

BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

In The Matter Of

Level 3 Communications, LLC'S Petition for
Arbitration Pursuant to Section 252(B) of the
Communications Act of 1934, as Amended by
The Telecommunications Act Of 1996, and the
Applicable State Laws for Rates, Terms, and
Conditions of Interconnection with Qwest
Corporation

DOCKET NO. UT-063006

REPLACEMENT

DIRECT TESTIMONY OF

DR. WILLIAM FITZSIMMONS

ON BEHALF OF

QWEST CORPORATION

AUGUST 18, 2006

1 **I. INTRODUCTION AND PURPOSE OF TESTIMONY**

2 **Q. PLEASE STATE YOUR NAME AND POSITION.**

3 A. My name is William Fitzsimmons. I am a Director at LECG, LLC; my business
4 address is 2000 Powell Street, Suite 600, Emeryville, CA 94608.

5

6 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL QUALIFICATIONS.**

7 A. I hold a Ph.D. in Resource Economics from the University of Massachusetts,
8 Amherst. My industry experience prior to joining LECG in 1994 includes two years
9 of modeling demand for private line services for AT&T in New Jersey and six years
10 as a financial modeler for BellSouth in Atlanta. At LECG, my work is focused on
11 the economic analysis and financial modeling of telecommunications issues. I have
12 testified numerous times on cost models and economic issues. My curriculum vita is
13 attached as Exhibit WLF-2.

14

15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

16 A. The purpose of this testimony is to provide guidance from the perspective of proper
17 economic reasoning for how to consider cost causation and incentives as they relate
18 to efficient and beneficial competitive markets.

19

20 **II. COST CAUSATION**

21 **Q. FROM AN ECONOMIC PERSPECTIVE, IS THE PRINCIPLE OF COST**
22 **CAUSATION THE PROPER CONSIDERATION FOR DETERMINING THE**
23 **RESPONSIBILITY FOR COSTS?**

24 A. Yes, cost causation is the proper consideration for determining the responsibility for
25 costs. I am not here to make a legal argument, and I understand that each party will

1 argue that certain Federal Communications Commission (FCC) rules and court
2 decisions govern financial responsibility for costs incurred by Qwest on its side of
3 the point of interconnection (POI). Setting that issue aside, cost causation is the
4 proper guiding principle for determining which firm is responsible for costs.

5
6 In competitive markets, cost responsibility follows cost causation. This is a key
7 reason why competitive markets produce efficient outcomes, and it is a key reason
8 why we are making the transition from regulated to competitive markets, as directed
9 by the Telecommunications Act of 1996 (Telecom Act).¹ Now, ten years after the
10 signing of the Telecom Act, it is increasingly important to adopt cost causation in
11 decisions regarding pricing issues. Any other solution is contrary to the operation of
12 efficient competitive markets and maximizing long run benefits to consumers.

13 Perhaps more than any other factor, forcing cost causers to face the responsibility of
14 recovering the costs from end users is what drives efficient outcomes in competitive
15 markets.

16
17 For example, if Firm A causes the costs incurred by Firm B, it is appropriate for
18 Firm A to: (1) compensate Firm B for the costs it incurs; and (2) attempt to recover
19 from its own customers the costs that it causes. In this way, a firm that causes costs
20 is responsible for earning the revenues to recover the costs, and the firm will only
21 undertake investments that are valued sufficiently by customers. If Firm A, in this
22 example, considers a marketing initiative that (if successful) will use current capacity
23 in telecommunications infrastructure or require investment in additional

¹ Congress characterized the 1996 Act as: “An Act to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.” *See* Preamble of the Telecommunications Act of 1996, Pub. LA. No. 104-104, 110 Stat. 56.

1 telecommunications capacity, the efficient solution is for Firm A to proceed only if it
2 expects to earn revenues sufficient to recover the cost of this capacity.

