

**THE PITTSBURGH REGIONAL CHALLENGE:
AN AGENDA FOR THE FUTURE**

Prepared for



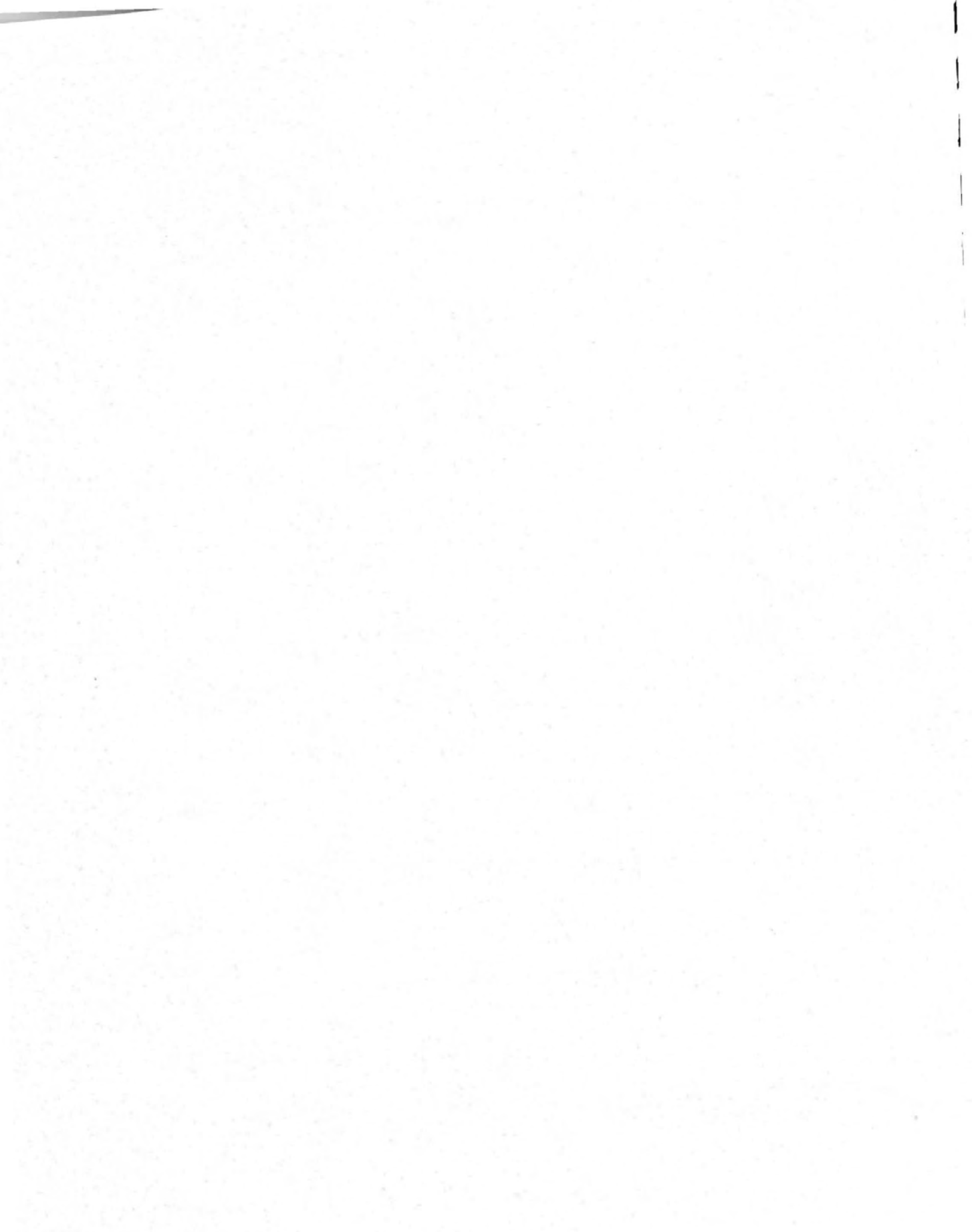
DUQUESNE LIGHT COMPANY

by



Laventhol & Horwath

NOVEMBER 1988



EXECUTIVE SUMMARY
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This report presents an executive summary of the challenges and opportunities confronting economic development initiatives in the Pittsburgh Region. This analysis has been described in a detailed technical report entitled "The Pittsburgh Regional Challenge: An Agenda for the Future" of the same date. The study was undertaken by Duquesne Light Company in order to assist the Region in refining and, if necessary redirecting a strategy for economic development in the Pittsburgh Region.

