**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

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| WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION<br><br>Complainant<br><br>v.<br><br>CENTURYLINK COMMUNICATIONS, LLC,<br><br>Respondent. | **DOCKET UT-181051** |

# CENTURYLINK COMMUNICATIONS, LLC'S RESPONSIVE POST-HEARING BRIEF

February 10, 2023

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**Shaded Information is Confidential Per Protective Order in Docket No. UT-181051**

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## I. INTRODUCTION

***1.*** CenturyLink Communications, LLC ("CLC")'s Opening Post-Hearing Brief established that during an outage on its Green Network in December 2018, 911 calls failed to complete to Comtech-served Public Service Answering Points ("PSAPs") because Comtech failed to design its SS7 signaling network with network and supplier diversity. This causal connection is undeniable because 911 calls to CenturyLink-served PSAPs completed during the outage despite the fact that CenturyLink used the same Green Network for some of its SS7 circuits. Public Counsel's own expert witness wrote an article verifying this point: "[T]he root cause of CALL failures, which is what we and the FCC really care about, was lack of diversity. That was foreseeable, that was preventable, and that is almost universally a critical design fault of 9-1-1 networks, including NG9-1-1 networks today."[1]

***2.*** Just as CLC predicted, Staff, Public Counsel and the Washington Military Department ("WMD") completely ignore not only Comtech's role, but also Comtech's 2017-2018 emails *admitting its flawed network design*. Instead, they point the finger at CLC, even going so far as to blame CLC for Comtech's flawed network design. In order to arrive at the point where they blame CLC, Staff, Public Counsel and WMD misread contracts, ignore key pieces of evidence, and at times even misstate or exaggerate the record. CLC is confident the Commission will objectively evaluate the facts, and reach the inescapable conclusion that Staff has fallen far short of proving that CLC violated the Commission statutes or rules cited in the Complaint. CLC respectfully requests that the Commission reject the Complaint in all respects.

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[1] *See* https://brianrosen.net/wp/2019/09/02/analysis-of-centurylink-dec-2018-outage-transport-operator-supplier-diversity-is-critical/. A copy of the article is appended as *Attachment 1* to CLC's Opening Brief. On January 30, 2023, Public Counsel filed a motion to strike this article that it had not previously disclosed and that its expert witness prepared prior to his engagement in this case. Public Counsel's motion (which it amended on February 2) is without merit, but remains pending.

## II. BURDEN OF PROOF

***3.*** Staff and Public Counsel are asking the Commission to impose millions of dollars in fines on CLC because 911 calls did not complete during an interstate transport network outage in December 2018. Citing Commission precedent, Staff admits[2] that it has "the burden of proof and persuasion on each of its causes of action." *See Wash. Util. & Transp. Comm'n v. Puget Sound Power & Light Co.,* Cause No. U-84-27, 1984 WL 1022556 (Wash. U.T.C. Sep. 28, 1984) ("[T]here can be no doubt that the burden of proof in a case of this kind rests upon the complainant.").

***4.*** "The ordinary burden of proof to resolve a dispute in a civil administrative proceeding is by a preponderance of the evidence unless otherwise mandated by statute or due process." *Nguyen v. State, Dep't of Health, Med. Quality Assur. Comm'n*, 994 P.2d 216, 219 (Wash. Ct. App. 1999), *vacated and remanded sub nom*. *Nguyen v. State, Dep't of Health Med. Quality Assurance Comm'n*, 29 P.3d 689 (Wash. 2001) (en banc).

***5.*** When the Staff seeks fines, the Commission should expect the Staff to put forward clear and powerful evidence that the party they seek to fine violated Commission rules and statutes. The exact opposite is true here. The evidence establishes—by any objective measure—that 911 calls did not complete due to Comtech's faulty network design, not due to any action attributable to CLC.

***6.*** Instead of conducting a true investigation prior to initiating this complaint case to determine *why 911 calls failed to complete*, Staff simply assumed CLC was at fault. In bringing this complaint, Staff relied heavily upon an FCC Report regarding the outage on the Green Network.[3] Notably, however, that Report concerned the transport outage generically, and only touched on 911 calling. The Report states that millions of calls

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[2] Staff Opening Brief ¶ 44.

[3] *See* Ex. JDW-4.

failed, but states that only eleven 911 calls handled by CenturyLink failed to complete, all in the state of Arizona.[4] The Report does, however, make clear statements about the obligations of Covered 911 Service Providers:

> Covered 911 service providers are required to take reasonable measures to provide reliable 911 service in three specific respects: circuit diversity, central office backup power, and diverse network monitoring. They must also "certify annually whether they have, within the past year, audited the physical diversity of critical 911 circuits or equivalent data paths to each PSAP they serve, tagged those circuits to minimize the risk that they will be reconfigured at some future date, and eliminated all single points of failure." In the alternative, covered 911 service providers may describe "reasonably sufficient alternative measures they have taken to mitigate the risks associated with the lack of physical diversity." Similar obligations apply to their network monitoring capabilities.[5]

7. Amendment M to CenturyLink's contract with WMD made plain that Comtech, not CenturyLink, was the Covered 911 Service Provider for PSAPs that had transitioned,[6] and all of the 911 calls that failed as a result of the transport outage were destined for Comtech-served PSAPs. Given (a) that the FCC stated that only eleven 911 calls to CenturyLink PSAPs—all in Arizona—failed to complete, (b) that Covered 911 Service Providers are supposed to ensure circuit diversity, (c) Comtech's admission (almost two full years prior to the complaint being filed) to Staff that it needed to "[redacted],"[7] and (d) that in prior proceedings, Staff held CenturyLink responsible for the actions of its vendor when CenturyLink was the Covered 911 Service Provider,[8] one would have thought the Staff would have taken the time to truly investigate and evaluate Comtech's role. Instead, Staff immediately zeroed in on

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4 *Id.* ¶ 18.

5 *Id.* ¶ 6.

6 Ex. BR-4C (Amendment M § 11.1(a)).

7 Ex. JHJ-28CX at 6.

8 *See* Ex. JWS-1TC at 13:4-18:8.

CLC, and ignored numerous indications that Comtech might be responsible. A thorough and objective investigation would have led Staff to inquire with Comtech regarding its network design and lack of diversity. It would have also led Staff to uncover the materials disclosed by Comtech in discovery after Comtech intervened in mid-2021.

***8.*** Staff's arguments confirm its lack of investigation. Staff now makes two primary arguments in its post-hearing brief: (1) that the February 2018 outage on the Red Network should have led CLC to close the IGCC on its Green Network, and (2) that the demarcation point between CLC and Comtech was located at the Comtech RCL. The Commission should see these points for what they are: after the fact rationalizations offered to deflect the Commission's attention from Staff's unreasonably narrow focus on CLC.

***9.*** When Staff filed this complaint, it was unaware of the Red Network outage; now its entire case centers on it. Staff's entire basis for seeking fines, as articulated in its Opening Brief, is premised on the notion that the Red Network outage should have led CLC to close the IGCC on the Green Network.[9] However, the Red Network outage was not mentioned in the Complaint for obvious reasons: Staff learned about the outage on the Red Network (an outage that did not impact 911 calling anywhere, let alone in Washington) during discovery in this case. Obviously, Staffs' newfound theory of the case could not have been the reason why it filed this complaint case against CLC and why it simply ignored Comtech's role during its two-year investigation.

***10.*** Staff also relies on the location of the demarcation point, but interestingly, the word "demarcation" appears once in all of the pre-filed testimony of Staff's witnesses—in a footnote—and only to point out where CLC witness Carl Klein had identified the

[9] Staff Opening Brief ¶¶ 60 (RCW 80.36.080), 66 (RCW 80.36.220) & 75 (WAC 480-120-450).

demarcation point.[10] Staff never considered anything about the location of the demarcation point, let alone the impact it had on this case, until its post-hearing brief. Obviously, this likewise could not have been the reason why Staff filed this complaint case against CLC.

