

**Statement of Dr. Larry C. Skogen
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**Before the United States Senate Budget Committee
on
“Fueling America’s Future: Exploring Our Nation’s Energy Options”**

**Bismarck State College
Bismarck, North Dakota
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Overview of Bismarck State College Energy Technology Programs

Thank you, Senator Conrad. I appreciate this opportunity to provide testimony today. Bismarck State College (BSC) plays an important role in the national energy dialogue through our energy education programs. Thus, I am very pleased to provide an overview of Bismarck State College’s Energy Technology programs.

When we see the forecasts for employment growth in the energy industry and the increasing demand for workers, it is clear that BSC has positioned itself for responding to those needs. Over the years we have received estimates from our industry partners that range from 30 to 70 percent of their workforce expecting to retire in the next 5 to 10 years.

This is supported by the U.S. Department of Labor’s 2007 High Growth Job Training Initiative Report. In the overview of the energy industry and its sectors, the report states that the average age of workers in the industry is over 50, and the industry estimates that up to half of its current workforce - more than 500,000 workers - will retire within 5 to 10 years. There is also a need to hire new workers for new power plants and other new technologies.

According to the report, if new power generation facilities are built, the industry estimates it will need 21,000 new workers to build the plants, and another 5,000 to operate them.

With our programs delivered on campus and online, Bismarck State College has become a leader in training the highly skilled workforce that is required for North Dakota and the nation’s energy industry.

BSC launched the **Power Plant Technology** program on campus in 1976 in response to industry demand, at a time when North Dakota was seeing a surge in new power plants but lacked the skilled workforce to get them up and running.

Since then BSC has added several other programs that meet the needs of the energy industry. The programs are diverse enough for the workforce needs of other industries, such as manufacturing and telecommunications. Often the training and education students receive at BSC is transferable to other technologies. For example, graduates of our Power Plant Technology program are employed at wind farms.

Federal recognition of our achievements in energy education occurred in May 2007. Through Senator Byron Dorgan's efforts, BSC was designated by the U.S. Department of Energy as the National Power Plant Operations Technology and Education Center. This designation recognizes BSC for our expertise in training and educating operators and technicians in the energy industry.

Since 2002, BSC established two programs with the Energy Providers Coalition for Education. The **Electric Power Technology** program focuses on distribution, primarily for electric utilities. A **Nuclear Power Technology** program was also developed.

BSC also offers **Electrical Transmission Systems Technology**, which is designed for system operators and dispatchers.

For many years, BSC has offered programs in **Electrical Lineworker** and **Welding**. In May, the first group of students graduated with degrees in the new **Mechanical Maintenance Technology** program. This fall, we will roll out a new **Instrumentation & Control Technology** program. We developed these programs based on industry need and request.

In January, BSC started offering a Bachelor of Applied Science degree in Energy Management. The online BAS degree is designed to educate energy workers to move into supervisory and management positions.

BSC has partnerships with 40 of the largest energy companies around the United States. Industry representatives serve on advisory committees to develop and plan the curriculum, and continue to have a direct influence on curriculum changes.

As ethanol and biodiesel plants have become key in enhancing domestic fuel supplies, BSC and industry representatives worked together to modify the Process Plant Technology curriculum so graduates would be especially qualified to work in those plants.

Another example of our close relationship with industry is that the general managers of two of North Dakota's ethanol plants are members of our Process Plant Technology Advisory Committee. It isn't surprising that these two plants - Red Trail Energy and Blue Flint Ethanol – are run primarily by BSC graduates.

BSC students have opportunities to learn more about the industry by job shadowing at plants throughout the country while still working toward their certificate or associate in applied science degree.

BSC customizes online programs to help North Dakota and out-of-state utilities “grow their own” workers locally, using hometown talent for their individual workforce needs. The N.D. Department of Labor has approved several apprenticeship programs, which are offered face-to-face, by correspondence, and/or online.

Later this month, BSC will occupy a new facility, the National Energy Center of Excellence. This was constructed through collaboration of government funding at all levels and donations from industry and individuals.

BSC has roughly 4,000 graduates of energy-related programs working throughout the country. Last year, over 1,000 students from all over the United States were enrolled in these programs. Of that number, about 400 were located in North Dakota. Also in 2007, BSC helped train approximately 300 energy workers through customized non-credit courses and apprenticeship programs.

As you can see, Bismarck State College has a long history of successfully supporting the workforce needs of the energy industry. Thank you, Senator Conrad, for allowing me this time to discuss our programs.