowers County is continuing to pursue wind energy as part of its economic development strategy.

Key takeaways:

- Gain public support, and invest in projects where public support already exists
- Form partnership on the regional level, particularly when looking at major investments
- Use assets and asset-based economic development as an opportunity for community engagement and education



Phillips County, Arkansas' *Strategic Community Plan* was adopted in 2005 and updated in 2009 with the participation of over 600 community members. From its adoption until 2012, the plan resulted in leveraging \$105.1 million in investment in Phillips County. Photo courtesy of the Phillips County Chamber of Commerce.

Case Study—Phillips County, Arkansas, Population 21,757

In 2003, 300 residents in Phillips County, Arkansas worked together over a ten month period to start what would become the *Strategic Community Plan*, a long-range visioning document focused on five key areas: economic development, housing development and redevelopment, education, leadership development, and health care. The plan—initiated by Southern Bancorp Community Partners, a rural community development bank—and adopted in 2005 actively engaged Phillips County residents in the visioning and planning processes and continues to actively engage the community in implementation through its goal team structure.

The *Strategic Community Plan* identified a clear vision for the county: “Phillips County will be a model community for the Delta, one that is economically strong, spiritually enriched, and demonstrates equality among its people by building on the unity of its citizens, strengths of its leadership, its rich history and natural beauty. Phillips County will be a safe community with quality job opportunities for all citizens, excellent housing for all income levels, proactive healthcare and social services, excellent education for its children and workforce, and premier recreational and tourism attractions that promote cultural enrichment for all.”¹⁷

To achieve this vision, Phillips County focused on its “strengths-opportunities” or assets in five key areas: economic development, education, housing, leadership development, and healthcare. The *Strategic Community Plan* was updated again in 2009, this time with the participation of over 600 community members. By the time

the plan was updated, the county had made progress on a number of goals and action items.¹⁸

The Delta Bridge Project's implementation is organized into goal teams, which report to the larger project Steering Committee—also comprised of community volunteers. The goal teams are community based groups who meet and review the goals and look at what has been accomplished in each area, and what they would like to accomplish. "The Delta Bridge project strategic plan is like a menu," Doug Friedlander, Executive Director of the Phillips County Chamber of Commerce and chair of both the Delta Bridge Project Steering Committee and the Leadership Goal Team said of the Strategic Plan and implementation model. "If you open it up and see something you like, and are willing to take leadership on it, it is eligible for funding and technical assistance from Southern Bancorp Community Partners and other funding partners."

Each goal team generally has between 11 to 15 regular volunteers, who attend each meeting. Goal teams also have subcommittees, which work on specific projects. Subcommittees can often have larger attendance than the main goal team meetings—for example, the tourism goal team has eight regular meetings, but the civil war project (Civil War Helena) has at least 40 community members who are actively involved.

The Leadership Goal Team, which is chaired by Friedlander, provides an example of how the planning and Goal Team implementation process work. Between February and September 2009, the group met seven times to define leadership, work to understand why existing leaders were no longer engaged in the community, and work to re-engage them, asking, according to Friedlander, "Where do we want to go, why haven't we gone there yet, what is the solution, and how do we get there?"

The team developed a mission statement: "To increase the capacity of individuals to set and achieve goals likely to positively transform the community by: 1) increasing the involvement of those with already strong leadership in community life, 2) developing both existing and potential new leaders, and 3) supporting the work of these leaders toward the betterment of the community."¹⁹ To support this mission, the team developed six strategic goals and supporting action steps.

The Leadership Goal Team has since prioritized several of the goals and made significant progress on a number of the action steps. Goal four—implementing a training program for new and emerging leaders—has been particularly successful. The Chamber of Commerce is working with a youth entrepreneurship program and with the local schools to offer entrepre-

neurship programs through schools and the Chamber is working to develop a job shadowing program for sixth graders. The Leadership Goal Team has also worked to create a "Leadership 101" class at Phillips Community College. The class, which launched in 2011 with 11 participants (ten of who asked to continue into a second semester), seeks to develop new leaders in the community. The Leadership Goal Team has also been working to attract people to civic leadership, through the Leadership Academy. The first round had eight participants, one of whom is now running for city council.

Community members also serve on the Local Development Council, which advises Southern on the grant making process. Southern makes up to three grants quarterly to support strategic plan activities and Southern staff review grant applications, which are then reviewed by the Local Development Council, which makes recommendations to Southern's board. "It creates a greater sense of investment in the project because we provide real decision making power to a local group of individuals who can tell us if it is a good fit or if we don't need the project right now," said Julia Nordsieck, Community Development Officer with Southern Bancorp Community Partners, of the importance of the Local Development Council.

For community members who are interested in the Delta Bridge Project, but are looking for a lower level of engagement than goal teams or subcommittees, there are also regular informational meetings, and project information updates are regularly posted on the website (www.deltabridgeproject.com). Southern Bancorp Community Partners is finding that providing different levels of engagement is important and that the community's response to these efforts has been very positive.

To measure project success, Southern Bancorp Community Partners has a metrics program, which looks at community indicators. The three key indicators are employment rate, poverty rate, and educational attainment (defined as the population aged 25 or over with an associate's degrees or higher). The goal that has been set is to reduce the gap between the employment, poverty, and educational attainment rates in Phillips County and the national rates by half by 2020. Through the metrics program, intermediate indicators, which define success in these areas as they relate to the strategic plan's five key goal categories, are being defined.

Between the summer of 2005 and August 2012, The Delta Bridge Project leveraged \$105.1 million in investment in Phillips County. Of this amount, \$10.4 million in grants and loans has been invested by Southern

Phillips County, Arkansas

Population (2010): 21,757

Summary: Through the Delta Bridge Project, a strategic planning and implementation process, residents of Phillips County and the city of Helena-West Helena have been actively engaged in planning for economic development. The plan, which has leveraged significant private sector investment, makes community development and investing in leadership development, education, and healthcare—the existing human capital in the community—central to the economic development strategy.

Key Takeaways:

- Use strategic plans for long-range goal setting and to guide projects and investment, helping the community stay focused on long-term projects and goals
- Offer different levels of engagement for community members, from providing information online to allowing residents to actively engage in the implementation process
- For partnerships between funders, community institutions, and community members
- Use both short-term and long-term metrics to track success

Bancorp Community Partners, \$14.3 million has been contributed in grants and loans by Delta Bridge Partners, and \$80.3 million has been leveraged from other partners and funding sources. Over \$5.4 million of this funding has been invested in leadership development.²⁰

Conclusion

Asset-based economic development can help small towns and rural communities leverage their existing assets into economic opportunities. While all the communities profiled here have focused on asset-based economic development, they have focused on different assets—an existing industrial base in Pella, renewable energy potential in Prowers County, and human capital in Phillips County—and each community's experience offers different lessons. As Pella and Prowers County illustrate, both existing industry and emerging industries can be assets for a community, and local start-ups can be key to continued economic development and growth, and play an important role in supporting existing industries and in growing the

local workforce. These case studies also illustrate that investments need to be made to support assets and asset-based economic development. As the Pella example shows, making infrastructure investments on the local government level can support industry growth, making the community an attractive place for companies to stay or to locate. And making quality of life investments can help employees see the community as a desirable place to live. Ultimately, both of these investments can have positive impacts on job growth and the local tax base.

All three of the case studies show the importance of building partnership and working collaboratively on economic development initiatives. These partnerships can be between local governments and community or economic development organizations, between multiple local governments, or between community groups. Partnerships can be critical in leveraging resources, building stakeholder support, and in turning a great idea or existing community asset into a successful, long-term economic development strategy.

Finally, as the Phillips County example illustrates, community residents—the existing human capital—can be a key part of an asset-based economic development strategy. Not only are the people in your community one of its greatest assets, engaging them in developing an economic strategy can create greater buy-in and can, as a result, lead to greater success in implementation.

Key Takeaways:

- Identify existing assets and evaluate their benefit to the local economy
- Identify how development of assets and an asset-based economic development strategy tie into your existing economic development strategy
- Look at your communities assets, their potential benefit to the local economy, and how they can be leveraged as part of an economic development strategy
- Identify resources that can be leveraged to support asset-based economic development and make investments necessary to grow the asset base, whether those be in infrastructure, quality of life, education, or workforce or leadership development
- Form partnerships between key stakeholders to more fully leverage resources
- Engage the community in the planning and implementation process

Additional Resources

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Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 2: Natural Resources and Amenities

A briefing paper from the ICMA Center for Sustainable Communities

Anna Read, ICMA

Asset-Based Economic Development and Rural Communities

This briefing paper is the second in a series examining asset-based economic development in rural communities.

Asset-based economic development is an economic development approach that focuses on building upon local resources to strengthen local and regional economies. Asset-based economic development focuses on how a community's natural environmental, socio-cultural, and economic advantages can be leveraged into sustained economic growth, while building capacity both within communities and across regions. Communities pursuing asset-based economic development strategies should identify assets and evaluate these assets and their potential benefit to the local economy as part of an economic development strategy.

This paper will examine natural and working landscapes as an asset for small towns and rural communities. A case study of Killington, Vermont will highlight economic development strategies related to both working landscapes and recreation.

Natural Resources and Working Landscapes

Traditionally, many rural economies have been resource dependent, and natural resources (extractive industries) and working lands can remain an asset for rural economies. Combining agricultural and natural resource production with management of rural landscapes and ecosystems, which allows for longer-term, sustainable use of those natural and working landscapes, can be a positive asset-based economic development strategy.¹

Natural Amenities

Many rural communities have natural amenities, such as lakes, forests, or mountains. Natural amenities have

been correlated with job and economic growth in rural communities and people are drawn to the rural outdoors, which can be developed upon or enhanced as part of an asset-based economic development strategy. Communities can invest in recreational facilities, or can look at amenities as an asset in their undeveloped form, and look into opportunities related to low-impact outdoor activities (hiking, cross country skiing), or as scenery that provides a backdrop to residential development.²

Case Study—Killington, Vermont, Population 811

Killington, Vermont—the heart of the Green Mountains—has an asset-based economic development strategy. Recognizing that it is a destination based on its natural amenities and the recreational opportunities they afford (the town is home to the largest ski resort on the East Coast, as well as a number of hiking and biking trails and other recreational amenities) and with the goal of bolstering its tourism-based economy, Killington has worked to rebrand itself, market its offerings more widely, and establish events that build on the community's assets.

In 2008, Killington established an Office of Economic Development and Tourism (EDT), funded by the “One-Percent Tax”—a one-percent tax on food, beverages, retail and lodging. At the time, Killington had a steady skier base, but the town and its businesses were finding that the tourism market was not expanding. The EDT was established to “sustain and enhance”



Killington, Vermont has developed an asset-based economic development strategy around its many natural amenities and their associated recreational opportunities. The town is working to brand itself as a four-season destination. Photo courtesy of the Killington Office of Economic Development and Tourism.

tourism activities through events and marketing. In 2011, Killington voters voted to redirect these revenues into the general fund, and EDT is now funded through that general fund.

Building on its assets—its natural amenities and status as a tourist destination—Killington has worked to attract new events and re-establish existing events that promote the community’s assets. New events include the Cooler in the Mountains summer concert series, and existing events include the Killington Stage Race and Killington Hay Festival—a fall festival with giant hay sculptures that corresponds with the peak fall foliage season. On a busy winter weekend, between events and skiing, there are often over 20,000 people in Killington, which has a year-round population of under 1,000.

“These events are beneficial in the short term because they bring people here who spend money—heads in beds, as we call it. And they are beneficial in the long term because people start to think, ‘Wow, there is a lot going on in Killington,’” said Suzie Dundas, Killington’s Director of Economic Development and Tourism, in regard to the town’s strategy. “It helps us build our long term brand as a four-season destination.”

Killington’s economic development goals include rebranding its summer assets to better reflect that the town as an all-season destination and working with the state’s Department of Tourism and Marketing, as well as other state agencies, to ensure that Killington’s tourism-based economic development efforts are in line with state asset-based development efforts. The town is also investing in infrastructure development, workforce development, and beautification. In

2011, Killington received a federal grant to improve the town’s gateway, re-designed pole banners around town, and two of the town’s roads were recognized as Vermont Byways by the Vermont Scenery Preservation Council.

To complement its efforts attracting events, the town has pursued an aggressive branding and marketing strategy. In 2011, the town rebranded to reflect the ‘big mountain adventure feel’ reflected in the branding on the Killington Ski Resort, which has a dedicated skier base and wider brand recognition. Through cohesive branding, Killington is working to build long-term brand recognition and a positive reputation for the town as tourist destination. The town has also formed new marketing partnerships with media outlets throughout New England and nationwide for wider promotion of events. These partnerships have helped the town to better leverage marketing investments and expand its marketing reach, allowing them to target new audiences.

The majority of the marketing that EDT focused on is tied to specific events, because, as Dundas explains it “They are manageable, easy to track, and easy to explain to the public how they work.” In addition to focusing on specific events, EDT focuses on emphasizing Killington’s proximity to New York (five hours by train), Boston (three hours by car), and Canada (three hours by car).