***11.*** Moreover, Comtech produced several key documents showing—before the December 2018 outage—that Comtech knew its network design was flawed, and knew the design flaw was on its side of the demarcation point. Specifically, Comtech admitted that all four of its signaling links were on the CLC transport network, and described this as "[redacted]" and importantly that these circuits were on Comtech's "side of the network."[11] Staff does not cite this document anywhere in its post-hearing brief (interesting, neither does Public Counsel or WMD), instead arguing that "whether or not Comtech … bears responsibility for the 9-1-1 outage is irrelevant."[12] Instead, just as CLC predicted, Staff tries to change the issue from "Why did 911 calls failed to complete?" to "Why an outage occurred on the Green Network." Mis-framing the issue in this manner ignores past decisions that state the objective in a 911 outage case is to "determine whether the 911 calls at issue in this proceeding failed as a result of … noncompliance with the systemic requirements …."[13]

***12.*** To blame CLC, Staff relies on superficial arguments that quickly fall apart. Indeed, the Red/Green outage comparison is fundamentally flawed, as is any debate about the demarcation point. In other words, even when one focuses on Staff's post-hoc rationalizations, their case is built on a foundation of sinking sand.

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[10] Webber, Ex. JDW-1CT fn. 85 ("[redacted]").

[11] Ex. JDW-41C at 2.

[12] Staff Opening Brief ¶ 76.

[13] Docket UT-190209, Order 03 ¶¶ 24-25 (Initial Order) (footnotes omitted).

## III. ARGUMENT

### A. There Can Be No Meaningful Dispute that 911 Calls Failed to Complete Due to Comtech's Flawed Network Design, Not Due to the Outage on the Green Network.

***13.*** In its post-hearing brief, CLC meticulously catalogued and presented detailed evidence showing that 911 calls failed in Washington during the Green Network outage *due to Comtech's flawed network design*. It is undisputed that Comtech (without CLC's knowledge) placed all four of its SS7 signaling links on CLC's Green Network, thereby failing to employ network and supplier diversity. Comtech's network design violates NENA standards, which state that "A best practice when designing connections into an ESInet is to utilize a mix of diverse transport mediums, technologies and service providers as is operationally and economically feasible. The emphasis on 'no single point of failure' in 9-1-1 applies to all ESInets. Some considerations that should be addressed include: … Network diversity."[14] Indeed, in a data request response, Comtech admitted that it always tries to implement supplier diversity.[15] This is verified by the fact that Comtech's RFP response to WMD stated that its network is designed to eliminate "all single points of failure," was "highly redundant" and utilized "network" and "carrier diversity."[16] Comtech knew in 2018—months before the outage—that its network design failed to meet this promised standard, and that its decision to place all four circuits on the same transport network was "obviously not an ideal situation, and was intended to be extremely temporary.[17] Even Public Counsel's expert admits that Comtech's decision to

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[14] Ex. JDW-67CX at page 40 of 92.

[15] Valence, Ex. MDV-1TC 7:11-18, citing Ex. SJH-12C, Comtech Response to CTL DR 2(a) ("Comtech states that it 14 "seeks supplier diversity as a matter of practice."), and Comtech Response to DR-CTL7 ("diversity is a generally good practice, if available, based on the significant expertise of its employees and general industry guidance, such as the National Emergency Number Association ("NENA") i3 materials", which state "multiple circuits from multiple providers is assumed to create greater diversity and Redundancy.").

[16] Ex. JDW-75X at 161-163.

[17] Ex. SJH-12C at 8-12.

place all four circuits on the same CLC Green Network created a single point of failure.[18] To make matters worse, Comtech admits that it has no record of having disclosed its flawed network design to either CLC or WMD.[19]

***14.*** In stark contrast, CenturyLink designed its signaling network with physical, network and supplier diversity. Specifically, for its SS7 functionality in Washington, [redacted]"[20] Similarly, "[t]he four SS7 links between the Intrado RCL and the Intrado SS7 STP utilized supplier diversity, meaning that Intrado did not place all four circuits on the same network."[21] Even Mr. Webber acknowledges that this design ensured diversity for CenturyLink's signaling network.[22]

***15.*** The net effect: no 911 calls to CenturyLink-served PSAPs failed as a result of the Green Network outage, while thousands of 911 calls to Comtech-served PSAPs did. What more powerful evidence can there be *about what caused 911 calls to fail*? Staff utterly fails to meet its burden of proof (both as to liability and the appropriateness of penalizing CLC) given these simple, irrefutable facts.

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18 Rosen, Tr. 277:2-278:2.

19 Valence, Ex. MDV-1TC 8:8-11, citing Exhibit SJH-12C, Comtech Response to DR-CTL-4(c) ("TSYS does not have any information to indicate one way or another that such information [that Comtech relied exclusively upon CenturyLink to provide SS7 functionality for its 911 services in Washington] was or was not provided to WMD [or CenturyLink] before the CenturyLink Outage.").

20 Exs. CDK-1TC at 10:12-16, SET-1TC at 46:3-15, SET-4C at 3 (CLC response to Staff data request 27c.).

21 Ex. CDK-1TC at 10:15-16.

22 Webber, Tr. 201:5-12 ("[redacted]").

***16.*** Responses to this argument are either non-existent or so obviously wrong that they barely merit response. For example, the word "diversity" appears in Staff's Opening Brief exactly three times. The first two times the word is used, Staff merely references (and does not attempt to rebut) positions taken by CLC's witnesses.[23] The third time, Staff argued Mr. Rosen claimed "the root cause of the failure on the Green Network was a combination of a lack of software diversity (i.e., each piece of Infinera equipment was using the same software), as well as the failure to lock the IGCCs."[24] As an initial matter, as will be discussed below, this position grossly distorts Mr. Rosen's testimony. But more importantly, this shows that Staff completely ignores Comtech's flawed network design and its impact on failed 911 calls in Washington. Instead, Staff distorts the record by citing to an early data request response from Comtech claiming "Comtech believed that these links provided sufficient redundancy because each link was ordered as a geographically diverse link, with different beginning locations and ending locations."[25] This data request response came soon after Comtech intervened in the case. In contrast, after CLC demanded discovery from Comtech, emails and documents from 2017 and 2018 showed Comtech knew that placing all four links on one network was "[redacted]", "not an ideal situation," contrary to Comtech's practice of utilizing supplier diversity, contrary to the promises Comtech provided in its RFP response to WMD, and in violation of Comtech's contract with WMD. Staff ignores all of this evidence. The record also clearly shows that Comtech's circuits were not even geographically diverse, [redacted],[26] exposing its signaling network to yet another single point of failure.

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[23] Staff Opening Brief ¶¶ 27, 42.

[24] Staff Opening Brief ¶ 42.

[25] Staff Opening Brief ¶ 20, citing JDW-22C at 2.

[26] CLC Opening Brief, fn. 95.

***17.*** Public Counsel's arguments are equally flawed. While its Opening Brief mentions the word "diversity" twelve times, it concludes that CLC—not Comtech—was responsible for Comtech's flawed network design.[27] Likewise, WMD claims CLC was responsible for the lack of diversity "because it provisioned the non-diverse circuits."[28] This argument is specious. CLC witnesses testified that CenturyLink was completely unaware of the fact that Comtech had placed all four of its SS7 links supporting 911 calling in Washington on the Green Network.[29] Public Counsel's own expert admits that CLC had no "awareness or visibility into Comtech's design."[30] Despite its own witness's admission, Public Counsel claims CLC obviously knew or should have been aware of the lack of diversity.[31] There is no factual support for this leap of logic; indeed, all of the evidence points to the opposite conclusion.[32] Comtech's signaling network was *originally* designed with supplier diversity: [redacted].

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[27] Public Counsel Opening Brief ¶ 29 ("CenturyLink also failed to ensure diversity in the network design"), 54 ("The 9-1-1 system lacked sufficient diversity, creating a single point of failure, which also indicates that the appliances, instrumentalities, and services are not modern, adequate, sufficient, and efficient. CenturyLink was obligated under contract to ensure sufficient redundancy.").

[28] WMD Opening Brief ¶ 20.

