

**FINDING OF NO SIGNIFICANT IMPACT
FOR
PROJECT STELLAR
MICROPOROUS ASSETS CORPORATION
DANVILLE, VIRGINIA
DOE/EA-2272**

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

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The DOE National Energy Technology Laboratory (NETL) completed the Final Environmental Assessment (EA) for Microporous Assets Corporation (Microporous) – Project Stellar (DOE/EA-2272). Based on analyses in the EA, DOE determined that its Proposed Action – awarding a grant to Microporous to partially fund the new facility – would result in no significant adverse impacts.

BACKGROUND: DOE’s NETL, on behalf of the Office of Manufacturing and Energy Supply Chains issued the Funding Opportunity Announcement (FOA) DE-FOA-0002907 Advanced Energy Manufacturing and Recycling Grant Program. Microporous was awarded a grant under this FOA to partially fund the construction of its new facility.

Microporous’s new facility would support the construction of a coated lithium-ion (Li-ion) battery separator plant on Lots 1 and 2 of the Southern Virginia Megasite property near Danville, VA. This new facility would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. If approved, DOE’s Proposed Action would provide \$100,000,000 in financial assistance in a cost-sharing arrangement with Microporous, who would provide \$425,000,000 towards the total project costs of \$525,000,000.

Based on the scope of the Proposed Project, DOE prepared an EA to evaluate potential environmental and socioeconomic consequences of providing financial assistance for the proposed project in accordance with the requirements of the National Environmental Policy Act (NEPA), as amended (42 U.S.C. 4321 et seq.).

PURPOSE AND NEED: The overall purpose and need for DOE action pursuant to the Office of Manufacturing and Energy Supply Chains is to support the American industrial base; establish secure, resilient domestic energy supply chains, and revitalize economies in American communities. Microporous’ project was selected due to its potential to create hundreds of permanent jobs (including 85% of those jobs going to employees located in distressed communities) and its project plan to produce world-class separators for lithium-ion batteries and secure domestic manufacturing of a market currently dominated by China.

DESCRIPTION OF THE PROPOSED ACTION: DOE’s Proposed Action is to provide a funding grant for Microporous’ Proposed Project. The Proposed Action applies to only Phase I of the overall development planned by Microporous, although a total of four Phases are anticipated to be completed. The operations at the proposed Microporous facility include the development of

a coated Li-ion battery separator plant at the property located at Lots 1 & 2 in Danville, VA within the Southern Virginia Megasite, for Li-ion batteries integral to electric vehicle (EV) supply chains. This project would secure 600 million m² per year of domestic separator manufacturing capacity, strengthening the United States market. Microporous would install twenty aqueous coating lines for both ceramic (alumina, boehmite) and polymer (PVdF, PMMA) coating, complete with slurry mixing and slitting equipment. Within the DOE grant's 3-year performance period, Microporous would expect to create approximately 282 permanent jobs based on a three-year performance period of Phase I and would ensure that at least 85% of full-time employees are from local distressed communities by the completion of the project. To achieve its purpose, the plant would consist of manufacturing buildings, an administrative building, a utility building, and storage silos.

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. Without DOE funding for the project to be completed as proposed, the applicant would need to identify, obtain, and use an alternative source of funds equal to the amount of funding that the applicant would have received from DOE under the above-listed funding opportunity. DOE recognizes that this proposed project might continue if DOE decides not to provide financial assistance. If Microporous' project proceeds without DOE's financial assistance, the potential impacts would be essentially identical to those under DOE's action alternative. To allow a comparison between the potential impacts of the projects to be implemented and the impacts of not proceeding with the projects, for purposes of this environmental analysis, DOE assumes that the proposed project would likely not proceed without DOE assistance.

ENVIRONMENTAL CONSEQUENCES: DOE considered the potential effects of the Proposed Action and No-Action Alternative on numerous environmental resource areas in preparation of the EA; however, not all resource areas were evaluated at the same level of detail. DOE determined that land use, floodplains, sole source aquifers, airport clear zones and accident potential zones, community services, parks and recreation, and prime and unique farmland would either not be affected or would sustain negligible impacts from the proposed project and thus was dismissed from detailed analysis in the EA. The areas that DOE evaluated in more detail included surface water and groundwater, socioeconomic, transportation and traffic, greenhouse gas emissions, air quality, cultural resources, wetlands, biological resources (vegetation and wildlife), noise and vibration, geology, topography and soils, regulated wastes (solid and hazardous wastes), utilities and energy use, and public and occupational health and safety. For these areas, DOE determined there would be negligible or minor potential environmental impacts.

