

**FINDING OF NO SIGNIFICANT IMPACT
FOR
ELECTRIC DRIVE VEHICLE BATTERY AND COMPONENT MANUFACTURING
INITIATIVE PROJECT
FUTUREFUEL CHEMICAL COMPANY
BATESVILLE, ARKANSAS**

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE completed the *Final Environmental Assessment for FutureFuel Chemical Company Electric Drive Vehicle Battery and Component Manufacturing Initiative Project, Batesville, AR* (DOE/EA-1760). Based on the analyses in the Environmental Assessment (EA), DOE determined that its proposed action, awarding a federal grant to FutureFuel Chemical Company (FutureFuel), to partially fund the design, installation and operations of a commercial-scale plant to produce intermediate anode material for high-performance lithium-ion (Li-ion) batteries would result in no significant adverse impacts. DOE further determined that there could be beneficial impacts to the local economy and to greenhouse gas emissions from implementation of FutureFuel's proposed project.

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 Vehicle Technologies Program, is providing up to \$2 billion in federal funding under competitively awarded agreements to facilitate the construction of U.S. manufacturing plants (including increases in production capacity at existing plants) to produce advanced batteries and electric drive components.

The federal action of providing funding for these projects, known as the Electric Drive Vehicle Battery and Component Manufacturing Initiative, requires compliance with the *National Environmental Policy Act of 1969* (NEPA; 42 U.S.C. 4321 et seq.), the 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 initiative.

PURPOSE AND NEED: The overall purpose and need for DOE action pursuant to the Vehicle Technologies Program and the funding opportunity under the Recovery Act are to accelerate the development and production of various electric drive vehicle systems by building or increasing domestic manufacturing capacity for advanced automotive batteries, their components, recycling facilities, and electric drive vehicle components in addition to stimulating the U.S. economy. This and the other selected projects are needed to reduce the U.S. petroleum consumption by investing in alternative vehicle technologies. The proposed project will also meaningfully assist

with the nation's economic recovery by creating manufacturing 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 FutureFuel's proposed project -- design, installation, and operation of a commercial-scale plant to produce intermediate anode material (a coated and dried petroleum coke) for high-performance Li-ion batteries. An existing FutureFuel building (48,000 square feet, 5 stories) would be retrofitted to accommodate the proposed plant. The existing building, which would be reconfigured, currently includes over half of the major process equipment and pumps required to produce intermediate anode material. The goal is to increase the product supply from the current 1,000,000 pounds per year at an off-site plant to 10,000,000 pounds per year. Upon completion in 2011, the plant would have the capacity to process 10,000,000 pounds per year of intermediate anode material sufficient for supplying over 2,000,000 hybrid-electric vehicles (HEVs).

The proposed project would use an existing building, formerly utilized to produce a bleach activator. Most of the modifications would be limited to changes to reactors, pumps, piping, centrifuges, dryers, process vent systems, and instrumentation for process equipment located inside the existing building. Outside of the plant, a concrete loading dock would be added to the southeastern corner; a nitrogen air separator plant would be installed in the utilities area adjacent to other infrastructure to supply nitrogen to the anode material dryer; and, to the west of the existing tank farm, two 35,000-gallon above-ground tanks (ASTs) would be installed on a concrete pad with concrete containment walls. The two ASTs would be used to store xylene and petroleum pitch, which would be used in the manufacturing process. The nitrogen air separator plant, including absorbers, would be 14 feet wide by 14 feet long by 20 feet tall and would be installed on a new concrete pad approximately 54 feet by 23 feet in a previously graded utility area. The separator plant would consist of two compressors and air and nitrogen surge tanks.

This plant would support anticipated growth in the Li-ion battery industry and, more specifically, the electric drive vehicle industry and HEV industry. DOE would provide \$12.6 million in financial assistance in a cost-sharing arrangement with the project proponent, FutureFuel. The cost of the project is estimated at \$25.2 million. It is anticipated that 33 permanent jobs would be created.

ALTERNATIVES CONSIDERED: In addition to the proposed project, 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 that the project would not proceed without DOE funding. This assumption establishes a baseline against which the potential environmental impacts of the proposed project are compared.