3 If Firm A is allowed to shift the costs that it causes onto another firm, then Firm A
4 can proceed with its marketing initiative, even if the overall cost caused by the
5 initiative is greater than the amount that consumers are expected to value the
6 additional service. Totally aside from the question of fairness, this is an inefficient
7 use of resources that is, for the most part, avoided in competitive markets. Firm A,
8 in this example, would receive the revenue from the capacity, and Firm B would
9 incur the cost. Such an imbalance between revenues and costs (and risks and
10 rewards) would distort the market. It would benefit one competitor at the expense of
11 the broader and longer term benefits expected from efficient competition. This is the
12 outcome that would result from the application of Level 3's policy prescription.

13

14 **Q. WHAT COST CAUSATION AND COMPENSATION DO YOU FOCUS ON**
15 **IN THIS SECTION OF YOUR TESTIMONY?**

16 A. It is my understanding from Mr. Linse that Level 3 presently interconnects with
17 Qwest at 6 points in Washington. I focus on costs that arise when Level 3's
18 customers are internet service providers (ISPs) and Level 3 interconnects with Qwest
19 to collect and transport Internet traffic. The expected result of such an arrangement
20 is that virtually all traffic exchanged between Qwest and Level 3 is dial-up traffic
21 destined for the Internet. As observed by the FCC in its ISP Remand Order:

22 "The regulatory arbitrage opportunities associated with
23 intercarrier payments are particularly apparent with respect to
24 ISP-bound traffic...because ISPs typically generate large

1 volumes of traffic that is virtually all one-way – that is
2 delivered to the ISP.”²

3 Often, the end users who originate ISP traffic are not in the same local calling areas
4 as their ISPs. When this occurs, the traffic travels on Qwest’s facilities from the
5 originating end user to Level 3’s points of interconnection in another local calling
6 area, and Qwest incurs costs related to switching and transporting this interexchange
7 traffic. There is nothing new about this concept. When the end points of a call are in
8 separate local calling areas, the call is an interexchange call. When interexchange
9 calls travel over facilities owned by local exchange carriers (LECs), there are well
10 defined rules for how LECs are compensated for the use of their facilities.

11 Specifically, there are “access” charges that compensate LECs for costs related to the
12 “local” portions of the call and for costs related to transporting traffic between local
13 calling areas.

14 Finally, the focus of my analysis is on costs and compensation that are related to
15 VNXX Internet traffic. VNXX is typically defined as the situation where a
16 telephone number with an NPA-NXX associated with one local calling area is
17 assigned by a CLEC to a customer physically located outside of the local calling area
18 to which the NPA-NXX is associated. Thus, while the calling party appears to be
19 making a local call, the call is actually transported to and terminated in another local
20 calling area (or perhaps even in a different state).

21

22 **Q. WHEN AN END USER ESTABLISHES AN INTERNET CONNECTION**
23 **WITH AN ISP, IS THE END USER A CUSTOMER OF THE ISP?**

² Order on Remand and Report and Order, *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, and Intercarrier Compensation for ISP-Bound Traffic*, CC Docket Nos. 96-98, 99-68, ¶ 2 (FCC. 2001) (hereafter “ISP Remand Order”).

1 A. Yes. Before describing the chain of cost causation for the traffic at issue, it is helpful
2 to establish that end users who purchase Internet access service from ISPs are
3 customers of the ISPs, and that the ISPs are customers of Level 3. ISPs are
4 commercial enterprises that provide Internet connections and information to their
5 customers across these Internet connections. For this purpose, end users establish
6 formal customer relationships with ISPs and pay monthly fees for the services (either
7 for a certain amount of usage or for unlimited usage). Even on ISP home pages,
8 customers have ready access to information that is generated around the globe. The
9 purpose of establishing an Internet connection is to access this and other information,
10 and when an end user establishes the connection with its ISP, the end user is acting
11 as a customer of the services offered by the ISP. It is not necessary to belabor this
12 point, since it is a point that is quite obvious and which has already been explained
13 and established by multiple regulatory commissions.