[29] Valence, Ex. MDV-1TC 7:8-8:11.

[30] Ex. BR-75X.

[31] Public Counsel Opening Brief ¶ 37.

[32] Public Counsel claims that because TNS was referenced in the transition documents, CLC should have given orders from TNS additional scrutiny. This argument ignores everything about the telecommunications industry. TNS provides services across the country, not just in Washington; indeed, [redacted] Thus, it was not clear these circuits would be used to support calling in Washington, let alone 911 calls in Washington. *See* CLC Opening Brief fn 91. Moreover, [redacted]. Turner, Tr. 267:25-371:19. [redacted]. *Id.*; Valence, Ex. 1TC 21:9-22, Ex. MDV-6. Comtech ignored that option, it appears merely to save money.

Public Counsel admits the network was tested when suppler diversity existed.[33] Comtech moved away from [redacted].[34] Comtech admits that it did not disclose the newly created lack of supplier diversity to CLC or WMD.[35] Moreover, Comtech could have obtained diverse circuits from CenturyLink simply by checking a box when ordering the circuits.[36] Comtech's hesitation: there was a cost associated with obtaining diversity from CenturyLink,[37] and Comtech made a conscious decision that it would rather obtain non-diverse circuits as cheaply as possible than pay for diverse circuits. The evidence could not be more clear: [redacted][38] This is yet another violation of NENA standards, which state that "Those involved in planning and design of an ESInet are urged to look beyond the cost of operations as a restriction to implementing as much diversity as possible in comparison to the costs of liability in the potential event of a service or system failure."[39]

***18.*** That leaves the argument that Mr. Rosen claimed the root cause of the outage was the lack of software diversity on the Green Network. Mr. Rosen never makes this claim; instead, he argues that because all four SS7 links were placed on the Green Network, the lack of software diversity created a single point of failure.[40] This makes CLC's point. Mr.

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33 Rosen, Tr. 289:18-21 (Rosen: [redacted]

34 Webber, Tr. 148:4-11, 149:5-11.

35 Valence, MDV-1TC 8:8-11, citing Exhibit SJH-12C, Comtech Response to DR-CTL-4(c).

36 Valence, Ex. MDV-1TC 20:6-22:4, Ex. MDV-6.

37 Valence, Ex. MDV-1TC 22:5-11.

38 Exhibit SJH-12C at 12-13.

39 Ex. JDW-67CX p 40 of 92; Webber, Tr. 173:2-174:7 (Webber admits that cost should not be the driving factor in designing 911 networks).

40 Rosen, Ex. BR-30CT 11:2-12:14.

Rosen recognizes that it is commonplace in the current telecommunications market for networks to use one set of software,[41] and that software outages are "almost universally the underlying problem that causes an entire 911 system to fail?"[42] Mr. Rosen continues:

> The fundamental reason this is true is that our most common defense against total system failure is redundancy. A redundant system does not depend on a single instance of anything: there are multiple instances, geographically dispersed, so that a failure in one instance can be compensated for by another instance. We say that we have no single point of failure in such a system because redundancy ensures a single failure, or in many cases, multiple failures, will not bring the system down. Unfortunately, the complex devices from which we build 9-1-1 systems, all run the same software. The vendors of the systems select one vendor who writes the software once, and all instances run the same software. This means the *software* is a single point of failure and redundancy in such an example would not prevent total system failure. A bug in the code is a bug in every instance of that device in a system.[43]

Given this known fact, Mr. Rosen recognizes the obvious: that it is critical when designing 911 networks to implement network and supplier diversity to account for the very fact that suppliers may implement networks with one type of software.[44]

***19.*** Staff, WMD and Public Counsel all ignore Mr. Rosen's constant refrain that network and supplier diversity are critical to an NG-911 design.[45] Indeed, contrary to Staff's statement about Mr. Rosen's conclusions on "root cause" Mr. Rosen unequivocally stated: "[T]he

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41 Rosen, Tr. 347:13-17 ("[redacted]").

42 Rosen, Ex. BR-30CT 12:1-2.

43 *Id.* 12:4-14.

44 Rosen, Tr. 324:13-24.

45 *See, e.g.,* Rosen, Ex. BR-1CT 20:19-21:2 ("In building 9-1-1 systems, I generally advise that supplier diversity be used to guard against the kind of failure that occurred here. In this case, there was no supplier diversity."); 33:2-5 ("Any such detailed review would have shown them that all four links were provisioned in the same network, which I believe would not have been acceptable to any expert, no matter whether physical redundancy was achieved."); Rosen, Tr. 277:2-278:21, 345:6-364:4 ("[redacted]").

root cause of CALL failures, which is what we and the FCC really care about, was lack of diversity. That was foreseeable, that was preventable, and that is almost universally a critical design fault of 9-1-1 networks, including NG9-1-1 networks today."[46]

***20.*** There is a reason Staff ignores any discussion on diversity, and Public Counsel attempts to change its own witness's testimony about diversity: the *actual* facts exonerate CLC and show that Comtech's flawed network design was the *actual* reason 911 calls failed to complete in Washington during the Green Network outage. This is verified by WMD's contract with Comtech which required the network to be designed to complete calls during network events, such as the Green Network outage:

> [Comtech] shall design and provide the ESInet Services in a manner that ensures that there will be no single point of failure (*i.e.,* if any single part of the ESInet Services or supporting platform is unavailable, including as a result of a Force Majeure Event, the ESInet Services will continue to operate as set forth in this Contract)[47]

Comtech failed to design its network such that if a "if any single part of the ESInet Services or supporting platform is unavailable" 911 calls would complete anyway; instead, they placed all of their eggs in one basket—the Green Network—which created the "single point of failure" that the contract prohibited.[48] Comtech, not CLC, laid the groundwork for 911 calls not completing during the Green Network outage.

***21.*** The Commission should end its analysis here. Staff cannot possibly meet its burden of proof and persuasion when Comtech's network design fell so far below the standard of care. It is confounding that Staff seeks millions of dollars in fines from CLC, all while

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46 *See* fn 1.

47 Ex. JDW-74X at 38 (§ 11.5).

48 Public Counsel's witness Mr. Rosen admitted that placing all signaling links on the same network created a single point of failure (Rosen, Tr. 277:2-278:2), and that [redacted] (Rosen, Tr. 294:9-13) ("[redacted]").

ignoring Comtech's contemporaneously acknowledged (and ignored) design flaws. Staff had every opportunity[49] to investigate Comtech's role in the outage (including its network design) prior to initiating this complaint, but it did not do so.

### B. The Evidence Shows the Green Network Outage had No Impact on CenturyLink's Ability to Deliver 911 Calls.

***22.*** Staff appears to understand that it has a problem because the facts show that the Green Network outage had no impact on CenturyLink's ability to successfully deliver 911 calls. As such, Staff's entire premise falls like a house of cards. How can the Green Network outage be the primary cause of 911 call failures, when CenturyLink was using the same network for some of its signaling links, but its 911 calls completed anyway? As a result, Staff attempts to argue that calls to CenturyLink PSAPs failed as well. The argument lacks any evidentiary support.

***23.*** CLC's witness Klein, who manages CenturyLink's 911 Network Operations Center, testified that during the Green Network outage, Intrado's call detail records ("CDRs") show [redacted] attempted 911 calls to the 15 remaining CenturyLink-served PSAPs. Of those calls, there were issues with [redacted], virtually all of which had an error code "one party left in call." This indicates that the call reached the PSAP, but that the caller hung up before the PSAP operator could answer. In other words, there was no 911 call failure at all.[50]

***24.*** Citing Mr. Webber, Staff claims it is a "mystery" why these [redacted] calls experienced issues, claiming a large percentage of them were during a discrete period of time to a couple of specific PSAPs. It then says that "CenturyLink cannot explain why a greater percentage of calls failed exactly when the Green Network packet storm was at its worst" and as a

[49] *See* CLC's Opening Brief pp. 35-39.

