# FINDING OF NO SIGNIFICANT IMPACT
# FOR THE
# TEXAS A&M UNIVERSITY COMBINED HEAT AND POWER PROJECT, COLLEGE STATION, TEXAS

**RESPONSIBLE AGENCY:** U.S. Department of Energy (DOE or the Department)

**ACTION:** Finding of No Significant Impact (FONSI)

**SUMMARY:** DOE completed the *Final Environmental Assessment for the Texas A&M University Combined Heat and Power Project, College Station, Texas* (DOE/EA-1775) (EA). Based on the analyses in the EA, DOE determined that its proposed action—awarding a federal grant to Texas A&M University to facilitate installation and operation of a high-efficiency combined heat and power system that would produce steam for heating and cooling as well as generate electricity—would result in no significant adverse impacts. DOE further determined that the proposed project would have potential beneficial impacts to the nation's energy efficiency and local air quality. In addition, beneficial local socioeconomic impacts could occur as a result of increased employment opportunities and spending in the project area.

**BACKGROUND:** As part of the *American Recovery and Reinvestment Act of 2009* (Recovery Act; Public Law 111-5, 123 Stat. 115), DOE's National Energy Technology Laboratory (NETL), on behalf of the Office of Energy Efficiency and Renewable Energy's Industrial Technologies Program, is providing up to $156 million in federal funding for competitively awarded agreements to facilitate the deployment of district energy systems, combined heat and power systems, waste energy recovery systems, and energy-efficient industrial equipment and processes at single or multiple installations and sites.

The federal action of providing funding for these Industrial Technologies Program projects requires compliance with the *National Environmental Policy Act of 1969* (NEPA; 42 U.S.C. 4321 et seq.), Council on Environmental Quality regulations (40 CFR Parts 1500 to 1508), and DOE's NEPA implementing procedures (10 CFR Part 1021). DOE prepared an EA to evaluate the potential environmental consequences of providing a grant for this proposed project under the Industrial Technologies Program.

**PURPOSE AND NEED:** The overall purpose and need for DOE action pursuant to the Industrial Technologies Program and the funding opportunity under the Recovery Act is to establish U.S. industry as the world leader in energy efficiency and productivity. The program's goal is to facilitate a 25-percent reduction in industrial energy intensity by 2017. The Industrial Technologies Program's three-part strategy intends to achieve this objective by:

- Sponsoring research, development, and demonstration of industry-specific and crosscutting technologies to reduce energy and carbon intensity;
- Conducting technology delivery activities to help plants access today's technology and management practices; and

- Promoting a culture of energy efficiency and carbon management within industry.

The strategy also calls for an 18-percent reduction in U.S. carbon intensity by 2012. DOE seeks to identify projects and suitable technologies that it can fund to meet this goal. Texas A&M's proposed project would also contribute to the nation's economic recovery by creating or helping to retain jobs in the United States in accordance with the objectives of the Recovery Act.

**DESCRIPTION OF THE PROPOSED ACTION:** DOE's proposed action is to provide a grant to partially fund Texas A&M's proposed project—installation and operation of a high-efficiency combined heat and power system that would produce steam for heating and cooling as well as generate electricity. The project would include (1) a 34-megawatt natural gas combustion turbine; (2) a 210,000-pound-per-hour heat recovery steam generator; and (3) an 11-megawatt steam turbine generator. DOE would provide a $10-million financial assistance grant in a cost-sharing arrangement in order to facilitate installation and operation of the project. The cost of the project is estimated at $70.3 million.

**ALTERNATIVES CONSIDERED:** In addition to the proposed action, DOE considered the no-action alternative as required under NEPA. Under the no-action alternative, DOE would not provide funds for the proposed project. For the purposes of the EA, DOE assumed the project would not proceed without DOE funding. This assumption established a baseline against which the potential environmental impacts of the proposed project were compared.

**ENVIRONMENTAL CONSEQUENCES:** DOE evaluated the potential environmental consequences of the proposed project and the no-action alternative. DOE considered 14 environmental resource areas in the EA. However, not all areas were evaluated at the same level of detail. For some of the resource areas, DOE determined there would be no impacts or the potential impacts would be small, temporary, or both, and therefore did not carry these areas forward for additional analysis. DOE focused its more detailed analyses on those resources that could require new or amended permits, have the potential for significant impacts or controversy, or interest the public, such as socioeconomics. DOE conducted more detailed analyses of potential impacts on the following resources areas: air quality, water resources, waste, and socioeconomics and environmental justice.

Operation of the proposed combined heat and power (CHP) system would increase $PM_{10}$, sulfur dioxide, and volatile organic compound emissions. These emissions could be offset by reductions in emissions at other fossil-fuel electric plants because Texas A&M would purchase significantly less electricity from the regional grid. Emission of carbon monoxide would be lower, and emission of nitrogen oxides would be much lower. The University has obtained an air emissions permit for the proposed project from the State of Texas. Texas A&M would install 45 megawatts of power-generating capacity and reduce the University's carbon dioxide emissions.

Texas A&M's proposed project would use small amounts of groundwater from existing wells and discharge small amounts of wastewater to its existing storm water system. These activities would not require amendments to the University's existing water use or wastewater permits.

DOE also evaluated socioeconomics to determine the potential benefits of the proposed project on the surrounding communities. The project is anticipated to result in small increases in local

employment and local spending, potentially providing a minor beneficial economic impact to the local communities.

The other environmental resource areas DOE evaluated for potential impacts were geology and soils; land use; aesthetics and visual resources; noise; biological resources; historic and cultural resources; health and safety; transportation; and utilities, energy, and materials. DOE determined that there would be no adverse impacts for these resource areas, or that the impacts would be small, temporary, or both. The EA provides more detail on the reasons DOE did not conduct more detailed evaluations of these areas.

Under the no-action alternative, DOE assumed the project would either be delayed, as Texas A&M sought other funding sources, or abandoned altogether. The potential environmental consequences, if the project were delayed, could be different if the project were modified. If abandoned, the potential environmental consequences would not occur. Furthermore, the potential beneficial impacts would change or not occur.

**PUBLIC AVAILABILITY:** DOE issued the Draft EA on August 8, 2010, and advertised its availability in *The Eagle* on August 8, 9, and 10. In addition, DOE sent copies of the Draft EA for public review to the Larry J. Ringer (College Station) Public Library. The Department established a 15-day public comment period that began August 8, 2010, and ended August 22, 2010, and announced it would accept comments by mail, email, or facsimile. Copies of the Final EA and this FONSI are available at DOE's NETL website at www.netl.doe.gov/publications/others/nepa/ea.html.

The Draft EA was distributed to various federal, state, and local agencies with jurisdiction or special expertise. DOE conducted formal consultation by mail with the Texas State Historic Preservation Officer, who concurred with DOE's determination that no historic resources would be affected by the project. The Department also sent an informational letter to the U.S. Fish and Wildlife Service (USFWS) and a copy of the Draft EA. The USFWS had no comments on the Draft EA.

**DETERMINATION:** On the basis of the evaluations in the Final EA, DOE determined that its proposed action, to provide a $10-million financial assistance grant, and Texas A&M's proposed project, installation and operation of a combined heat and power system, would have no significant impact on the human environment. Operation of the combined heat and power system would comply with and operate within all permit requirements. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

Issued in Pittsburgh, Pennsylvania, this 7th day of September 2010.

Anthony V. Cugini
Director
National Energy Technology Laboratory