

**"The 'green' economy could soon become the nation's fastest-growing job segment, accounting for roughly 10% of new jobs over the next 20 years."**

*-Forbes magazine*

## **Career and Technical Education for a Newer, Greener Economy**

A Green Paper by

The New Jersey Council of County Vocational-Technical Schools

With more than a century-long history of educating students for the workforce needs of our state and nation, New Jersey's county vocational-technical schools continuously change and update career programs to meet the demands of the ever-evolving economy.

As our nation experiences unprecedented economic change and severe unemployment, retooling career programs to address new demands is as critical as ever. Today's focus on the environment – from the race for clean energy to improving energy efficiency to reducing greenhouse gases – provides hope for a rebounding economy, a stronger workforce and a healthier planet.

With these significant changes on the horizon, New Jersey has a unique opportunity to transform existing employment sectors by thinking "green." At the same time, our state must develop education programs to prepare individuals for an entirely new sector of emerging "green" jobs in renewable energy.

What does all this mean for county vocational schools? Change. What does change mean for today's students? Opportunity.

### **Change for Good. Change for Opportunity.**

New Jersey's Energy Master Plan, coupled with the Governor's Economic Assistance and Recovery Plan, calls for an investment of \$33 billion into the state's energy infrastructure, creating over 20,000 jobs by 2020. The state estimates that 8,300 jobs will be created in installation and construction jobs, 7,400 in operations and maintenance and over 4,000 in ancillary jobs. Federal funds through the President's economic stimulus package will funnel even more much-needed money toward our state's infrastructure and environmental projects.



The New Jersey Council of County Vocational-Technical Schools is undertaking a statewide initiative to develop new education and career programs to prepare students for the green careers of today and tomorrow. The Council will develop curricula and training materials to guide programs in all 21 counties throughout the state. This coordinated approach will remain flexible enough to customize according to local and regional workforce needs.

The cornerstone of the initiative is a statewide Green-Collar Careers Advisory Committee. Throughout the state, career program advisory boards have historically guided our county vocational-technical schools as they develop new programs and update curricula to respond to employer needs and keep students up-to-date in their respective career fields. For the first time in New Jersey, a **statewide** advisory board will partner with county vocational-technical schools throughout New Jersey as they develop short-term and long-range strategies to prepare high school and adult students for the “green” jobs that will drive tomorrow’s economy.

Leaders of county vocational schools will join with New Jersey’s leading utility company executives, labor unions, higher education institutions, government leaders, and green technology manufacturers. The Advisory Committee will be led by an education consultant with experience in curriculum development.

The Committee will meet as necessary to provide guidance and expertise as they develop initiatives identified as critical steps to be undertaken by the New Jersey Council of County Vocational-Technical School. The short and long-term projects outlined in this document were identified by Council members during a workshop discussion with leaders from the Board of Public Utilities, the New Jersey Department of Labor and Workforce Development and PSEG, and further developed by a committee of county vocational –technical school superintendents, principals and staff.

*"One of the cornerstones of my economic stimulus plan is an investment in changing our energy future by converting the challenge of a 'carbon-constrained' future into an opportunity to drive a clean energy future fueled by innovation, economic opportunity, local job growth, and environmental fortification."*

*-Governor Jon S. Corzine*

## **Immediate Response**

### **Training Programs for Energy Auditors**

The NJ Council of County Vocational-Technical Schools will develop a curriculum to prepare out-of-school youth and unemployed and underemployed workers to become Energy Auditors, an entry-level job in the energy sector. These critical workers must be well-versed in identifying energy efficiencies for residential, commercial and public buildings. The state's investment through its Energy Audit Program makes these workers in high demand. As a first step toward improving energy efficiency, energy audits identify possible improvements and help property owners evaluate the cost and environmental justification. This short-term program could potentially re-educate unemployed adults and have them ready for work in this exciting new field in *weeks*, not months or years, while providing a foundation for further study in the energy industry.

### **Green Skills for Construction Trades**

The Council will also develop short-term education modules to help individuals and small employers in the construction trades "go green." These training opportunities will make it easy for working contractors, electricians, HVAC professionals and other tradespeople to expand their knowledge of the latest "green" technologies and learn new approaches to energy efficiency and sustainability.

## **Long-term Change**

### **The Greening of Career Program Curriculum**

Upgrades to existing curriculum will focus on weaving appropriate green skills into career and technical education. While students in construction trades – electricians, plumbers, HVAC installers – are among those most drastically impacted, curriculum in all career areas will be explored to insure students are prepared to enter the green workforce. Culinary students benefit from knowledge of organic farming and composting; automotive students must be retrained to work on hybrid vehicles and electric cars; virtually every worker will be required to "think green" in their future workforce. A collaborative statewide effort will ensure that students and employers in all counties benefit from the most up-to-date input from industry partners.

### **Renewable Energy Program of Study**

A new program of study will be created for students who plan further study and work in the renewable energy field. The academic and technical curriculum will put students on a career path in the areas of sustainability and renewable energy. Building on partnerships such as the PSEG Green Energy Academy in the Essex County Vocational Technical School District, this curriculum will prepare students for a variety of jobs in the Renewable Energy career pathway.