## Exhibit 1B

# **STATEMENT OF NEED**

## 1.1 BIENNIAL AND ANNUAL IRP REPORTS

DEP's 2018 Integrated Resource Plan Biennial Report ("IRP") and the 2019 IRP Updated Plan is included as Exhibit 1A. The Company's 2018 IRP discusses the Woodfin Solar Facility in the Western Carolinas Modernization Plan ("WCMP") update sections. The IRP envisions the inclusion of the 5 MW-AC Solar photovoltaic ("PV") generator as part of the Company's commitment to the WCMP referenced on page 52 of the Company's 2018 IRP. The Woodfin Solar Facility will enable the Company to provide safe, costeffective, and reliable service for DEP's customers. Additionally, by constructing and operating the solar facility, the Company will gain valuable experience owning and operating a ballasted solar facility on a landfill site.

## **1.2 RESOURCE AND FUEL DIVERSITY**

The comprehensive planning process for the 2018 IRP demonstrates that a combination of renewable resources, DSM/EE programs, and additional base load, intermediate, and peaking generation are required over the next fifteen years to reliably meet customer demand. The solar PV generation of the Woodfin Solar Facility will contribute to the diverse resource mix identified in the IRP. The solar facility does not require any additional fuel to operate, and no fuel will be stored at the site.

## **1.3 STATEMENT OF NEED**

While PV solar installations provide little to no capacity value at the time of the Company's winter peak, solar does provide valuable energy with zero fuel cost. As such, the Woodfin Solar Facility will contribute to meeting the energy needs of the DEP system.

Additionally, as part of the WCMP that was approved in Docket No. E-2, Sub 1089, the Commission accepted DEP's commitment to solar and storage projects and directed DEP "to file as soon as practicable the CPCN to construct at least 15 MW of solar at the Asheville Plant or in the Asheville region. The Commission further urges DEP to move forward in a timely manner with the 5 MW storage project in the Asheville region."

(WCMP CPCN Order at p. 38) Along with furthering its commitment to site solar and storage technologies in the western region, the Woodfin Solar Facility and future Company facilities will support the goals and objectives of the WCMP and complies with the WCMP CPCN Order.

The Woodfin Solar Facility is projected to produce approximately 9,413 MWh per year. This corresponds to a 21.5% net capacity factor. The service life of the asset is 25 years.

#### Exhibit 2

## SITING AND PERMITTING INFORMATION

### 2.1. General Site Information

A color map showing the proposed site boundary and layout, with all major equipment, the E911 street address and GPS coordinates is included as Appendix 1.

The Woodfin Facility is located in Buncombe County and Appendix 2 shows its geographic location.

#### 2.2. Site Owner, Site Justification and Additional Site Details

The Site Owner is Buncombe County

In order to identify sites suitable for solar in the Greater Asheville Region, DEP conducted a GIS solar suitability survey. Many alternative sites were evaluated, including Company-owned land. Due to limitations in terms of parcel size, topography (e.g., slope), availability of land and distribution circuit limitations that would be suitable to support a 15 MW solar installation, DEP has been exploring the possibility of multiple, distributed solar installations in lieu of a single, larger installation.

The Woodfin Site was determined to have the following beneficial characteristics: (1) the site is on a municipal landfill and zoned for industrial land use and has approximately 30 acres of relatively flat, buildable area on one parcel, (2) the acreage is sufficient for siting multiple MW of solar generation and the site is primarily clear of trees and debris; (3) the point of interconnection is located adjacent to the planned project and on the same property and does not require additional land rights or permitting to access the interconnection facilities; (4) the site is not adjacent to residential customers; (5) the site does not require tree clearing to support the solar; and (6) the site is owned by a single landowner willing to enter into a lease agreement in support of the project and community's goals.

While developing solar on a landfill can have an impact on costs due to the inability to penetrate the landfill cap, the size and other positive characteristics described help to balance overall project costs and limit local environmental impacts. In addition, finding available sites within the Asheville region that can support a solar facility of this scale while limiting environmental impacts (such as tree clearing and wetland disturbance) is challenging given topography and high land cost in the Asheville region.

During DEP's solar siting process, DEP was made aware that Buncombe County was interested in making their site available for solar development to support the County's renewable energy and climate change goals. DEP presented Buncombe County with a proposal to allow DEP to lease the landfill site to support the Western Carolinas Modernization Project's goal to advance solar development in this area.

A Ground Lease Agreement was executed with Buncombe County in August 2018. The term of the Ground Lease Agreement is 25 years from the date of operation and includes three optional five year renewal terms. [BEGIN CONFIDENTIAL] -

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### WOODFIN CPCN APPLICATION

There is an existing County-owned facility on land immediately to the North and adjacent to the proposed solar site. That is the site of the Buncombe County Public Safety Training Center. It houses both classroom space for law enforcement as well as first responders, as well as training units (burn tower) for fire department staff, and an indoor firing range for law enforcement. Other than this facility, the Company is not aware of any other existing or proposed plans for other developments at or adjacent to the proposed site of federal, state, local governmental and private entities.

The following is further background concerning the site selected.

#### **Geological**

A review of data provided by the North Carolina Geologic Map Information Service shows the Site is located within the Ashe Metamorphic Suite and Tullulah Falls Formation geological unit. This geologic unit is composed primarily of muscovite-biotite gneiss. According to the USDA soil report, Udorthents, loamy, 2 to 50 percent slopes (Ud) underlies the Site; this soil is comprised of sandy clay loam, loamy and stony mine spoil or earthy fill derived from metamorphic rock. However, as the land is the location of a historic landfill, native soils within the project area are likely to be disturbed. Therefore, the findings of the USDA NRCS Soil Report cannot be relied upon for accurate depiction of the conditions of the Site.