Killington is also beginning to invest more in online marketing, including websites and social media for three main reasons. The first is that EDT’s research has shown that over 75 percent of travelers are booking at least one component of their travel online, meaning that online marketing is key to continued success with a tourism based economic develop-



Bikers pass Killington, Vermont’s welcome sign during a race. In 2011, Killington received a federal grant to improve the town’s gateway. Photo courtesy of the Killington Office of Economic Development and Tourism.

ment strategy. Second, online marketing allows ads to be tailored to the specific interests of a consumer, whether those are skiing, hiking, rafting, or something else entirely. This will help Killington's efforts to build its brand as a four-season destination. Finally, impressions from online marketing are both much easier to track and EDT is able to see whether online marketing is having the desired effect more quickly, and redirect funds to the online marketing strategies that are proving the most effective.

Killington's asset-based economic development strategy has been successful. To calculate the estimated spending in town by event, EDT uses the following equation:

$$\begin{array}{r}
 \text{number of event attendees} \\
 \times \text{ average daily seasonal expenditure per person} \\
 \times \text{ average number of days stayed per person} \\
 \hline
 = \text{ estimated economic impact}
 \end{array}$$

Using this equation for the 12 events hosted in 2011, EDT arrived at a total estimated economic impact of \$4,498,843.92. For example, the Spartan Race, a 10-12 mile mountain obstacle race with 6,000 participants had an economic impact of \$241,560.00 and the Cooler in the Mountains Concert Series, which had 2,000 attendees, had an estimated economic impact of \$80,520.00.³

Killington, Vermont

Population (2010): 811

Asset: Natural amenities for outdoor recreation, including two ski mountains

Summary: Summary: Killington is home to the largest ski resort on the east coast, and the town's natural amenities afford many recreational opportunities. Building on these recreational opportunities, and seeking to brand itself as a four-season destination, Killington's Office of Economic Development and Tourism has worked to attract and re-establish new events and to strategically expand its marketing reach.

Key takeaways:

- Invest in events that highlight your communities assets
- Target marketing in a way that clearly shows impact
- Adapt to a changing market place
- Track a range of metrics to show the impact of economic development strategies



Killington, Vermont holds a number of events throughout the year. The Hay Festival, which corresponds with fall foliage season, features large hay sculptures. In 2011, the town estimates that the festival attracted 1,000 visitors. Photo courtesy of the Killington Office of Economic Development and Tourism.

Killington also tracks a number of other metrics to measure the economic impacts of economic development activities, including macro and micro economic factors, and taxable receipts. Looking at macro and micro economic data allows EDT to see if there are similar trends across the region, or if EDT's activities are having an impact. It also helps EDT make decisions on where to target marketing. For example, trends in consumer spending show that it has remained level in New England while it has continued to drop nationwide, though at a slower pace. As a result, EDT will focus 2012 marketing on the Northeast region, while planning to expand to a larger region that encompasses more of the Mid-Atlantic in 2013 and beyond.

Taxable receipts also provide important data. In 2010, the town saw an increase in sales taxes receipts for the first time in seven years. Adjusting for the effects of Hurricane Irene, which isolated the town for nearly three weeks in 2011, this positive trend continued. "It is difficult to point to one metric and say, 'we caused this,' but when we look at four or five metrics and they are all going in a positive direction, then we can say that this is something," Dundas noted.

Conclusion

Traditionally, rural economies have been connected to the productive capacities of the surrounding landscapes, whether that be agriculture, mining, forestry, etc. Many rural communities seeing population growth are in high amenity areas—those with mountains, lakes, rivers, or forests that provide opportunities for

outdoor recreation. These high amenity areas attract retirees, second homeowners, and those looking for an alternative to city life. These natural amenities can be an asset in an economic development strategy. As the Killington case study illustrates, strategic branding and marketing that adapts to a changing marketing place, as well as working to attract special events that highlight the community's assets and recreational opportunities can help attract visitors year round and increase the economic impact of visits. And, carefully tracking marketing metrics can both highlight the importance of these economic development strategies, and make sure that marketing funds are being put towards the most effective use.

Notes

- 1 Hibbard, M., S. Lurie & T.H. Morrison. "Healthy Economies, Healthy Environments: Multifunctionality and the New Natural Resource Economy." Rural Futures Lab, Foundation Paper No. 5, April 2012. <http://www.ruralfutureslab.org/docs/NNRE.pdf>
- 2 USDA Economic Research Service. "Rural Amenities." <http://www.ers.usda.gov/Briefing/RuralAmenities/>
- 3 More information on event attendance and estimated economic impacts is available in Killington's 2011 Annual Report. <http://www.sharesnack.com/5CC7B6F569B/fzpi2p3u>

Key Takeaways:

- Identify existing assets and evaluate their benefit to the local economy
- Identify existing historic and cultural assets and evaluate their benefit to the local economy
- Identify how development of assets and an asset-based economic development strategy tie into your existing economic development strategy
- Look at your communities assets, their potential benefit to the local economy, and how they can be leveraged as part of an economic development strategy
- Identify resources that can be leveraged to support asset-based economic development and make investments necessary to grow the asset base, whether those be in infrastructure, quality of life, education, or workforce or leadership development
- Form partnerships between key stakeholders to more fully leverage resources
- Engage the community in the planning and implementation process

Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 3: Existing Infrastructure, Historic and Cultural Resources

A briefing paper from the ICMA Center for Sustainable Communities

Anna Read, ICMA

Asset Based Economic Development and Rural Communities

This is the third briefing paper in a series on asset based economic development in rural communities.

This third paper will examine assets connected to a communities' history: existing infrastructure, such as their traditional compact development patterns and Main Streets; and historic and cultural resources. A community's historic and cultural resources can also be a significant asset for heritage-based tourism or economic development activities.

This paper will examine Main Streets, and cultural and historic resources—with an emphasis on cultural heritage and heritage tourism—though case studies of Silver City, New Mexico and Lindsborg, Kansas.

Main Streets

Many small towns and rural communities have Main Streets, which were once central to their economies and can again be a significant asset for economic development. The National Trust for Historic Preservation's Main Street Four-Point Approach,*—which recommends a coordinated preservation-based strategy of organization, promotion, design, and economic restructuring—has helped build a network of 37 statewide Main Street programs and over 2,000 community programs.¹ Investing or re-investing in Main Street as a community asset can help revitalize downtowns and support small businesses, create jobs, restore historic buildings, highlight community heritage, and create a renewed sense of place and community pride.

Case Study—*Silver City, New Mexico, Population 10,315*

Silver City, New Mexico—historically a mining town in the southwestern part of the state—has a thriving Main Street, but it wasn't always that way. In 1985, the year Silver City's Main Street program was started, the vacancy rate downtown was 40 percent. As of 2011, that number had fallen to 13 percent.² "I grew up in the area. The program started the year I graduated from high school. At that time the downtown was dead. And now we've turned into a nationally recognized Main Streets program, through the efforts of the program and the town," said Alex Brown, Silver City's Town Manager. "It has been a mainstay of our downtown, with the small businesses, and in creating a sense of community."

Silver City's Main Street program—one of New Mexico's five original Main Streets programs and the oldest remaining program in the state—relies on close coordination between the town and the Main Streets program. In order to maintain a Main Streets designation in New Mexico, it is necessary to send an annual resolution to the State Legislature showing community support for the program, something Silver City has done for the past 27 years. Additionally, the town provides operational funding for the Main Streets program and has funded capital infrastructure upgrades in the downtown area.

For many years, due to severe flooding a century ago, stores along Silver City's Main Street turned their frontages. As a result, the entrances were no longer at

ground level, creating accessibility issues. The flood also created a large ditch, which gave its name to Big Ditch Park. The town and the Main Streets program were able to procure funding to for infrastructure improvements, which included new sidewalks at entry level for the storefronts, as well as for the creation of Big Ditch Park. Through the Main Streets program, Silver City was also able to obtain funding for decorative street lighting in the downtown area.

By all accounts, Silver City's Main Street program has been a success. The program has leveraged \$2,165,075.00 in public investment and another \$4,637,334.00 in private investment. In addition to substantially reducing the vacancy rate in Silver City's Downtown area, the program has resulted in the creation of 150 jobs, the rehabilitation of 151 buildings, and the construction of two new buildings.³

Following on the success of the Main Streets program, Silver City applied to the State of New Mexico for an Arts and Cultural District designation. The Arts and Cultural District designation was adopted by the New Mexico State Legislature in 2007 and made available to New Mexico Main Street Communities to encourage "place-based economic development focusing on the unique cultural and arts assets of each authorized district."⁴ Silver City adopted an Art and Cultural District Cultural Plan, which was created through a community-based planning process and which recognizes the increasing importance of artists and the arts to the local economy. The plan has six defined goals for the district, including to "support artists, cultural/arts groups, and cultural entrepreneurs in all disciplines," to "foster sharing and appreciation across cultures, past and present throughout the region," and to "support the preservation, protection, and celebration of local historic resources."⁵

The Arts and Cultural district, which includes Silver City's historic downtown is now home to many of Silver City's special events, including a three-day Blues Festival, held annually in May, and the new Silver City Clay Festival, a celebration of clay-based arts. Silver City is also home to the Tour de Gila, an international cycling race which takes riders from Silver City through the Gila National Forest. In addition to these annual festivals and events, the Main Streets program hosts events every weekend during the summer, which promote the art and culture of Silver City. These include music festivals and restaurant tours.

Due in part to the Main Streets program and its success, Silver City has not seen any significant decreases in its revenue, even during the recession. The town ended fiscal year 2012 with the most revenue it has

ever recognized and has been able to issue bonds for quality of life projects, including upgrades to the municipal golf course and a new sports complex. The town is also developing a comprehensive walking and biking trail system and creating bike routes through town. Silver City is also working to create a stronger corridor linkage between Main Street and Western New Mexico University, which is about two blocks away.

"We look at ourselves from a regional quality of life aspect—we may not have the infrastructure for job creation, etc. but our greatest asset is quality of life," Brown noted. "People come here to live and they work in adjacent counties. And even if they live in adjacent counties, they come here to shop or use our health services."

Cultural and Historic Resources

Rural communities often have significant cultural and historic resources. These assets can be leveraged into economic potential through historic preservation and Main Streets programs and through cultural heritage events and tourism. Investing in cultural and historic resources can strengthen a community's sense of place. Making improvements through Main Streets programs can strengthen downtowns and build on an existing asset of many small towns—their compact, walkable core. Investing in these resources can also help attract tourism.

Silver City, New Mexico

Population (2010): 10,315

Asset: Historic Main Street

Summary: Silver City has a thriving Main Street and an emerging Arts and Cultural District. Over \$2 million in public funding for the Main Street has leveraged more than twice that in private sector funding. The Main Street is home to a number of special events and is a draw for community members, residents of surrounding communities, and tourists. Investment in Main Street has been a factor in growing Silver City's revenues and allowing for quality of life investments.

Key takeaways:

- Build strong partnerships
- Look at how existing Main Streets and infrastructure, even if they pose challenges
- Highlight local culture with arts and festivals
- Invest in local infrastructure and quality of life

Case Study—Lindsborg, Kansas, Population 3,458

Lindsborg, Kansas—Little Sweden, USA—celebrates its Swedish heritage through festivals and events, cultural customs, and the arts—all of which tie into the cultural heritage tourism in the city. Cultural heritage is defined by the National Trust for Historic Preservation (NTHP) as “traveling to experience the places and activities that authentically represent the stories and people of the past and present. It includes irreplaceable historic, cultural, and natural resources.”⁶ According to US Travel Association, cultural heritage tourism contributed \$759 billion to the US economy in 2010, employing more than 7.4 million people, and generating \$118 billion in tax revenues for the federal government and state and local governments.⁷

Lindsborg, located in central Kansas, about 20 miles south of Salina, has seen the benefits of investing in its cultural heritage. “From an economic development standpoint, what makes Lindsborg unique is that the history and so forth were developed not as attractions, but as the culture of the community,” said Greg DuMars, Lindsborg’s City Administrator. “They are real and not manufactured for tourist purposes. It has a greater appeal to a cultural heritage traveler. The attractions were not created to promote, but we do promote them.”

Lindsborg observes a number of Swedish holidays and customs. The Swedish National Holidays of Midsummer’s Day, Lucia, Julotta, and Våffeldagen are celebrated. Lindsborg also holds the biennial Svensk Hyllningsfest, a festival honoring Swedish traditions. In addition to these holidays and festivals, Swedish customs such as Fika—having coffee twice a day—are observed in Lindsborg, and children learn Swedish



Lindsborg has many historic buildings dating from the late 19th and early 20th centuries in the downtown area. Many of the small businesses in these buildings have Swedish names. Photo courtesy of Lindsborg CVB.



A herd of wild Dala horses—large Dala Horses designed by local artists—can be found around Lindsborg. This one, entitled Fala the Dala Brick Road, is located in front of Lindsborg’s City Hall. Photo courtesy of Lindsborg CVB.

folk dances beginning in first grade in the local public schools. For high school students, there is the Lindsborg Swedish Dancers Troupe, a competitive dance folk dance group, which travels internationally, and there are also the Folksdanslag, a folk dancing group for adults.