14

15 **Q. HAVE REGULATORS RECOGNIZED THAT A CUSTOMER**
16 **CONNECTING THROUGH LEVEL 3 TO AN ISP IS ACTING PRIMARILY**
17 **AS A CUSTOMER OF THE ISP?**

18 A. Yes, regulators have recognized that an end user who originates an Internet call is
19 acting as a customer of the ISP. The Public Utilities Commission of Colorado, in an
20 arbitration decision involving Qwest and Level 3, directly addressed this issue:

21 “We find Qwest’s ILEC/IXC analogy for the transport of ISP-
22 bound calls more persuasive than the ILEC/CLEC analogy
23 advanced by Level 3. We continue to believe that in
24 transporting an ISP-bound call, the ISP plays a role similar to
25 that of an IXC in the transmission of an interstate long
26 distance call. *We believe that the originator of either call, the*

1 *ILEC end-user, acts primarily as the customer of the ISP or*
2 *IXC, not as the customer of the ILEC.”³*

3 An arbitrator for the Vermont commission, in referring to VNXX traffic, reached a
4 similar conclusion:

5 “In effect, a CLEC using VNXX offers the equivalent of
6 incoming 1-800 service, without having to pay any of the costs
7 associated with deploying that service and instead relying
8 upon [the ILEC] to transport the traffic without charge simply
9 because the VNXX says the call is ‘local.’”⁴

10

11 **Q. DID ARBITRATORS ALSO RECOGNIZE NEGATIVE IMPACTS ON**
12 **ECONOMIC INCENTIVES FROM LEVEL 3-TYPE PROPOSALS?**

13 A. Yes. The arbitrator in Vermont observed correctly that a CLEC’s use of VNXX to
14 avoid paying for the cost of transporting traffic on the incumbent’s network “sends
15 inappropriate signals to competitors and discourages the deployment or purchase of
16 facilities that may provide more efficient service to customers.”⁵ An arbitrator in
17 Massachusetts also concluded that the use of VNXX to avoid compensating the
18 incumbent for costs it incurs:

19 “[W]ould artificially shield [the CLEC] from the true cost of
20 offering the service and will give [the CLEC] an economic
21 incentive to deploy as few facilities as possible. By artificially
22 reducing the cost of offering the service, [the CLEC] will be
23 able to offer an artificially low price to ISPs and other

³ Commission Decision, *In the Matter of Petition of Level 3 Communications LLC, for Arbitration Pursuant to § 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Qwest Corporation*, Decision No. C01-312, Docket No. 00B-601T, at 18 (Colo. PUC 2001) (emphasis added).

⁴ *Petition of Global NAPS, Inc. for Arbitration Pursuant to §252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Verizon New England*, Docket No. 6742, 2002 Vt. PUC LEXIS 272, at *41-*42 (Vt. PSB 2002).

⁵ *Id.* at *45.

1 customers who experience heavy inbound calling... The result
2 would be a considerable market distortion...”⁶

3 In these cases, the decision-makers properly identified the cost causers and
4 determined financial responsibility based on the proper application of the principle of
5 cost causation.

6

7 **Q. IS TRAFFIC TO ISPS SIMILAR TO LONG DISTANCE TRAFFIC THAT**
8 **ILECS ORIGINATE AND TERMINATE FOR INTEREXCHANGE**
9 **CARRIERS?**

10 A. Yes. The quotation from the Colorado Commission cited above uses that precise
11 analogy. The FCC made a similar observation:

12 “ISP service is analogous, though not identical, to long
13 distance calling service... The analogy is...used merely to
14 bolster...the reasonableness of not characterizing an ISP as the
15 destination of a call, *but as a facilitator of communication.*”⁷

16 As “facilitators of communication” for their customers, long distance carriers and
17 ISPs cause local exchange carriers to incur costs (both within the local exchange and
18 to transport the traffic to another local calling area), and the principle of cost
19 causation dictates that the cost causers should compensate the local exchange carriers
20 for these costs.

