

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

CENTURYLINK COMMUNICATIONS, LLC,

Respondent.

DOCKET UT-181051

AMENDED
WASHINGTON STATE MILITARY DEPARTMENT'S INITIAL BRIEF

January 18, 2023

Shaded Information is Confidential Per Protective Order in Docket UT-181051

REDACTED

TABLE OF CONTENTS

I. INTRODUCTION.....1

II. STATEMENT OF FACTS.....1

III. ANALYSIS5

 A. CENTURYLINK WAS A COVERED 911 PROVIDER BY ITS CONTRACT WITH SECO, AND AS SUCH, WAS A COMMISSION REGULATED TELECOMMUNICATIONS COMPANY.....5

 B. CENTURYLINK WAS REQUIRED UNDER STATE LAW AND THE COMMISSION’S RULES TO ENSURE CALLS ENTERING ITS ESINET COULD BE ROUTED TO COMTECH’S ESINET FOR DELIVERY6

 C. CENTURYLINK’S ACTIONS ARE THE PROXIMATE CAUSE OF THE DECEMBER 2018 WASHINGTON 911 SYSTEM OUTAGE9

IV. CONCLUSION AND RELIEF REQUESTED.....10

TABLE OF AUTHORITIES

Statutes

RCW 38.52.5201
RCW 80.36.0806
RCW 80.36.150(1).....6
RCW 80.36.2206
RCW 80.36.3501, 6

Regulations

47 C.F.R. § 9.19(a)(4).....1

Rules

WAC 480-120-021.....7
WAC 480-120-412(1).....7
WAC 480-120-412(2).....7
WAC 480-120-450.....6

I. INTRODUCTION

1. The Washington State Military Department Enhanced 911 Coordination Office (SECO) files this Initial Brief.

II. STATEMENT OF FACTS

2. In 2009, under RCW 38.52.520, SECO contracted with CenturyLink Communications Company, LLC f/k/a Qwest Communications, LLC (CenturyLink), for the provision and maintenance of a statewide Emergency Services Internet Protocol 911 Network (ESInet I) (Contract).¹ The ESInet I was a telecommunications network over which 911 calls are received and routed from Originating Service Providers (OSP) to Public Safety Answering Points (PSAP). CenturyLink agreed that its ESInet I would “include, but . . . not [be] limited to, network, transport, PSAP interfaces, 911 trunk support, selective routing and [Automatic Location Identification (ALI)] interfaces.”² The network was required among other things, to be “reliable [and] redundant.”³ As a provider of the ESInet I, CenturyLink, if it was not already, became a “covered 911 service provider” as that term is defined by the Federal Communications Commission⁴ and a telecommunications company regulated by the Utilities and Transportation Commission (Commission)⁵.

3. The Contract was amended many times and, in anticipation of the issuance of a solicitation for proposals for a next generation 911 (NG911) ESInet II, CenturyLink agreed in Amendment J to a transition plan to successor provider.⁶ In that Amendment, CenturyLink agreed

¹ Webber, Exh. JDW-38C, WMD Contract E09-196 and Amendments J, K, L, and M

² *Id.* at 14, ¶ 2

³ *Id.*

⁴ 47 C.F.R. § 9.19(a)(4)

⁵ RCW 80.36.350

⁶ Webber, Exh. JDW-38C at 18-19

Shaded Information is Confidential Per Protective Order in Docket UT-181051

to provide “all services, information and data reasonably necessary to effectuate an orderly and seamless transition to such successor provider and to ensure that there is no interruption of 9-1-1 [sic] service in the State of Washington.”⁷

4. In 2016, SECO solicited proposals and awarded a new ESInet II contract to TeleCommunications Systems, Inc. d/b/a Comtech TeleCommunications Corp. (Comtech)⁸. Subsequently, CenturyLink, its subcontractor Intrado, and Comtech met to coordinate the transition of 911 calls from ESInet I to ESInet II. In describing the design of the transitional interconnection of the two ESInets, telecommunications expert Brian Rosen testified that:

[REDACTED]

He explained that:

[REDACTED]

This resulted in an IP to SS7 to IP interconnection.

