

EXHIBIT 1.
Dominion Energy Services, Inc.

1. Applicant: Dominion Energy Services, Inc.

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2. Reasons for Seeking Special Temporary Authorization

Dominion Energy Services, Inc. (“Dominion”) seeks a Special Temporary Authorization for the first of a series of equipment tests conducted with the Electric Infrastructure Security Council (“EISC”). Dominion and EISC are developing equipment recommendations for a Black Sky Emergency Communications and Coordination System (“BSX System”) for use by Dominion, other United States electric utilities, and potentially other critical infrastructure providers for service restoration in the event of a so-called “Black Sky Event.”

The continental United States has not yet experienced a Black Sky Event: an extreme subcontinent-scale power outage causing cascading, long duration failures across U.S. critical infrastructure, including existing wire line and wireless communications and emergency networks. A restart of the regional electric grid and coordination with the national electric power grid in a Black Sky Event will require high levels of coordination and communications. Accordingly, Dominion and EISC have sought to identify technology to create an interoperable, all-sector, all-hazard-protected emergency communications to be used specifically and exclusively in a Black Sky Event to save lives and support infrastructure restoration.

Dominion is a subsidiary of Dominion Virginia Power. EISC is a 501(c)(3) organization dedicated to the protection of the security of the electrical power grid by facilitating public-private sector collaboration and planning to strengthen critical infrastructure resilience against particularly severe hazards resulting in extreme power outage scenarios.

By this application, Dominion seeks Special Temporary Authority to import into the United States, and test over a period of no more than 90 days from the date of importation, as described below, three units of Rafael Advanced Systems Ltd. Bnet radio system, more specifically described in Exhibit 2. The representative units are part of a larger system that Dominion and EISC have identified as meeting the characteristics developed for equipment to serve as the backbone and a key enabler for a prospective BSX System. The contemplated tests would demonstrate and validate key design and performance features for utility personnel and provide information for further refinement of the proposal for a BSX System. The Bnet units to be tested are not certified under the Commission’s current equipment authorization rules and do not comport with current rules, so temporary authority is necessary for the importation of the Bnet equipment into the United States for the proposed test program. As described below, the Bnet units to be tested have the capacity to be programmed and restricted in operation so that

they can be operated within the service footprint of two existing authorized Dominion private radio stations and within the channelization of those stations.

Summary of Contemplated tests:

Rafael Advanced Systems ltd. will import three Bnet-V transceivers into the United States for no more than 90 days for the purpose of testing and evaluation by Dominion Energy Systems as part of their grid resilience program.

Two Bnet radios will be installed at the following fixed site stations owned and operated by Dominion Energy Systems.

Callsign: KVO487(.375) & KJV60 (.425)
Class of Station: FB, FB2
Nature of Service: Land Mobile Radio
Latitude: North 37 37 5.5
Longitude: West 77 31 13.9

Callsign: KJE512
Class of Station: FB, FB2
Nature of Service: Land Mobile Radio
Latitude: North 37 32 15.5
Longitude: West 77 26 19.9

A third unit will be installed in a Dominion provided vehicle in order to evaluate mobile operations within the defined footprint of the test area.

Callsign: KZ2786
Class of Station: MO
Nature of Service: Land Mobile Radio
Latitude: Need to know how to list, do we go with a center point and radius
Longitude: Need to know how to list, do we go with a center point and radius

Initial tests consist of bench-mount tests in order to ensure that the Bnet transceivers operate within designated parameters. Upon successful bench-mount tests and demonstration, the Bnet radios will be installed at the two fixed test sites utilizing existing antennae and coaxial cable located at each site. Minimum power levels will be used to achieve effective site-to-site communications while minimizing potential interference to other stations. A third Bnet transceiver will be installed in a Dominion provided vehicle, which will move throughout the defined test area. The minimum necessary power to achieve effective communications will be used.

All tests will be done on Dominion licensed spectrum. Rafael Advanced Systems ltd. will provide on-site engineers at the beginning of the test period in order to ensure all system operate as intended and ensure harmful interference for other stations does not occur. Dominion and Rafael Advanced Systems ltd. will immediately cease test operations should harmful interference be identified.