Our research included the following tasks:

- * Review the changes occurring in the emerging economy;
- * Assess how Pittsburgh is performing in the new economy by interviewing key professionals involved in economic development activities in the Region and reviewing key documents;
- * Profile innovative economic development initiatives which are being undertaken around the Country to compete in the new economy;
- * Evaluate the extent to which Pittsburgh is implementing similar economic development efforts;
- * Prepare an econometric forecast of the Pittsburgh metropolitan area economy given known infrastructure improvements planned for the Region;
- * Identify key issues which must be addressed and opportunities which could be pursued in the economic development area; and
- * Prepare a written report which documents the results of our research.

This report is based on estimates, assumptions and other information developed from our research of the Pittsburgh Region, knowledge of economic development, and meetings with Duquesne Light, representatives of municipal governments, community leaders, employers and other individuals involved in economic development

efforts. The sources of information and bases of the estimates and assumptions are stated in the detailed report. In accordance with the terms of this engagement, the report reflects the conditions of the Pittsburgh Region at the completion of our fieldwork.

Our report is intended for use by Duquesne Light and others in the Region in the full range of economic development efforts. The report may be used to provide general information to a prospect or an investor. We do require, however, that Laventhol & Horwath have the opportunity to concur with the use of this report in any financial statement, prospectus or loan documents and agreements.

November 1, 1988

Laventhol & Horwath

EXECUTIVE SUMMARY

INTRODUCTION

The Pittsburgh metropolitan area is widely recognized for its innovative approach to economic development. The regional economic development strategic plan prepared in 1984 under the sponsorship of the Allegheny Conference on Community Development entitled "Strategy for Growth: An Economic Development Program for the Pittsburgh Region" is widely held to be one of the first and most comprehensive strategies for addressing the challenges and opportunities of a changing National economy. This strategy has been carried out largely through the commitment of business, community and civic leaders to the future economic health of the Region.

Building upon the success of this strategy, Duquesne Light Company retained Laventhol & Horwath to reassess and refine, if necessary, the future economic development agenda for the Pittsburgh Region. The context in which the 1984 plan was prepared has continued to change in relation to local, regional and national economic, demographic and technological trends. In order to maintain Pittsburgh's leadership position in economic development and to ensure the future vitality of the Region, regional efforts to stimulate growth and new investment should be refined and

expanded to reflect the challenges and opportunities created by the trends.

The purpose of this analysis is to identify the Pittsburgh Region's economic development resources and opportunities for growth and development. Emphasis was placed on providing an unbiased, objective evaluation of the strengths and weaknesses of the metropolitan area's economic base and an identification of new and/or innovative initiatives in economic development which could be implemented in the Region. This report will provide the organizations involved and/or concerned with economic development with a basis for prioritizing and responding to needed economic development efforts. It is not an end in itself, but a framework for action that will improve the effective use of local resources for economic development, energize others to become actively involved and therefore further enhance Pittsburgh's economic health and vitality.

For the purposes of this report, the Pittsburgh Region is defined as Allegheny, Beaver, Washington and Westmoreland Counties.

The major findings of our study are summarized in the following pages.

CHARACTERISTICS OF THE EMERGING ECONOMY

Rapid, fundamental structural changes in the national economic environment threaten the economic base of metropolitan areas nationwide and indeed have had a devastating impact on the Pittsburgh Region. The challenges being created by the following emerging economic, demographic and political trends over the next decade include:

- * **Globalization of the U.S. Markets.** The U.S. economy operates in an international marketplace. Increasing foreign competition, especially in key manufacturing sectors such as automobiles, appliances, semiconductors and steel has caused significant job losses. Companies are being forced to automate to become more price competitive as well as to seek out potential new markets.
- * **Foreign Reverse Investment.** Direct foreign investment in the U.S. has grown dramatically over recent years. The value of foreign-owned property, plant and equipment is expected to continue to increase as the U.S. offers a safe economic and political environment for investment. The opportunities for additional jobs generated by this inflow of money and technology are substantial.
- * **Employment Restructuring.** The most dramatic shift in the national economy is that the sources of new jobs have changed and will remain different through the 1990's. Manufacturing employment has declined while the service sector has expanded. In addition, the increasing sophistication of work tasks in both sectors means that different skills will be needed by the workers of tomorrow.
- * **Technology Development and Transfer.** High technology companies are leading the manufacturing sectors in terms of employment and output growth. The three areas with the broadest potential impact on the U.S. economy are:
 - ** microelectronics
 - ** advanced composite materials
 - ** biotechnology

U.S. manufacturing industries are automating rapidly to improve quality and reduce costs. Reflecting this trend, employment growth in the manufacturing sector will be concentrated in engineering, technical and computer-related occupations.

