Charter Fiberlink NY-CCO, LLC Within the State of New York

Section 9. Special Access Services

The following services are offered where technically and operationally feasible.

9.1 Charter Business[®] Optical Ethernet Services

9.1.1. General

Charter Business[®] Optical Ethernet Services provide transparent optical network connectivity of point-to-point, point-to-multipoint or multi-point to multi-point configurations. The typical topology for Optical Ethernet is a standard fiber build using shared backbone bandwidth. A premium is charged for redundant/diverse access and dedicated backbone bandwidth. Charter Business[®] Optical Ethernet Services are certified using technical specifications and testing approved by the Metro Ethernet Forum (MEF). The service has an expectation of low Frame Delay, Frame Delay Variation and Frame Loss Ratio

9.1.2. Optical Ethernet Service Types and Descriptions

- a. <u>Ethernet Private Line</u> (EPL) provides a point-to-point Ethernet transport solution. EPL does not allow for service multiplexing as a dedicated UNI (User Network Interface) is used.
- b. <u>Ethernet Virtual Private Line</u> (EVPL) EVPL provides a point-to-multipoint (hub and spoke) Ethernet transport solution that allows for service multiplexing (more than one Ethernet Virtual Circuit can be supported at the UNI). The service meets the Metro Ethernet Forum (MEF) specification for an EVPL service and is MEF 9 and MEF 14 certified.
- c. <u>Ethernet Local Area Network (E-LAN)</u> E-LAN provides a private metro "LAN" Ethernet network, providing the ability to share bandwidth between multiple Ethernet locations. The service connects a dedicated channel of bandwidth to a single customer that is shared among the customer's locations. These locations may exchange traffic via the shared connection as required. For example, any port could send information to any other port (any-to-any) or multiple ports could send all of their traffic to a single port. The service meets the Metro Ethernet Forum (MEF) specification for an E-LAN service and is MEF 9 and MEF 14 certified.

9.1.3. Service Features

The Charter Business[®] Optical Ethernet service offers full duplex connectivity between sites with speeds ranging from 10Mbps up to 10Gbps, scalable in 10Mbps increments. Specific equipment is used at the customer premises to be MEF compliant. The following Optical Ethernet Service features are option specific and should be specified on the service order:

- Option 1: Protected Ethernet service dual protect paths, route diversity, dual entrance facilities in to each location, and redundant electrical components or circuit cards
- Option 2: Unprotected Ethernet service single optical path from core network facility to customer location

Issued: December 16, 2010

Issued By: Betty Sanders, Director Regulatory Affairs 12405 Powerscourt Drive, St. Louis, MO 63131