[50] Klein, Tr. 435:8-23.

result, details surrounding these calls remains "unknown."[51]

***25.*** As an initial matter, Staff seems to ignore its own admission that it, not CLC, bears the burden of proof and persuasion. It is incumbent upon Staff to prove facts, not for CLC to disprove "unknowns." Beyond this, the record clearly establishes that the Green Network outage did not impact CenturyLink's ability to deliver 911 calls to the PSAPs it still served. Specifically:

- Unlike Mr. Webber who ignored the error codes,[52] CLC witnesses evaluated the error code associated with each of the [redacted] calls (based on CDR data) and could determine—based on the error code—what happened.[53]
- The FCC Report recognized that only eleven CenturyLink 911 calls were affected by the outage, all of those being in Arizona.[54]
- During the critical time cited by Staff, "People in Washington and parts of Oregon had tweeted about receiving the emergency alert on their smartphones" which easily could have led to people to call 911 just to make sure they could get through to 911.[55]
- Finally, and most importantly, the CDRs showed that the 911 calls destined to CenturyLink-served PSAPs completed—meaning the PSAP answered the call—

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51 Staff Opening Brief ¶¶ 28-29.

52 Webber, Tr. 200:16-25.

53 Klein, Ex. CDK-1TC 11:5-12:9.

54 Ex. SJH-14 at 4; Hawkins-Jones, Tr. 109:20-25.

55 *See* https://www.geekwire.com/2018/widespread-911-outage-hits-washington-emergency-alerts-sent-smartphones-friday-night/ ("A 911 outage affected agencies across Washington state on Thursday and continued into the early hours of Friday, as people received emergency alerts on their smartphones late Thursday evening with alternatives to 911 phone number * * * People in Washington and parts of Oregon had tweeted about receiving the emergency alert on their smartphones just past 11:20 p.m. PT Thursday…"). On January 30, 2023, Public Counsel filed a motion to strike this article. Public Counsel's motion (as amended) is without merit, but remains pending.

the caller had just hung up. In other words, CenturyLink's 911 calls completed despite the outage—unlike thousands of calls destined for Comtech-served PSAPs.

***26.*** Public Counsel takes a different tact, arguing that it could not determine the number of 911 calls that failed because CLC refused to produce CDRs that would have allowed them to evaluate the particulars of the calls.[56] This is simply untrue. CLC produced CDRs, which Staff's witness Mr. Webber and CLC's witness Mr. Klein evaluated.[57] Public Counsel had everything it needed to evaluate the 911 calls.

### C. Comtech Recommended Use of SS7; CenturyLink Did Not Demand It; But the Decision to Use SS7 Had No Impact on Why 911 Calls Did Not Complete.

***27.*** Staff, Public Counsel and WMD all try and shift the focus away from Comtech's faulty network design by arguing that the genesis of the problem was actually CenturyLink demanding that Comtech use SS7 (instead of IP interconnection), refusing to interconnect directly with Comtech, and forcing Comtech to use TNS as its signaling provider.[58] This argument is both factually wrong and legally irrelevant.

***28.*** The documentary evidence shows what actually happened. Comtech initially proposed SIP signaling; CenturyLink suggested a different form of IP signaling, and SS7 in the alternative.[59] In the end, on February 7, 2017, Comtech sent CenturyLink an email stating: [redacted]

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56 Public Counsel Opening Brief ¶¶ 12, 67 & 69.

57 *See* Ex. JDW-6C, CLC's response to Staff DR No. 20 ("Attached as Confidential Attachment Staff 20 is an excel version of the Call Data Records ("CDRs") for December 27-29, 2018. The attachment includes all Washington data, and is not isolated for PSAPs served (at the time) by CenturyLink or Comtech.").

58 Staff Opening Brief ¶ 11, WMD Opening Brief ¶ 18, Public Counsel Opening Brief ¶¶ 29 & 31.

59 Ex. SJH-5C.

[redacted]"[60] This email validates that the constant refrain that CenturyLink unilaterally dictated the use of SS7 *is just not true*. In discovery, WMD acknowledged that no particular technology was mandated and that the parties cooperated in the transition development and design.[61] WMD's post-hearing advocacy directly contradicts its own discovery responses, begging the question of why WMD (like Staff and Public Counsel) is so preoccupied with pinning responsibility on CLC and with whitewashing Comtech's admitted failures.

***29.*** Public Counsel and WMD also claim that CenturyLink refused to interconnect with Comtech directly.[62] While Mr. Rosen claimed Comtech made the statement, in reality Comtech stated that CenturyLink refused to "connect directly via IP-based circuits."[63] Once again, this Comtech discovery response came right after Comtech's intervention before documents were produced showing that Comtech recommended the use of SS7. Moreover, this shows that seeking to connect via IP is synonymous with a request to interconnect directly. In other words, Comtech and CenturyLink could only connect directly if they connected via IP. There is no evidence CenturyLink refused to connect via SS7 directly because the parties did not have the network infrastructure to do so. Indeed, Mr. Rosen "has no knowledge of what SS7 capability Comtech possessed at the time of the outage."[64] The evidence shows that Comtech did not have its own SS7 network, because it had been using TNS to provide SS7 capability for many years.[65] The fact that Comtech had a pre-existing relationship with TNS also verifies that Comtech—

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60 Ex. SJH-5C at 3-5; SS7 signaling sends ISUP messages, so this email unequivocally means SS7. *See* Ex. BR-3C at p. 23 of attachment, p 27 of 73 of pdf ("[redacted]").

61 See CLC Opening Brief, fn 7.

62 Public Counsel Opening Brief ¶ 25; WMD Opening Brief ¶ 19.

63 Rosen, Ex. BR-1TC 22:3-4, citing BR-18C and BR-17 (Comtech data request responses).

64 Ex. BR-65X.

65 BR-15C ("[redacted]"); Webber, Tr. 305:16-306:8.

not CenturyLink—selected its signaling provider. While Mr. Rosen tried to argue that CenturyLink commanded Comtech to use TNS,[66] at hearing it was established this was simply untrue.[67] A review of the materials cited by Mr. Rosen shows the exchange between Comtech and CenturyLink simply said "[redacted]."[68] These claims of CenturyLink foisting its network design upon Comtech are simply belied by the record evidence, notably including WMD's acknowledgement that the parties worked cooperatively. These claims are extremely misleading and are irrelevant to the Commission's consideration of why 911 calls failed in December 2018.

***30.*** Public Counsel also makes several arguments about SS7 that are easily disproven. First, it claims that the IP signaling protocol CLC proposed violated NENA standards.[69] As an initial matter, Public Counsel's own witness admitted these standards came into existence after the outage,[70] and Public Counsel admits the same in its Opening Brief.[71] Moreover, this argument misses the mark completely. Comtech recommended SS7 and made SIP signaling—the very type of signaling Mr. Rosen claims was proper—its second choice.[72] Second, Public Counsel claims the use of SS7 signaling violates CenturyLink's contract

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66 Rosen, Ex. BR-30CT 5:13-16, citing BR-18C.

67 Webber, Tr. 303:23-304:1 ("[redacted]").

68 Ex. BR-18C.

69 Public Counsel Opening Brief ¶ 30; WMD Opening Brief ¶ 18.

70 Rosen, BR-30CT 3:15-17 and fn. 3 (NENA standards created in 2021); Rosen, Tr. 319:4-19.

71 Public Counsel Opening Brief at fn. 80 ("the current NG9-1-1 standards were published after the outage at issue here").

