Excerpt from

Qwest Technical Publication 77386

Qwest Corporation Technical Publication

Interconnection and Collocation for Transport and Switched Unbundled Network Elements and Finished Services

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1.6 General Requirements

All equipment (IDE) installed by an Interconnector in a Qwest Wire Center must comply with the requirements of the National Electric Code[®]. The IDE must also comply with the with Bellcore Network Equipment Building System (NEBS) Level 1 safety standards, GR-63-CORE, NEBS Requirements: Physical Protection, and GR-1089-CORE, Electromagnetic Compatibility and Electrical Safety - Generic Criteria for Network Telecommunications Equipment. Requirements for fiber optic cables are provided in GR-20-CORE, Generic Requirements for Optical Fiber and Fiber Optic Cable.

The following publications will also apply for collocation:

- PUB 77350, Central Office Telecommunications Equipment Installation and Removal Guidelines
- PUB 77351, Qwest Communications, Inc. Engineering Standards (three modules)
- PUB 77355, Grounding-Central Office and Remote Equipment Environment
- PUB 77385, Power Equipment and Engineering Standards.

Appropriate sections of the publications must be followed when collocating equipment in a Qwest wire center.

Other requirements of Qwest or of a regulatory and statutory nature may apply. See the appropriate tariff, catalog or contract for further information.

Additional information may also be found on Qwest's web site at:

www.qwest.com/Wholesale/clecs

1.7 Non-Access Private Line Services

Qwest provides end-to-end Private Line Transport Services (PLTS) within a Local Access and Transport Area (LATA). These services have been called Non-Access or IntraLATA services. This situation changes with the introduction of CLECs. A service may still be within a LATA (i.e., intraLATA) but now may be jointly provided by both a CLEC and Qwest. The portion of the service ordered from Qwest is now an Access Service.

The technical parameters for Access Services may differ from those of end-to-end Non-Access services. This is especially true of analog PLTS. Normally, the Non-Access end-to-end technical parameters of a service provided by a LEC are the same as the end-to-end service provided by multiple providers (i.e., a LEC(s) and an Interconnector, CLEC or Interexchange Carrier).

Excerpt from

Qwest Technical Publication 77368

QWESTTechnical Publication

COMMERCIAL CUSTOMER PREMISES ELECTRONIC EQUIPMENT ENVIRONMENTAL SPECIFICATIONS AND INSTALLATION GUIDE

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77368 Issue E March 2006 Temperature and high humidity are generally controlled with the HVAC (Heating, Ventilation and Air-Conditioning) system. The owner of the Premises is responsible for HVAC systems which can ensure that temperature and humidity meet the guidelines of Table 4-1.

It may be wise to use more than one HVAC unit or system to meet the load needs. This is wise engineering practice, which protects against outages. As an example, there may be two compressors, each sized to handle 60% of the load. Multiple system components should be designed in such a way that if one component fails, the remaining component(s) should be able to maintain the short-term temperature, humidity, and temperature rate of change guidelines of Table 4-1.

In order for a building owner or their engineer to determine if their HVAC system is adequate, they must know the approximate heat releases of the Qwest equipment.

The building HVAC system should easily be able to handle average NEBS heat spread release of 35 W/ft². This is equivalent to about 500 W per standard front and rear equipment relay rack, 300 W per front-access only relay rack, and 650 W per Customer Premises 2-sided cabinet. The higher NEBS heat release level (which requires notification of the customer, and potential upsizing of the HVAC for the room), is 80 W/ft². This is equivalent to about 1200 W per standard front and rear aisle relay rack, 700 W for front access only relay racks, and about 1500 W for a Premises cabinet.

Average heat release information is given by the vendors. If this cannot be obtained, it can be estimated from List 1 (average) power drains given by the equipment vendors:

$$P_{DC} = I \times V$$

Where I is the List 1 drain in Amperes (Amps), and V is the voltage (normally about - 54.5 in a Customer Prem DC plant). The result, P (Power) will be in Watts (W).

Sometimes, the vendor will only give List 2 (peak) power drains. A rough estimate of List 1 drains is 30-40% of the List 2 drain.