21

22 Earlier this year, the South Carolina Commission articulated a similar conclusion:

23 “The Commission’s and the FCC’s current intercarrier
24 compensation rules for wireline calls clearly exclude
25 interexchange calls from both reciprocal compensation and
26 ISP intercarrier compensation. These calls are subject to

⁶ *Petition of Global NAPs, Inc., Pursuant to Section to §252(b) of the Telecommunications Act of 1996, for arbitration to Establish an Interconnection Agreement with Verizon New England, D.T.E. 02-45, 2002 Mass. PUC LEXIS 56, at *56 (Mass. Dep’t of Tel. and Energy 2002).*

⁷ *ISP Remand Order, ¶60 (emphasis added).*

1 access charges. This is also the case for Virtual NXX calls,
2 which are no different from standard dialed long distance toll
3 or 1-800 calls.”⁸

4 The Colorado Commission has likewise addressed this issue in a case in which
5 Level 3 sought to interconnect with Centurytel (a rural independent carrier) for the
6 purpose of serving ISP customers located in Centurytel territory. The Colorado
7 Commission concluded that Level 3 had no right to interconnect with Centurytel
8 when the purpose of the agreement was for interexchange calling:

9 “Centurytel notes that the ISP customers that Level 3 seeks to
10 serve are not located in Centurytel’s local calling area. As
11 such, calls by Centurytel’s end-users to Level 3’s ISP
12 customers would originate and terminate in different calling
13 areas, and, therefore, would be interexchange calls. Section
14 252(c)(2) is clear that the duty to interconnect under its
15 provisions does not apply to interexchange calling.”⁹

16 More than 20 years ago, when the Regional Bell Operating Companies were created
17 as separate entities from AT&T, end users became customers of at least two separate
18 firms, a local service provider and one or more long distance service providers.
19 Beginning in the 1980s, when customers used their phone lines to make long
20 distance calls, it was recognized that they were acting as customers of the long
21 distance companies. There was no nonsensical conclusion that the end user was
22 acting as a customer of the local company up to the point of interconnection with the
23 interexchange carrier (IXC). When a customer wanted to make a call to a local
24 calling area in another local access and transport area (LATA), he was acting as a
25 customer of an IXC, and the costs associated with the call were attributed to the IXC.

⁸ Order Ruling on Arbitration, *In re Petition of MCI Metro Transmission Services, LLC for Arbitration of Certain Terms and Conditions of Proposed Agreement with Horry Telephone Cooperative*, 2006 S.C. PUC LEXIS 2, at *35 (S.C. PUC, January 11, 2006).

⁹ Decision Denying Exceptions, *In the Matter of the Petition of Level 3 Communications, LLC for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 with Centurytel of Eagle, Inc.*, Decision No. C03-0117, Docket No. 02B-408T ¶ 36 (Colo. PUC, January 30, 2003).

1 To compensate the local companies for the use of their facilities when users acted as
2 long distance customers, the long distance companies (such as AT&T, MCI, and
3 Sprint) paid the local companies for those costs through access charges. Not long
4 after, intraLATA toll competition emerged, and state commissions applied the same
5 rationale for intraLATA calling between local calling areas. From the perspective of
6 cost causation, the rationale is fundamentally the same for customers of ISPs.

7

8 **Q. IS LEVEL 3 AWARE OF THE FACT THAT THE FCC IS GRAPPLING**
9 **WITH INTERCARRIER COMPENSATION ISSUES, INCLUDING ACCESS**
10 **CHARGES?**

11 A. Yes. In August of 2001, Level 3 filed comments in the *still ongoing* intercarrier
12 compensation docket at the FCC, and Level 3 remains an active participant in this
13 proceeding.¹⁰ In comments to the FCC, Level 3 demonstrated that it is well aware of
14 the intercarrier compensation rules and issues that the industry has grappled with for
15 many years, including access charges. In its comments in the above-mentioned FCC
16 proceeding, Level 3 recapped the derivation of access charges as follows:

17 “In 1983, following the break-up of AT&T, the Commission
18 adopted uniform access charge rules that governed the fees
19 charged by the local exchange carriers for the costs associated
20 with using the local network for the provision of interstate
21 access services.”¹¹

22 “Although the Commission has revised the interstate access
23 charge regime, the essential characteristics of intrastate and
24 interstate access charge systems remain.”¹²

¹⁰ Comments of Level 3 Communications, LLC, *In the Matter of Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, (FCC August 21, 2001).