5. Further, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] at 18, ¶ 11(1)(a)

⁸ Webber, Exh. JDW-74X 1-92, Comtech Contract with SECO

⁹ Rosen, Exh. BR-30CT at 3:8-14, Rosen Cross Answering Testimony

¹⁰ Rosen, Exh. BR-30CT at 3:15-4:2; *see also*, Rosen, Exh. BR-1CT at 4-8, Direct Testimony

Shaded Information is Confidential Per Protective Order in Docket UT-181051

[REDACTED]
[REDACTED]¹¹

6. In Amendment M¹² to the CenturyLink contract, CenturyLink agreed to a joint detailed transition plan with Comtech¹³, in which CenturyLink agreed that it would “remain responsible for routing calls . . . intended for Migrated PSAPs to the Demarcation Point at ESInet II. . . .”¹⁴ Unfortunately, the Transition Plan, despite stating that responsibility for call delivery would transitioned from CenturyLink to Comtech at the “Demarcation Point,” it did not define or describe the Demarcation Point. Importantly, CenturyLink, in addition to its array of contractual responsibilities, [REDACTED]
[REDACTED]

[REDACTED].¹⁵

7. Neither of the amendments addressing the transition relieved CenturyLink of its primary responsibility to ensure that 911 calls that originated in its ESInet I could pass through to Comtech’s ESInet II and to provide reliable and redundant 911 service.¹⁶ The transition plan (which was added to both vendors’ contracts with SECO) adds Comtech as “a Covered 911 Service Provider,” but does not remove CenturyLink as a Covered 911 Service Provider.¹⁷

8. On December 27, 2018, CenturyLink experienced a nationwide outage on one of its national networks being used by CenturyLink in its ESInet I. The outage was caused by a data

¹¹ Rosen, Exh. BR-1CT at 5:2-7; *see also* Rosen, TR. III–Confidential Excerpts, 290:17-18 – 291:4-6; *see also*, Rosen, Exh. BR-30CT at 5:12-20

¹² Webber, Exh. JDW-38C at 23-24, Amendment M

¹³ *Id.*

¹⁴ *Id.* at 23, ¶ 11(1)(a)

¹⁵ Webber, Exh. JDW-1CT 38:15-17; *see also*, Rosen, Exh. BR-30CT 21:19-20

¹⁶ Rosen, Exh. BR-1CT at 27:11-13

¹⁷ Rosen, Exh. BR-1CT at 27:11-13; *see also* Rosen, TR. III 285:6-8, Confidential Excerpts

Shaded Information is Confidential Per Protective Order in Docket UT-181051

“packet storm” that impacted one of its fiber-based long-haul transport networks.¹⁸ According to telecommunications expert James Webber, “the primary and avoidable cause of the Washington E911 network outage in December 2018 was CenturyLink’s failure to disable certain unused communications paths . . . between the nodes. . . .” despite having suffered a similar packet storm on another of its networks only ten months earlier.¹⁹

9. The CenturyLink outage caused the [REDACTED] [REDACTED] to fail to complete calls to PSAPs in Washington State’s 911 System and CenturyLink failed to notify PSAPs of the call failures.²⁰ This national outage caused a [REDACTED] hour outage in the Washington E911 System and at least [REDACTED] 911 calls failed during this time.²¹ Subsequently, Commission Staff filed the Complaint in this matter alleging violations of Washington State statutes and Commission rules. SECO intervened in this matter to ensure its contracts and SECO’s understanding of the contracts were available to the Commission, and to protect the cyber security of Washington’s 911 System.

10. Despite CenturyLink’s assertion following the outage, that the Demarcation Point was located in the middle of the [REDACTED] a point in the system that is in front of the point of the system failure, Comtech and SECO believe that the Demarcation Point is logically where Comtech’s equipment [REDACTED] received the calls, a location after the system failure occurred and a location at which Comtech could take control of the calls and routing.²²

¹⁸ Webber, Exh. JDW-1CT at 6:19-22-7:1-5; Webber, Exh. JDW-37C; Akl, Exh. RA-1CT at 3:10-21

¹⁹ Webber, Exh. JDW-1CT at 7:6-9

²⁰ Rosen, Exh. BR-1CT at 5:7-8

²¹ Webber, Exh. JDW-1CT at 8:14-1

²² Rosen, Exh. BR-30CT 21:17-18; Rosen, Exh. BR-1CT 29:8-14 – 30:1-3; Rosen, Exh. BR-28 at 2, WMD Supplemental Response to Public Counsel Data Request No. 6