- * **Changing Demographics.** The U.S. population is aging and, as a result, the growth in the labor force is slowing. In addition, the population is shifting both South and West, indicating a further decline in the market size and strength of the Northeastern Region of the Country.
- * **Small Business Growth.** The small business sector represents a large and dynamic part of the U.S. economy - over 46% of existing jobs, 75% of new jobs and 38% of the Gross National Product. Yet few of these firms, approximately 10%, are entrepreneurial.
- * **Competition for New Jobs and Investment.** Every State in the Country is involved in economic development activities including:
 - ** Business retention, expansion and creation
 - ** Business attraction
 - ** International development

Thus, competition for economic development, new jobs and capital expenditures is fierce. Locational attributes and the overall general business climate are prime considerations of companies looking to (re)locate in a Region.

THE PITTSBURGH REGION'S RESPONSE

Economic development organizations and businesses in the Pittsburgh Region have been dealing with many of these issues. An analysis of the impact and response of the Region to these trends yields some interesting findings:

- * Due to its dependence on the steel industry, the Region's industrial base was devastated by foreign competition. Manufacturing, which once accounted for 25% of the Regional employment, has been declining steadily since the 1970's and today accounts for less than 15% of total employment.
- * However, the Pittsburgh Region is highly ranked for export-related activities and foreign reverse investment. The Penn's Southwest Association has been successful in attracting over 155 foreign-owned businesses to locate in the Region, generating over 25,000 jobs. The Regional Industrial Development Corporation's Foreign Trade Zone has been a success and employment is on the rise in the Region, led by the Services and Retail/Wholesale Trade sectors.

- * The Region has clearly begun to diversify, however, it still has not met its potential. The service-producing industries account for approximately 42% of total regional employment which is less than the U.S. average (59%), indicating that the Region is less diversified than the nation. And some areas, particularly the Mon Valley and Beaver County, have experienced the brunt of the decline in manufacturing and need to diversify and expand their industrial bases.
- * High technology manufacturing is beginning to play a role in the expansion of the regional economy, led by the following industries:
 - ** Chemicals
 - ** Medical instruments
 - ** Computer software and equipment
 - ** Communications equipment
 - ** Electronic and industrial machinery

However, it is unlikely that Pittsburgh will be able to capture more than its fair share of high technology employment, since the Region has and continues to lose jobs in key technology occupations such as engineering, computer science and general science.

- * Automation will continue to play a large role in manufacturing industries represented in the Region including:
 - ** Optical and ophthalmic instruments
 - ** Electrical and electronic equipment
 - ** Drugs
 - ** Transportation equipment
 - ** Medical instruments
 - ** Machinery
 - ** Fabricated metals
 - ** Primary metals
- * The underlying strengths of the Pittsburgh Region's high technology base are its universities and their associated efforts toward research and development and entrepreneurial activities.
- * A second area of strength for the Region is the health care industry, with over 20% of the Region's largest employers being health care institutions.
- * However, the Region's population base is expected to further decline through the year 2000 and its age structure

will change dramatically. The greatest growth will occur in the 35-54 age group, which is supposed to be the peak earning years for most people; in the Region, however, many of these people are currently unemployed or underskilled. The expected decline in the population aged 24-35 is most troublesome, as it will have a negative impact on the availability of labor in the future.

- * The limited amount of funds available for venture capital and facility development in the Region has and will continue to stymie growth of small businesses and entrepreneurial research. However, the strength and importance of several support groups, notably the Pittsburgh High Technology Council and the Enterprise Corporation should not be overlooked because they offer critical, necessary support for the emerging industries and entrepreneurial businesses.
- * New initiatives in the areas relating to technology transfer, infrastructure development and legislative and regulatory reform are positive indicators reflecting the Commonwealth's and Region's dedication to economic development. The Governor's Response Team, Strategy 21 and the Ben Franklin Partnership are all positive steps to designing programs to strategically link economic development efforts with capital expenditures and resources.
- * Despite perceptions to the contrary, the Pittsburgh Region competes favorably with selected metropolitan areas in the Midwest, Northeast and South on a variety of locational factors:
 - ** Manufacturing wage costs are comparable to other large industrialized metropolitan areas, although the South enjoys a distinct advantage given its lack of unionization.
 - ** Space and electric power costs in the Region are very competitive in relation to all three Regions.
 - ** State business climate rankings are well below the comparison states for large manufacturing facilities and small business growth. However, a survey of leading business executives ranked Pittsburgh as the 14th most attractive metropolitan area out of 30 in which to locate a business.
 - ** Key locational assets of the Region are: market accessibility; attractive State incentives; positive revitalizing downtown; sales, service and distribution

activities; and concerted economic development/revitalization efforts.

