



Enhancing Resilience in Danville, Virginia
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Resilience - the capability of infrastructures to maintain their functions and structure in the face of internal and external change, to degrade gracefully when they must, and to restore their full range of services in a rapid and effective manner.

The Problem: Danville at a Crossroads

Danville, Virginia, is an independent city bounded by Pittsylvania County, Virginia and Caswell County, North Carolina. Founded more than 200 years ago on the Dan River, Danville grew to a high of 53,700 residents in 1988, with an economy built on manufacturing, tobacco and textiles. However, recent years have seen the latter two industries in significant decline, leading to a loss in population and requiring Danville to seek to diversify the economy by developing a transition strategy as a leading location for new businesses and industries.

To that end, the City of Danville and its economic development allies have developed the Airside and Riverview Industrial Parks, the Cyber Park, and the Danville/Pittsylvania County Regional Industrial Park, as well as individual sites throughout the City. These sites have become home to some of Danville's largest employers including: Nestlé USA, EDS, The Goodyear Tire and Rubber Company, Dan River Inc., Intertape Polymer, Masonite Corporation, Owens-Brockway Glass, Corning, CIT Commercial, Diebold, Essel Propack and Unarco Industries, Inc. In all, some sixteen projects have been announced since March of 2004, resulting in over 2,600 new jobs and \$112 million of new investment within the community.

The Sustainable Solution: The Danville Resiliency Program

Although Danville has been relatively successful in attracting a variety of new business and industrial enterprises, the ability to market to new high-tech prospects with increasingly demanding reliability and security needs requires additional incentives. To enhance its attractiveness, the City needs to take advantage of its distinct assets: in addition to offering the typical array of municipal services, Danville is unique in additionally providing water, wastewater, natural gas, electricity, and telecommunications services. This has given Danville the opportunity to initiate a comprehensive program to ensure that these critical infrastructure services are brought to a high standard of availability, reliability and coordination – in a word, resilient. At a time when security concerns are of even greater interest to the high-tech, service sector economy, resilience is increasingly prized by firms seeking either to relocate or to establish a secure back-up site.

Accordingly, with funding from the U. S. Department of Homeland Security, the City of Danville and the Virginia Governor's Office of Commonwealth Preparedness cooperated with

Virginia Tech's Disaster Risk Reduction Program to assess the interdependencies and resilience of the City's four principal infrastructure sectors -- communications, energy, transportation, and water/ wastewater. The study used an all-hazards approach in examining infrastructure systems resilience and included:

- Evaluation of threats, vulnerabilities, and consequences of manmade or natural disasters affecting the four sectors
- Identification of key geographic, physical, electronic, social and functional cross-sector interdependencies
- Review of the City's needs for future system investments and management capabilities necessary to achieve and maintain a high level of infrastructure resiliency

Preliminary Results: Implementing the Solution

At the completion of the study, the City of Danville will seek to enhance the resilience of its infrastructures in order to accommodate firms that require a safe, highly reliable off-site location for redundant, back-up, and/or recovery and reconstitution facilities. The City also intends to build on its existing partnership with the Commonwealth of Virginia and U. S. Department of Homeland Security to examine four other aspects of resilience that were identified in the study:

- Increase the integration of emergency services into infrastructure departmental planning and budgeting activities
- Examination of the requirements imposed on Danville as a possible regional disaster evacuation target
- A survey of public and privately owned emergency generators in the City
- Examine the resilience of the four industrial parks in Danville

The City will also propose development of a “Community Certification Program” to assist local governments exposed to a wide variety of manmade or natural disaster threats and vulnerabilities to increase the resiliency of community critical infrastructure systems

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