SURFACE WATER AND GROUNDWATER: Construction of the Proposed Project would have minor temporary indirect impacts from runoff to surface waters, but adherence to permits (particularly General Permits for construction of storm water utilities) would make significant impacts unlikely. Sources of inputs for the Proposed Project include precipitation and runoff from the constructed building into storm water utilities that are managed by the City of Danville, Sanitation Division. Stormwater runoff from the Proposed Project is ultimately discharged to the City of Danville municipal stormwater drainage system. During operations, discharges of process water to the local POTW would be managed according to requirements of authorizations obtained

from the Commonwealth of Virginia. There is no current or anticipated direct use of groundwater at the Southern Virginia Megasite, so impacts to groundwater would be negligible.

WETLANDS: Current development plans for the Proposed Project avoid incursion into jurisdictional freshwater aquatic/wetland resources which have been identified within the area of Lots 1 and 2. If development plans are revised to include placement of fill in a wetland or other aquatic resource, avoidance and minimization measures would be defined in conjunction with application for appropriate permits and approvals under Section 404 and 401 of the Clean Water Act, and applicable state statutes. Thus, impacts to wetlands would be negligible.

VEGETATION AND WILDLIFE: Impacts to listed endangered or threatened species or designated critical habitat from the Proposed Project are anticipated to be negligible. Phase I of Project Stellar would be constructed on the west half of Lot 1. Future expansion (Phase II) would occur on the eastern half of Lot 1, and the next expansion phases (Phase III and IV) would be constructed on Lot 2. Lot 1 is currently cleared and graded, and Lot 2 is currently forested. It is anticipated that forested and vegetated land would be cleared for Phase III and IV of the Proposed Project. Trees within or immediately adjacent to the project area would be removed or otherwise potentially impacted during construction activities. However, reasonable precautions would be taken to protect against adverse impacts to established trees. No instream work is planned for the Proposed Project. Comments received from the Virginia Department of Wildlife Resources (DWR) stated that given the scope and location of the proposed work, DWR does not anticipate significant adverse impacts upon listed species or other designated resources under its jurisdiction. In addition, the Virginia Department of Conservation and Recreation (VDCR) commented that the Proposed Project would not affect any documented state-listed plants or insects, and there are no Virginia State Natural Area Preserves within the project vicinity.

DOE initiated consultation with the U.S. Fish and Wildlife Service – Virginia Ecological Services Field Office regarding the Proposed Action and Proposed Project by completing the Section 7 online review process required by the Virginia Ecological Services Field Office. DOE submitted its initial determinations regarding potential impacts to threatened and endangered species, and critical habitat (“May Effect” determination for the Tricolored bat, “No Effect” on the Green Floater, “Not Likely to Adversely Affect” the Monarch Butterfly, and “No Effect” on critical habitat) in November 2024. The Virginia Ecological Services Field Office replied to DOE and recommended a “Not Likely to Adversely Affect” determination for the Tricolored bat if the project could avoid tree removal and trimming during a time-of-year restriction from April 1 - November 15 should the Tricolored bat be listed throughout the duration of the project. Southern Virginia Megasite owners and developers have committed to adhering to this time-of-year restriction. Based on recent developments of the Southern Virginia Megasite (including the Proposed Project site) and surveys conducted within close proximity to the Proposed Project, presence of minimal natural habitat, and resulting low potential for wildlife use, use of the USFWS IPaC Tool, databases described above, and communication with the U.S. Fish and Wildlife Service – Virginia Ecological Services Field Office, DOE has made a final determination that the Proposed Action and DOE’s Proposed Project would have No Effect on the Green Floater, Not Likely to Adversely Affect the Monarch Butterfly, and Not Likely to Adversely Affect the Tricolored bat. The Proposed Project would also have No Effect on critical habitats.