In addition to festivals and cultural traditions, Lindsborg has an active heritage arts scene, which includes the Birger Sandzén Memorial Art Gallery, named for a Swedish immigrant and well known artist, and the Lester Raymer Society/Red Barn Studio, which provides artists in residence with studio and living space. Additionally, there is the Pearson wood carving studio, which was the first art studio in the city and now represents three generations of woodcarvers.

Local artists have also designed a series of Dala horses—the Dala horse is a symbol of Sweden and Lindsborg is home to the Hemslöjd, a Dala horse factory, which makes signs, door harps and other hand-painted wood gift items painted in the Swedish folk style—that form a herd of Wild Dala horses around the city. The Dala horses serve as both public art and a fun activity, as people search for them.⁸

Lindsborg’s Convention and Visitor’s Bureau (CVB) actively works to market the city’s cultural heritage. CVB engages in limited print, radio, and television advertising, and actively engages in e-marketing. This includes the publication of a monthly e-newsletter—the CVB Posten—which has information on upcoming events and features a local artist, and active use of social media, including Facebook, Twitter, and Flickr. CVB also maintains a website (www.VisitLindsborg.com) with information on cultural offerings, a calendar of events, and other information about visiting Lindsborg.



Lindsborg's Swedish heritage is evident beyond the city's tourist attractions. The community designed and built Viking Valley playground has a Swedish castle, a Viking dragon ship, a Dala horse, and part of the Swedish pavilion from the 1904 World's Fair. The playground is a point of community pride and has become a draw for families from neighboring communities. Photo courtesy Lindsborg CVB.

Lindsborg is home to Bethany College, a small Lutheran liberal arts college. CVB targets marketing at Bethany alumni, as well as alumni of other Lutheran affiliated colleges throughout the country. In addition, CVB works with the Swedish Council of America, a group that works to promote knowledge and understanding of Swedish heritage in the US and foster relationships between the US and Sweden.

Lindsborg's Swedish heritage is also evident around the community, in the names of local businesses, and in the investments the city is making in community quality of life. An example of this is the Viking Valley Playground, which was designed and built by the community in 2005. Students at Sonderstrom Elementary School designed the playground, which was built by 1,200 volunteers with \$250,000 in donated materials. Construction took just over a week. The playground now serves as a point of community pride, as well as a draw for families from neighboring communities. "It is

very Swedish American. The students' Swedish heritage comes out in some of the elements they asked for that make up the playground," said Carla Wilson, the CVB Director, of Viking Village's design.

Lindsborg's investment in its cultural heritage has had positive economic benefits for the community. Property values have remained steady throughout the recession and sales tax revenues have been growing at a rate of about one percent per year. DuMars noted that both property values and sales tax revenues are driven by a combination of quality of life and tourism and that "Quality of life investments and visitors have helped stabilize Lindsborg and weather that downward cycle of the economy. In my opinion that is quite an achievement in a rural community in a down economy."

With the increased sales tax revenue, Lindsborg has begun construction on the Sundstrom Conference Center. A feasibility analysis conducted showed that Lindsborg could host up to 106 conferences of business meetings of up to 300 people a year. The conference center will also expand the venue space for weddings and family reunions, both of which are frequent occurrences in Lindsborg.

Lindsborg, Kansas

Population (2010): 3,458

Asset: Cultural Heritage

Summary: Lindsborg has a strong Swedish heritage, which it celebrates by observing Swedish cultural customs, national holidays, and festivals, and by supporting traditionally Swedish arts and crafts.

Key takeaways:

- Market cultural heritage activities strategically
- Incorporate heritage into community infrastructure and amenities, so that cultural heritage continues to be a part of community life

Conclusions

Many small towns and rural communities have significant historic and cultural resources. These can include historic sites and buildings, as well as Main Streets, or they can include the community's cultural heritage and the traditions and celebrations that go along with that. Investing in these resources, or assets, can help communities revitalize Main Streets, support small businesses, and attract visitors. And, in the case of both Silver City and Lindsborg, support thriving local arts scenes, which reflect the heritage of the communities.

In Silver City and Lindsborg, investment in historic and cultural resources has also been an investment in community quality of life. These assets, when leveraged for economic development, can attract both visitors and residents. They can also be a significant draw for residents from surrounding communities, who may come and use local businesses and services.

Notes

- 1 National Trust for Historic Preservation. “About Main Street.” <http://www.preservationnation.org/main-street/about-main-street/> and “The Main Street Four-Point Approach®.”
- 2 National Trust for Historic Preservation. “Silver City Main Street Project.” <http://www.preservationnation.org/main-street/awards/gamsa/2011-gamsa/silver-city-mainstreet.html>
- 3 National Trust for Historic Preservation. “Silver City Main Street Project.” <http://www.preservationnation.org/main-street/awards/gamsa/2011-gamsa/silver-city-mainstreet.html>
- 4 New Mexico Main Street. “Arts and Cultural District Toolbox.” http://nmmainstreet.org/Arts_and_Cultural/index.html
- 5 New Mexico Main Street. “Silver City Arts and Cultural District Cultural Plan.” http://silvercitytourism.com/wp-content/uploads/2012/01/ACD_plan.pdf
- 6 National Trust for Historic Preservation. “Cultural Heritage Tourism 2012 Fact Sheet.” www.preservationnation.org/information-center/economics-of-revitalization/heritage-tourism/additional-resources/2011-CHT-Fact-Sheet-6-11.pdf

Key Takeaways:

- Identify existing historic and cultural assets and evaluate their benefit to the local economy
- Identify how development of assets and an asset-based economic development strategy tie into your existing economic development strategy
- Look at your communities assets, their potential benefit to the local economy, and how they can be leveraged as part of an economic development strategy
- Identify resources that can be leveraged to support asset-based economic development and make investments necessary to grow the asset base, whether those be in infrastructure, quality of life, education, or workforce or leadership development
- Form partnerships between key stakeholders to more fully leverage resources
- Engage the community in the planning and implementation process

- 7 US Travel Association as cited in National Trust for Historic Preservation. “Cultural Heritage Tourism 2012 Fact Sheet.” <http://www.preservationnation.org/information-center/economics-of-revitalization/heritage-tourism/additional-resources/2011-CHT-Fact-Sheet-6-11.pdf>
- 8 City of Lindsborg. “Wild Dala History.” <http://www.lindsborgcity.org/index.aspx?NID=605>

Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 4: Adaptive Reuse of Underutilized Buildings and Sites

A briefing paper from the ICMA Center for Sustainable Communities

Katherine Takai, ICMA

A *asset-based economic development* is an approach that builds on community resources to strengthen local and regional economies. Asset-based economic development focuses on how a community's natural, social, cultural, and economic advantages can be leveraged into sustained economic growth while building capacity, increasing wealth, and enhancing quality of life within communities and across regions. This approach to economic development involves identifying assets and evaluating how preserving and strengthening them could contribute to regional and local economic competitiveness.

This paper will examine the adaptive reuse of vacant sites and buildings as an approach to restoring these important but underutilized assets often found in small towns and rural communities. Case studies of Boyne City, Michigan and Rocky Mount, North Carolina will demonstrate how these communities are reusing vacant properties, brownfields, empty storefronts, and other underutilized physical assets to spur economic development that is rooted in community character and history.

What is Adaptive Reuse?

The term “adaptive reuse” refers to modification of a pre-existing structure or previously developed property for a new purpose, often different from its original one.¹ Many small towns and rural communities contain a variety of vacant properties and structures, such as underutilized commercial and retail buildings; industrial sites of former textile mills, factories, and power plants; empty barns and agricultural buildings; and remnant structures of former transportation hubs, such as rail stations and river ports. Across the country, these properties and structures have been reused creatively for a number of purposes, such as housing, businesses, mixed-use developments, unique venues for the arts, public spaces for recreation and community

centers, farmer's markets, and business incubators.² For example, in 2005, the City of Franklin, Virginia (U.S. Census 2010 population 8,582), repurposed an old peanut warehouse to establish the Franklin Business Incubator, which is now a 40,000 square-foot, state-of-the-art facility in downtown Franklin offering affordable office space, technical assistance, financing, and other resources to small firms and entrepreneurs.

Although adaptive reuse projects can present challenges, such as remediating contamination and the complexities of working with historic buildings, they also offer unique opportunities that will retain and create businesses and jobs, cultivate new industries, and encourage private investment in small and rural communities. Vacant properties and buildings are often centrally located on historic main streets, in downtowns, and near businesses, homes, and other development. Reusing them can bring new life to the cores of towns and cities, transforming eyesores into valuable community amenities that enhance quality of life and retain and attract residents and businesses. Adaptive reuse also takes advantage of existing water, sewer, transportation, and other infrastructure, saving municipalities money—a critical benefit in times of stretched public budgets.

Adaptive Reuse of Vacant Properties and Structures

Reuse of vacant and underutilized sites and structures—whether they are historic school buildings in the village center, empty lots on a main street, old



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The Franklin Business Incubator. Photo courtesy of the City of Franklin.

general stores at a crossroads, or iconic barns—can be an efficient and sustainable strategy for use of existing building materials and structures, saving money on infrastructure, and preserving the distinctive character and history of small and rural communities. Many of these sites are located in walkable downtowns and on main streets, and redeveloping them can be critical to revitalizing these historic neighborhoods. Market research suggests that demand will continue to rise for walkable residential development that is close to jobs, shopping, and transportation choices. These preferences are especially strong among young people in their twenties and early thirties, as well as baby boomers.³ Reusing vacant buildings and lots can help rural communities meet that growing market demand and retain their young residents and the businesses that employ them. In addition, rather than necessitating the construction of new infrastructure, vacant properties and buildings are already linked to existing water and sewer lines, roads, and other infrastructure that can be updated and maintained to meet new needs.⁴ Providing attractive development opportunities within existing communities can also take development pressure off surrounding agricultural and natural lands and other open space that is so important to rural livelihoods and character. Moreover, adaptive reuse of vacant or underutilized structures reduces the pollution and solid waste created by building demolition and new construction.

Adaptive Reuse of Brownfield Properties

Structures and sites that were previously used for industrial or commercial purposes may be contaminated

by hazardous substances or pollutants that pose health risks.⁵ These sites are called *brownfields* and must be assessed and cleaned up before reuse. Brownfields in rural communities are typically legacies of previous manufacturing activities, mining operations, mills, and gas stations.⁶ Though brownfields remediation and reuse can increase the upfront costs of redevelopment and introduce its own specific challenges, it also increases local tax bases, creates jobs, improves public health, and supports the revitalization of downtowns and village centers, where many brownfields are commonly located.

Adaptive Reuse and Historic Preservation

Some vacant and underutilized properties are historic structures whose rehabilitation may require specialized expertise, additional planning, and resources. However, along with protecting a community's unique sense of place and character, the preservation of historic structures can offer economic development opportunities, like the cultivation of heritage tourism or agritourism industries. Retaining iconic architecture can also increase local real estate values and tax base.⁷ Historic preservation projects often entail leveraging public and private funding and technical assistance; however, resources are available through several arts and cultural organizations, federal agencies, and nonprofit historic preservation organizations, such as the National Trust for Historic Preservation.⁸

Adapting vacant and underutilized buildings and sites for new uses is now common practice in communities of all sizes across the U.S., and there are many

models for these types of projects. The following two case studies show how adaptive reuse efforts were undertaken in the small town of Boyne City, Michigan and the small city of Rocky Mount, North Carolina.

Case Study—*Boyne City, Michigan, Population 3,735*

Boyne City, located in Northern Michigan on the Eastern shore of Lake Charlevoix, began as a lumber town 160 years ago. As the city grew, the waterfront filled with mills and structures for other heavy industries, including a leather tannery, the Charcoal Iron Company, and the Boyne Chemical Plant. These businesses were placed to take advantage of the city's strategic waterfront location to send bricks, lumber, and other heavy duty materials over the Great Lakes. At the turn of the century, the population numbered nearly 15,000 residents. Since then, the city has gone through a significant transition. In the 1920s, the timber industry began to disappear and many of the mills burned to the ground. However, the tannery and railroads remained.⁹ In the second half of the 20th century, manufacturing of auto parts and other light goods became prominent in the area; but manufacturing overall declined, causing many businesses, jobs, and residents to leave between 1960 and 2000.¹⁰ Boyne's population was down to 3,503 in 2000. However, recent redevelopment efforts have contributed to a six percent growth to about 3,700 residents in 2010.

One Water Street—in the center of the city's downtown and at the confluence of the Boyne River and Lake Charlevoix—is the former site of a large series of docks and an engine house where several tracks of the local Boyne City Railroad came together. The railroad transported both passengers and freight until 1980, and then ran as a tourist attraction for Boyne City Falls until the operation went out of business. The engine house, the last remaining structure on the property, was torn down in the 1980s to make room for an upscale restaurant.

Boyne City Manager Michael Cain rode the Boyne City Railroad as a tourist when he was growing up. When Cain moved to Boyne City in 2003, unsuccessful attempts at redeveloping One Water Street had already been made. Developers and investors tried and failed to open businesses in the area; for example, a restaurant on an island encircled by ponds closed and was disassembled and trucked to Boyne Mountain Ski Resort nearby.

