



COMMUNITY FACILITIES AND SERVICES

ENERGY AND COMMUNICATIONS

INTRODUCTION

The following chapter is intended to identify the County's energy and telecommunications needs into the foreseeable future. Energy will be discussed in terms of resource availability and distribution. Communications services will include both traditional telephone and cellular services as well as cable and digital television services and access to the internet. Energy and communications policies are important to long-term County and municipal growth and vitality; however to a large extent remain outside of local control. In addition, rapid technological advances, particularly related to telecommunications, change the way we communicate and work.

This chapter will briefly discuss the global and national policies that impact local services and identify strategies that municipalities can employ to strengthen their position in a global economy.

ENERGY

An adequate supply of electricity and fuel resources (e.g. natural gas, oil products, coal) is necessary to sustain the quality of life enjoyed by County residents. Similarly, the County's continued growth and economic vitality are closely linked with the efficient delivery of electricity and fuel.

While most energy policies are formulated at the national level, municipalities play an important role in the delivery of electricity and fuel to consumers. A comprehensive land use strategy that promotes efficient development patterns, identifies appropriate locations for mineral resource extraction, and outlines implementation measures (including the location of utility lines) is important to the County's long-term economic and social condition.

Mineral resources extraction, as noted in both the Natural Resources and Economic Development Chapters, has been and will continue to be an important part of the County's economy. However, with regards to the satisfaction of energy needs, the role of natural resources has changed dramatically over the past 25 years.

Coal, once a dominant fuel source regionally and particularly abundant locally, has seen continued declines in usage. The remaining excess demand for fuel resources has been satisfied by increased reliance on oil and natural gas reserves. While there are natural gas resources available throughout Pennsylvania (as shown in the Natural Resources Chapter), extraction, production, and distribution factors have had an influence on both supply and demand. Oil resources, while available in portions of the United States, are largely contained in deposits found throughout South America, the Middle East, and Russia.



County's economic regions drawn on 1874 map. Notice how the 'belt' of the Pennsylvania RR across the middle of the county controls access to the industrial townships. Source: Centre County Government Website, Historical Sketches of our 200 years.

Global and national influences (e.g. instability in the Middle East and South America, disruption of the nation's power grid) can have significant local consequences. Our County's residents,

business interests, and visitors are all vulnerable to the availability and cost factors surrounding energy supplies.

This dependency has become even more apparent in recent years as energy experts begin to anticipate and chart the global peak in oil production. As a result, global and national energy policies will continue to affect Centre County.

Fortunately, there are some strategies available to municipalities to promote the efficient and cost effective availability of energy. As with the provision of public water and sewer services, efficient patterns of land use will generate economies of scale for service providers. By concentrating population and employment centers into urban or village nodes, utility providers can offset the costs of capital infrastructure investment over a larger consumer base.

In addition, municipalities and Counties can plan cooperatively with one another to identify areas of need and plan for utility corridors. Areas appropriate for utility facilities (e.g. transmission lines, substations, etc.) should be identified to serve an area of need while not conflicting with adjacent land uses.



Electric Sub-station, Spring Mills

Since the massive North American power outage in the summer of 2003, much debate has occurred regarding the need to update the nation's power generation systems and distribution grid. One area that has gained attention is the need for a

more decentralized locally based energy production system that can be routed to the national power grid based on demand. While discussion on this issue is in the earliest stages, there are some elements that municipalities can contribute now towards a long range local energy strategy.

One such element is to promote energy conservation. Centre County's population and employment base is projected to grow considerably over the next several decades. This will add to the already significant demand for electricity and fuel resources. While municipalities have long encouraged the conservation of natural resources, particularly in times of shortages, many newer approaches are beginning to gain acceptance.

One such approach is to encourage energy efficient design in the land development process. Often, strategies such as situating buildings based on the location of the sun and shade can help to conserve energy with no additional costs to the developer. Other measures, such as locating residential developments in close proximity to employment, commercial, and recreational opportunities, decrease the reliance on the automobile and thus on fuel. This concentrated development activity which promotes infill development can also serve to revitalize some of the County's downtown areas and villages.

COMMUNICATIONS

Communications services have changed dramatically since the adoption of the County's 1979 Comprehensive Plan. Federal and state telecommunications polices have drastically altered the landscape for local and long-distance phone service providers. The widespread use of cellular services has changed the way society views communications. Cable television companies have competition from satellite and digital cable providers.

In addition, the personal and commercial use of the internet has experienced phenomenal growth over the past decade. Each of these elements has combined to form a telecommunications network that is much different than ever before, in terms of consumer choice, services offered, speed of information delivery, and land use impacts. The rapid technological advances in telecommunications suggest that this area will remain dynamic.

Telephone Services



The predominate local phone service provider in Centre County is Verizon. However, consumers do have access to a broad variety of choices for local phone service, including many long-distance service providers and other independent companies. Cellular telephone service has supplemented, and to some extent replaced, local and long distance phone services as the provider of choice for many Centre County residents. Growth in the use of cell phones has been dramatic and has created both opportunities and land use challenges for many municipalities.