AIR QUALITY: Minor, temporary, intermittent air emissions are anticipated during Proposed Project construction which could present a short-term, minor adverse impact on air quality. Air emissions of CO, NOX, SO₂, PM₁₀, PM_{2.5} and volatile organic compounds associated with construction equipment and/or vehicles are anticipated during active use of heavy machinery, site grading and leveling, and installation of equipment. Construction material (i.e. mason supplies) deliveries via roadways can be anticipated during the construction of the Proposed Project. As such, in addition to tailpipe emissions, surface soil disturbances during excavation and grading could result in generation of fugitive dust. Use of EH&S protocols as applicable (e.g. training, industry best practices, and PPE) would mitigate any potential health impacts to personnel within the Proposed Project, and for private residences in the larger area. Operations of the Proposed Project are subject to oversight by the Virginia Department of Environmental Quality – which includes monitoring and reporting on air emissions to maintain regulatory compliance. In particular, the Proposed Project would require a Virginia Department of Environmental Quality minor new source air permit. Based upon existing Microporous facilities with similar operations, the Proposed Project anticipates a closed-loop processes with limited air emissions, primarily associated with natural gas combustion for boiler operations. New technologies proposed for the Proposed Project boast low operational emissions of potentially harmful pollutants. Based on the factors outlined above, the Proposed Project’s operational impacts to air quality are expected to be direct, long term, and minor.

NOISE AND VIBRATION: The Proposed Project is located in a Quest Site Solutions-certified Southern Virginia Megasite designated for industrial use, including the area of Lots 1 and 2. The nearest population (sensitive receptor) is rural (farm) residences, the closest of which is adjoining to the Proposed Project, approximately 0.10 miles east from the planned operational area of the Proposed Project. The nearest residential neighborhood to the Proposed Project is roughly 2 miles southwest of the Proposed Project. The Proposed Project is roughly five miles from the nearest school and about 1 mile from the nearest existing community structure (a church). Other sensitive receptors, including parks, libraries, hospitals, and other care facilities, etc. do not occur within a mile or more radius to the Proposed Project. Population density is low in this rural area, with private residences scattered on large-acreage parcels surrounding the entire Southern Virginia Megasite. Minor increase in noise and vibration is anticipated temporarily for construction and operations. Construction noise would be anticipated as commensurate with comparable industrial development, and equivalent to other anticipated industrial construction on adjacent parcels within the Southern Virginia Megasite. Short-term and intermittent construction noise and vibration would generally be limited to the immediate vicinity of Lots 1 and 2. Construction during the prohibited time range is not currently anticipated and construction during general work hours (between 8:00 a.m. through 5:00 p.m.) can mitigate any potential concerns on the effect on the nearby properties. Operation of the facility would result in a minor, long-term increase in noise as an average increase in ambient noise is expected for industrial activities, increase in traffic to and from the site, and overall increase in noise in commensurate with comparable industrial development, and with other planned industrial construction on adjacent parcels within the Megasite. Primary noise sources during operations are anticipated from industrial activities within enclosed facility structures, and from truck and employee-vehicle traffic accessing Lots 1 and 2, and a possible incremental increase in rail traffic when the railway is constructed associated with material delivery and product shipment. Heating, ventilation, and air conditioning would be installed externally on facility structures, with small contributions to low-decibel ambient noise.

REGULATED WASTES (SOLID AND HAZARDOUS WASTES): The construction phase of the Proposed Project is expected to generate negligible to minor, direct, and temporary impacts from regulated waste. Solid waste and sanitary waste generated during construction activities would be limited to common construction-related waste streams. It is Microporous' responsibility to follow applicable state permits to discharge any construction-related waste streams. In-state or out-of-state landfills or recycling facilities would have the capability and capacity to accept these waste (if documented and approved), and therefore, there would be negligible impacts associated with the disposal of these materials. In addition, the Facility would implement BMPs to minimize the quantity of non-hazardous solid waste generated, as appropriate, during construction and to ensure proper handling of materials. Operations of the facility under the Proposed Project are expected to incur minor, direct, long-term impacts from regulated wastes. There would be certain non-hazardous waste production generated during facility operations, including municipal solid waste as well as any applicable chemicals used. No underground storage tanks are included in the Proposed Project. Materials would be stored in the appropriate containers designed for spill containment in accordance with BMPs and any applicable regulatory requirements. The initial operations as a result of the Proposed Project would have a negligible impact on the overall quantity of hazardous waste generated and the amount of waste that would require offsite treatment and disposal. Microporous intends to recycle or reuse byproducts and non-hazardous waste to the maximum extent possible.

