DRAFT
Finding of No Significant Impact
Environmental Assessment for a Microgrid with Backup Power at Fort Sill, Oklahoma

U.S. Army Garrison Fort Sill has prepared an environmental assessment (EA) in accordance with the National Environmental Policy Act (NEPA) of 1969 and the U.S. Army (Army) implementing regulations for NEPA at 32 CFR Part 651, *Environmental Analysis of Army Actions*. This Finding of No Significant Impact (FONSI) herein incorporates the EA by reference. The attached Final EA was prepared to present and evaluate the alternatives, including the No Action Alternative.

PROJECT LOCATION: The proposed location is Fort Sill, located near Lawton, Oklahoma.

PURPOSE AND NEED FOR THE ACTION: The purpose of the proposed action is to provide secure and reliable access to energy resources at Fort Sill. The proposed action is needed to sustain critical mission capabilities and mitigate risks posed by energy disruptions that could degrade Fort Sill's capabilities. The proposed action is also needed to comply with AD 2020-03; meet the goals of the Army Energy Security and Sustainability strategy to invest in renewable energy; and withstand, respond to, and rapidly recover from regional energy disruptions.

PROPOSED ACTION: The proposed action includes three primary elements: (1) the construction, operation, and maintenance of solar PV arrays that would produce up to 24 megawatts (MW) of renewable electric power; (2) the construction, operation, and maintenance of overhead and/or underground tie-lines from the solar PV arrays to a Reciprocating Internal Engine Combustion (RICE) facility; and (3) the construction, operation, and maintenance of a Battery Energy Storage System (BESS) with a maximum energy storage capacity of 8 MW per hour (MWh).

ALTERNATIVES: Four alternatives and the no action alternative were considered. Descriptions of these alternatives follow.

No Action Alternative. Fort Sill would not implement the proposed action and the existing electrical infrastructure on Fort Sill would remain unchanged.

Alternative 1 – 12 MW Solar PV Array with 4 MWh BESS at Artillery Village. Alternative 1 involves the construction of up to 12 MW solar PV array with a 4 MWh BESS that encompass approximately 66 acres in the Artillery Village area, located east of Sheridan Road and the Fort Sill visitors center, west of Fort Sill Boulevard, directly north of U.S. Highway 62, and south of the Buffalo Soldier Acres housing complex. Figure 2-3 in the EA provides an overview of alternative 1.

Fort Sill would use approximately 66 acres for the construction, operation, and maintenance of a solar PV array with a total of 40,005 fixed tilt solar PV panels that would have the potential to generate an annual output of up to 28,000 MWh. The solar PV array area would be accessed via Haws Street. Alternative 1 would require the construction of a 13.2-kilovolt (kV) overhead tie-line connecting the solar PV array to the RICE facility.

To achieve the energy storage capacity of 4 MWh, approximately four to eight BESS containers would be needed, with each container providing between 0.5 MWh and 1.0 MWh. Each BESS would be up to a 40-foot containerized design and would include the features described in Section 2.2.3 of the EA. The location of the BESS would be determined by engineers as part of the final project design process.

Alternative 2 – 12 MW Solar PV Array with 4 MWh BESS in the 3900 Area. Under alternative 2, up to 12 MW solar PV array with a 4 MWh BESS would be constructed in the 3900 area. The solar PV array and BESS encompass approximately 65 acres and would be located west of Sheridan Road, south of Mow-Way Road, east of East Branch Wolf Creek, and north of U.S. Highway 62. Figure 2-3 in the EA provides an overview of alternative 2.

Fort Sill would use approximately 65 acres of land for the construction, operation, and maintenance of a solar PV array with a total of 40,005 fixed tilt solar PV panels that would have the potential to generate an annual output of up to 28,000 MWh. The solar PV array area would be accessed via Mow-Way Road. Two gravel roads would need to be constructed: an 18-foot-wide gravel road originating from the RICE facility and proceeding southerly for 2,452 feet along the east edge of the solar PV array and an 18-foot-wide gravel road originating from the RICE facility and proceeding easterly for 920 feet and then southerly for 2,486 feet along the west edge of the solar array.