Perhaps no communications issue has caused so much debate at the municipal level as has the siting of cellular communications towers. Used to relay signals over long distances, these cell towers have had significant land use and aesthetic impact on the County's communities, mountain vistas, and rural landscapes.

Many municipalities have begun to address such issues through local land use regulations. Such regulations include

identifying suitable locations for cell towers through land use planning and zoning. Other regulations (e.g. conditional use or special exception ordinances) provide for certain additional buffering and performance criteria that minimize the impact of the towers on community character.

One criteria gaining common acceptance is co-location requirement. Such ordinances require any company wishing to locate a cell tower within a municipality to also allow for additional providers on that facility. These regulations allow for the availability of a broad range of cellular services while maximizing land resources and minimizing impacts on the community.

In order to promote a broad coverage area while minimizing impacts to communities, the County should prepare a cell tower inventory and a model ordinance for use by those municipalities interested in planning for the continued growth in the cell tower industry.

Internet

Just as cellular phone service has transformed the telecommunications industry, so to has the internet revolutionized both telecommunications and the economy. The internet provides access to information, serves as a communications tool, facilitates commerce, and has become an important component in the way of life for Centre County residents.



As noted in the Economic Development Chapter, internet access is one of the key components to a comprehensive

economic development strategy to revitalize small communities. By making the physical location of a business less important, the internet allows for efficient and effective sharing of information and commercial transaction and makes home based businesses and telecommuting viable options in an information and services based economy.

However, there are significant hurdles that must be faced in order to level the playing field. While internet service has indeed revolutionized telecommunications and the economy, there are varying degrees of access. Those municipalities that rely on "dial-up" internet connections face speed and capacity constraints that others using broadband connections do not.

Similar to the efficient and cost effective provision of public utilities, the economic realities of internet access revolve around development densities. It is much more cost effective for internet providers to expend capital resources on the development and improvement of services in a densely populated urban cores than it is to serve less densely populated areas. This is due to the fact that the investment in facilities will be offset by revenues from a much larger client base. As such, the County's urbanized areas have much greater access to high speed internet services than do the rural municipalities. This condition threatens the future economic vitality of the rural areas and small towns.

Legislation has been enacted to correct this imbalance. In 1993, the Pennsylvania General Assembly enacted Chapter 30 of the Pennsylvania Public Utilities Code to speed the provision of affordable broadband communications into both rural and urban areas. This legislation recognizes market conditions that would preclude the delivery of infrastructure into rural areas and provides mandates for service coverage during a ten year period.

Many of the coverage goals of Chapter 30 have not yet been met and the legislative measures are set to expire in December 2003. There is, however, proposed legislation currently under consideration to continue Chapter 30. Continued support for this type of legislation is important to bringing high speed communications and internet services to rural areas.

Competition and technological innovation and improvements have also begun to show benefits to rural areas and small towns. Many cable companies have begun to upgrade facilities to provide high-speed internet access through their infrastructure. In addition, the line between telephone and cable television services has been blurred. Once providers of completely independent services, telecommunications industries have been transformed to provide a broad range of telecommunications and information products and, in some instances, packages of services that can be bundled to provide increases in efficiency and affordability. Continued support for these efforts will increase both choice and availability for the residents and businesses of Centre County.

Grants and other assistance programs are available to promote high-speed internet access in rural areas and small towns. For example, such federal and state funding mechanisms have recently been used to help finance projects in the Moshannon Valley area that will bring wireless high speed internet access to the region's residents, students, and businesses. The County should support these efforts and continue to provide assistance to municipalities in data collection/analysis, and grant preparation.

Community Facilities and Services Goal

Promote the appropriate location and maintenance of existing and proposed community facilities, utilities, and services for the citizens of Centre County

Recommendations

Promote the efficient placement of utility services in high growth areas of the County consistent with land use and environmental goals and policies.

Encourage common utility corridors and promote the placement of underground utilities.

Encourage regional planning efforts to identify important utility and land use issues.

Promote public awareness and citizen participation regarding the placement of utility lines or energy production sites.

Support policies to identify and implement alternative fuels as a viable energy alternative.

Support policies and identify land resources to accommodate local decentralized energy production and distribution facilities.

Work cooperatively with utility providers to understand their constraints in providing service and in determining the projected levels of service within the County in the future.

Identify and implement energy conservation land development strategies.

Support legislation and land use policies to bring affordable high speed broadband internet services to both urban and rural areas.

Promote "high-tech" corridors and identify strategies (land use and financial capital) to promote necessary infrastructure (e.g. fiber optics).

Prepare an inventory of cell tower locations throughout the County and provide model ordinance language for use by municipalities.

Work with municipalities and planning regions to prepare grant applications for high speed internet services.