FUTURE ECONOMIC GROWTH PATTERNS IN THE REGION

With this baseline assessment of the Region's current strengths and weaknesses, we then turned our focus to identifying future regional growth patterns which will form the basis for allocating resources where they can be used most effectively in the creation of jobs and investment.

Laventhol & Horwath constructed an econometric model of the Pittsburgh Region with the assistance of Regional Economic Models, Inc. The model forecasts economic and demographic growth trends in Pittsburgh relative to national trends and accounts for such regional characteristics as interindustry structure, comparative costs of doing business, labor supply and skills and income levels. Three different growth scenarios for the Region were formulated:

- * The first assumed a continuation of historical growth trends in the Region, wherein regional economic development efforts are unable to reverse the pattern of decline caused by the restructuring of the Pittsburgh Region.
- * The second scenario assumed that planned capital improvements to the Midfield Terminal and in the Mon Valley will increase the competitive position of the Region for new investment. Industries which will benefit from these activities include electrical equipment, industrial machinery, chemicals, food processing, medical services, business services and others.
- * The third scenario assumes a recovery of the Region's primary metals industry to the point where its growth trends parallel those of the nation. Employment in this sector will not necessarily grow but the rate of decline will be slowed considerably. This scenario therefore presumes that Pittsburgh's emerging role in the specialty steel production and the growth in the mini-mills will be enough to bring the Region in line with national trends.

The discussion below focuses on the implications of these trends for future economic development efforts and summarizes the major conclusions that can be derived from the forecasts.

1. Future Growth Opportunities in the Pittsburgh Region Will be Developed Through Exploiting National and International Markets.

Regardless of the growth scenario, Pittsburgh is expected to play a declining role in the national economy in the future. The national shift in economic activity to the South and West contributes to this trend as well as the decline of Pittsburgh's previous dominance as a manufacturing center because of the steel industry. The Region's share of income, employment and population will converge as the structure of the Pittsburgh regional economy begins to mirror that of the nation.

Future growth opportunities, therefore, will depend upon the ability of business and industry to broaden opportunities and markets beyond that of the immediate metropolitan area and the Northeast Region. The areas of greatest development potential will lie in stimulating growth through encouraging export trade, and in providing specialized health and business services that at least have national markets.

2. Employment Opportunities Will be Concentrated in Non-manufacturing Industries.

Reflecting national trends, employment growth in the Pittsburgh Region will be concentrated in the nonmanufacturing sector of the economy. This sector will capture between 50% and 80% of future employment growth in the Region. The range occurs because in the medium and high growth forecasts manufacturing employment growth is expected. As efforts to improve the competitiveness of the Region's industrial base are implemented and as new industries are developed, Pittsburgh can expect to capture a greater share of growth opportunities in manufacturing activity.

The fastest growing sectors in the Pittsburgh regional economy will be trade, services and nondurable manufacturing. In each of these sectors except the latter, however, the regional growth rate will lag the national rate.

3. The Opportunities for Further Growth and Development in the Manufacturing Sector Are Varied.

Major manufacturing sectors are classified below by the relative level of regional production costs versus the nation:

PRODUCTION COST DIFFERENTIAL IN
PITTSBURGH RELATIVE TO THE NATION
1988

<u>Above Average</u>	<u>Average</u>	<u>Below Average</u>
Stone Products	Food Processing	Lumber
Fabricated Metals	Primary Metals	Furniture
Non-electrical	Electrical	Motor Vehicles
Machinery	Equipment	Textiles
Trans. Equipment	Printing	Apparel
Except Vehicles		Paper
Instruments		Chemicals
Misc. Manufacturing		Rubber
Leather		

The Pittsburgh Region will be able to further develop employment opportunities in those industrial sectors that have average or below average production costs in the Region relative to the nation. The list of growth industries outlined below reflect both the production cost comparison shown above and the Pittsburgh Region's basic resources for growth and development:

- * Electronic equipment for office, industrial and medical uses;
- * Communications equipment;
- * Office furniture;
- * Printing trade services;
- * Commercial printing for financial service industries, in particular;
- * Business forms;
- * Advanced composite materials;
- * Drugs and pharmaceuticals; and
- * Plastic products.