72 Rosen, Tr. 317:21-318:3; *see also*SJH-5C at 3-5 (February 7, 2017 email from Comtech to CenturyLink stating: "[redacted]"). In its Opening Brief, Public Counsel claimed Comtech proposed "SIP signaling"; in reality, this was its ultimate second choice. Public Counsel Opening Brief at fn. 80.

with WMD.[73] In reality, everyone—Comtech, CenturyLink and WMD—agreed upon the use of SS7 and created an implementation document incorporating SS7 into the transition network design. Indeed, the [redacted] document contains many pages describing that the parties would interconnect with SS7 signaling.[74] Likewise, the "scope of work" implemented by WMD, Comtech and CenturyLink provided that Comtech would interconnect to CenturyLink using SS7 signaling.[75]

***31.*** This gets to the key point about SS7: the parties agreed to use SS7 and created a plan to use the technology. Even Staff agrees with this point.[76] Comtech was supposed to design its network—a network that implemented SS7 technology—with no single points of failure. While Comtech could have easily accomplished this goal, Comtech chose not to in order to save money. The fact that the parties used SS7 had no impact whatsoever on whether 911 calls completed or not.[77] Public Counsel argues that use of SS7 meant that there were multiple conversions from TDM to IP on each 911 call during the transition;[78] however, in the next breath Public Counsel admits that these conversions from TDM to IP performed flawlessly, and had no impact on why 911 calls were not delivered to Comtech-served PSAPs.[79]

***32.*** That leaves Public Counsel's argument that if the parties had interconnected using SIP (i.e., IP) technology instead of SS7, the Green Network outage likely would not have

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[73] Public Counsel Opening Brief ¶ 31.

[74] Ex. BR-3C pp. 23-30 of [redacted] (pages 27-34 of the pdf).

[75] Ex. BR-4C at Scope of Work pp. 12, 16, 27.

[76] Staff Opening Brief ¶ 11 ("Transaction Network Services, Inc. ("TNS") was a vendor providing Signaling Transfer Points (STPs) for SS7 connectivity. . . . This design was ultimately incorporated into the contract between WMD and CenturyLink, with CenturyLink and Comtech each having responsibilities to connect to the TNS SS7 network for interconnection purposes.").

[77] Turner, Ex. SET-1TC fn. 29, citing Ex. SJH-2.

[78] Public Counsel Opening Brief ¶ 33.

[79] Ex. BR-61X.

caused 911 calls to fail because IP networks usually find a path to complete calls.[80] This is mere conjecture, premised on Mr. Rosen's misunderstanding of the type of network Comtech was seeking. Mr. Turner directly refuted Mr. Rosen's misunderstanding:

> *You may have heard the term referred to as best efforts internet.* Well, best efforts internet sometimes gets a negative connotation with it, which is that it means you may not get the quality you want. But another thing about best efforts internet is that it often will allow you to find some path through the network to get from point A to point B.
>
> *But with internet protocol connectivity within telecommunications networks, because of the security requirements, much of what Mr. Rosen is saying the benefits are not permitted.* In other words, you can use IP, but you carefully bound what IP connectivity those devices have access to because you cannot allow the general internet to have access. So you create – there's various ways of doing it, but you create extremely secure environments, *such that what Mr. Rosen was describing just simply cannot happen.*
>
> I -- again, I understand … what his -- the thought is. *It's just, it's not the way in practice that network engineers will design a network, even when they're using IP to connect.*[81]

***33.*** What Mr. Rosen is describing is "best efforts internet," not SIP connectivity. In other words, if the parties interconnected directly via SIP—just as Mr. Rosen claims should have happened—and those connections were provisioned on the Green Network, the 911 calls would have failed for the exact same reason as they failed in December 2018—due to a lack of diversity in Comtech's signaling circuits. All of this points to one irrefutable conclusion: the decision to use SS7 was mutual and has no relevance whatsoever to the issues before the Commission.

### D. <u>The Red and Green Network Outages Were Completely Different Events</u>.

***34.*** Staff's entire theory of why the Commission should impose fines on CLC relies on the argument that CenturyLink experienced a packet storm on its Red Network in February 2018 that propagated through the IGCC, and this outage should have led CenturyLink to

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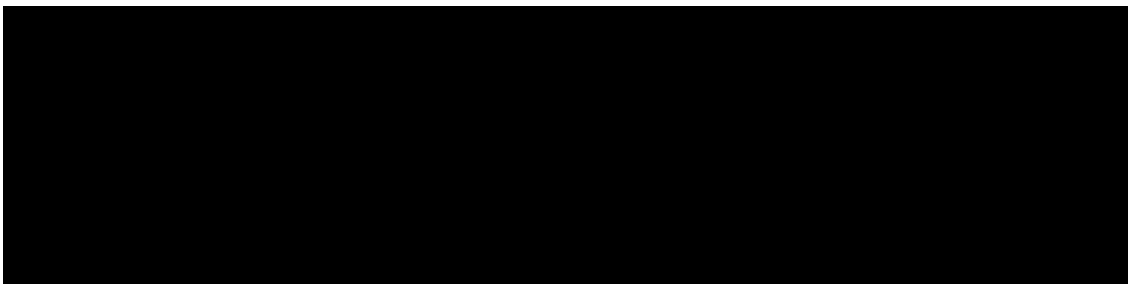
[80] Public Counsel Opening Brief ¶ 34.

[81] Turner, Tr. 405:4-24 (italics added).

close the IGCC on the Green Network.[82] This superficial argument ignores the myriad of differences between the Red and Green Networks, Infinera's thoughtful guidance to CLC after the Red Network outage, the differing causes of the packet storms, and that the packet storm on the Green Network was so unusual that no one had ever heard of this type of event before. If a situation were ever unforeseeable, this was it.

***35.*** As CLC explained in its Opening Brief, in February 2018 Level 3 (an affiliate of CLC) experienced a packet storm during a software upgrade on its Red Network which propagated malformed packets through the IGCC to the few switching units that had been upgraded with the new software. The reason the malformed packets were transmitted through the IGCC was because the software upgrade—for the very first time—permitted packets of 64-bytes to pass. Every software version before that prevented the transmission of packets 64 bytes or smaller, which literally blocked every single message the system was designed to send. That meant that in earlier versions of software, such as Version 15.3.3 being used on CLC's Green Network, the IGCC would automatically block every message the network was expected to send. This is why Thomas McNealy of Infinera described the IGCC as "effectively closed" on the Green Network.[83]

***36.*** After the Red Network outage, CLC did not reconfigure the Green Network to close the IGCC for a number of reasons:



[82] Staff Opening Brief ¶¶ 60 (RCW 80.36.080), 66 (RCW 80.36.220) & 75 (WAC 480-120-450).

[83] *See* CLC Opening Brief ¶¶ 49-56.

[redacted]

***37.*** [redacted][87]

***38.*** The odd thing is Staff agrees with all of the facts that made the event unforeseeable. Staff agrees that the [redacted]

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84 *See* CLC Opening Brief ¶¶ 57-66.

85 McNealy, Ex. TJM-1TC ¶ 21. It is important to note that none of Staff or Public Counsel witnesses had first-hand knowledge of what occurred on the Green or Red networks leading to the outages. Their witnesses all rely on secondhand facts. Dr. Akl admits he has no evidence contrary to anything put forward by Mr. McNealy. Akl, Tr. at 221:17-228:13. In Mr. Webber's direct testimony, he brazenly speculated he thought CLC was lying when it said that Infinera had advised it to leave the IGCC open. Webber, Ex. JDW-1CT at 30:1-9. In stark contrast, CLC put forward the two witnesses—Mr. McNealy from Infinera and Mr. Valence from CenturyLink—who lived through the experience and were involved in the actual decision making.

86 Rosen, Tr. 186:24-187:6 (Rosen admission); Akl, Tr. 230:1-231:9 (Akl admission).

87 McNealy, Tr. 502:2-503:12.

[redacted]

[redacted]."[92]

***39.*** Despite all of this objective information, Staff makes it sound like doing more to close the IGCC was the only appropriate decision after the Red Network outage. In taking this position, Staff ignores the one-in-a-billion nature of the event; an event so unusual Infinera could not replicate it in a laboratory environment. In fact, Staff simply ignores the unforeseeability of this type of packet malformation, ignoring that the Commission does not apply strict liability analyses to 911 outage cases. Moreover, if the outage had occurred during the configuration change to the Green Network—just like had occurred on the Red Network—CLC would have been excoriated for *not following* the manufacturer's advice. Now, CLC is excoriated for *following* the manufacturer's advice. The question posed in this case is premised on reasonable foreseeability, and the packet malformation causing the outage was unforeseeable by any objective measure.

