



# Industries of the Future-West Virginia

## Co-Funded By:

West Virginia Development  
Office

## Project Partners:

West Virginia University  
West Virginia Development  
Office  
West Virginia Industry

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## Projects with Industry

### Project Summary:

The Projects with Industry Program uses students to provide on-site technical assistance to West Virginia industry. Teams of 5-10 mechanical engineering seniors will go to a state industry and tackle a problem that deals with energy efficiency and/or production efficiency. The projects are quite varied and include companies from every major industrial sector in the state such as steel, aluminum, chemical, wood, glass, and manufacturing. The teams will make at least three visits to the company to get the necessary information and familiarity with the project. The companies will get progress reports during the projects and a final report and presentation by the student teams. Well over 100 companies in the state have benefited from these projects and many have resulted in projects at the plants incorporating the recommendations from the students. This is a great experience for the students who get a 'real world' experience in an industrial setting.

New groups of industries in West Virginia are aided each semester by the MAE senior design teams in this program that is part of the curriculum in mechanical engineering. Often, these companies both large and small do not have the expertise or the time to devote to solving energy related problems. As a supported arm of the West Virginia Development Office – Energy Efficiency Branch, the student teams are supported

in their travel and costs to complete their projects. These student teams are led by faculty with wide experience in the industrial area. Drs. Ken Means and Larry Banta are the current leaders of the projects. They both are registered professional engineers in West Virginia with many years of industrial experience.

Last year there were projects at Pratt & Whitney a jet engine manufacturer in Bridgeport, WV, Burke, Parsons, Bowlby Company in Reedy, WV who makes railroad ties, Cytec, Inc. a chemical plant at Willow Island, WV, Interstate Hardwoods Inc. a lumber plant at Bartow, WV, The projects involved material handling efficiency, alternate forms of energy usage, and heat recovery. The students are currently working on projects at GE Silicone plant near St. Marys, WV and KSD Diesel in Bridgeport, WV who make methane removal systems for coal mines. The project topics are varied, but tend to focus on energy efficiency. Many of the design solutions developed by the student teams have been adopted by the companies. There is no charge to the companies for this service.

The students that have participated in these projects have benefited greatly by having a realistic industrial team design experience that can help in obtaining employment. Companies like students that have had this type of experience, as it is close to the way most are managed today