These industries are consistent with the strategic economic development plan prepared by the Commonwealth of Pennsylvania.

Additional manufacturing industries which are expected to grow and expand to the year 2000 are as follows:

- * Material handling equipment;
- * Computers and peripheral equipment;
- * Electrical transmission equipment;
- * Scientific and controlling instruments; and
- * Medical instruments and supplies.

4. An Expanding Service Economy Will Also Offer Employment Growth Opportunities in Key Industries.

The Pittsburgh Region has an opportunity to further develop its potential as a regional service center. The expansion of Midfield Terminal, coupled with the Region's existing business and medical services base, are key elements of a future growth strategy for nonmanufacturing activities.

More specifically, opportunities for growth in the service sector will be concentrated in the following areas:

- * **Financial Services:** Pittsburgh will remain competitive as a location for regional, administrative and processing offices within the financial services industry. Growth opportunities in this industry will continue because of market expansion and a need to aggressively manage operating costs. The expanded Midfield Terminal will improve the Region's air service which, along with Pittsburgh's competitive office lease rates and labor costs, is a critical location factor for these types of facilities.
- * **Business Services:** This sector of the service economy holds particular promise because of its growth potential and above average wage structure. The computer and data processing segment of this industry is expected to outpace all other service industries in terms of employment growth. In addition, the super computer and software development activities at the University of Pittsburgh and Carnegie-Mellon University will be major catalysts for future growth.
- * **Sales and Service Offices:** With the increasing application of technology in all industries and with the deregulation of key service industries, such as communications, there is a growing trend toward establishing sizable sales and service offices to provide training and after-sales support to customers of industrial, office and medical electronic and communications equipment. The regional market accessibility of

Pittsburgh make it a competitive location for this type of facility. The communications industry is expected to be one of the three fastest growing nonmanufacturing industries in the Pittsburgh Region.

- * **Medical and Health Services:** Finally, the Pittsburgh Region's existing concentration of medical and health care services and facilities is expected to serve as a springboard for future growth and development. Increasing specialization and cost management are two important industry trends that are leading to the evolution of specialty medical centers with broad regional and national markets. For example, out-patient facilities, specialized nursing and personal care facilities, and wellness and fitness centers are among the fastest growing industries in the manufacturing and nonmanufacturing sectors of the economy.

Complementing the growth and development of these types of Business Services, various Personal Services industries are expected to provide a range of employment opportunities. These industries serve the regional market, and growth trends reflect, in essence, emerging demographic trends such as rising birth rates, continued dominance of two-income households, rising income levels, increasing single-parent families and aging of the population. Employment growth opportunities in Pittsburgh are expected to be concentrated in such industries as child care, primary education, recreation, personal counseling and other personal services.

5. Occupational Growth Trends Illustrate the Growing Dominance of Services and Technology.

Projected occupational trends in the Pittsburgh Region provide a further indication of the basic structural changes that continue to occur in the regional economy. The occupations in the Pittsburgh Region that are expected to grow at a faster rate than the nation fall into four general categories:

- * Office and clerical;
- * Technology intensive;
- * Educational; and
- * Business services.

Significantly, none of the traditional blue collar occupations are expected to grow more rapidly in the Pittsburgh Region than in the nation in spite of growing manufacturing employment. This trend underscores the transition of the

manufacturing sector to a knowledge-intensive industry. Employment growth in the industry is concentrated in technology-intensive and management/administrative occupations, reflecting the basic trend toward automation.

6. Demographic Trends Highlight the Need for Vocational and Technical Training.

The recent trend toward declining population levels in the Pittsburgh Region is expected to continue to the year 2000. Absolute population decline is forecasted under each growth scenario with the largest share of that decline represented by two age groups: 0-34 years and 55 years and older. This general trend reflects a number of different factors, including:

- Intra-metropolitan area growth patterns as the Pittsburgh Region continues to suburbanize;
- Out-migration of retirees, as well as individuals and households in search of employment opportunities; and
- Decline in birth rates reflecting both national trends and local economic conditions.

These demographic trends have implications for labor availability and skills training. The largest segment of the Region's labor force over the next 15 years will be between the ages of 35 and 54 years. For the most part, these individuals will probably have skills that are best suited to Pittsburgh's old economic base. The number of younger individuals, typically better equipped to work in emerging technology and service industries, will decline in absolute terms to the year 2000. Educational institutions at all levels will have to be closely involved with local economic development efforts in order to ensure that the skills of available labor closely match the needs of employers.