¹¹ Ibid, p.7.

¹² Ibid, p. 9.

1 “In any event, the interexchange carrier is left to recover its
2 costs for originating and terminating the call from its
3 customers.”¹³

4 With this summary, Level 3 recognizes ongoing revisions to access charge systems
5 and the fact that interexchange carriers are responsible for recovering the costs that
6 they cause on behalf of their customers. Level 3 continues as an active participant in
7 the debate at the FCC regarding intercarrier compensation issues, as demonstrated by
8 its ex parte meeting with the FCC just last month.¹⁴

9
10 It would be disingenuous for Level 3 to state or imply that it placed its facilities
11 without full knowledge of current access charge rules or the ongoing efforts at the
12 FCC to resolve difficult intercarrier compensation issues. Yet, Level 3 has embarked
13 upon a business plan that seeks to shift costs that it causes onto Qwest. In the short
14 run, this is an attempted end run around the FCC’s efforts to guide the industry
15 through an equitable transition. In the longer run, it is a strategy that is contrary to
16 the development of efficient competitive markets.

17
18 **Q. IS LEVEL 3 ACTING AS AN INTEREXCHANGE SERVICE PROVIDER**
19 **WHEN IT CONTRACTS WITH AN ISP AND DELIVERS DIAL-UP**
20 **INTERNET CALLS TO THE ISP ACROSS LOCAL CALLING**
21 **BOUNDARIES?**

22 A. Yes. When an end user in one local calling area initiates a connection with an ISP
23 that is in another local calling area, this call crosses exchange boundaries and is,
24 therefore, an interexchange call. It is my understanding that the media gateway that

¹³ Ibid, p. 10.

¹⁴ Notice of Ex Parte Presentation by Level 3 Communications, LLC, *In the matter of Developing a Unified Intercarrier Compensation Regime*, CC Docket 01-92, (FCC May 1, 2006).

1 Level 3 uses to “answer” dial-up calls from its customers in Washington is in
2 Seattle.¹⁵ This means that when an end user in Washington dials the phone number
3 for an ISP served by Level 3, the call is handed off at a POI to Level 3, and Level 3
4 carries this call to Seattle before the call is, in effect, answered by Level 3’s modem
5 functionality and handed off to an ISP. The end user who originates the call is not
6 ultimately trying to reach the POI; the end user is trying to reach the ISP, wherever
7 the ISP is physically located. These are the end points of the call for intercarrier
8 compensation purposes. If these end points are in different local calling areas, then it
9 is an interexchange call.

10
11 **Q. WOULD YOU PLEASE EXPAND UPON YOUR VIEWS OF THE PROPER**
12 **APPLICATION OF THE PRINCIPLE OF COST CAUSATION FOR THE**
13 **TRAFFIC AT ISSUE IN THIS PROCEEDING?**

14 A. Through their customer relationships with end users, ISPs cause the costs associated
15 with collecting Internet traffic from their customers throughout Washington. ISPs
16 are not, however, in a position to collect this traffic on their own. As I understand it,
17 an ISP cannot obtain local telephone numbers—it must engage a local exchange
18 carrier, such as Level 3, which has the right to obtain local telephone numbers from
19 the North American Numbering Plan Administrator (NANPA). To fulfill its part of
20 the contract, Level 3 assumes the responsibility for obtaining local telephone
21 numbers, for collecting traffic from multiple local calling areas in Washington, and

¹⁵ The ultimate termination points of ISP calls are the websites that the end-user chooses to access during an Internet session. Indeed, it was on that basis that the FCC asserted jurisdiction over ISP calls in the *ISP Declaratory Order* in 1999. For compensation purposes, however, it is my understanding that one endpoint is viewed as the ISP, and it is the ISP’s modems that “answer” the call after the screeching sound is completed. The modems are also where the ISP performs the TDM-ISP conversion that goes on throughout an Internet session. It is in that sense that I say the ISP answers the call at its modems.