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88 Staff Opening Brief ¶ 31 (Note there is a paragraph 30 and 32. In between are two unnumbered paragraphs, which CLC will collectively refer to as paragraph 31).

89 *Id.*

90 *Id.*

91 *Id.* ¶ 32.

92 *Id.*

***40.*** To support its argument, Staff cites to its experts, Mr. Webber and Dr. Akl,[93] who have no real-world experience with packet storms, let alone the particular one that occurred in December 2018.[94] Staff also references Public Counsel's expert, Mr. Rosen, who described no prior experience with packet storms.[95] Staff also references CLC's outside expert, Mr. Turner, who disagrees with Messrs. Webber, Akl and Rosen, explaining that "the Red Network packet storm was different from the Green Network packet storm and was not a reason to lock the IGCCs on the Green Network."[96] Interestingly, while Staff cites Mr. McNealy for facts, they do not describe him as an expert, although he is the ultimate expert on the issue, and has significant familiarity with packet storms. Likewise, Staff does not reference Mr. Valence at all for his opinions, which is odd because it was Messrs. Valence and McNealy who were personally involved in making decisions about what changes, if any, to make to the Green Network after the Red Network outage. These two men uniformly testified about all of the reasons why they made the decision not to close the IGCC beyond its "effective closure", and the underlying reasons why the decision was wise.[97] At hearing, Mr. McNealy very convincingly defended the course of action taken, so much so that no party chose to cross examine Mr. Valence.

***41.*** Again, Staff cites to three outside witnesses—none with any real-world experience with packet storms—for the proposition that CLC should have modified the Green Network to

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93 Staff Opening Brief ¶ 33 (Webber), 36 (Akl). Notably, when referencing Dr. Akl, the Staff admits it asked him to opine on the cause of the packet storm, not why 911 calls did not complete. Staff Opening Brief ¶ 36 (Dr. Akl "opined that the primary and avoidable cause of the Green Network packet storm was the failure to lock the IGCCs and CenturyLink's decision to keep them unlocked and unconfigured."). Dr. Akl likewise was not asked to evaluate the foreseeability of the particular packet malformation that preceded the Green Network packet storm. Staff, relying again on a strict liability approach, skips that critical step and asked Dr. Akl to focus solely on the issue of whether the IGCC should have been closed on the Green Network.

94 Rosen, Tr. 186:24-187:6 (Rosen admission); Akl, Tr. 230:1-231:9 (Akl admission).

95 Staff Opening Brief ¶ 41.

96 Staff Opening Brief ¶ 42.

97 McNealy, Tr. 480:21-482:1. An "SEU" is a "single event upset."

prevent any packets from passing, not just those 64-bytes or smaller (which encompassed 100% of the messages the network was designed to send). The reason: because CLC was not using the IGCC, CLC should have closed the channel.[98] Ignoring for a moment that Mr. McNealy testified that the IGCC was "effectively closed" with software version 15.3.3 on the Green Network because it was designed to block all anticipated messages, Staff's overly simplistic argument is easily refuted.

***42.*** Mr. Webber claimed that industry standards mandated closure of the IGCC, citing to the FCC Report about the outage.[99] That report—which obviously postdates the Green Network outage—states "System features that are not in use should be turned off or disabled," citing CSRIC standards 11-6-5170 and 11-8-8000. A review of the standards that predated the outage are insightful. They state:

- 11-6-5170: "Suppliers should control *or disable* all administrative access ports" in order to "eliminate the use of default and undocumented ports *to penetrate into* software and distribution systems."
- 11-8-8000: "Network Operators and Service Providers should establish a process, during design/implementation of any network/service element or management system, to identify *potentially vulnerable, network-accessible services* (such as Network Time Protocol (NTP), Remote Procedure Calls (RPC), Finger, Rsh-type commands, etc.) *and either disable, if unneeded, or provided additional compensating controls*, such as proxy servers, firewalls, or router filter lists, if

[98] Staff Opening Brief ¶ 33 ("Witness Webber's opinion was that, essentially, because the IGCCs were not used they should have been disabled and that if they had been disabled, the Green Network outage could not have occurred."); ¶ 36 (Akl "opined that the primary and avoidable cause of the Green Network packet storm was the failure to lock the IGCCs and CenturyLink's decision to keep them unlocked and unconfigured); ¶ 41 (Rosen claimed it should have required disablement of the IGCC because it was not being used).

[99] See Ex, JDW-4 ¶ 40.

such services are required for a business purpose" for network "security."

***43.*** Both of these standards focus on outside bad-actors attempting to access open channels to create problems. 11-6-5170 exists to prevent people from penetrating into systems, and 11-8-8000 (both standards from 2011) recommends closing potentially vulnerable services for network security reasons. Mr. Webber's testimony also cited a National Security Agency ("NSA") standard, which exists for the exact same reasons.[100] Likewise, the one document referenced by Dr. Akl on the subject was a 2022 document from an equipment manufacturer that talks about disabling unused channels to prevent "someone without management privileges from connecting to the fabric." The reason: "Otherwise, an attacker could unplug the switch to re-enable unused ports."[101] All of these documents are trying to prevent the same thing; to prevent a rogue attacker from hacking into a network and cause mischief. The Green Network outage was not the result of, or in any way related to, any such occurrence. This is another red herring.

***44.*** As Mr. McNealy testified, these standards have no applicability to the IGCC, which is purely internal and not accessible to a rogue attacker through any means. As he explained:

[redacted]

[100] Webber, Ex. JDW-1CT 33:1-17 ("Hardening network devices reduces the risk of unauthorized access into a network's infrastructure. Vulnerabilities in device management and configurations present weaknesses for a malicious cyber actor to exploit in order to gain presence and maintain persistence within a network.").

[101] Ex. RA-3 at p. 76.

[102]

***45.*** Thus, the rationale that all three experts who opined that the IGCC should be closed because the IGCC was unused premised their argument on network security documents that have no applicability to the IGCC or to the nature of this particular outage. Moreover, even from a network security perspective, the standards discuss how unused ports should be *controlled or disabled*. The IGCC was controlled through filters designed to block all packets the network was designed to receive. Even Mr. Webber acknowledged that if the standards identify disablement as one of two options, it would perfectly appropriate to use the second option—controls—to manage the unused channel as well.[103] What led to the packet storm was not faulty design, but an unforeseeable, unprecedented and inexplicable packet malformation.

***46.*** Staff does not come anywhere close to meeting its burden of proof and persuasion that the events that led to the Green Network outage were reasonably foreseeable, or that CLC acted in a manner inconsistent with that of a responsible carrier. To the contrary, the facts show that CLC acted thoughtfully, gathered data, had meetings with the equipment manufacturer, and after significant thought, made a conscious choice to maintain the

[102] McNealy, Tr. 499:15-500:18.

[103] Webber, Tr. 195:11-23.

status quo on the Green Network because, *inter alia*, it had been operating flawlessly, the vulnerability that led to the Red Network outage ([redacted]) could not occur on the Green Network, modifications are known to create risks that can cause outages, and the equipment manufacturer advised maintaining the status quo. These are the actions of a prudent carrier. Ignoring Infinera's advice would have been careless.

### E. Attempts to Use Generic Contract Language to Claim CLC is Responsible for Comtech's Faulty Network Design are Unavailing.

*47.* Public Counsel and WMD (and to a lesser degree, Staff) argue that the 2009 CenturyLink/WMD contract required CenturyLink to provide "network" and "transport," and when the Green Network outage occurred, CenturyLink breached that contract because calls failed. In other words, they claim the contract made CLC strictly liable for all 911 call failures because the contract obligated it to provide network that would transport 911 calls. This argument ignores language from Amendment M, ignores the WMD-Comtech contract altogether, and defies common sense.