Shaded Information is Confidential Per Protective Order in Docket UT-181051

11. Brian Rosen testified that Comtech's assertion of the Demarcation Point is reasonable and logical because since [REDACTED]

[REDACTED]²³ Upon cross examination Mr. Rosen clarified that Comtech's argument is logical because the demarcation is at the [REDACTED]

[REDACTED]²⁴

12. Regardless of the demarcation point between CenturyLink and Comtech, at the time of the 2018 outage, CenturyLink remained contractually responsible for providing access from the OSPs for all 911 calls in Washington, for the ALI connections to the OSPs²⁵, and to ensure delivery of 911 calls intended for PSAPs that had migrated to Comtech were delivered to the [REDACTED]

[REDACTED]²⁶ As testified by Brian Rosen, "CenturyLink was not yet relieved of its obligation as a Covered Service Provider at the point where the outage impacted the network and is therefore responsible for the call failures."²⁷

III. ANALYSIS

A. Centurylink Was a Covered 911 Provider by Its Contract With SECO, and as Such, Was a Commission Regulated Telecommunications Company

13. By contractual agreement, state law and Commission rules, CenturyLink was a regulated telecommunications company providing essential 911 services at the time of the 911 system outage in December 2018 in Washington State. CenturyLink's agreement to provide ESInet I services in Washington resulted in the requirement to comply with Washington state statutes and Commission rules that apply to telecommunications companies operating in this state.

²³ Rosen, Exh. BR-30CT 22:1-2, Rosen Cross Answering Testimony

²⁴ Rosen, TR. Vol. III 314:5-9, Confidential Portion

²⁵ Rosen, Exh. BR-1CT at 7:11-16

²⁶ Rosen, Exh. BR-27 at 2, WMD Supplemental Response to Public Counsel Data Request No. 7

²⁷ Rosen, Exh. BR-1CT at 34:6-8

Shaded Information is Confidential Per Protective Order in Docket UT-181051

These statutes and rules include, but are not limited to, requirements that it file its contracts for telecommunications services, equipment, and facilities with the Commission, register with the Commission, and comply with the Commission's rules regarding the provisions of telecommunications services.²⁸

B. Centurylink Was Required Under State Law and the Commission's Rules to Ensure Calls Entering Its ESInet Could Be Routed to Comtech's ESInet for Delivery

14. CenturyLink was required by contract, state law, and Commission rules to ensure that 911 calls coming into its ESInet from originating service providers were able to pass over the circuits [REDACTED] to be routed to the appropriate PSAP.

15. Specifically, telecommunications contracts for "messages, conversations, services rendered and equipment and facilities supplied, whether such message, conversation or service to be performed be over one company or line **or over or by two or more companies** or lines" are required to be, among other things, "fair, just, reasonable and sufficient" to provide the service.²⁹ (Emphasis added.) The service is required to be "rendered and performed in a prompt, expeditious and efficient manner."³⁰ Facilities, instrumentalities and equipment furnished are required to be "kept in good condition and repair" and "appliances, instrumentalities and service" are required to be "modern, adequate, sufficient and efficient."³¹ In addition, telecommunications companies are required to receive, exchange, and transmit other telecommunications companies' messages without delay or discrimination, and shall receive and transmit messages for any person.³²

²⁸ RCW 80.36.150(1); RCW 80.36.350; WAC 480-120-450

²⁹ RCW 80.36.080

³⁰ *Id.*

³¹ *Id.*

³² RCW 80.36.220

Shaded Information is Confidential Per Protective Order in Docket UT-181051

16. Importantly, per the Commission’s rules, “[a]ll companies must make reasonable provisions to minimize the effects of major outages, including those caused by force majeure, and inform and train pertinent employees to prevent or minimize interruption or impairment of service.”³³ A “major outage” is a “service failure lasting for thirty or more minutes that causes the disruption of local exchange or toll services to more than one thousand customers; [or] total loss of service to a public safety answering point or emergency response agency.”³⁴ Additionally, “[w]hen a company receives notice of or detects a major outage, it must notify the commission and any PSAP serving the affected area as soon as possible.”³⁵

17. In transitioning the ESInet I services to a successor provider, CenturyLink’s services and interactions were not fair, just, or reasonable, and instead were woefully insufficient for the public safety service required.