In 2008, at the height of the national economic downturn, developer Glen Catt approached the community and solicited input for a new plan for the site. Catt

BOYNE CITY, MICHIGAN

Population (2010): 3,735

Asset: Waterfront property and marina

Summary: Boyne City worked with a local developer to redevelop an underutilized waterfront site into a bustling marina with housing, office, and retail space occupied by small, local businesses.

held meetings with individuals and small groups, inviting interested parties and key stakeholders, including those perceived to be “anti-growth.” Despite continued dissension, those who opposed the project appreciated Catt's consideration of their opinions.

Strategy 1: Engage the community in planning and project development from the very beginning, including residents who may not be initially supportive.

“It was contentious, and there was a lot of emotion involved. To just dismiss this and not try to involve people was the biggest thing that caused our predecessors to fail. Boyne City is made of people who like to get things done, and I think that gaining their support was the right strategy,” Catt said.

Catt managed to gain approval for plans for the site, which consisted of three components: a commercial real estate building, a marina, and a hotel and condo facility. During the first phase of the project, contamination made up of heavy metals was discovered on the site, speculated to be left over from the rail yard or a former gas station nearby.¹⁰ The developer made it a priority to remediate the land by having all soils removed and dealing with any associated issues up front, including demolition and identification and evaluation of environmental liabilities associated with property acquisition, to mitigate potential liability in the future. To cover the costs required to remove the contamination and related activities, the City worked with consultant companies Otwell Mawby and AKT Peerless to develop a plan to use the additional school and local property tax revenue projected to result from the increased value of the redeveloped land. This funding mechanism, called Tax Increment Financing (TIF), was

made possible by the State of Michigan's Brownfield Redevelopment Financing Act (Act 381) of 1991. Act 381 allows municipalities to establish Brownfield Redevelopment Authorities, entities authorized to approve plans for setting up TIF districts to fund cleanup costs for contaminated properties. The brownfield plan for One Water Street had to be approved by both the Charlevoix County Brownfield Redevelopment Authority and the Charlevoix County Board of Commissioners with concurrence from the Boyne City government. The TIF provided \$861,000 in up-front financing for remediation activities. The Northern Lakes Economic Alliance, a regional economic development group representing four counties in Northern Michigan, was a critical partner. They helped the developer and Boyne City activate the Charlevoix Brownfield Redevelopment Authority, which had not previously been used; guided them through the process of creating and approving the brownfield plan; and assisted in recruiting private sector investment to the project.

Strategy 2: Create a favorable environment for developers and provide them with creative funding mechanisms and technical expertise.

By 2012, the first phase of the project had already brought new services and amenities for residents and spurred economic activity. The commercial structures are fully occupied with locally owned businesses like the Alpine Chocolate Haus, Kidd & Leavy Real Estate, Café Santé (the second successful restaurant venture established by a local restaurateur) and the Michigan Community Dental Clinic. The architecture of the new buildings, which retained the character of the historical downtown, was important to the project's success as well as the overall vitality and attractiveness of the community.

As described by a tenant of the building, Walter Kidd of Kidd & Leavy Real Estate, "It was genuinely a



Redevelopment of the One Water Street site has allowed businesses and restaurants, such as the locally owned Café Santé, to thrive and has made downtown a regional draw for tourists and new businesses. Photo courtesy of Boyne City.

developer coming in to improve the city's position and to enhance the experience of the city right now by cleaning it up, designing architectural features that look as though they have been here for a long time, and creating a tax base and jobs in a very challenging economy."

Strategy 3: Retain the cultural and historical character of reused structures and sites as an effective place-based strategy to gain community buy-in and attract new residents and tourism to the area.

The second component of the development, the 24-slip marina, is a T-shaped floating dock across from the City-owned marina. "The new marina is a

Tax Increment Financing (TIF)

TIF is an economic development tool that allows future real property taxes and other taxes generated by new development (or redevelopment) to pay for up-front costs, specifically in situations when the development wouldn't take place without the public subsidy. Expenditures are often debt financed in anticipation of future tax revenue. TIF rules vary across states.



The expansion of the marina, resulting from the partnership between the developer and the city, has made it possible for more and larger boats (up to 147 feet) to dock in Boyne City. From the marina, nearby restaurants, shops, and a farmer's market are all accessible on foot, attracting activity to the area by both land and water. Photo courtesy of Boyne City.

new gateway into the community,” City Manager Cain explained. “People could come by road, and now this encourages more people to come by water. There is a lot more transient boater space for people to come and spend an afternoon or evening with us.”

The third phase was originally planned to include development of a hotel building, but financing difficulties ultimately forced a revision of the site plan to include 15 three-story condominium cottages, which could be built one at a time and financed more easily.

In a successful example of a public-private partnership, the City offered to operate the new marina in 2010, though it would continue to be owned by the developer. “The marina has been the marketing piece to sell the cottages,” Catt said. “We thought we needed it, but we had no expertise in running it. It certainly made sense to contract with [the City].”

Strategy 4: Consider innovative ways to partner, leveraging assets and expertise of the different stakeholders involved.

By July 2012, development from the first two phases had already created around 100 jobs and generated \$60,000 in new tax revenues.¹¹ Businesses at One Water Street continue to grow. In the summer of 2012, Boyne Parasail worked with Glen Catt and the City to start a parasailing operation using one of the docks and kiosk trailers on the property. After one year, the company is expanding to rent boats, jet skis, and paddleboards. The success of this now-thriving development in the downtown area, particularly with its timing right after the economic downturn, has focused attention on



Boyne Parasail is a venture born on the One Water Street marina last year. Due to a successful first year of operations, the business is expanding its services to include boat, jet ski, and paddleboard rentals. Photo courtesy of Boyne Parasail.

Boyne City as a viable place to start up and sustain a business and a model for economic development that capitalizes on community assets.

Case Study—Rocky Mount, North Carolina, Population 57,477

Rocky Mount is located on the cusp of Edgecombe and Nash Counties in eastern North Carolina. Over the past 20 years, the city’s economy has slumped as two of its primary industries, tobacco and manufacturing, have declined. As a result, the area has lost an estimated 8,500 jobs, including nearly half of its manufacturing jobs.¹² However, in recent years, the city has undertaken a targeted effort to revitalize the center city, specifically the once-bustling downtown business district. In 2004, the City gathered the necessary resources by pulling together a unique financing package comprised of tax

ROCKY MOUNT, NORTH CAROLINA

Population (2010): 57,477

Asset: Vacant downtown business district

Summary: Rocky Mount used an innovative model of financing, including historic and New Market Tax Credits and public funding to spur private investment, encourage economic activity, and revitalize the Douglas Block, a former African American business district in the city's downtown.

credits, incentives, and public funding to redevelop the three-block site into a thriving commercial and residential area.

Rocky Mount is still home to several major companies. Hospira (formerly Abbots), an injectable drug provider, has maintained a large plant in the area for over 40 years. Additionally, about 600 diesel engines per day are built in the metropolitan area, providing over 600 jobs. Honeywell, a jet engine manufacturer, also has a location in Rocky Mount. The corporate headquarters of the fast food chain Hardees was based in Rocky Mount until the devastating floods caused by Hurricane Floyd in 1999 forced them to relocate. However, Hardees maintains a significant presence in the area, including the corporate headquarters of Boddie Noel, the largest Hardees franchise owner.

The three-block downtown area known as the Douglas Block is a cornerstone of the city's history, as it was a hub of economic and social activity for the African American community. The population of the two-county area is around fifty percent African American, and the City of Rocky Mount is about 60 percent African American. During the segregation period, the block emerged as the African American downtown business district occupied by doctors' offices, restaurants, barber shops, churches, funeral homes, and venues for entertainment.¹³ Beginning in the 1970s, business owners grew older and passed on, residents left, and the accomplishments of the Civil Rights movement eliminated the need for segregated business districts, contributing to the eventual abandonment and deterioration of many of the buildings on the block. However, the community expressed the desire to revitalize the block, and the City began looking for ways to spur reinvestment and prevent the block from being demolished. In 2004, the city adopted the Douglas Block Revitalization



This photo was taken from inside a Douglas Block building before construction. Photo courtesy of the City of Rocky Mount.

Master Plan as a blueprint for the area's redevelopment that aligned with the City of Rocky Mount Comprehensive Plan.¹⁴ Through adoption of this plan, the Douglas Block was designated a Redevelopment Area in conformance with state statute, opening up additional funding opportunities. The City Council was excited about moving the plan forward, which included a financing package similar to one they had used successfully before for the Imperial Centre for the Arts in 1999. The Imperial Centre was redeveloped after severe flood damage in 1999 and is now home to a venue for exhibitions, community theater, and classes in visual and performing arts. The variety of funds used for that project included historic tax credits and New Market Tax Credits, which had been used for the first time by the City and provided \$13 million critical to the project.

Multiple Layers of Financing for the Douglas Block

For the first phase of the Douglas Block project, a financing package was assembled using a combination of historic tax credits, New Market Tax Credits, a Section 108 HUD Loan for a planned housing component, and a contribution from the City. The project included the renovation of six historically significant buildings of the twelve existing structures in the 1.5-acre area. Three buildings in the block were beyond repair and had to be demolished.

The City also received an EPA Brownfields Assessment Grant in the amount of \$182,750 to assess the extent of pollution issues at eligible properties and prepare remedial plans. Through Phase I and Phase



The Douglas Block after construction. Photo courtesy of the City of Rocky Mount.

II Environmental Site Assessments (ESAs), chemical contaminants associated with underground fuel storage, automotive repair activities, or gasoline stations were discovered at the site of an old tobacco warehouse.¹⁵ The City received an additional \$200,000 EPA Brownfields Cleanup Grant to remove contaminants with the support of specialized environmental scientists and engineers and the EPA. The City then became eligible to apply for a Brownfield Economic Development Initiative Grant (BEDI) from the U.S. Department of Housing and Urban Development (HUD), which resulted in an award of \$1 million to be used for redevelopment. The redevelopment of the Douglas Block cost a total of \$8 million and took approximately one year—from closing on the financing in December of 2009 to the completion of the “white box,” a residential or commercial structure with minimal interior finishing, on December 31, 2010.

One of the City’s long-time partners, the Rocky Mount/Edgecombe Community Development Corporation (RMECDC) played an important role by helping to strategize about funding sources and prepare the New Markets Tax Credits application. The RMECDC worked as an integral core component with the majority of City departments, including the City Manager’s Office, Finance, Community Development, Planning, Inspections, Engineering, Park/Recreation, and Public Works. RMECDC had critical technical expertise and experience with redevelopment projects. Additionally, they had completed a comprehensive redevelopment plan for the downtown area that included the Douglas Block and had advocated for the project for many years. As a nonprofit entity independent of the city, their partner-

ship enabled the use of the tax credits that were not available to governmental entities. The tax credits were critical to attracting over \$7 million in private sector investment. The Douglas Block Redevelopment created a model of a partnership between a City and a non-profit community development corporation that will be used in future projects, including neighborhood redevelopment, other downtown projects, and community development initiatives.

Strategy 5: Engage in strategic partnerships in order to provide equity and make use of tax credits not available for use by local government entities.

The use of historic tax credits presented the unexpected challenge of meeting the historic standards required for eligibility, which necessitated more time and planning. Additionally, renovating the 1920s-era buildings brought surprises that demanded extra resources, such as the need to waterproof the spaces between bricks that were not adequately sealed. City officials had to demonstrate that future redevelopment planned for neighboring properties would not have a negative impact on the historic character of the existing buildings, and ended up spending \$500,000 in unanticipated costs to design a nearby building to meet this standard and get approval from the National Parks Service, the federal entity overseeing historic preservation. Despite these hurdles, historic designation allowed for the use of the critical tax credit, and maintaining the integrity of the block has been an asset to the community.

Strategy 6: When using complicated funding mechanisms, engage partners with technical expertise, such as the local community development corporation and regional council

The Value of Maintaining Cultural Heritage

The restored commercial center offers 25,500 square feet of commercial space and eight second floor apartments between two of the buildings. One of the original movie theaters, the Booker T. Theater, continues to show movies and has been a busy venue for meetings, receptions, and other special events. Since its redevelopment, the Douglas Block has become a thriving commercial center in downtown Rocky Mount. Currently, about 85 percent of the block is occupied. In the space of a former drug store, there is now a shop and an attorney's office. Other businesses on the block include an auto parts and repair shop, a pediatrician, a Subway franchise, and a computer repair and installation service. The residential units, all of which were outfitted with energy efficient appliances, are fully occupied.

"There's a lot of pride and a lot of people who ride around the block now, and they remember when the area had been a thriving downtown commercial center," explains Charles Penny, the City Manager of Rocky Mount, "When folks rode through last Christmas they began to see the appeal. People were able to eat downtown and shop."

The community is also working to attract tourism and help visitors learn about the African American heritage of the neighborhood. The Douglas Block Oral History Project, supported by a grant from the North Carolina Humanities Council, compiles oral histories from people who lived and worked on the Douglas Block from its construction in 1923 to the present. Information collected for the project will be used for education and promotion, as well as for guiding the future use of buildings on the block.¹⁶ Events are held regularly to honor the heritage of the historic African American Business District and recognize its famous residents, such as the great jazz performer, Thelonious Monk. Cultural Arts programming is held at the Booker T. Theatre, and the RMECDC hosts the annual Monk Jazz Festival and the Harambee Festival, a celebration of the city's African American heritage.