In addition to general skill mix, the overall supply of labor will be tight as the population declines and ages. This trend is already being experienced in other North-eastern metropolitan areas such as Boston. Wages are escalating rapidly and companies are expanding in smaller, rural communities to relieve operating cost burdens as well as ensure adequate skilled labor supply.

EMERGING TRENDS AND OPPORTUNITIES IN ECONOMIC DEVELOPMENT

The complex and fluid economic, demographic and technological trends described above present difficult challenges for communities trying to grow. However, there are effective efforts underway at the local, regional and State level to address these challenges and exploit new opportunities for growth and development. These efforts include:

- * A coordinated regional approach to economic development. This approach involves the expansion of economic development efforts to include new partners and for-profit activities among other initiatives. Critical players in these new partnerships are the private sector and the universities and local community colleges.
- * A stronger role for State agencies which must fill the void left by the decline in the Federal Government's role in economic development programs.
- * Innovative programs for the development, transfer and application of new technologies to the manufacturing and industrial base of the regional economy.
- * Enhancing local resources to support economic development initiatives, particularly as they relate to entrepreneurial support and the dissemination/distribution of technical expertise and financial resources.
- * Expansion of economic development marketing efforts and tools. Pivotal activities of these efforts include: aggressive national public relations programs which address the negative perceptions of the Region's business climate while extolling the virtues of the Region's locational assets; target industry analyses designed to capture complementary employment growth opportunities; and, the establishment of information/prospecting centers at the Region's new Midfield Terminal.
- * Identification of export trade opportunities for local businesses which may be enjoying a positive benefit from the declining value of the U.S. dollar.
- * Expanded real estate development activities, particularly in the area of land assemblage and write-downs, infrastructure development and provision of incubator space.

THE PITTSBURGH REGION'S CHALLENGE

Four principal conclusions emerged from the analysis of economic development trends, conditions and initiatives in the Pittsburgh Region:

1. While the Pittsburgh Regional economy has undergone a fundamental restructuring, there are opportunities for future growth and development.
 - * While severely impacted by foreign competition, Pittsburgh has emerged as a regional business and medical service center which has helped spur employment growth in non-manufacturing industries.
 - * Efforts geared toward attracting foreign investment have contributed substantially to the Region's growth and development.
 - * The universities have played an important role in generating new growth in the Region both as research centers and sources of entrepreneurs.
 - * The Regional partnership approach to dealing with economic development efforts has been successful.
2. Improving the Region's economic health will depend upon strengthening the existing industrial base while capitalizing on national and international market opportunities.
 - * While the Region will never again be the dominant manufacturing center that it was during the heyday of the steel industry, there are still opportunities for future growth, particularly in the following industries and activities:

Manufacturing Industries

- ** Advanced materials
- ** Chemicals and plastics
- ** Drugs and pharmaceuticals
- ** Electronics for office, industrial and medical applications
- ** Printing and publishing
- ** Office furniture and equipment
- ** Instruments
- ** Communications equipment

ensure that the Region's growth opportunities will not be foregone due to a lack of qualified labor.

- ** Entrepreneurial business support to increase the start-up and survival rate of small businesses.
- ** Export trade development to capture a growing portion of the expanding international market.
- ** Service sector growth to capitalize on regional infrastructure such as the new Midfield Terminal and existing industries such as health care and educational and research institutions.
- ** Real estate and infrastructure development to ensure that future growth opportunities are supported.

4. Economic development leadership in the Region will have to provide the necessary resources and support to implement these additional and expanded activities.

- * The strong partnership between industry, government and academia needs to be strengthened. This partnership has been critical to the Region's economic development successes but now must be expanded to include the new players such as investment banking and risk capital industry, utilities, export trade and educational institutions at all levels.
- * Additional risk-taking and for-profit activities should be undertaken.
- * Leadership support and development is needed in the advanced technology industries.
- * Support of the Commonwealth's economic development initiatives and efforts to change the regulatory environment for businesses should be continued.

These challenges address the Pittsburgh Region's strategic locational assets and its economic development position in the Country. They are challenges which can be influenced through local action. They need to be further refined and developed into a strategy that includes goals, objectives and programs which provide a framework for action for the pursuit of business attraction, expansion and development opportunities. Duquesne Light has

provided an important first step in assessing the Region's current strengths and weaknesses so that the Region can now develop an enhanced agenda for implementing economic development initiatives in the 1990s.