

Narrative Statement
Form 442
Line 7

Duke Energy – Carolinas (formerly Duke Power) initiated proof of concept and technical trials of Broadband over Power Line (BPL) equipment under Experimental License WD2XIG, granted on March 15, 2004 (File Number 0022-EX-PL-2004) and modified on March 30, 2005 (File Number 0047-EX-ML-2005). Both grants permitted experimental operation in accordance with Sec. 5.3 (i and j) of the Commission's Rules. The initial grant was specific to equipment from Main.Net. The modification authorized testing of equipment from various vendors.

The proof of concept phase of testing successfully demonstrated that BPL is a viable form of communications and has the potential to provide satisfactory performance as a vehicle to provide broadband Internet access and support to applications designed to improve the reliability and efficiency of the electric distribution network. The technical trials have demonstrated that significant effort by (1) BPL equipment vendors, (2) the electric utility, and (3) service or applications providers remains to turn the demonstrated potential into a commercially viable, robust platform for broadband Internet access and utility applications including:

- Network and equipment redesign to meet service level metrics
 - Data loss
 - Delay
 - Speed
- Network and equipment redesign to provide scalability
 - Cost reductions
 - Physical size reductions
 - Overhead and underground capabilities
 - Network management systems
 - Manufacturing and supply chain enhancements
- Network and equipment redesign to provide reliability, safety and regulatory compliance
 - Smart repetition or routing to respond to the dynamic nature of the electric distribution grid
 - Integration with grid components for utility applications
 - Engineering and safety standards
 - Part 15 Rules and Certification
- Market investigation and service/product development
 - Propensity to buy in a competitive market
 - Ordering, provisioning, customer service, maintenance and billing
 - Value added electric utility services

All testing to date has been accomplished by providing free service to less than 100 participants over networks that pass from 500 to 700 homes. As reported previously in File Numbers 0022-EX-PL-2004 and 0047-EX-ML-2005 customer response has been favorable and there have been no legitimate interference complaints. The experience gained through these extremely limited, and free, trials has been valuable. However, testing of the efforts described above will require an expanded deployment and the charging and collection of fees for service from participants.

Going forward Duke Energy – Carolinas proposes to continue its efforts utilizing BPL equipment from Ambient and Current Technologies (and potentially others). All vendors' equipment transmission frequencies will be notched, in accordance with the Commission's BPL Rules, to help insure that no harmful interference to licensed operators will occur. Duke will enter into short term wholesale trial agreements with from one to five service providers (e.g. ISPs, CLECs) who

will market services to customers in an expanded deployment still contained within the footprint specified in the original license application. The expanded deployment will pass approximately 6,000 homes. With an assumed take rate of 10 to 17% some 600 to 1,000 customers could potentially take service from a trial service provider. This expanded, but still limited, trial and market study will provide the data necessary to evaluate the vendor, utility and service provider efforts described above.

Collectively the selector vendor equipment operates in the range of frequencies from 1.7-60 MHz.