Despite challenges and some initial opposition to the redevelopment of the downtown, the consensus remains that a strong city center is necessary for sustainable and authentic economic growth in the area. The downtown continues to be developed in alignment with the vision of the Douglas Block Revitalization Plan. The City has completed a \$6 million renovation of the streetscape that includes new sidewalks, street furniture, and trees. The City has also worked with addi-



The Booker T. Theater. Photo courtesy of the City of Rocky Mount.

tional partners, such as area nonprofits and community development organizations, to bring businesses into the area. The Golden LEAF Foundation, a nonprofit organization that manages one-half of North Carolina's share of the Master Settlement Agreement with cigarette manufacturers, and local hospital Nash Health Care Systems helped fund the renovation of the pediatrician's office, Wee Care.¹⁷ RMECDC manages the six buildings on the property. Partnerships with businesses, nonprofits, and the community will continue to be important as Rocky Mount moves into its next phase of redevelopment of the Douglas Block, which includes the construction of the new building the City has designed and potential additional development nearby.

Strategy 7: Establish diverse, long-term partnerships crucial to planning and implementation of redevelopment plans and sustaining benefits.

"The impact of the Douglas Block on downtown has been very positive," said Joyce Dickens, President and CEO of the RMECDC. "Linked to the improvement of the downtown streetscape, the feel of downtown

and participation of citizens in shopping and attending events has been improved tremendously. Citizens have been drawn to downtown by the diversified businesses and services and the events utilizing the Booker T. Theatre. There is an increased sense of pride in the city as a whole, especially in the African American community.”

The project has been the catalyst for broader downtown revitalization and a model for the successful use of multi-layered financing for restoration and reuse of historic buildings. Approximately 28 jobs have been created by the development, and this number continues to increase as commercial and residential spaces are filled. Residents look forward to the continued revival of a thriving commercial center in Downtown Rocky Mount where they can live, work, and play.

Conclusion

Despite the unique challenges inherent in working with historic and vacant buildings and lots, adapting underutilized structures and sites can be an effective strategy for encouraging economic development that builds on the character of the community. As efforts in Boyne City and Rocky Mount demonstrate, creative financing and planning, community engagement, and forging long-term, strategic partnerships have the ability to move these projects forward. These types of projects can naturally complement other development efforts and be integral components of broader economic development plans, such as the targeted redevelopment of downtown area or region. Adaptive reuse projects can catalyze the creation and retention of local businesses, expand the tax base, and establish a renewed sense of place by

capitalizing on existing physical assets and the unique character of small towns and rural communities.

Notes

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- 3 Urban Land Institute. “America in 2013: A ULI Survey of Views on Housing, Transportation, and Community.” 2013. www.uli.org/research/centers-initiatives/terwilliger-center-for-housing/research/community-survey/. Accessed 6 June 2013.
- 4 Smart Growth Network. “Putting Smart Growth to Work in Rural Communities.” 2010. www.icma.org/Documents/Document/Document/301483.
- 5 American Planning Association. “Brownfield Remediation and Reuse.” www.planning.org/nationalcenters/health/brownfield.htm?print=true.
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- 7 The National Trust for Historic Preservation. “Rebuilding Community: A Best Practices Toolkit for Historic Preservation and Redevelopment.” http://www.preservationnation.org/issues/housing/Rebuilding_Community.pdf.
- 8 Partnership for Sustainable Communities. Fall 2011. “Supporting Sustainable Rural Communities.” http://www.sustainablecommunities.gov/pdf/Supporting_Sustainable_Rural_Communities_FINAL.PDF.
- 9 Dunham, William. Michigan’s Internet Railroad History Museum. “Logging in the North Woods.” www.michigan-railroads.com/RRHX/Stories/LoggingNorthWoods.htm.

Additional Resources

There are many sources of information about technical assistance, funding, and other resources that can help rural and small communities assess, clean up, and reuse their brownfields sites; restore historic properties; and utilize best practices in economic development:

1. Learn more about U.S. EPA Brownfields programs for rural communities at www.epa.gov/brownfields.
2. NADO Research Foundation. 2004. “Brownfields Resource Guide for Rural and Small Communities.” <http://www.epa.gov/region4/brownfieldstoolkit/brownfields/informational.pdf>.
3. U.S. Environmental Protection Agency. Brownfields and Land Revitalization Grants and Funding. www.epa.gov/brownfields/grant_info/index.htm.
4. U.S. Environmental Protection Agency. 2013 Brownfields Federal Programs Guide. www.epa.gov/brownfields/partners/brownfields-federal-programs-guide-2013.pdf.
5. Smart Growth Network. “Putting Smart Growth to Work in Rural Communities.” 2010. www.icma.org/Documents/Document/Document/301483.

- 10 By several chemicals including fluoranthene and phenanthrene, benzo(a)pyrene, arsenic, chromium, copper, mercury, zinc, methylene chloride, and lead.
- 11 "One Water Street Cottage Condominiums Gain Zoning Approval on Lake Charlevoix in Boyne City, Michigan." Press Release Distribution - Submit Press Releases Online - PRWeb. N.p., 8 Aug. 2012. Web. 31 May 2013. < <http://www.prweb.com/releases/2012/8/prweb9772291.htm> > .
- 12 Richter, Chris, and Frank Maley. "Business North Carolina." Left Behind. N.p., n.d. Web. 12 June 2013. < <http://www.businessnc.com/articles/2008-02/left-behind-category/> > .
- 13 Learn more about the history of the Douglas Block at www.douglasblock.org/history.html.
- 14 Access the Douglas Block Revitalization Plan at www.rockymountnc.gov/cd/douglasblock.html.
- 15 <http://www.rockymountnc.gov/cd/documents/BrownfieldNewsletter-Oct2007.pdf>
- 16 For more information about the Douglas Block Oral History Project visit www.rockymountnc.gov/cd/oralhistory.html.
- 17 For more information about the Golden LEAF Foundation visit www.goldenleaf.org.

Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 5: Leveraging Transportation Networks

A briefing paper from the ICMA Center for Sustainable Communities

Hannah Wolford, ICMA

Transportation is a vital component for rural communities hoping to bolster their local economies. Without access to reliable transportation modes, industries and individuals cannot access these more remote locations. Highways, railroads, and airports are essential for communities to remain competitive in economic markets; however they can easily become out-of-date or fall into disrepair. Increased transportation capacity encourages local business development, attracts tourists, and entices permanent residents to the area.

Rural communities should have a transportation system that can support economic development and job growth with efficiency and capacity. Transportation options for passengers or products in rural communities include rail, air, water, and bus for intercity travel. However, between 2005 and 2010, the percentage of the rural population without intercity transportation access rose from 7 to 11 percent. This reflects a total of 8.9 million rural residents without access to scheduled intercity transportation in 2010. An additional 3.7 million rural residents with intercity transportation service in 2010 lost access to at least one mode of transportation during the same timeframe.¹

The loss of access to these transportation modes is frequently due to disrepair or abandonment. It is essential for communities to maintain and expand upon established transportation networks for economic growth. The following examples will highlight how rural communities and small metros can leverage existing infrastructure to encourage economic development and job opportunities in the region.

Aroostook County, Maine Rail Preservation and Rehabilitation

Aroostook County is located in northern Maine, covering 6,671.5 square miles in land area. It is the largest

county in North America east of the Mississippi River and has more square miles of land than the states of Connecticut and Rhode Island combined. The estimated population in 2012 was 70,868, a decline from the 71,870 residents reported in the 2010 census. The decreasing population in the county has been a general trend since the 1970s as people migrate to the larger metropolitan areas. Nearly 16 percent of people reside below the poverty level and the median household income is \$37,138, over \$10,000 less than the average for the state of Maine.²

The area is well-known for its agricultural products, including potatoes, beef, dairy, broccoli, organic produce, and extensive forests and associated industries. Eighty-nine percent of the county is forest land. Subsequently, key exports are forest products, pulp, and paper. These products are distributed both nationally and internationally, with Canada and Malaysia as top consumers. Rail connections allow goods to be transported to major deep water seaports in coastal Maine and New Brunswick as well as to national rail lines.³

Facing abandonment

Aroostook County is connected to the North American rail transportation network through the Madawaska subdivision of the Montreal, Maine & Atlantic Railway (MM&A). Track maintenance on this subdivision had been continuously deferred prior to 2010 due to a lack of capital funds. Rail deterioration affected service delivery, leading to a perpetual cycle of declining service reliability and a loss of business, causing critical maintenance to be deferred. Between August 1, 2004 and July 31,

2005, five rail subdivisions of northern Maine hosted 15,128 car loads in traffic (929,137 net tons). During the same time period in 2007-2008, the number of car loads decreased to 9,742 (612,193 net tons).⁴ Rail traffic was unable to generate sufficient capital funds needed for the sustainability of the rail line. Ultimately, this led to the MM&A filing to discontinue rail service and abandon these five railway subdivisions on February 24, 2010. The lines subject to abandonment covered approximately 233 miles, the largest subdivision being Madawaska, stretching 151 miles.

The abandonment of the Madawaska, Presque Isle, Fort Fairfield, Limestone, and Houlton subdivisions would have had devastating effects on the region in a variety of ways. Rail service provides cost-effective transportation for forest products and other area exports. Rail abandonment would have caused some firms to discontinue business in northern Maine, limiting job opportunities and economic growth in the area. The Northern Maine Development Commission estimated that 1,726 direct and indirect jobs are associated with the rail line. The loss of these jobs would have resulted in a total loss of \$340 million for the region (\$73 million in direct annual earnings for the county and \$116 million in gross domestic product).

One available option was for companies to switch over to trucks, though at a significantly higher cost to shippers. However, the higher cost would have been a disincentive for businesses looking to provide goods and service to the region. One rail car can hold the same amount as multiple truckloads of product. Those businesses that switched to trucks would have increased diesel fuel consumption by an estimated three million gallons.⁵ The additional traffic would also have amplified carbon monoxide, volatile organic compounds, and nitrous oxide emissions, affecting environmental and residential health. Trucks also increase maintenance costs on state and local roadways due to wear and tear.

Facing abandonment, citizens of Maine voted to fund the state acquisition of the rail lines in June 2010. The public approved an \$18 million bond package for acquisition (\$7 million in new bonding authority, \$4 million reallocated bonds, and \$7 million from Maine's reserve). The Maine Department of Transportation (Maine DOT) Rail Program applied for a Transportation Investment Generating Economic Recovery (TIGER) II Discretionary Grant from the U.S. Department of Transportation to preserve and rehabilitate the 233 miles of railroad. The grant application received letters of support from Maine Senators Olympia J. Snowe and Susan M. Collins, Representative Michael

H. Michaud, the Southern Aroostook Development Corporation and Fraser Papers, among others. The \$10.5 million TIGER II grant was awarded in October 2010. Rehabilitation was considered a priority as it would increase rail velocity, capacity, and reliability, allowing Maine industries to continue to compete in national and global markets.

Rehabilitation and economic growth

After extended negotiations between MM&A and MaineDOT, the state was able to purchase the rail lines in January 2011 for \$21.1 million. Eastern Maine Railways was selected as the rail operator for the purchased lines based on their familiarity with the region and financial stability. The rail repair work began in August 2011. In order to rehabilitate the lines, MaineDOT needed to perform rail tie replacement, track surfacing, rail replacement, and ditch maintenance. Specifically, this included replacing 50,000 rail ties, 350,000 iron spikes, and 7,500 feet of rail, parts of which were over 70 years old. This maintenance would bring the track into compliance with Federal Railroad Administration track safety standards and increase rail efficiency. Between August and December 2011, roughly half of the necessary rail replacement was completed and 11,000 of the planned 50,000 ties were replaced. Work was suspended in December 2011 due to weather conditions. However, even with only a portion of the work done, track speeds and overall rail efficiency had increased over the course of the five months. Many of the areas with necessary track speeds of 10 mph had been cleared. Since the state acquisition, rail service speed has increased from 15 to 35 miles per hour.⁴

The Aroostook County TIGER II project is currently scheduled for completion in August 2013. Though the work is still ongoing, this project has already provided tangible benefits for the region. The state acquisition of the five subdivisions saved Aroostook County 1,726 local jobs and \$340 million dollars.⁶ Aroostook County was home to 2,005 non-farm establishments in 2011, employing 22,038 people. This is a 0.6 percent increase in employment from 2010, while the state of Maine saw a 0.3 percent decrease in employment during the same timeframe.³ The railroad itself has provided 60 new jobs to the region. Carloads have increased from 100 cars a week at the time of acquisition to 250-300+ per week. Nathan Moulton, rail program director for MaineDOT, said "The bulk of the increase in rail shipments are customers returning to the railroad now that service is more reliable and timely. Many shippers are able to get to markets further away or to existing markets cheaper

than [by] truck.” By preserving the line, MaineDOT was able to prevent the decline of the region and increase economic development opportunities.