### **Aesthetic**

The Site is located in the town of Woodfin, and it is zoned as Heavy Industrial (H-1). The Site is buffered by forested vegetation to the north, west, and south. The Site is visible from NC Highway 251 to the northeast. Site access is limited to the north via NC Highway 251.

#### **Ecological**

#### **Protected Species**

Based on desktop database and literature review and field observations, the Site consists predominantly of a historic landfill that has been graded and regularly maintained. The Site consists of grasses and herbaceous vegetation typical of the active land use. The Site does not include suitable habitat for federally listed endangered or threatened species but is potentially suitable for two (2) state listed threatened plant species, Schweinitz's ragwort (Packera schweinitziana) and yellow ladies'-tresses (Spiranthes ochroleuca) were identified as having potential preferred habitat onsite. Both identified species are state threatened plant species that live on grassy balds. Although these species have the potential to be located onsite, no penalties are assessed if state threatened and endangered plant species are harmed in the course of legal land management practices.

The Migratory Bird Treaty Act ("MBTA") protects more than 1,000 bird species that occur in the U.S., including 13 species of conservation with ranges encompassing the Site. Under the MBTA, it is unlawful to take any migratory bird, or any part, nest, or egg of any such bird. Although tree clearing is not anticipated for construction activities, Duke Energy's Natural Resource Group has developed specific tree-clearing protocols that are incorporated into project planning and disseminated to all sub-contractors.

The Bald and Golden Eagle Protection Act provides similar protection to those two raptor species. According to NCNHP, the nearest observation of the bald eagle occurred less than one (1) mile from the project area along the French Broad River. Although bald eagles are known to utilize the nearby FrenchBroad River, no nesting trees or foraging habitat is located within the Site. Therefore, the bald eagle is notanticipated to inhibit the project. According to NCNHP, no golden eagles have been observed within one (1) mile of the project area. TheSite does not provide the preferred foraging or nesting habitat for this species; therefore, the golden eagle is not anticipated to inhibit the project

#### <u>Habitat</u>

According to the USGS National Land Cover Database (Homer et al. 2015), the Site consists primarily of pasture/hay with small areas of developed, open land and barren land located in the eastern and southeastern portions of the Site. Available aerial imagery (Google Earth 2017) depicts the project area as cleared and graded with a remote-controlled airplane tarmac facility in the western portion of the Site. According to the USGS topographic map, the Site ranges in elevation from approximately 2,100 to approximately 2,200 feet above mean sea level (AMSL).

Review of the USFWS IPaC Resource List reveals no critical habitats for federally listed species within or adjacent to the project area. A review of the Protected Areas Database of the U.S. (PAD-US 2018) reveals no protected areas within the Site; however, seven (7) protected areas are located within five (5) miles of the Site, including the Buncombe County Park, a Conservation Trust of North Carolina Easement, the Sandy Mush Game Land, a Southern Appalachian Highlands Conservancy Easement, the Southern Appalachian Highlands Conservancy Preserve, the Thomas Wolfe Memorial State Historic Site, and the Western Governors Residence.

### **Meteorological**

A search of available online data from the National Oceanographic and Atmospheric Administration database was conducted for Woodfin covering a three-decade span (1971 thru 2000). Average annual precipitation was 41.4 inches, with the warmest month being July (average high 84.5 F) and the coldest being January (average low 24.8 F).

### **Seismic**

Based on a review of USGS geologic data for North Carolina, the nearest mapped fault is located approximately 0.5 miles northwest of the Site. According to the

USGS Seismic Hazard map for North Carolina, the area is in a low to moderate risk zone for earthquakes.

### Water Supply

There are no planned or existing water supplies on the Site.

### **Population**

Woodfin had a population of 6,123 people as of the 2010 census. It is part of the Asheville Metropolitan Statistical Area (AMSA). The AMSA between 2000 and 2010 has experienced a large increase in population (15%) going from 369,186 to 424,859 people.

## 2.3. Transmission Line

The Woodfin Solar Facility will interconnect with a distribution line (as shown on both Appendix 1 and 2).

## 2.4. Nameplate Generating Capacity

The nameplate generating capacity is 5 MW AC / 6.3 MW DC

## 2.5. Permitting Information

No federal, state or local air quality programs are associated with this facility. The facility is in an Outstanding Resources Waters area which requires more rapid revegetation standards after land disturbance and requires a 30' vegetated setback from any streams or other waterbodies, if present.

Below is a list of Agencies from which approvals will be sought.

## **Federal**

• US Army Corps of Engineers (USACE):

- Jurisdictional Determination
- Environmental Protection Agency (EPA):
  - Spill Prevention and Control Plan (SPCC)
    - Prepare and update as required. No submittal or filing required.
- Federal Aviation Administration
  - File a Notice of Proposed Construction
- Federal Energy Regulatory Commission (FERC):
  - Notice of Self-Certification

# North Carolina

- NC Division of Waste Management (NC DEQ DWM):
  - Modification of landfill post-closure permit
- NC Division of Energy, Mineral, and Land Resources (NC DEMLR):
  - Stormwater General Permit NCG010000 (aka Erosion and Sedimentation Control Plan)
- NC Division of Water Resources (NC DWR):
  - Post-Construction Stormwater Pollution Prevention Plan (SPPP)
- NC Public Utilities Commission:
  - Certificate of Public Convenience and Necessity (CPCN)
- NC Department of Transportation:
  - Oversize/Overweight Permit (if necessary)
- Buncombe County:
  - Building Permit

- Town of Woodfin
  - Zoning Conditional Use Permit