If none of the above can be obtained, the rawest estimate can be done using the size of the power plant. Using the formula above, I (the Amps) would be represented by the total capacity of the rectifiers minus one rectifier. For example, if there were five 15 A rectifiers, $5 \times 15 = 75$, and 75 - 15 = 60 Amps.

Besides Watts, commonly used units for HVAC sizing are BTUs/hr, and tons of air-conditioning. The following conversion factors can be used.

$$1 W = 3.41 BTUs/hr$$

1 ton of air-conditioning = 12,000 BTUs/hr

Qwest Response to

McLeodUSA Data Request No. 3–26

Washington UT-063013 McLeodUSA 03-026

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 026

Please provide the most recent completed Qwest Form 841 "BDFB or Power Board Panel Fuse/Breaker Assignment Record" for all Washington central offices with McLeodUSA collocations. With regard to this Form 841, please provide the following information:

- (a) Whether the Form 841 includes the telecommunications equipment of both Owest and CLECs;
- (b) An explanation of how Qwest obtains the "Mfg L-1 Drain" information shown on this form;
- (c) An explanation of how Qwest obtains the "Actual Load" information on this form;
- (d) An explanation of how Qwest obtains the "Mfg L-2 Drain" information shown on this form;
- (e) A detailed explanation of how the information in the "Mfg L-2 Drain" and "Mfg L-1 Drain" columns is used by Qwest; and
- (f) An indication of what information on this form is for engineering use.

RESPONSE:

Qwest objects to this request on the ground that it is overly burdensome to gather responsive documents. If in fact the requested documents actually exist, they are housed at individual central offices and production of these documents would be extremely time consuming.

- (a) Yes. If used, it would include that equipment.
- (b) Qwest obtains L-1 drain information shown on this form based by applying engineering judgment to information obtained from the manufacturer, information from actual experience with the equipment, and information obtained from lab testing.
- (c) The actual load would be filled in by the field technician.
- (d) The Mfg. L-2 drain comes from the manufacturer.
- (e) The Mfg L-2 drain information is used to determine if fuse or breaker sizing is proper. The L-1 information is used to determine if the BDFB or PBD might be overloaded at some point; and if so, Qwest would add another BDFB or PBD and/or migrate some loads.
- (f) The information on this form that is for engineering use is the L-1 and L-2 drain information.

Respondent: Curtis Ashton

Qwest Response to

McLeodUSA Data Request No. 2–11

Washington UT-063013 McLeodUSA 02-011

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 011

Has any Qwest central office in Washigton ever experienced an event when all power users' telecommunications equipment in the central office (Qwest, CLECs, ISPs, toll providers, etc.) went to List 2 drain simultaneously? If so, please provide the following for each event:

- (a) the date on which this event occurred;
- (b) the central office in which the event occurred;
- (c) the duration (in minutes or hours) of the event;
- (d) the steps Qwest took to resolve the aggregate, simultaneous list 2 drain situation;
- (e) the amperages of each of the power distribution cables that was serving load for telecommunications equipment in that central office at the time of the event (in Amps) [if this information is not available, please provide the sum total of DC power cable capacity (in Amps) of the entire office at that time];
- (f) the total installed capacity of the DC power plant(s) serving that central office at the time of the event (in Amps);
- (g) the total List 1 drain and or busy hour drain of the central office as measured prior to the event;
- (h) whether any total power loss was experienced during this event (i.e., whether backup generation was sufficient to power the equipment during this event); and
- (i) the number of collocators (IXCs, CLECs, ISPs) present at the central office at the time of the event.

RESPONSE:

No, not in the past 5 years for which Qwest has retained records. However, the fact that such an event has not recently occurred does not mean that Qwest does not engineer and plan for this rare, but possible, occurrence. Such events have recently occurred in other Qwest states, such as Colorado.