Many communities throughout the United States can relate to Aroostook County’s predicament. The economic downturn caused a loss of capital that needed to be offset. Deferring maintenance was a short-term solution that nearly created catastrophic long-term problems for the area. The railroad closing would have cost northern Maine significant job opportunities, product exports, and capital funds. In this case, the combined effort of the state, regional organizations, and private industries were able to save and rehabilitate the rail line. Aroostook County’s experience demonstrates that regions should invest in and maintain existing transportation infrastructure in order to keep efficiency of service and encourage industry investment in the area.

Boosting the Central Oregon Economy through Transportation Investments

The city of Bend is located in Central Oregon and is the county seat of Deschutes County. Bend is an urbanized area located in an otherwise rural area of the state with desert vegetation to the east and U.S. Forest Service land to the west. It is a gateway to many popular recreational activities in Central Oregon, including golf at the Sun River resort, skiing at Mount Bachelor, and hiking at Crater Lake National Park. Tourism is a principal industry in the area, providing 8,480 jobs in central Oregon.⁷ Other industries include timber and agriculture, predominantly cattle and potatoes, which require means of transportation and freight. However, Bend is 60 to 100 miles from the nearest interstate highways,, Interstate 5 or Interstate 84. Therefore, to support the regional industry and tourism, businesses in Bend and Deschutes County must utilize alternate transportation networks.⁸

The city of Bend was designated as an urbanized area based on the population growth over 50,000 in the census of 2000 (the 2012 estimated population is 79,109).⁹ The state of Oregon requires that all urbanized areas exceeding 50,000 designate an urban growth boundary¹⁰ and establish a metropolitan planning organization. To meet anticipated transportation needs, the Bend Metropolitan Planning Organization (BMPO) was developed. The BMPO was officially recognized by the Governor of Oregon in December 2002. The organization operates as a separate entity from all participating



Provided by the Bend Metropolitan Planning Organization

jurisdictions and is intended to serve as a forum for cooperative transportation decision making by state and local governments.

The BMPO serves an area slightly larger than the City of Bend urban growth boundary. These areas are included within Deschutes County and are expected to be urbanized within the next twenty years. The BMPO develops and maintains a long-range transportation plan and also monitors transportation planning by local or state agencies in or affecting the designated area.

Why transportation updates are necessary

Tourism increases

Tourism in Bend has seen a dramatic increase in recent years. The economic development organization Visit Bend reports a number of indicators to track the tourism industry’s progress. One such indicator is transient room tax (TRT) collections, which provides a blended metric based on lodging pricing and occupancy. In FY 2012, the city saw over \$3.5 million in TRT revenue, with five months showing historic highs. The city of Bend is already set to top these results in FY 2013. Citywide lodging occupancy, the percentage of available lodging units occupied for a defined period of time, averaged 54.3 percent occupancy in FY2012, a 2.5% increase from the previous year. It is anticipated that Bend area tourism and commercial markets will continue to grow and transportation capacity will have to accommodate the additional traffic on roadways and at airports.⁵

Road travel

Two major highways pass through the Bend urban growth area. They are utilized by a combination of tourists, residents, and freight. The Oregon Department of Transportation (ODOT) identifies Highway 97

as a designated federal truck route and a state freight route. Highway 20 is designated as a federal truck route through the entire Bend metropolitan area and certain sections are also designated as state freight routes. As of 2004, traffic on these roadways consisted of 7 to 24 percent trucks.

Manufacturing firms are the main truck freight generators in Bend, shipping their products through the region. The existing manufacturing and shipping areas are within 1.5 miles of US Highway 97 or US 20. Large retailers (supermarkets, vehicle sales, restaurants, etc.) in Bend are also primarily located along US 97 and US 20 or on local arterial streets. These retailers receive frequent truck deliveries.¹¹

Additionally, Visit Bend releases a tourism survey every few years asking travelers their preferred method of transportation, among other things. Roughly 79 percent of the 2012 tourism survey respondents traveled to Bend via motor vehicle (private car/camper/RV/rental car). Recurrent congestion occurs on Highway 20 through Sisters and on Highway 97 in Redmond. Within the city of Bend, there are 15 congested intersections and five congested corridors that have been identified. To alleviate this congestion, a number of different strategies are being used for tourists, residents, and commercial vehicles.

Community needs

In the Bend area, the housing downturn significantly affected the local economy. Despite the increased tourism, jobs in other sectors (especially construction) declined and employment is not projected to return to 2007 peak levels until 2020. As of the 2010 census, low income households made up over 10% of the city of Bend population and 5.4% of households reported not having a vehicle. This segment of the population is more likely to need and rely on public transportation options. Additionally, senior citizens (age 65+) make up 10.1% of the population and are less capable or willing to drive themselves, and may be unable to afford a car on a fixed income. Youth (age 10–17), unable or legally restricted from driving themselves, require transit services to get to school, part-time jobs, and recreation and entertainment. Young people account for 12.4% of the city of Bend population. Persons with disabilities make up 12% of the population and are heavily reliant on public transportation if they are unable to drive themselves. These demographic categories require alternative transportation options to maintain their daily lives to travel to work, run errands, and visit areas outside of their immediate location.¹³

Transportation system management strategies

Access management preserves safety while balancing access and mobility based on the functional classification of the roadway.

Parking management addresses on-street and off-street parking demand while considering safety and efficiency.

Traffic signal management and operations is used to provide control of traffic movement at high volume intersections.

Speed management addresses vehicular speed through speed signs and law enforcement to ensure speeds consistent with roadway design.

Geometric improvements employ road realignment and channelization to increase safety and efficiency.

Value engineering identifies the necessary function of a product or service and provides the function at the lowest overall cost.

Intelligent Transportation Systems is the application of technology and management techniques to relieve congestion and enhance safety for travelers.

Asset management is the process of cost-effective preventative maintenance.¹⁴

Addressing transportation issues

Strategy 1: Transportation system management

One transportation strategy being used by the Bend area is Transportation System Management (TSM). TSM is defined as the use of “techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without increasing its size.”¹⁴ The Bend MPO has identified several areas of interest within TSM including intelligent transportation systems (ITS), speed management, and asset management.¹⁵

ITS is the application of technology and management techniques to relieve congestion and enhance safety for travelers. ITS deployments throughout Oregon have yielded significant improvements: 35 percent reduction in vehicle-hours incident delay, 7 to 12 percent reduction in travel time, and up to 33 percent reduction in emissions.¹¹ The Deschutes County ITS plan lays out a twenty-year deployment plan for ITS projects ranging from low to high priority. High priority projects include the installation of a central signal system and a regional traveler information system. The central signal system was deployed in

June 2011 and will improve travel time on highways and major arterial roads and allow for integration of multi-jurisdictional arterial systems. The regional traveler information system allows local agencies to enter traveler information and share through the ODOT TripCheck website or mobile application. Travelers have the ability to plan trips around potential delays and access updates in real-time. More long term projects slated for completion in 2025 include identifying detour routes and developing communication plans on Highway 97 and 20 through Bend and Redmond to support the movement of north-south and east-west freight. All of these ITS updates aim to decrease time spent on the road and make travel through the area more appealing to tourists, residents, and truck drivers.

The Deschutes County ITS plan supports many of the other strategies in TSM. For example, variable speed limit signs and speed photo enforcement outlined in the Deschutes County ITS plan address speed management. Asset management is supported by an automated maintenance logging system and maintenance vehicle tracking. Other strategies, not a part of ITS, range from providing incentives for shared parking at commercial and retail locations to trimming vegetation to enhance sight distance. Each strategy aims to eliminate traffic congestion through increasing traveler knowledge and improving road conditions.

Decreasing congestion is essential to economic growth as it promotes personal and business productivity. In 2011, the average United States auto commuter wasted 38 hours in traffic. For trucks, the average hours delayed per region was 709,000 hours in a year. This resulted in an average congestion cost (delay and fuel costs) of \$12 million. Reductions in traffic can save fuel costs and man-hours for transportation employers. It also incentivizes industry talent to live and work in the area as commute times improve.¹⁶

Strategy 2: Public transportation

A proven method of congestion alleviation is to reduce the number of drivers on the roads. To do so, the city of Bend launched a fixed schedule route transit system service in 2007. The system is operated by Cascades East Transit and is integrated with the Cascades East Transit regional transit network. The Bend bus service is designed in a “hub and spoke” pattern radiating from the main transit center, Hawthorne Station. From the Hawthorne Station, residents can follow a direct route to Redmond, the regional transit hub. There, Cascades East Transit offers connections to Sisters, Prineville,

Madras and the Redmond Airport. Seasonal services are offered to Mt. Bachelor Ski Resort and the Bend Ride the River route.

In 2011, the transit system serviced more than 391,000 riders. Approximately 600 to 650 riders use the system each weekday.¹⁷ An onboard survey was conducted in March 2012 of the public transportation users. Of those surveyed, 26% indicated “school” was the purpose of their trip and 24% said “work”. When asked how they would have made the trip without the bus service, 26% would have walked while 23% would not have made the trip at all.¹³ Public transportation provides options for both residents and tourists that will alleviate traffic congestion by removing single drivers from the road and provide access for those without private transportation options.

Strategy 3: Airport expansion

An essential part of increasing tourism to any region is providing air travel access. Eighteen percent of the 2012 tourism survey respondents arrived by air travel. Deschutes County also hosts several airports, including the Redmond Municipal Airport and the Bend Municipal Airport. Both of these airports are outside of the Bend metropolitan area. The Redmond Airport is owned and operated by the City of Redmond. The Bend Airport is owned by the City of Bend but is governed by Deschutes County and county transportation system planning policies.

The Redmond Airport is the 16th largest commercial airport in the Northwest. In 2009, the airport underwent significant terminal expansion totaling \$35 million. The project was completed in 2010 and the terminal was expanded from 23,000 to 146,000 square feet. These efforts have produced demonstrable results—in 2012 the Redmond Airport reported 239,056 passengers, a dramatic increase from the 144,582 passengers in 2002.¹⁸

The Bend Airport is a smaller airport servicing business and general aviation but does not provide passenger service to or from Bend. The airport impacts the local economy through goods transportation and aircraft storage. During a 10 year period, Bend Municipal Airport saw a 39.6 percent increase in operational aircraft stored at the facility, with 215 aircraft on the facility in 2010. In that same timeframe, estimated aircraft operations increased by 167 percent, with 97,928 aircraft operations in 2010. To address this increase in usage, the Bend Municipal Airport has proposed several long-term expansions, including runway extension, airport road access upgrades, and hangar storage expansion.¹⁹

Results

The transportation areas overseen by the Bend MPO have seen significant updates over the past several years. By taking a multi-modal approach, the area has been able to serve a greater variety of interests. These updates have led to a greater ability to accommodate increased residential, commercial, and tourist traffic.

Although employment in Deschutes County was affected by the recent recession, overall it has seen a steady incline since 2010. Significant industries including trade/transportation/utilities and leisure/hospitality have seen increases in recent years and are once again showing employment levels greater than in 2004. Due to the regional tourist attractions, destination resorts make up four of the top fifteen largest employers in the region. The leisure and hospitality industry alone showed a 6.9 percent increase in the number of employees from 2012 to 2013.²⁰ In Deschutes County, financial deposits have doubled since 2001 and are higher than the 2006 deposits with \$2,355 million in 2011, indicating a general increase in investment in the area over the past five years.²¹

Building capacity of the roads, public transportation, and airports has allowed the local economy to continue to expand without overwhelming the current transportation options. Overall, Bend has seen significant increases in air traffic, tourism revenue, employment, and financial deposits following these transportation investments.

Conclusion

Transportation improvements can affect economic development in a variety of ways. Increased capacity

for highways, railroads, and airports may encourage employers to move into the region. Multiple modes allow companies to select the shipping and transportation options that work best for them. Increased capacity means that regardless of the mode they choose, they will be able to reduce costs by increasing speed and efficiency of transportation. Industries are therefore better able to compete within and outside of the immediate surrounding area. Residents and tourists also benefit as they can select from multiple transportation options depending on their needs. Convenient travel into and out of the area attracts tourists, while shorter commutes and public transportation options draw new residents. With the rural populations declining, and rural industries (agriculture, forestry, etc.) relying on national and international markets, focusing on transportation enhancements and expansions can boost local economies.

The case studies presented provide examples of how to improve upon existing infrastructure and the types of economic growth these investments can provide. Aroostook County, Maine was able to save local industries and job opportunities through the state acquisition of 233 miles of railroad. The subsequent rehabilitation efforts have provided increased employment and freight traffic throughout the region. Bend and Deschutes County took a multi-modal approach through the initiatives of the BMPO, updating road conditions, public transit, and air travel to allow residents, tourists, and commercial entities easier access to and through Central Oregon. Each region leveraged its existing transportation structures to increase capacity and improve efficiency, creating opportunities for continued economic development long into the future.