UTILITIES AND ENERGY USE: The Southern Virginia Megasite has been developed by the local government to include water, wastewater treatment, natural gas, electricity, and fiber optic utility availability to Lots 1 and 2 – the location of Microporous' Proposed Project. Construction of the Proposed Project would have short-term, negligible impacts on utilities, specifically electricity, water, gas, and sanitary sewer. During the construction period the proposed Project would rely on portable generators, water tanks, and portable bathrooms to accommodate increases in the demand for water, electricity, and sewer from workers and equipment at the Proposed Project site. New permanent utility connections would be installed during the construction period but not be relied on for services in new buildings until those buildings are fully operational and occupiable. Proposed Project operations would have minor direct impacts on local utilities and energy use, as the industrial processes involved would increase the demand for electricity, water, and gas at the Proposed Project, and increase the amount of wastewater generated on the site. However, these increases would not impact availability or strain on these resources or services for other users. Microporous plans to incorporate water recycling into the facility to increase water use efficiency during operations, wastewater treatment providers have indicated that they would be able to process and treat Microporous' wastewater discharge within existing capacity, and natural gas and electricity use for steam boilers and electrical demand would be within capacities of utility providers.

TRANSPORTATION AND TRAFFIC: Short term impacts to traffic and transportation are expected to be negligible during the construction phase of the Proposed Project. Construction of the facility is anticipated to take place over four phases, although Phases II – IV are in unconfirmed, conceptual stages and not funded under DOE's Proposed Action. Phase I would include the construction of production, warehouse, office, support, and utility buildings, installation of equipment and storage silos, and extension of utilities to service newly constructed

buildings. Phase I and Phase II of building construction is anticipated to last 12 months each, creating jobs that would be generated along with a corresponding increase in traffic to the area. The Proposed Project would generate a minor long-term increase to traffic and transportation from anticipated daily semi-truck and personal-vehicle traffic into and out of the industrial park. Microporous expects all raw materials and finished goods to be transported by truck in Phase I, and all raw materials (except for base film) and finished goods by truck through Phase II. Phase I operations are expected to require 2,560 semi-truck trips per year for the importing of raw materials and outgoing shipments of finished goods. Trucks would use the established road network to access the industrial park. These roadways are designed to accommodate industrial semi-truck traffic. Once Phases I through IV are completed and in operation, the facility would add approximately 800 employees within the first six years of operation with an expected corresponding daily number of personal vehicles at the site each day. The facility's site design would include adequate and sufficient parking, loading, and maneuver space to accommodate all incoming vehicles and semi-trucks.

GEOLOGY, TOPOGRAPHY, AND SOILS: The Proposed Project's construction impacts to geology, soils, and topography are anticipated to be direct, long term, and minor. Construction would include excavation, dredging, surficial grading, soil movement, and/or topsoil loss throughout the project area to accommodate facility buildings, future additions, parking lots, and retention pond construction. Facility construction would include drilling into a stable soil unit with reinforced caissons to support structure foundations. The lack of karstic conditions within the Proposed Project for proposed construction and operations are not anticipated to cause adverse geological impacts. Based on the precautions and best management practices adhered to during construction, soil erosion it anticipated to be minimal. Planed levelling and grading activities would redistribute soils to accommodate planned development of the Proposed Project. Operational activities for the Proposed Project would have negligible impacts on geology, topography, and soils.

GREENHOUSE GASES: Construction of the Proposed Project would result in temporary greenhouse gas (GHG) emissions from sources including vehicle transportation of equipment and materials, use of construction machinery, and concrete curers. Use of electricity during construction may indirectly increase GHG emissions depending on electric generation sources/methods employed by local utilities serving the Proposed Project. However, these GHG emissions would be negligible. Estimated operational annual greenhouse gas emissions for Phase I of the Proposed Project are 70,521 metric tons, increasing to 131,475 metric tons if Phase II becomes operational.