1 for delivering traffic to the ISP's location. As such, Level 3 incurs costs on behalf of
2 its ISP clients.

3
4 As a profit seeking firm, Level 3 searches for the least costly way to fulfill this
5 responsibility. To this end, Level 3 contracts with Qwest to collect traffic, and
6 Qwest incurs costs to perform this service (thus incurring costs within its local
7 exchange areas to gather the traffic and costs to transport it to a Level 3 POI).

8 Clearly, however, Qwest does not cause these costs. Level 3 and its ISP customers
9 cause the costs, and economic efficiency dictates that they should compensate Qwest
10 for the costs that Qwest incurs on their behalf. Level 3, however, does not want to
11 compensate Qwest for the costs that Qwest incurs on its behalf. Instead, it is asking
12 the Commission to require Qwest to provide its state-wide network free of charge for
13 the benefit of Level 3 and its ISP customers.

14
15 To summarize, ISPs and their customers cause the costs associated with switching
16 and transporting the Internet traffic that Qwest delivers to Level 3. Level 3 takes
17 responsibility for these costs on behalf of the ISPs, and Qwest incurs the costs.

18
19 The proper chain of payments is determined by the chain of cost, but in reverse –
20 back to the cost causer. Level 3 causes Qwest to incur costs in switching and
21 transporting the traffic to Level 3, so Level 3 should compensate Qwest. The ISP
22 causes Level 3 to incur costs, so the ISP should compensate Level 3. The end user
23 customers of the ISP cause the ISP to incur costs, so the end users should
24 compensate the ISP. In this way, every entity is responsible for the costs that it
25 causes, and every entity can properly weigh its costs against the expected benefits or

1 revenues that it expects to receive. As stated above, this leads to an efficient use of
2 resources.

3
4 If Level 3 can convince this Commission to force Qwest to assume responsibility for
5 the switching and transport costs, Level 3 can sidestep costs that it causes, and the
6 chain of payments that forces the responsibility of costs back to the cost causers will
7 be broken. If this occurs, Qwest will face costs that it does not cause, and the power
8 of cost causation to produce efficient decisions will be lost (not to mention the fact
9 that the result would be unfair). The beneficiaries would be Level 3 and its ISP
10 customers; the immediate loser would be Qwest; and the long term losers would be
11 the state's telecommunications customers.

12
13 **Q. WOULD YOU PLEASE PROVIDE AN ILLUSTRATIVE EXAMPLE TO**
14 **DEMONSTRATE THAT QWEST DOES NOT CAUSE THE COSTS AT**
15 **ISSUE IN THIS PROCEEDING?**

16 A. An illustrative example helps demonstrate the point that Qwest does not cause the
17 switching and transport costs associated with Internet traffic that is at issue in this
18 proceeding. Assume for purposes of this example that the modems used by Level 3
19 and its ISP customers to provide Internet access are in Seattle. Suppose an ISP runs
20 a successful marketing campaign and doubles the amount of Internet traffic that is
21 originated by its customers in Olympia. Assume further that this forces Qwest to add
22 switching and transport capacity. Clearly, the increase in traffic was caused by the
23 ISP's marketing efforts, as was the incremental cost incurred by Qwest to carry the
24 increased traffic. Just as clearly, the revenue to pay for this increase in cost should
25 come from customers of the ISP. The result is the same if Level 3 runs a successful
26 marketing campaign and attracts additional ISPs to its network. To the extent that

1 this places more traffic on Qwest's network, Level 3 causes additional costs for
2 Qwest. The principle of cost causation dictates that Level 3 and its ISP customers
3 should compensate Qwest for the costs that they cause.

4

5 **Q. DOES THAT CONCLUDE YOUR TESTIMONY?**

6 **A. Yes.**

7