Notes

- 1 *The U.S. Rural Population and Scheduled Intercity Transportation in 2010: A Five-Year Decline in Transportation Access*. February 2011. Research and Innovative Technology Administration Bureau of Transportation Statistics.
- 2 2007–2011 American Community Survey 5-Year Estimates
- 3 Maine Department of Transportation Tiger II Discretionary Grant Application: Aroostook County Railroad Preservation and Rehabilitation Project
- 4 *The Northern Maine Rail Initiative*. June 2012. RPO America Peer Symposium: Sharing Innovations in Regional Transportation Planning
- 5 Maine Department of Transportation Tiger II Discretionary Grant Application: Aroostook County Railroad Preservation and Rehabilitation Project
- 6 *The Northern Maine Rail Initiative*. June 2012. RPO America Peer Symposium: Sharing Innovations in Regional Transportation Planning
- 7 *2013/2014 Business Plan & Budget*. Visit Bend
- 8 *Connecting Rural and Urban America: Part 3 of a Series*. August 2010. American Association of State Highway and Transportation Officials
- 9 <http://quickfacts.census.gov/qfd/states/41/4105800.html>
- 10 An **urban growth boundary** is designed to protect rural lands from urban sprawl. The boundary prevents urban expansion onto farms and forests and promotes efficient land use inside the boundary. Oregon law requires each city or metropolitan area to identify an urban growth boundary separating urban from rural land “Urban Growth Boundary,” Metro Government. <http://www.oregonmetro.gov/index.cfm/go/by.web/id-27>.
- 11 “Chapter 11 Truck Freight System”. 2007–2030 Metropolitan Transportation Plan. Bend Metropolitan Planning Organization
- 12 Bend Area Visitor Survey Summer 2012 Final Results
- 13 *Public Transit Plan and Transit Corridor Land Use Assessment*. 2013. Bend Metropolitan Planning Organization.
- 14 Oregon Transportation Planning Rule
- 15 “Chapter 9 Transportation Systems Management”. 2007–2030 Metropolitan Transportation Plan. Bend Metropolitan Planning Organization.
- 16 *2012 Urban Mobility Report*. Texas A&M Transportation Institute. 2012
- 17 “Chapter 8 Public Transportation System”. 2007–2030 Metropolitan Transportation Plan. Bend Metropolitan Planning Organization.
- 18 “Air Service,” Economic Development for Central Oregon. <http://www.edcoinfo.com/regional-facts/transportation/transportation-air/default.aspx>
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Asset-Based Economic Development: Building Sustainable Small and Rural Communities

Part 6: Renewable Energy and Local Resources

A briefing paper from the ICMA Center for Sustainable Communities

Elisabeth Berman & Katherine Takai, ICMA

Asset-based economic development is an approach that builds on community resources to strengthen local and regional economies. Asset-based economic development focuses on how a community's natural, social, cultural, and economic advantages can be leveraged into sustained economic growth, while building capacity both within communities and across regions. This approach to economic development involves identifying assets and evaluating how preserving and strengthening them could contribute to overall regional and local economic competitiveness.

This paper will examine how renewable energy initiatives, policies, and programs can be part of an economic development strategy in small towns and rural communities. The case studies of Montpelier, Vermont and Kandiyohi County and its county seat, the City of Willmar, Minnesota provide examples of communities where renewable energy has stimulated the local economy by utilizing local resources.

Domestic Capacity to Meet Growing Demands for Renewable Energy

According to a report by the United Nations Conference on Trade and Development, renewable energies “utilize energy sources in ways that do not deplete the Earth’s natural resources and are as environmentally benign as possible.”¹ Renewables made up just over half of total net additions to electric generating capacity from all sources in 2012.² A rapidly increasing need for alternate sources of energy in the U.S. and across the globe has

highlighted the importance of increased capacity of the renewable industry.

There are several types of renewable energy sources consistently undergoing development and expansion, including wind, biomass, solar, hydro, and geothermal, among others. The United States is playing a significant role in this change. In 2012 the US added more capacity from wind power than any other renewable technology, and all renewables made up about half the total electric capacity additions during the year.³ Unlike other energy sources which are only found in certain areas and need to be transported, such as oil and coal, renewable energies occur everywhere in the world, with limited exceptions. The use of renewable energy encourages significant opportunities for energy efficiency over both large and small geographic areas. Consequently, the abundant natural resources, large areas of land, and industries commonly found in small towns and rural communities present a unique opportunity to play a role in innovating to meet the growing need for alternative energy.

Renewable Energy Powering Local Small and Rural Economies

Renewable energies can provide small and rural communities with an expanded job market and serve as a stimulus for economic development. Many of these communities have a wealth of natural resources such as water, wind, and biomass-intensive forms of energy.⁴ There are several ways that leaders in local governments and organizations have encouraged the use of

This briefing paper is a part of a series examining asset-based economic development in rural communities. Other papers in this series are available at www.icma.org/AssetBasedEconDev.

renewable energy and promoted the development of new technologies related to renewables. Strategies developed relating to renewable energy implementation are unique and provide a new set of opportunities for those municipalities that choose to focus development on such programs. The Solar Survey of Local Government conducted by ICMA in 2011 found that about 8% of respondents from communities under 50,000 reported that their local government had established or adopted a renewable energy goal. Renewable energy can provide a variety of benefits for regions and communities, including saving energy and costs, improving environmental and health outcomes, and facilitating economic development.

Wind, solar, bio-energy, and other renewable energy programs can all generate local tax revenue, stimulate job creation, and provide income for farmers who choose to sell their land to be repurposed for renewable energy development. According to the Solar Energy Industries Association's Q1 2013 report, the United States now employs over 119,000 workers in the solar industry, and those numbers continue to grow each year.⁵ The industry can be cultivated at local, state, and national levels. The ICMA 2011 Solar Survey found that 9% percent of local governments in small and rural communities provided incentives for clean energy businesses to locate in the area, and 13% reported that their local government or municipal utility offered financial incentives for installing solar PV. Examples of financial incentives used by small communities for both commercial and residential properties include rebates, direct grants and loans, feed-in tariffs and other production-based incentives, and property tax abatements and credits. Among those, rebates are the most common type of financial incentive offered. At the state level, many of the same types of financial incentives are offered, along with personal, corporate, sales, and property tax credits and deduction and industry-specific incentives. States also have established a number of rules, regulations and policies to promote renewables, most commonly related to building construction and design.⁶ At the federal level, increasing economic opportunity and promoting a clean energy economy in rural America through investment in renewable energy, energy efficiency, and cleaner rural environments between 2009 and 2011 was a goal of the American Recovery and Reinvestment Act (ARRA). Results from ARRA include the establishment of 16 cutting-edge energy research centers and 13 biofuels and biomass energy production projects in rural communities, many of which benefitted from the support and involvement of local governments.⁷

Leveraging Land for New Energy Sources

Many rural communities have geographic and physical features that naturally supply them with resources that can be harnessed to generate various types of renewable energy. Wind energy development and biomass production both provide the opportunity for landowners to capitalize on the energy market while still maintaining the productive use of their land. Many rural areas of Western Texas have used wind energy installations spread across miles of farmland, providing an estimated \$1.1 billion in earnings and over 24,000 jobs across the area.⁸ The Renewable Energy Production Tax Credit is a federal incentive for rural landowners to install different types of renewable energy on their land while acquiring additional revenue and maintaining the “working” aspect of their property.⁹ Rural communities can gain valuable benefits from engaging in renewable energy programs which aid in job creation as well as spur economic development. In an analysis of economic impacts of wind applications in 13 rural communities across the nation, a study sponsored by the U.S. Department of Energy found that wind installations create a large direct impact on economies of rural communities, especially those with few supporting industries. Wind farm installations can comprise a large percentage of local tax base and contribute to local businesses.¹⁰ Many of the benefits are experienced during the construction of windmills; however the benefits might be temporary after construction is over. When implementing these types of projects, local leaders can take measures to ensure that the skills of the local labor force are developed in such a way that encourages sustained job creation.

Case Study – Montpelier, Vermont, Population: 7,855

Using smart and collaborative planning, strategic partnerships, and effective communication with citizens and stakeholders the small, Northeastern city of Montpelier, Vermont established a renewable energy system using locally abundant wood resources. In addition to supporting the lumber industry in the area, the District Energy System offers a sustainable energy source to power government buildings and local businesses.

Montpelier is the smallest capital city in the United States with a population of about 8,000. During the day, the city more than doubles in population, swelling to accommodate visitors and over 20,000 employees,

Montpelier, Vermont

Population (2010): 7,855

Asset: District Energy System

Summary: Establishing a district energy system in Montpelier has provided the City, State, residents, and local businesses with easy access to reliable, cost-effective renewable energy for improved community cohesion and local economy.

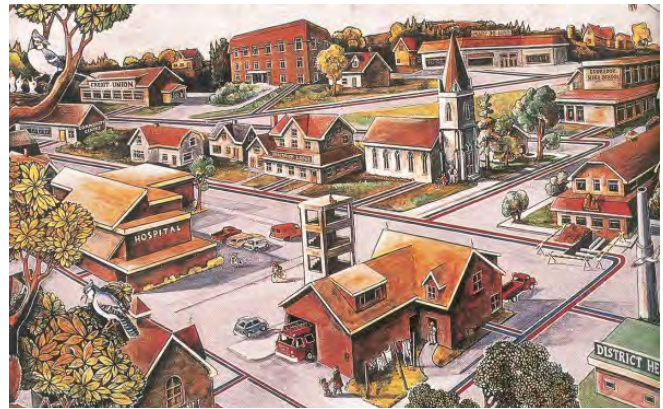
many of whom work in state government, the largest employer in the area. The downtown is home to many locally-owned businesses, as well as advocacy organizations. There is a fairly significant alternative medicine and healing industry in the area. The city is rural, surrounded by hills, the Winooski River, and the Green Mountains to the west.

Flooding Elicits a Need for a New Energy System

Montpelier's proximity to the Winooski River leaves downtown prone to flooding. In addition, many of the state-owned office buildings and historical buildings downtown had outdated heating and cooling systems, which meant many basements housed inefficient fuel tanks that were easily damaged by flooding. Also, valuable tax dollars were being spent towards the unstable (and usually increasing) price of oil instead of being applied to other initiatives or programs.

District energy systems are an effective way to not only utilize renewable energy for both residential and commercial needs, but provide better pollution control than localized boilers. In addition, having a district energy system would allow Montpelier to utilize its naturally occurring wood sources for biomass fuel, providing an opportunity for local economic growth. In 2009, the City of Montpelier contracted with Veolia Energy to complete a \$250,000 feasibility study for creating a district energy system in the city.¹¹ Veolia is an operator and developer of energy efficient solutions for energy, waste, and water management. The study was funded via an unused bond from 2003 that was intended "for the City's share of the development of the District Heating System involving the State of Vermont's central heating plant in the state complex and the installation of hot water transmission mains from the plant to the City of Montpelier's municipal complex in and around City Hall."¹²

Upon the completion of the feasibility study in April 2010, biomass was identified as the preferred option that Montpelier should consider for starting energy



Downtown Montpelier, VT. Photo courtesy of the City of Montpelier (<http://www.montpelier-vt.gov>)

generation in the city. Biomass was recommended in part because of Montpelier's natural wood supply and industry. In September 2009, the city partnered with Veolia and the State of Vermont in submitting an application for a grant through the American Recovery and Reinvestment Act (ARRA) to the U.S. Department of Energy for funding the implementation of the District Heat Project. In January 2010, the city was awarded a grant of \$8 million to construct the District Energy Plant as a Combined Heat and Power (CHP) facility and to establish an energy district that enables residents throughout the community to make efficiency and renewable energy improvements to their buildings.¹³

Increasing Economic Sustainability in Montpelier

The distribution system is an example of how Montpelier is continually looking to increase its economic stability in a sustainable way. The city government benefits from wood biomass heat, cutting oil usage and using locally-sourced wood. In addition, unlike oil energy generation, biomass fuel provides more predictability over time in terms of future costs, economic certainty for business, and job creation. Once the distribution project is completed, the State House, Supreme Court, government buildings and 19 downtown buildings (mostly shops) will be using biomass fuel, all centrally heated from the District Heat Project.

The project is expected to replace over 30,000 gallons of oil per year, remove private oil furnaces from potential flood areas, and allow tax dollars to be redirected towards services or other infrastructure instead of rising oil prices.¹⁴ In addition to doubling the capacity of the state's energy plant, increased efficiency provided by this project will also result in the elimination of 11 tons of problematic emissions like carbon dioxide. The use of locally-sourced wood to help fuel

the system not only stimulates the local economy and helps the Vermont capital take advantage of its naturally-occurring resources, but promotes the use of renewable energy by providing a solid “game-plan” that spearheaded the movement towards new sources of renewable energy for Montpelier.

Montpelier has tried to make the District Heat Project as attractive as possible, providing a streamlined application process and incentives to potential customers. Facilitative financing options are available for customers hooking up to the system, and a grant is available that reduces the cost of the hookup by 10 percent. The hookup fee can also be paid monthly with the customer’s energy bill, allowing for a simplified financial process. So far, all local businesses that have had the opportunity to “sign on” to the plan have done so. The system will heat 20 buildings that represent 15 local customers from downtown. The fact that customers are also supporting the local lumber industry is a selling point for those in support of Montpelier’s localized, rural economy.

A Community and Committee Effort

Gwen Hallsmith, a city planner for Montpelier, says that the community was integral in planning, approving, and establishing the heat distribution system. Members of the committee were knowledgeable in renewable energy and associated issues and helped to review proposals and made recommendations to the City Council. “We have a very active energy committee,” she said. “The energy committee has ‘quarterbacked’ the process [of establishing the heat distribution system]. They are our own expert think tank.”