3. Nature and Objectives of Operations to Be Conducted

Dominion proposes to import three Bnet transceivers from Rafael Advanced Systems ltd, an Israeli defense systems company with extensive experience in design of military and

emergency communications. Two of the units will be designated for fixed use and one will be a unit designated for mobile use.

The Bnet radio is an Electro-Magnetic Pulse (EMP) hardened, advanced software defined radio capable of achieving high levels of spectral efficiency for Mobile Ad Hoc Networking (MANET). Initial tests of this system will be limited to narrowband LMR frequencies owned by Dominion Energy Systems and will comply with all power requirements and channel spacing as defined by the licensing agreement and unlicensed use within the operating limitation of unlicensed frequency regulations. Exhibit 2 describes more fully the characteristics of the Bnet system and the units to be tested.

The two fixed units will be placed at the following locations:

Callsign: KVO487(.375) & KJV60 (.425)

Class of Station: FB, FB2

Nature of Service: Land Mobile Radio

Latitude: North 37 37 5.5

Longitude: West 77 31 13.9

Callsign: KJE512

Class of Station: FB, FB2

Nature of Service: Land Mobile Radio

Latitude: North 37 32 15.5

Longitude: West 77 26 19.9

The units installed at these locations will use existing tower, antennae, and cabling systems already installed at the location pending a site survey by Rafael Advanced Systems Ltd. to ensure existing hardware will support operations. If on site hardware does not meet the Bnet radio requirements, additional cabling and/or antennae systems may be installed, but will be done in such a manner as to comply with all site licensing requirements.

The third unit will serve as a mobile unit. The channels to be used in the proposed test will be narrowband land mobile radio channels at frequencies for which Dominion already is licensed for as part of its LMR service.

In the proposed test, the Bnet units will be configured to operate at power levels that maintain the test signals within the service footprint of Dominion's existing channels and to maintain emissions within the emission mask of those authorized stations.

The purpose of the tests is to validate that the units can be configured to operate as intended on the given frequencies and do not create harmful interference. Operational personnel from Dominion, and Rafael engineers, will assess the interface for configuring and operating the devices. This initial test will allow Dominion and Rafael engineers to conduct a limited, narrowly defined geographic test of the Bnet systems to ensure that systems comply with all regulatory requirements in regard to operational frequency, channel spacing, and emissions. Confirmation of the configurability of the system and the ability of the Bnet units to operate within designated parameters is necessary for anticipated expansion of the geographic scope of operation in connection with the future development and testing of the system as a backbone for a BSX System. This would include a contemplated future test for which Dominion will seek separate authorization, involving relay of communications from Richmond Virginia, to the

northern tip of North Carolina, a key path for restoration of Dominion services if a Black Sky Event should occur.

In addition, Dominion and Rafael will conduct additional test of the Bnet radio to connect to, and operate on fiber optic cabling. These tests are designed to test the viability of connecting two Bnet radios, over a large geographic distance using fiber optic cabling. This will allow the Bnet radio to serve as wireless end-points with a fiber backhaul between them. Fiber optic test will use both the Bnet radio and ECI NPT-1010D fiber optic module. These tests will be limited to Dominion owned fiber optic cabling and will not create harmful interference.

4. Time and dates of proposed operation.

1 June 2019- 30 September 2019

5. Class(es) of station

The proposed tests will use two fixed stations and a land mobile station with the power and service area falling within the service contour of Dominion's existing stations.

Station Information:

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Class of Station: FB, FB2
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Nature of Service: Land Mobile Radio
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6. Locations and Geographical Coordinates of Proposed Operations

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7. Equipment to be used

See Exhibit 2.

8. Frequency (or frequency bands) requested

See STA application.

9. Maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

See STA application.

10. Emission designator or describe emission (bandwidth, modulation, etc.)

See STA application.

11. Antenna structures to be used:

For the purposes of these tests, the approved antenna and antenna structures at the following sites will be used:

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