ENVIRONMENTAL CONSEQUENCES: DOE evaluated the potential environmental consequences of the proposed project and the No Action Alternative. DOE considered 17 environmental resource areas in the preparation of the EA. However, not all areas were evaluated at the same level of detail. DOE focused more detailed analysis on areas that would require new or revised permits, have the potential for significant adverse environmental impacts,

or have the potential for controversy. The areas DOE evaluated in more detail included air quality and greenhouse gas, surface water and groundwater, transportation and traffic, solid and hazardous waste, and human health and safety. For these areas, DOE determined there would be potentially minor environmental impacts.

The FutureFuel facility would not be a major source of air pollutants as defined by the National Ambient Air Quality Standards of the Clean Air Act and Arkansas Department of Environmental Quality (ADEQ) regulations. FutureFuel has determined, however, that it would be required to obtain a Title V permit modification from ADEQ. Construction of the proposed project would emit exhaust emissions from equipment used in construction, and coupled with likely fugitive dust emissions, could cause minor, short-term degradation of local air quality. Overall, the proposed operations would have a minor adverse impact on air quality. Based on general knowledge and the type of technology which is being proposed, DOE does not expect that the emissions would increase significantly beyond the current emissions rates. Minor measureable increases would occur for particulate matter 10 microns or less (PM₁₀), volatile organic compounds (VOCs), and organic hazardous air pollutants (HAPs). Although air emissions from the proposed process are expected to be measurable, they would result in minimal consequences; the proposed process's operating control devices would be used to limit emissions, and emissions would remain below permit limits.

In relation to greenhouse gas emissions, an increase in the manufacture and use of advanced batteries would result in the benefits of reduced reliance on fossil fuels and long-term improvement in air quality through reduced emissions of greenhouse gases (and other pollutants).

During construction and operation activities of the FutureFuel facility, there could be accidental spills of materials (e.g., fuel, oils, antifreeze, etc.) from equipment, which would have the potential to runoff into adjacent surface waters or could migrate into groundwater resources. DOE determined, however, that surface water contamination would be unlikely as the closest receiving surface water is 0.5 miles to the south of the site. Additionally, site disturbance resulting from construction would be less than 1 acre. Any change to the project that would result in disturbance in excess of 1 acre would need to comply with the terms of storm water construction general permit ARR150000 prior to the start of construction.

DOE determined the potential groundwater impacts would be minor as FutureFuel would employ best management practices to avoid, minimize, and respond to spills that could affect groundwater. Operations of the proposed project would also increase the amount of water required for operations and would increase the amount of wastewater treated and discharged by approximately 12 percent. DOE determined these increases would be negligible, representing a small fraction of the water currently withdrawn from the White River, and the discharges would be similar in nature to wastewater produced by other existing operations and would not be expected to change the chemical composition or thermal characteristics of the receiving waters. As part of the proposed project, an oil water separator would be added to further minimize the potential for adverse impacts from the spills of contaminants. FutureFuel would also continue to adhere to the general monitoring and reporting requirements contained in its existing National

Pollution Discharge Elimination System (NPDES) Permit. No changes to the existing NPDES Permit are anticipated; FutureFuel, however, would request a permit modification if changes to wastewater discharges were identified. DOE determined overall impacts to surface waters and groundwater from the proposed project would be minor.

Short-term but measurable adverse impacts to traffic are expected during the construction phase. DOE determined, however, these short-term impacts would be minor and localized, with Gap Road and State Highway 69 being the most impacted. Both of these roads have adequate capacity to handle the additional traffic. Once operational, the proposed project would be expected to result in a minor long-term increase in vehicle traffic. DOE determined the small increase in traffic would have only a minor impact on the surrounding community.

Proposed operations at the new plant would increase the materials currently used, and would introduce two new materials (coke and pitch). A 35,000-gallon AST of xylene and a 35,000-gallon AST of pitch would also be added to the facility. An increase of 13.1 million pounds per year of hazardous waste consisting of pitch and xylene would be generated and incinerated as beneficial fuel onsite, minimizing waste generation. As the ASTs would be equipped with secondary containment and FutureFuel has a Spill Prevention, Control, and Countermeasures (SPCC) Plan and emergency procedures in place, DOE determined the potential for impact to solid and hazardous waste from the new tanks would be minor.