SOCIOECONOMICS: The proposed project would result in a minor, beneficial impact on socioeconomics during construction and operations. During the Proposed Project's construction period, short-term construction workers would be employed. It is anticipated that these jobs would be filled by local and/or nearby residents, aiding the overall household incomes of local residents and providing reliable employment for the duration of the construction. This would benefit residents who may be currently unemployed or underemployed, residing and paying taxes in Pittsylvania County or the surrounding area. Operations of the Proposed Project, along with the additional three phases (once completed), would introduce new, full-time jobs in a growing market sector and to engage under-employed Americans in the workforce (approximately 800 new

permanent jobs within the first six years of operations, and potentially up to 2,015 permanent positions over the life of the facility). It is anticipated that the number of jobs would increase as phases of the Proposed Project are completed and as the plant is able to expand. An influx of population is expected in the surrounding area of the Proposed Project, but the impact to housing demand and population from the Proposed Project is expected to be minor.

CULTURAL RESOURCES: DOE initiated consultation with the Virginia Department of Historic Resources (DHR) on June 27, 2024, and initiated tribal consultation with the Delaware Nation of Oklahoma and Monacan Indian Nation on July 3, 2024, by formal letter. The DHR and Tribal Nations were also provided copies of the Draft EA as part of the 30-day public comment period. In a letter dated January 14, 2025, DHR found that a determination of No Adverse Effect is appropriate for DOE's Proposed Action and also accepted the Unanticipated Archaeological Discoveries Plan developed for DOE's Proposed Action. No comments on the consultation materials submitted or the Draft EA were received from the Delaware Nation of Oklahoma or the Monacan Indian Nation.

PUBLIC AND OCCUPATIONAL HEALTH AND SAFETY: Risk to public and occupational health and safety from the Proposed Project construction and operations are expected to be minor, direct and indirect, and long-term. Numerous regulatory permitting requirements and planned mitigations governing Proposed Project construction and operations address factors relevant to public and occupational health and safety. Existing corporate policies of Microporous or future updates thereof, further address relevant health and safety risk factors and would be followed throughout construction and operations.

PUBLIC AVAILABILITY: The Draft EA was released for public review and comment and advertised its release in the *Danville Register and Bee* on December 3, December 5, and December 7, 2024, and in the *Chatham Star-Tribune* on December 4, 2024. The Draft EA was published online on DOE's NETL EA website (<https://netl.doe.gov/node/6939>) and DOE's NEPA EA website (<https://www.energy.gov/nepa/doe-environmental-assessments>). In addition, DOE sent one hard copy for public review to the Ruby B. Archie Public Library in Danville, VA. The public was invited to provide oral, written, or e-mail comments on the Draft EA to DOE during the comment period, which occurred from December 3, 2024, through January 3, 2025. Copies of the Draft EA were also distributed to cognizant federal and state agencies and Tribal Nations. All comments received are located in Appendix B of the Final EA.

During development of the Draft EA, and prior to the public comment period, DOE initiated consultations with the Virginia DHR, which serves as the Virginia state historic preservation office. DOE also initiated consultations with the Delaware Nation of Oklahoma, Monacan Indian Nation, U.S. Army Corps of Engineers – Norfolk District, and U.S. Fish and Wildlife Service – Virginia Ecological Services Field Office. Through these consultations, DOE provided information about the proposed project and solicited input for consideration both prior to finalizing and releasing the Draft EA for public comment and then again concurrent with the public release of the Draft EA.

PUBLIC COMMENTS: No comments were received from individuals of the general public. DOE received comments on the Draft EA from the state of Virginia Department of Environmental

Quality, Department of Wildlife Resources, Department of Conservation and Recreation, and Department of Health. Through consultations, comments were also received from the Virginia Department of Historic Resources and the U.S. Fish and Wildlife Service - Virginia Ecological Services Field Office. DOE acknowledges receipt of these comments, and all comments received are included in Appendix B of the Final EA.

MITIGATION REQUIREMENTS: No additional mitigation measures beyond those contained in permits obtained or to be obtained by Microporous from the appropriate permitting authorities are required.

DETERMINATION: Based on information presented in the Final EA (DOE/EA-2272), DOE finds that the Proposed Action to provide a grant to Microporous would not significantly affect the quality of the physical, biological, or human environment. Therefore, preparation of an Environmental Impact Statement is not required, and DOE is issuing this FONSI.

Copies of the Final EA and this FONSI are available at DOE's NETL EA website at: <https://netl.doe.gov/node/6939>. The EA and FONSI are also available at DOE's NEPA – EA website at <https://www.energy.gov/nepa/doe-environmental-assessments>.

Copies of the Final EA and FONSI can also be obtained by sending a request to:

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