The development of the plan to establish the new system was not without bumps in the road. A year ago, the new city council did not approve the continuation of the entire District Energy plan, even though two-thirds of citizens overwhelmingly supported the plan. As a result, protests were held at the city hall, and the city council held an emergency meeting to reverse their decision. In addition, the process was complicated by the presence of multiple partners. It was unclear as to whether the City of Montpelier or the State of Vermont would take ownership of the plan. However, a compromise was reached—the City of Montpelier is running the distribution system, and the State of Vermont is running the energy plant. The city buys energy from the state and sells it to its individual consumers. Through transparent communication between the city and state, both parties were able to reach a compromise with which they were comfortable. This transparency is important as the plant and plan continue to grow



Bushmills Ethanol Plant located in the City of Atwater in Kandiyohi County, Minnesota. Photo courtesy of the Kandiyohi County EDC.

and move forward into full-time functionality and for a consistently positive relationship between Montpelier and the State of Vermont.

Sustained Benefits for the District Heat Project

Stabilized energy costs, increased local energy independence and resilience from a renewable source of energy, and other benefits to the local economy and community have encouraged city officials to pursue additional funding necessary for expansion of the project. Despite obstacles, the process of establishing the system has been worthwhile for long-term economic sustainability. The energy project is set to be completed in February 2014, updating or replacing currently hazardous facilities so they are out of Winooski River’s flood plain and less of a threat to the quality of Montpelier’s water.

The finalization of the District Energy Project will provide Montpelier with increased communication with the state, a strengthened relationship with local businesses, a more stimulated economy, a closer-knit community, and lower and more stable energy costs looking into the future. The District Energy Project couldn’t have happened without the availability of local resources. Montpelier’s access to the lumber industry was crucial for the success of the Project and played an integral role in stimulating the areas’ economic sustainability.

Key Takeaways

- District energy can be beneficial for places with naturally occurring wood resources.
- Feasibility studies can be a valuable resource in determining a proper course of action when converting old energy sources to renewable.
- Renewable energy not only lowers long term costs for rural areas, but can be a community builder and encourage citizen engagement.

- Cooperation between multiple partners (and potentially jurisdictions) and the creation of defined roles in establishing a shared system is essential for success.
- Transparency between the government and its citizens is crucial for communication and establishment of successful plans.

Case Study—Kandiyohi County, Minnesota, Population 42,173 and Willmar, Minnesota, Population 19,582

Minnesota's rural Kandiyohi County has worked with its principal city, Willmar, to harness the resources of its agriculturally-rich land and promote economic activity from agri-business and renewable energy. This partnership has resulted in increased jobs, business retention and creation, and the establishment of the area as a leader in renewable energy industry development and commercialization. The county is home to five ethanol plants, two of which use a bio-mass source of thermal energy, two major wind projects, a number of projects in emergent renewable energy sources, and one of the country's largest privately-owned collaborative business communities for bioscience, agribusiness, technology, and bioenergy.

The area surrounding Kandiyohi County and its county seat, Willmar, is primarily agricultural. Agriculture is the largest source of income for the county, with an estimated economic impact of \$237 million in annual cash receipts.¹⁵ Turkey producing and processing is the primary industry in the county, with two of its major employers being the Jennie-O Turkey Store,



The MinnWest Technology campus, located in the repurposed state hospital, has 29 tenants and employs nearly 400. Photo courtesy of the Kandiyohi County EDC.

Kandiyohi County, Minnesota

Population (2010): 42,379

City of Willmar, Minnesota

Population (2010): 19,582

Asset: Ag-based renewables

Summary: Kandiyohi County has capitalized on its abundance of livestock, poultry and grain byproducts, and corn growers to become a leader in renewable energy development and commercialization.

the world's largest turkey processor and marketer, and Willmar Poultry Company, the world's largest turkey hatching company. Crops like corn and soybeans are farmed in the county, and tourism is also a major industry, particularly in the north, where the lakes offer recreational opportunities for fishing and boating. The tourism industry generates \$76 million in annual sales and provides over 1,500 jobs to area residents.¹⁶

In 2002, the city and county combined economic development efforts into one department. Through authorization from the State of Minnesota, the Economic Development Commission (EDC) is funded by property taxes as a separate unit of government or "district." The EDC's Agriculture and Renewable Energy Development (Ag) Committee was formed with a mission to "sustain, identify and develop agriculture, agribusiness, and renewable energy opportunities."¹⁷ The EDC has focused on renewable resources since 2004, when Jim Larson, a member of the committee, advocated for the possibilities offered by renewable resources. At that time, the EDC created a part-time position to promote the agricultural and renewable energy sector. Since then, the position has become full-time to meet the demands of the job and a workload that has grown as the potential of the industry has become better understood.

In an effort to harness the abundant sustainable and economically viable resources in the area, including corn cobs and bi-products from livestock, poultry, and grain, the community has undertaken several renewable energy projects with varying degrees of success. Renewable energy has mostly been used for heat generation in the area, as more traditional sources of energy such as coal and gas began to decrease in supply. The Commission began to focus on different types of renewables from sources including wind, solar, geothermal, and bio-mass. They sought to get ahead in the industry to use it as a business attractor for the

county and offer a lower cost, more sustainable source of energy. To-date, over \$1 billion has been invested in area ventures related to wind energy, biomass, methane digesters, and ethanol.¹⁸

Attracting Major Renewable Energy Plants to the Area

Due to the size of the corn industry, the EDC's first large-scale project was the establishment of an ethanol plant. The project was successfully completed in 2005, and the plant processes 50 million gallons of ethanol per year. The development of ag-based renewable energy has brought economic benefits to the area, including jobs for area residents. The Bushmills ethanol plant reported employing 41 full-time equivalent employees and purchases about 20 million bushels of corn annually. Local economic development staff have observed additional employment and business opportunities from the trucking and transportation of crops to the ethanol plant are a co-benefit of the plant.

Two commercial wind farms were built in the county; however, the commercial viability has not yet been realized. Challenges that developers face include gaining access to the transmission grid through approval by the Midcontinent Independent System Operator, Inc. (MISO). MISO is an organization formed with the approval of the Federal Energy Regulatory Commission that coordinates, controls, and monitors the high voltage electrical transmission system used by utilities, generators, and marketers throughout the Midwest United States and Manitoba, Canada. The \$200,000 application fee is cost-prohibitive, and it has been difficult to competitively price wind farm energy with the increased availability of natural gas over the past three years.

"We are undaunted," said Steve Renquist, Economic Development Director at the Kandiyohi County EDC. "Not everything in renewable resources must result in the creation of electrical power or other forms of energy as a result of heat generation. Also, there are many portions of our country that are not served by natural gas lines."

The development of a newer niche market of ag-based renewable energy has had its starts and stops, but the community has continued to pioneer more sustainable sources of energy and recognized new opportunities for agricultural byproducts in the meantime.

Renewable Energy Innovation Hub

Kandiyohi County is home to several companies on the leading edge of renewable energy development, including Nova-Tech Engineering and a family of innovative

affiliated companies uniting agriculture, engineering, and the biosciences underneath the umbrella of Life-Science Innovations (LSI). Nova-Tech and LSI are located within the MinnWest Technology Campus, a former state hospital that was transformed into a technology campus in 2006. The campus is located within seven historic buildings that were purchased from the state by Kandiyohi County and redeveloped to accommodate the privately owned, collaborative business community for innovators in bioscience, agribusiness, technology, and bioenergy. Nova-Tech and LSI purchased the space for \$1 million and have invested over \$10 million since then. The development of the campus was facilitated by the EDC who approached the companies with the idea for the business community and then took the leading role in facilitating negotiations between private, city, county, and state officials.^{19,20}

Continuing to Build an Industry

Despite hurdles, the community in Kandiyohi County and Willmar has been encouraged by its successes and continues to cultivate and invest in its agriculturally based renewable energy industry.

"Rural communities need to look regionally when they look at renewable energy as a potential for economic development," says Charlene Stevens, the City Administrator of Willmar. "Small communities are tentative on such ventures when they have to go it alone; but if you can build the partnerships and collaborate, there are greater opportunities for success. Small communities should not be afraid to step out and lead on such initiatives."

The community's position at the leading edge of renewable energy innovation has gained international attention, as a delegation from Hangzhou, China recently visited to learn about conversion of animal waste to energy. Research and development in the area is focused on the exploration of corn-based, wind, and solar power options and more recently on fuel cells and the conversion of algae to energy. The Agri-business and Renewable Energy Development Committee is the EDC's largest budget category, and the amount continues to increase. The Agri-Business and Renewable Energy Development Specialist is a liaison between key stakeholders in the industry, connecting and increasing opportunities for companies and farmers. The EDC also identifies and addresses issues facing the industry. A recent survey of farmers in the county identified a need for farm succession training, which will become increasingly important as farmers and landlords age and anticipate the eventual transition and transfer of land.

With its hub in the City of Willmar, Kandiyohi County continues to develop its agriculturally based renewable energy sector. Through experimentation, investment, and research into how to leverage abundant natural resources and increasing knowledge about how to cultivate a renewable energy industry, the community has increased its capacity to spur economic activity and improve availability of sustainable, lower price sources of energy for the future.

Key takeaways:

- Look regionally when considering economic development projects, such as those in renewable energy.
- As a small community, don't be afraid to take the lead on region-wide initiatives.
- Local renewable energy businesses need a collaborative environment to build an industry.
- Understand that there may be a great deal of starts and stops in pioneering the renewable energy industry.
- Two things are required to gain a competitive advantage in the energy market—a local source of raw materials and a local market for the byproduct.

Conclusion

As small communities, the city of Montpelier and the City of Willmar and Kandiyohi County have experienced significant benefits in using renewable energy as an economic driver. Their experiences demonstrate how rural communities can take advantage of one type of renewable energy and spark a larger dialogue about how to capitalize on the economic potential of renewable resources for immediate expansion and into the future. Montpelier is making its mark by reducing its oil footprint and redirecting valuable tax dollars towards other programs rather than rising oil prices. Its District Energy Program is an example of how city and state governments can partner together to establish a system to promote renewable energy use that benefits multiple parties. This partnership is one that will continue to serve Montpelier well into the future.

Kandiyohi County and the City of Willmar provide another example of how rural areas can use existing assets provided by its rural character and a thriving agricultural industry to cultivate a renewable energy industry, increase resilience by reducing reliance on imported and nonrenewable sources of energy, and spur economic development and local growth. The ethanol plant that was established in 2002 employs 40 residents and creates

a market for 20 million bushels of corn annually, a huge boost for the agriculture-based economy of Minnesota. The ability to produce energy from an abundant amount of locally-produced corn also reduces the area's reliance on unstable and expensive sources of energy.

These case studies demonstrate not only that it is possible to successfully use renewable energy programs for economic benefits, they also highlight the important and unique role that local government plays in these efforts. A progressive local government can facilitate easier access to renewable energy through publicly funded projects, as has been completed in Montpelier. As found in Kandiyohi County, policies at the local, state, and federal level significantly influence the ability of local economic development organizations, businesses, and other stakeholders to effectively cultivate an agriculturally based renewable energy industry.

Small towns and rural areas that take advantage of existing assets and resources in their communities are capitalizing on an important opportunity to increase their economic sustainability. In the past, importing goods, using outside resources for energy, or relying on the most readily available products made economic sense; however the reality is quickly changing for many communities. Nonrenewable resources are becoming more expensive and supplies more limited, so it is important to "tap into" the renewable resources and assets available locally. For example, while Montpelier may not have thousands of acres of farmland, local forestry enables the city to engage in a successful biomass fuel program. On the other hand, while Kandiyohi County may not be abundant in forests, it takes advantage of its corn industry to sustain an ethanol plant, and its wide open spaces serve as a site for a future wind energy program. The ability to adapt to changing needs, especially related to the critical energy supply, will contribute to continued gains in the quality of life for these communities.

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Asset-Based Economic Development: Building Sustainable Small and Rural Communities

A briefing paper from the ICMA Center for Sustainable Communities

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Founded in 1914, ICMA, the International City/County Management Association, advances professional local government worldwide. Our mission and vision is to create excellence in local governance by developing and fostering professional management to build sustainable communities that improve people's lives worldwide. ICMA provides member support; publications; data and information; peer and results-oriented assistance; and training and professional development to city, town, and county experts and other individuals and organizations throughout the world. The management decisions made by ICMA's members affect millions of individuals living in thousands of communities, from small villages and towns to large metropolitan areas.



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About NADO

The National Association of Development Organizations (NADO) is a national membership organization for the national network of over 520 regional development organizations (RDOs) focused on strengthening local governments, communities, and economies through regional strategies, partnerships, and solutions. Founded in 1988, the NADO Research Foundation is the nonprofit research affiliate of NADO. The NADO Research Foundation identifies, studies, and promotes regional solutions and approaches to improving local prosperity and services through the nationwide network of RDOs. The Research Foundation shares best practices and offers professional development training, analyzes the impact of federal policies and programs on RDOs and their local communities, and examines the latest developments and trends in small metropolitan and rural America. Most importantly, the Research Foundation is helping bridge the communications gap among practitioners, researchers, and policymakers.



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