*48.* As an initial matter, the Commission does not have jurisdiction over breach of contract claims. The Commission has authority to act only where such authority has been granted by statute, such as to conduct proceedings "contemplated for a state commission under the telecommunications act of 1996." RCW 80.36.610. It does not have jurisdiction to hear claims alleging breach of a contract. *See Metro-Net Servs. Corp. vs. US W. Commc'ns*, No. U-88-2417-F, 1990 WL 10703431 (May 8, 1990) (noting that the Commission did not have jurisdiction over the "determination of breach of contract and remedies for asserted breach," and "does not have jurisdiction to determine whether US WEST has entered and breached any contract, oral or written"). In response to this jurisdictional limitation, Public Counsel retorts that the "Commission looks to the

contract to understand what CenturyLink was tasked with related to the 9-1-1 system."[104] However, a review of the contract language does not help Public Counsel. In contrast, a review of the Comtech-WMD contract identifies the true culprit.

***49.*** In 2009, WMD contracted with CenturyLink to (continue to) be the Covered 911 Service Provider for the entire State of Washington. As a result, the parties entered into a contract containing a section titled "Introduction" which states:

> **INTRODUCTION**: The Washington Military Department (Department) through its Emergency Management Division State Enhanced 911 Coordination Office and State Enhanced 911 Coordinator supports, assists and facilitates statewide Enhanced 911 (E911) services via network maintenance, assisting in equipment procurement and providing operational funding for those counties whose 911 excise tax base is inadequate to support 911 services. The Department has the statutory authority under RCW 38.52.510 to assist and facilitate E911 operation throughout the state and the statutory authority under RCW 38. 52.540, RCW 38.52.545, and Chapter 118-66 WAC to provide funds from the State E911 account to assist the counties to establish and operate an E911 program. The intent is that E911 services be furnished in the most efficient manner possible. All 39 counties in the State of Washington have implemented E911 services for wireline and wireless systems.
>
> To accommodate Next Generation 911 and provide the citizens of Washington State with a modern internet protocol system that will allow the 911 system to accept information from a wide variety of communication devices from consumers in emergencies, it is first necessary to update the network used to transfer voice/data information from the consumer to the Public Safety Answering Point (PSAP). To accomplish this, there must be a switch from the antiquated legacy analog telephone system to a system as used in cellular and computer voice over internet (VOiP) protocols by telephone and communication providers. The Emergency Services Internet Protocol Network (ESINet) will also allow the transportation of Automatic Location Information (ALI) database information meeting the current National emergency Number Association (NENA) standard 4.xx XML format. *This solution must include, but is not limited to, network, transport, PSAP interfaces, 911 trunk support, selective routing and ALI interfaces. The system must be scalable, affordable, reliable, redundant, and capable of resolving the limitations of the current legacy system.*
>
> The second goal of the project is the migration of the E911 ALI database to the current NENA standard 4.xx XML format and be able to transport that

[104] Public Counsel Opening Brief ¶ 13.

> information to the PSAP's using the ESINet. It is envisioned that the migration of this project will be implemented in two major phases.
>
> Through a competitive bidding process, Qwest Communications Company, LLC fka Qwest Communications Corporation and its subcontractor, the lntrado Company, utilizing existing technologies, will develop and implement an infrastructure of Internet Protocol (IP)-capable private managed Next Generation 911 (NG911) ESINet and ALI database provider for 911 services. The implementation of an ESINet using Internet Protocols will meet the strategic goals of E911 and serve the needs of today as well as future NG911 applications.
>
> The completion of this project will be done in two major phases as per the Request for Proposal (RFP). Phase 1 will involve upgrading the existing dedicated analog 911 network and limited trials with eight selected PSAPs. Upon successful completion and acceptance of Phase 1, Phase 2 will be added by amendment . Phase 2 will complete the migration of all 9-1-1 calls and data to all PSAPs outside of the original eight county trial area in the same manner as Phase 1.[105]

***50.*** CLC understands that this is a lengthy paragraph, and it quotes it in its entirety for a reason. This paragraph simply spells out the overall goals of the NG 911 system to be employed. The very next provision of the 2009 contract states "The Contractor (meaning CenturyLink) Agrees To" and then creates a list of expectations and due dates. Contrary to the Introductory section, the "Contractor Agrees to" section contains clear contractual expectations. The Introduction is akin to "whereas" clauses in a contract followed by substantive provisions (i.e., the "Contractor Agrees To" section).

***51.*** The NG 911 network CenturyLink developed in 2009 contained "network, transport, PSAP interfaces, 911 trunk support, selective routing and ALI interfaces, and was scalable, affordable, reliable, redundant, and capable of resolving the limitations of the current legacy system." If it had not, 911 calling would not have worked from 2009 forward. In this case, no one has questioned whether CenturyLink's 2009 NG 911 system satisfied these requirements. Instead, Public Counsel argues that in 2018 the network was also supposed to be redundant. CenturyLink obviously designed a network with

[105] Ex. BR-4C (bold in original, italics added).

redundant circuits. Unlike Comtech, calls to CenturyLink-served PSAPs completed because CenturyLink developed a redundant network.

***52.*** Even if the Commission were to entertain these breach of contract arguments, Public Counsel and WMD fail to identify a specific and cognizable breach by CLC. In any breach of contract case, one must identify a contractual obligation that was actually breached. *King Cnty. Pub. Hosp. Dist. #2 v. Washington State Nurses Ass'n*, 83750-8-I, 2022 WL 9704978, at *4 (Wash. Ct. App. Oct. 17, 2022) ("If there is no duty imposed by the contract, "there can be no breach or resulting damages."). Nowhere in the contract does it say that CenturyLink breaches the contract if a 911 call fails while being transported or is responsible for every point along the call path. Indeed, if Public Counsel's theory were accurate, the Commission would have found CenturyLink responsible in 2019 when evaluating an earlier 911 outage. The exact same 2009 contract was in place then, and the Administrative Law Judge found for CenturyLink.[106] Neither Staff nor Public Counsel sought review from the Commission.

***53.*** Public Counsel's argument also all but ignores that in 2016 WMD chose Comtech to replace CenturyLink and created Amendment M to effect the transition. Section 11(a)(1) of Amendment M states in its entirety:

> Covered 911 Service Provider during PSAP Migration. The Department is transitioning the ESINet services to a successor provider via a phased cutover of PSAPs from Contractor's ESlnet I to New Contractor's ESlnet II ("PSAP Migration"). Prior to this cutover, Contractor shall route calls over ESlnet I to the appropriate PSAPs and, as such, during this time, Contractor is a Covered 911 Service Provider as defined in 47 C.F.R. § 12.4(a)(i)(A) ("Covered 911 Service Provider") for all PSAPs in the State. Upon the Department's cut over of one or more PSAPs to ESlnet II ("Migrated PSAPs"), ***the Department's successor provider shall be a Covered 911 Service Provider for such Migrated PSAPs and shall be solely responsible for routing calls from the Demarcation Point between ESlnet I and ESlnet II to such Migrated PSAPs***.

[106] Docket UT-190209, Order 03 ¶¶ 24-25 (Initial Order) (footnotes omitted) (citing UT-140597 Order 03 ¶ 25).

> During the PSAP Migration, Contractor remains responsible for routing calls to PSAPs that have not migrated to ESlnet II ("Unmigrated PSAPs"), and for routing calls intended for Migrated PSAPs to the Demarcation Point at ESlnet II, at which point the successor provider assumes responsibility for delivering such calls to Migrated PSAPs and is therefore the Covered 911 Service Provider.[107]

***54.*** Amendment M makes plain that Comtech is a Covered 911 Service Provider for PSAPs that have transitioned *and, in addition,* must transport all calls from the demarcation point. Public Counsel—whether intentionally or otherwise—misquotes this section of Amendment M, arguing that Comtech only becomes the Covered 911 Service Provider at the demarcation point.[108] That is not what the contract says: it says Comtech "shall be" the Covered 911 Service Provider for transitioned PSAPs, AND in addition, is "solely responsible for routing calls from the Demarcation Point." The language is conjunctive—Comtech became the Covered 911 Service Provider for its role serving the transitioned PSAPs.

