Qwest

EXECUTIVE SUMMARY

WASHINGTON

DARK FIBER

RECURRING COST STUDY
#7705

ECONOMIC LIVES
9.63% COM

June 2003

MARKET SERVICES AND ECONOMIC ANALYSIS ORGANIZATION

DARK FIBER STUDY

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MSEA

A. PURPOSE, SCOPE, AND APPLICATION

The purpose of this study is to estimate Qwest's - 2003 total element long-run incremental costs that would be incurred to provide Unbundled Dark Fiber to a Co-Provider.

This study develops statewide average Total Element Long Run Incremental Costs (TELRIC). Costs are specific to the state of Washington and are stated on a per unit basis, unless specified otherwise. **Cost results are based Economic Lives and 9.63% Cost of Money (COM).**

B. DESCRIPTION OF SERVICE

An Unbundled Network Element (UNE) is a portion of Qwest's network sold to an Interconnector or Certified Local Exchange Carrier (CLEC) for use in building services for their customers. The Interconnector normally would connect to these UNEs in a Qwest wire center. The Interconnector may combine these UNEs together and/or with their own facilities or equipment for this purpose.

The Interconnector has design responsibility to insure that these elements will properly work with each other and with their facilities and equipment to meet their customer's service needs.

Several types of UNEs are available from Qwest. The following UNEs are addressed in this study:

- Unbundled Dark Fiber - Loop (1 & 2-Fiber)
- Unbundled Dark Fiber - Extended Unbundled Dark Fiber (1 & 2-Fiber)
- Unbundled Dark Fiber – IOF (1 & 2-Fiber)

Unbundled Dark Fiber (UDF) Loop:
Provides a single strand or pair of optical fibers (i.e., two fibers) on which no electronic terminating equipment is provided by QWEST. The fibers go from wire center to splice, FDP, or customer location for Loop applications. A CLEC must be collocated in all wire centers where UDF terminates. The fibers will be connected to a Fiber Distribution Panel (FDP) or functional equivalent in the wire centers or customer locations. Technical Publication 77383 for additional information.

Extended Unbundled Dark Fiber (E-UDF) :
Provides a single strand or pair of optical fibers (i.e., two fibers) on which no electronic terminating equipment is provided by QWEST. The fibers go from wire center to splice, FDP, or customer location for Loop applications. A CLEC must be collocated in all wire centers where UDF terminates. The fibers will be connected to a Fiber Distribution Panel

(FDP) or functional equivalent in the wire centers or customer locations. Technical Publication 77383 for additional information.

Unbundled Dark Fiber (UDF) Interoffice:
Provides a single strand or pair of interoffice optical fibers (i.e., two fibers) on which no electronic terminating equipment is provided by QWEST. The fibers go from wire center to wire center for interoffice applications. A CLEC must be collocated in all wire centers where UDF terminates. The fibers will be connected to a Fiber Distribution Panel (FDP) or functional equivalent in the wire centers. See Technical Publication 77383 for additional information.

Unbundled Dark Fiber (UDF) & (E-UDF) & (IOF) Termination:
One or Two fiber termination equipment (FDP) located at the SWC or customer location.

Unbundled Dark Fiber (UDF) & (E-UDF) & (IOF) Cross Connect:
One or Two fiber patch cords to connect FDP to FDP located at the SWC or customer location.

C. STUDY METHODOLOGY

Unbundled Dark Fiber (UDF) Loop – Average fiber loop investments are taken from the LOOPMOD Model. Detailed description of LOOPMOD Model can be found in the Integrated Cost Model (ICM) LOOPMOD documentation. The Dark Fiber Model shows these investment results under the Loopmod Investments tab.

Extended Unbundled Dark Fiber (E-UDF) – Average fiber loop investments are taken from the LOOPMOD Model. Detailed description of LOOPMOD Model can be found in the Integrated Cost Model (ICM) LOOPMOD documentation. The Dark Fiber Model shows these investment results under the Loopmod Investments tab.

Unbundled Dark Fiber (UDF) & (E-UDF) Termination & Cross-Connect – The primary cost drivers are the investments for materials and corresponding installation and engineering labor costs. Total Install Factors (TIF) and utilization factors are applied to the pertinent material investments to calculate the total installed investments. The Dark Fiber Model calculates these investments under the FDP and Fiber Xconnect tabs.

The TELRIC Windows Personal Computer Cost Calculator (WINPC3) was used to convert installed investments to TELRIC by applying appropriate investment and expense factors to the installed investment.

D. DESCRIPTION OF TOTAL ELEMENT LONG RUN INCREMENTAL COSTS

Qwest performs Total Element Long Run Incremental Cost (TELRIC) studies to estimate the economic cost of providing network elements. The Qwest TELRIC studies identify the forward-looking costs associated with the provision of the total quantity of a network

element in the long run. The *forward-looking* Qwest TELRIC studies identify the costs that are likely to be incurred in the future, and consider the latest forward-looking technologies and methods of operation that are currently available. These studies are *not* embedded or historical, and do not measure the impact of prior investment decisions by the corporation. The Qwest TELRIC studies also identify the *long run* costs associated with providing a network element—reflecting a time period over which all inputs (including changes in the size of facilities, levels of investment, etc.) can be adjusted.

The Qwest cost study format disaggregates the cost results, on a unitized basis, into the following components:

Direct Network Costs are direct product group costs. They include network related investment based costs, Network Operations and Other Operating Taxes. Investment Based Costs are associated with recurring cost elements and include the capital costs (e.g., depreciation, return, and taxes) and maintenance costs associated with the investment required for provisioning a network element. Network operations include power, plant operations, testing, network administration, and engineering costs, which are calculated on a per line basis for loop elements. Network operations costs vary with the provision of all network elements, and are not common to the entire firm. Other Operating Taxes consists of Account 7240, which includes among others property taxes.

Element-Specific Expenses are direct costs. Element-specific Expenses are other product related costs such as billing and for non-recurring costs, the labor-related expenses associated with the provision of a network element.

Marketing are direct product group costs. Marketing costs include product management and sales expenses that Qwest's accounting records typically allow tracking down to a particular product or service group.

Support Assets and Uncollectibles are not directly associated with a specific network element. However, these costs vary with the provision of all network elements, and are not common to the entire firm. Support Assets are comprised of the investment related costs and maintenance expenses associated with the Network Support Assets, General Support Assets, and General Purpose Computers. Uncollectibles are uncollectible revenues associated with wholesale UNE/Resale revenues.

Total Element Long Run Incremental Costs (TELRIC) represent the sum of all direct and directly assigned / allocated costs (e.g., Direct Network Costs and Element-Specific Expenses, Marketing, Support Assets and Uncollectibles). This measure of costs includes the forward-looking costs incurred in the provision of a network element. This measure of costs is consistent with TELRIC as defined by the FCC.

Common Costs are associated with the enterprise as a whole. These costs do vary based on the total size of the firm, but may not vary with the provisioning of individual network elements. These costs are avoidable only with the elimination of the entire firm, and are sometimes referred to as *general overhead costs*.

Fully Allocated Costs represent the sum of Total Element Long Run Incremental Cost plus Common Costs (TELRIC + CC).

E. STUDY ASSUMPTIONS

Cost results are based on Economic Lives and 9.63% Cost of Money (COM).