Respondent: Ryan Gallagher, Qwest Manager

Qwest Response to

McLeodUSA Data Request No. 3-23

Washington UT-063013 McLeodUSA 03-023

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 023

In Utah, Mr. Ashton testified that collocators have filed complaints against Qwest for Qwest not providing collocators with the collocators' ordered amount of DC power. Please provide the following information for each of these complaints:

- (a) The state in which the complaint was filed;
- (b) The docket/case number of the complaint;
- (c) The collocator that filed the complaint against Qwest;
- (d) A detailed description of the nature of the complaint, including whether the complaint pertained specifically to a situation in which Qwest did not provide the collocator the amount of power associated with the ordered amperage of the collocator's power distribution cables;
- (e) Whether the complaints pertained to instances in which Qwest could not provide the ordered power due to an "embargo" situation;
- (f) Whether the complaints pertained to instances in which Qwest could not provide the List 2 drain associated with the full capacity of the collocator's power distribution cables at a time the collocator needed to draw the full List 2 drain; and
- (g) Whether any of the complaints disclosed in response to this Request were resolved without state commission involvement and if so, please explain the manner in which the complaint was resolved, including both the form of resolution and the terms agreed to by all parties.

RESPONSE:

- (a) No formal complaints were filed.
- (b) N/A
- (c) No records exist and Mr. Ashton does not recall.
- (d) The only complaint about which details are available involved a CLEC who ordered 30 Amps. Qwest supplied a 30 Amp A breaker and a 30 Amp B breaker. The CLEC grew its load to 40 Amps on each side and complained informally that Qwest didn't size its breakers at 40 A (the breaker sizing rule at the time the CLEC went in in 1997 was 100% instead of the 125% it presently is). In this case the CLEC was drawing more than 260% of the ordered amount and still threatened to complain to the Commission.
- (e) No.
- (f) No.
- (g) All were resolved without State Commission involvement. Qwest does not have records reflecting the manner in which each complaint was resolved. However, Mr. Ashton recalls that on at least one occasion, one of the complaints was presented orally to Qwest's state interconnection manager and resolved after the CLEC augmented its power order. As described above, at least one of these complaints had to do with a situation in which the CLEC was using far more than its ordered amount of power. The fact that a CLEC

thought there was a basis to complain even though it was using far more than the ordered amount confirms Qwest's belief that it must make available to the CLECs the ordered amount of power and not less.

Respondent: Curtis Ashton

Qwest Response to

McLeodUSA Data Request No. 2-9

Washington UT-063013 McLeodUSA 02-009

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 009

Qwest's response 01-007, in which Qwest states that it did not retain the cost study documentation supporting the rates found in the DC Power Reduction Amendment offered to McleodUSA in September 2004. Please confirm or deny that Qwest currently offers a "DC Power Reduction Amendment" similar to the amendment offered to McLeodUSA in September 2004.

- a. If your answer to the question above is anything other than an unequivocal "deny," please provide a copy of the amendment Qwest currently offers.
- b. If your answer to the question above is anything other than an unequivocal "deny," please produce all cost study documentation (including an electronic, working copy of the model/study) supporting the rates found in the amendment Qwest currently offers.

RESPONSE:

(a) and (b): Qwest responds that it does not affirmatively market a stand alone amendment for Power Reduction any longer. However, if a CLEC requests such an amendment, the rates that are currently available for Power Reduction are the same rates as offered to McLeodUSA in September 2004 for which Qwest does not have cost study documentation. Qwest is in the process of updating the costs for this element and will have cost support for the new resulting rates soon.

Respondent: Terri Million, Staff Director

Qwest Response to

McLeodUSA Data Request No. 1-5

Washington Docket No. UT-063013 McLeodUSA 01-005

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 005

For each circumstance wherein McLeodUSA or any other CLEC has decommissioned a collocation space in Washington in the past 3 years, please identify the extent to which Qwest removed, or otherwise reduced the capacity related to, any equipment from the list below:

- a. Rectifiers
- b. Power Monitors
- c. Battery Distribution Fuse Bays (BDFB)
- d. Power Boards
- e. Batteries
- f. Generator or Alternators
- g. Fuel Tanks

RESPONSE:

Qwest does not remove or reduce its Power Plant capacity based on decommissioned collocations. Qwest will reassign fuse positions for Battery Distribution Fuse Bays ("BDFB") and Power Boards ("PBD"), based on demand.

Respondent: Ryan Gallager