

Purpose:

The purpose of this document is to provide a high-level summary of the testing and test results of units of the Rafael Advance Systems ltd. BNET radio under authorization of STA 0837-EX-ST-2019 performed during the week of July 15, 2019.

Background:

Dominion Energy is exploring Black Sky resilient communications technologies as part of its operational Black Sky/ Black Start plans. One such technology which shows promise is the BNET Radio manufactured by Rafael Advance Systems ltd. Dominion Energy requested and received a Special Temporary Authorization (STA) from the United States Federal Communications Commission (FCC) to conduct, in conjunction with the Electric Infrastructure Security Council (EISC) and Rafael, a series of tests and evaluations of the BNET radio at several Dominion owned facilities to include two mobile units which would roam in and around the Dominion service territory.

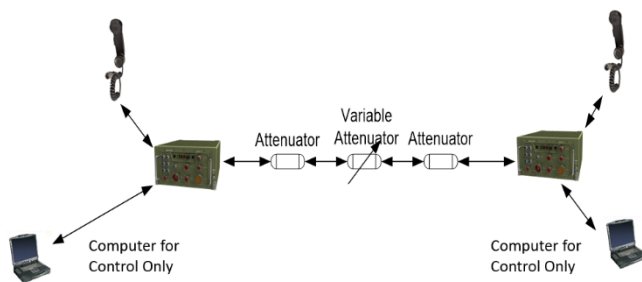
Scope:

Dominion energy received approval from the FCC to conduct a series of tests on the BNET (Vehicular series) radio within the scope and special conditions provided in STA 0837-EX-ST-2019¹.

Tests:

Dominion Energy, in conjunction with the EISC and Rafael Advanced System ltd., conducted a series of tests during the week of 15 July 2019 in order to evaluate the performance of the BNET Radio (Vehicular series) in operating within the scope and special conditions as outlined in STA 0837-EX-ST-2019.

The series of tests conducted were designed to build progressively upon each of the previous tests, culminating in a full system field test. This was done for two reasons. First, the testing each component permitted an assessment of how well each system operated within the parameters identified for each test. Secondly, the approach minimized the risk of any harmful interference to third-party operations within our operational area.

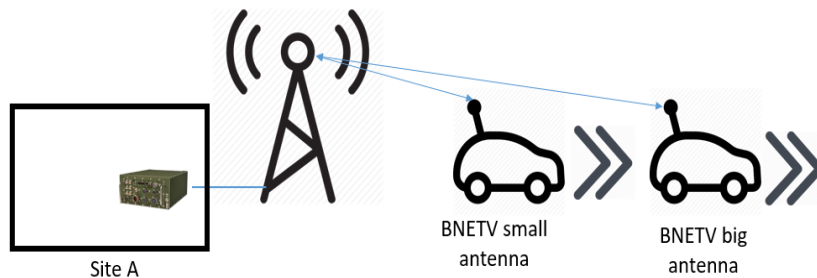


The initial tests were conducted as bench mount test, with an RF cable and attenuator to both contain the RF signal within the cable and to dampen the RF signal. This was done both to minimize the prospect of generating any harmful interference and to protect the personnel conducting and

¹ See Exhibit B

monitoring the test from extraneous RF radiation.

Once each round of tests was completed and assessed, the evaluation team approved the test team to move to the next level of testing. The entire evaluation period spanned three days and was conducted at two fixed sites and with two mobile units.



The test evaluation not only evaluated the ability to communicate via radio frequency (RF), but also via fiber optic cabling linking the BNET radios together. (This test was performed as a bench mount proof-of-concept and will be expanded to a full field test in future testing.)



Results:

The BNET (V) radio proved its capability to operate within the operational tolerances specified in STA 0837-EX-ST-2019. No reports of harmful interference were reported to Dominion during the evaluation period. All tests were validated with an external spectrum analyzer and all test results are made available as an attachment to this report.

The BNET proved to be a versatile radio, with the capability either to operate independently or to be integrated within existing communications architecture. The tests also confirmed the capability of the BNET units for interoperation with existing analog Land Mobile Radios (LMR) currently utilized by Dominion Energy.

Next Steps:

Next steps include requesting authorization to expand the testing to include a higher number of sites with and expanded operational footprint. This will be accomplished through a mixture of RF and fiber optic interconnection between sites. We will also expand on the concept of using the BNET to serve as a repeater system for the Dominion LMR network; as well as seek to use some form of broadband signaling to validate the ability of the BNET to serve as a transceiver for both voice and data communications.