18. First, CenturyLink refused to connect its ESInet I via the modern IP connection that Comtech requested and only offered an IP connection that was at odds with industry standards. CenturyLink’s only other agreed solution was to connect via the older SS7 protocol, resulting in an IP-SS7-IP connection and making the system unnecessarily complicated and ultimately less stable.

19. Second, CenturyLink then insisted upon connecting its ESInet I via a third party to the ESInet II; rather than using a direct connection, further unnecessarily complicating this vital system.

³³ WAC 480-120-412(1)

³⁴ WAC 480-120-021

³⁵ WAC 480-120-412(2)

Shaded Information is Confidential Per Protective Order in Docket UT-181051

20. Third, CenturyLink [REDACTED] that failed to transport calls from the CenturyLink ESInet I to the ESInet II. CenturyLink has argued that there was insufficient diversity or redundancy in the circuits, but after meet and entering into a written, detailed agreement about the transition, CenturyLink is responsible for any lack of diversity or redundancy because [REDACTED]

[REDACTED] as required in its contract with SECO. It did not.

21. Fourth, CenturyLink connected its ESInet I to one of its two national networks. One of these networks had already suffered an outage caused by leaving unused portions of the network open (operational) that shut down that network only ten months prior to the December 2018 outage on it's the other network connected to the ESInet I. The second network outage was also caused by leaving unused portions of the network open, resulting in a data packet storm. This was a clearly foreseeable event by December 2018 and CenturyLink knew, or should have known, that its other network was also vulnerable to an outage and it should have closed the unused portions of the network. Instead, it followed advice from its contractor and left the Washington State 911 System vulnerable to an outage.

22. Fifth, once CenturyLink's national network outage impacted the Washington 911 System and calls began to fail, CenturyLink did not bother to notify the PSAPs of the outage as required, resulting in a [REDACTED] hour major outage, leaving at least [REDACTED] calls unanswered and people without emergency services.

23. In sum, CenturyLink's services, provided via its chosen connection to Comtech, were not rendered or performed in a prompt, expeditious or efficient manner. The

Shaded Information is Confidential Per Protective Order in Docket UT-181051

instrumentalities and equipment CenturyLink furnished were not kept in good condition and repair and its appliances, instrumentalities and services were not modern, adequate, sufficient or efficient in the provision of vital 911 services.

24. Finally, on December 27, 2018, CenturyLink did not receive, exchange, and transmit other telecommunications companies' messages without delay or discrimination. CenturyLink, in failing to prevent its national outage, in its unconventional connection and [REDACTED], clearly violated its contract, Washington State statutes, and Commission rules.

C. CenturyLink's Actions Are the Proximate Cause of the December 2018 Washington 911 System Outage

25. The Washington State 911 System was fully functional before CenturyLink's national network failure and was fully functional again after the national network failure was resolved. The System, therefore, would have properly routed all 911 calls but for the failure on CenturyLink's national network. CenturyLink's national network failure is the proximate cause of the outage and it is legally responsible for that outage.

26. CenturyLink's defense in this case has been to deflect responsibility to Comtech. However, the evidence in this matter reflects that at every point, CenturyLink suggested or insisted upon solutions and [REDACTED] that contributed to the major outage. As Mr. Rosen concluded in his direct testimony:

[REDACTED]

Shaded Information is Confidential Per Protective Order in Docket UT-181051

27. CenturyLink's actions were the proximate cause of the December 27, 2018 outage of the Washington 911 System and as such it violated state law and Commission rules regarding the provision of telecommunications services.

IV. CONCLUSION AND RELIEF REQUESTED

28. In sum, per its contractual agreement, state statutes, and Commission rules, CenturyLink was obligated to ensure that 911 calls could be successfully routed and received from its ESInet I to Comtech's ESInet II. CenturyLink's nationwide outage on its national network, the interconnection it requested, and the [REDACTED] and Comtech caused the failure of calls to complete within the Washington State 911 System on December 27, 2018. Thus, the Commission should find that CenturyLink is responsible for not providing the legally required telecommunications or 911 services during the December 2018 outage.

DATED this 18th day of January 2023.

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³⁶ Rosen, Exh. BR-1CT at 4:19-22 – 5:1-8

Shaded Information is Confidential Per Protective Order in Docket UT-181051