DOE determined the risk of a release from the proposed project would not increase the potential for exposure to offsite receptors from what currently exists. FutureFuel would have to revise its Emergency Response and Safety Plans to incorporate the new operations, including the loading dock, nitrogen air separation unit package plant, and two new ASTs. The principal hazards associated with plant operations (exposure from chemical handling and equipment operations) would be contained within buildings and secure areas of the property. The facility's existing safety plan would be modified to address any new safety hazards and would ensure that appropriate training would be provided to protect workers. With appropriate safety procedures in place and use of personal protective equipment, DOE determined the potential for an impact to the health and safety of workers would be minor.

DOE also evaluated socioeconomics to determine the potential positive benefits of the proposed project on the affected communities. The proposed project is anticipated to result in small increases in local employment opportunities (approximately 33 permanent jobs) and local spending, potentially providing a beneficial impact to the local community.

The other environmental areas DOE evaluated for potential impacts were: land use, meteorology, socioeconomics, environmental justice, visual resources, cultural resources, geology and soils, wetlands and floodplains, vegetation and wildlife, noise, and utilities and energy use. DOE determined that there would be no potential for adverse impacts for these resource areas, or that the impacts would be negligible, temporary, or both. The EA gives the reasons DOE did not conduct more detailed evaluations.

Under the No Action Alternative, the project would either be delayed, as FutureFuel sought other funding sources, or abandoned altogether. If abandoned, the potential environmental consequences and benefits would not occur.

PUBLIC AVAILABILITY: DOE distributed the Draft EA on July 18, 2010, and advertised its release in the Searcy Daily Citizen on July 18 and 20, and the Batesville Daily Guard on July 19 and 20, 2010. In addition, DOE sent copies for public review to the Independence County Library, 368 East Main Street, Batesville, AR 72501. DOE established a 15-day public comment period which began July 18, 2010, and ended August 1, 2010. DOE announced it would accept comments by mail, e-mail, and facsimile.

The Draft EA was distributed to various federal, state, and local agencies with jurisdiction or special expertise. DOE conducted formal consultations by mail with the Arkansas Field Office of the U.S. Fish and Wildlife Service (USFWS) in Conway, Arkansas; the Arkansas Natural Heritage Commission in Little Rock, Arkansas; and the Arkansas Historic Preservation Program in Little Rock. In each case, DOE received correspondence supporting a determination of no potential impacts to threatened or endangered species and critical habitat, and no potential impacts to properties listed on or eligible for inclusion in the *National Register of Historic Places*.

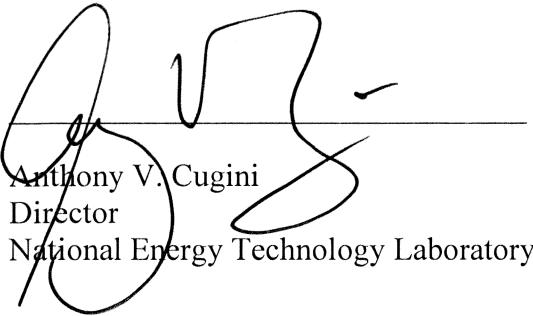
Copies of the Final EA and this FONSI will be sent to stakeholders that provided comments or consultation, and will be available on DOE's National Energy Technology Laboratory web site at <http://www.netl.doe.gov/publications/others/nepa/ea.html>.

COMMENTS: Comments were received from three entities, the Arkansas Department of Environmental Quality (ADEQ), the USFWS, and the Department of Arkansas Heritage, Deputy State Historic Preservation Office (SHPO). ADEQ provided comments regarding storm water construction permitting and FutureFuel's NPDES Permit. The USFWS provided comments regarding the likelihood of the project to adversely impact endangered or threatened species. The SHPO stated that the undertaking would have no effect on historic properties. DOE and FutureFuel addressed these comments, and responses to the comments are included in Appendix B of the Final EA.

DETERMINATION: On the basis of the evaluations in the Final EA, DOE determined that its proposed action, to provide a \$12.6 million federal grant, and FutureFuel's proposed project, to design, install and operate a commercial-scale plant to produce intermediate anode material for high-performance Li-ion batteries in Batesville, AR, would have no significant impact on the human environment. Although the proposed project would cause air emissions, require additional process water and create additional wastewater discharge, generate increased traffic, create additional manufacturing wastes; and require the use and storage of additional materials; these impacts would be minor. The project proponent would be required to adhere to applicable

permit requirements during construction and operations. All other potential environmental impacts identified and analyzed in the EA would be negligible. Therefore, preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI.

Issued in Pittsburgh, PA, this 20 day of August 2010.



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