Alternative 2 would require the construction of a 13.2-kV underground tie-line connecting the solar PV array and BESS to the switchgear in the generator building at the RICE facility. Approximately four to eight BESS containers would be needed to reach the total storage capacity of 4 MWh. Each BESS would be up to a 40-foot containerized design and would include the features described in Section 2.2.3 of the EA. The location of the BESS would be determined by engineers as part of the final project design process.

Alternative 3 – 12 MW Solar PV Array in Artillery Village with 4 MWh BESS in the 3900 Area. Under alternative 3, up to 12 MW solar PV array in Artillery Village and a 4 MWh BESS in the 3900 area would be constructed. The solar PV array encompasses approximately 66 acres. Alternative 3 would also require the construction of a 13.2-kV overhead tie-line and a short underground tie-line. Figure 2-5 in the EA provides an overview of alternative 3.

Fort Sill would use approximately 66 acres for the construction, operation, and maintenance of a solar PV array with a total of 40,005 fixed tilt solar PV panels that would have the potential to generate an annual output of up to 28,000 MWh. The solar PV array area would be accessed via Haws Street. Alternative 3 would require the construction of a 13.2-kV overhead tie-line connecting the solar PV array at Artillery Village to the BESS in the 3900 area with a short underground section of tie-line from the BESS to the switchgear generator building at the RICE facility.

Approximately four to eight BESS containers would be needed to reach the total storage capacity of 4 MWh. Each BESS would be up to a 40-foot containerized design and would include the features described in Section 2.2.3 of the EA. The location of the BESS would be determined by engineers as part of the final project design process.

Alternative 4 – Combination of Alternative 1 and Alternative 2. This alternative combines the features of alternative 1 and alternative 2:

- Construct up to 12 MW solar PV array at Artillery Village as described under alternative 1.
- Construct an up to 12 MW solar PV array at the 3900 area as described under alternative 2.
- Construct 13.2 kV overhead tie-line from the solar PV array at Artillery Village to RICE facility as described for alternative 1.
- Construct an underground tie-line from the BESS in the 3900 area to the switchgear in the generator building at the RICE facility as described for alternative 2.

There would be an up to 8 MWh BESS constructed under this alternative in either the Artillery Village or the 3900 area as determined in the final engineering design. Each BESS would be up to a 40-foot containerized design and would include the features described in Section 2.2.3 of the EA.

ENVIRONMENTAL CONSEQUENCES: The construction of any of the four alternatives have the potential to result in negligible to minor, short-term impacts to air quality, biological resources, socioeconomics, traffic and transportation, and visual resources. Over the long-term, the implementation of any of the four alternatives would result in beneficial impacts to air quality through a reduction in pollutant emissions and beneficial impacts on facilities and infrastructure through increased energy resilience.

Implementation of any of the four alternatives would result in long-term, minor impacts to visual resources but would not result in long-term impacts to biological resources, socioeconomics, or traffic and transportation. There would be no impacts to airspace, cultural resources, human health and safety from construction or implementation of any of the four alternatives. Refer to Table 1 for a summary comparison of environmental consequences.

PUBLIC OUTREACH: The Draft EA and Draft FONSI were made available to federal, state and local agencies, Native American tribes, and the public for review and comment for a 30-day period. Additionally, communication with the Oklahoma Department of Environmental Quality has been initiated to address potential concerns regarding air quality, water quality, hazardous waste, and potential human health effects. Fort Sill published a Notice of Availability for the Draft EA and Draft FONSI in the Lawton Constitution and made the Draft EA and Draft FONSI available for online viewing at http://sill-www.army.mil/USAG/dpw/Environmental.html and at the following libraries:

Lawton Public Library, 110 SW 4th St., Lawton, OK, 73501
Nye Library, 1640 Randolph Road, Fort Sill, OK, 73503

FINDING: After considering the environmental effects described in the EA and supporting documents in the Project record, I have determined the proposed action will not result in significant impacts on the quality of the human environment. This analysis fulfills the requirements of NEPA

and CEQ. Therefore, an Environmental Impact Statement will not be prepared and no further environmental impact analysis is warranted at this time.

Derek R. Baird
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Garrison Commander
Fort Sill, Oklahoma

Date