***55.*** Public Counsel theorizes, if the "State intended to relieve CenturyLink of its network and transport obligations, it would have done so in Amendment M."[109] In reality, the State made Comtech responsible for these functions both in Amendment M and in WMD's contract with Comtech. As a Covered 911 Service Provider, Comtech has certain responsibilities by law:

> Covered 911 service providers are required to take reasonable measures to provide reliable 911 service in three specific respects: circuit diversity, central office backup power, and diverse network monitoring. They must also "certify annually whether they have, within the past year, audited the physical diversity of critical 911 circuits or equivalent data paths to each PSAP they serve, tagged those circuits to minimize the risk that they will be reconfigured at some future date, and eliminated all single points of failure." In the alternative,

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[107] *See id.; see also* Exhibit 9C (Turner Response Testimony) at 37–38, quoting Amendment M (emphasis added).

[108] Public Counsel Opening Brief ¶¶ 18, 26.

[109] Public Counsel Opening Brief ¶ 20.

> covered 911 service providers may describe "reasonably sufficient alternative measures they have taken to mitigate the risks associated with the lack of physical diversity." Similar obligations apply to their network monitoring capabilities.[110]

By making Comtech a Covered 911 Service Provider for transitioned PSAPs, Amendment M made Comtech responsible for network and transport; what else could making one responsible for "circuit diversity" mean?

***56.*** There can be no question on this point, as WMD's contract with Comtech and common sense makes Comtech responsible for its network design. For inexplicable reasons, Public Counsel (as well as Staff and WMD) ignores WMD's contract with Comtech, which contains an explicit provision stating that Comtech was required to design its network to complete calls during network events, such as the Green Network outage:

> [Comtech] shall design and provide the ESInet Services in a manner that ensures that there will be no single point of failure (*i.e.*, if any single part of the ESInet Services or supporting platform is unavailable, including as a result of a Force Majeure Event, the ESInet Services will continue to operate as set forth in this Contract)[111]

In addition, the Comtech/WMD contract contains a service level agreement ("SLA") requiring Comtech to ensure redundancy and to avoid single points of failure.[112] The accompanying SOW explicitly reinforced the critical importance of redundancy: "In summary, TCS [Comtech] implements local redundancy with separate entrance facilities, redundant local area network (LAN) links between functional elements, and redundant hardware and software components. TCS implements geographic redundancy by deploying geographically diverse data centers and by employing carrier diversity, where available, between the MPLS network that provides call and data delivery to PSAPs and

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[110] *Id*. ¶ 6.

[111] Ex. JDW-74X at 38 (§ 11.5).

[112] Ex. JDW-74X at 58-59 (SLA 6.4).

the MPLS network that provides the network and system monitoring."[113]

***57.*** The State of Washington went to great lengths to make clear that Comtech had a contractual obligation to design its network properly. Public Counsel's attempt to use generic language from the introductory section of a 2009 contract that was amended in 2016, while ignoring the crystal-clear obligations owed by Comtech, is inexplicable, yet consistent with its approach throughout this case.

***58.*** Staff belatedly attempts to latch onto Public Counsel's contract theory, claiming because CLC had (generic) "network" and "transport" responsibilities, it had a duty to understand what circuits were being used by its unaffiliated successor for signaling.[114] Once again, this argument ignores the WMD/Comtech contract, which obligated Comtech to design its network and supporting systems with no single points of failure. If WMD wanted to hold CenturyLink responsible for Comtech's network design, it would have explicitly required that in Amendment M. The generic language from the introduction to the 2009 contract does not do so. It is a huge stretch to assert otherwise.

### F. <u>There is Only One Logical Point for Placement of the Demarcation Point; Where Control Transitioned from CenturyLink to Comtech</u>.

***59.*** Public Counsel, WMD and Staff all take language from Amendment M to make various claims about the demarcation point. Public Counsel argues that there is no demarcation point at all. Staff and WMD claim the demarcation point is at the Comtech RCL (gateway). Both of these arguments are deeply flawed, and not supported by record evidence.

***60.*** Public Counsel's principal argument is that because Amendment M does not define the precise physical location of the demarcation point, there can be no demarcation point

[113] Ex. JDW-75X at 163.

[114] Staff Opening Brief ¶ 59.

because the parties did not affirmatively agree to the location. There is absolutely no case law, treatise or industry standard that even hints the demarcation point must be agreed upon. Also, Public Counsel's self-serving conclusion defies the parties' expectations of a demarcation point and a handoff of responsibility. If WMD and CenturyLink had not intended demarcation points between CenturyLink and Comtech, Amendment M would not have referenced "Demarcation Point." Public Counsel relies on bizarre contract interpretation that over-interprets and misapplies 2009 language, while simultaneously ignoring 2017 language contemplating demarcation points and handoffs of responsibility.

***61.*** The legal principle underlying the concept of demarcation is undisputed. Everyone agreed that a demarcation point is the point where one party's responsibility ends and another's begins."[115] Thus, when multiple carriers are involved, there is always a demarcation point. The only question is where it is. CLC witnesses testified that the demarcation point for the SS7 network was at the TNS STP, where CenturyLink/Intrado lost control of the signaling messaging and handed it to TNS/Comtech.[116] To support this proposition, CLC put forward an expert witness, Mr. Turner, who spent years managing an SS7 call center, which included troubleshooting SS7 outages.[117] He explained that "[redacted]" that CLC identified the only possible demarcation point,[118] because it was where CenturyLink's control ended and Comtech's control started—the very definition of demarcation point.

***62.*** Public Counsel and Staff argue that this location places the demarcation in the middle of the TNS network, where problems would allegedly not be observable to Comtech.[119]

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[115] Turner, Ex. SET-1TC at 40:1-2; Rosen, Tr. 296:20-297:2. No Staff witness took a position on any aspect of the demarcation point issue.

[116] *See* CLC Opening Brief ¶¶ 33-40.

[117] Turner, Tr. 383:8-21.

[118] Turner, Tr. 408:3-7.

[119] Staff Opening Brief ¶ 39, citing Rosen, BR-30CT 20:5-21:14.

There are several flaws with this assertion. First, Staff and Public Counsel admit that this physical location is likewise not observable to CenturyLink. Why should CenturyLink bear the burden of this location, and not Comtech? Second, CenturyLink is taking responsibility for circuits that its vendor (Intrado) ordered, even though those circuits are not observable to CenturyLink. Comtech and its agent (TNS) ordered the circuits that failed here and were similarly responsible for them, and for ensuring sufficient diversity. Third, there is no debate that Comtech knew the circuits were on its side of the demarcation point. Three months before the Green Network outage, it described the circuits that failed during the outage to be on its "side of the network."[120]

***63.*** Staff argues that Comtech consistently claimed that the demarcation point was at its RCL, not at the TNS STP.[121] This is not true. As described in the preceding paragraph, Comtech sent an email months before the outage in 2018 describing the circuits as being on *its side of the network*. Second, while planning the network transition, Comtech identified the demarcation point as the location where it would become responsible for the handling of SS7 messages[122]—the exact location identified by Mr. Turner and Mr. Klein. Public Counsel argues that this document was simply Comtech's "proposed" demarcation point.[123] That is wrong for the reasons set forth above. More importantly, however, contrary to Staff's argument it shows Comtech did not have a uniform view that the demarcation point was at the Comtech RCL.[124] The only document that purportedly

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120 Ex. JDW-41C at 2.

121 Staff Opening Brief ¶ 19. WMD states that the demarcation point was at the Comtech RCL because that was Comtech's position, and CLC provisioned the links. WMD Opening Brief ¶ 10. This obviously ignores Comtech's contemporaneously created documents.

122 Ex. SET-7C at 1-2.

123 Public Counsel Opening Brief ¶ 25.

124 Comtech's admission that there was a demarcation point also completely invalidates Public Counsel's argument that CenturyLink was responsible for all network and transport. Even Comtech acknowledged that it carried the network responsibilities from the demarcation point; the only question is where does that demarcation point lie.

supports the view that the demarcation point is at the Comtech RCL was created by Comtech's legal department during this litigation, years after the outage. That document is indisputably inaccurate, in that it displays a transition network design that never existed.[125]

***64.*** Interestingly, this is the exact argument Staff and Public Counsel make about CenturyLink.[126] They state that the diagram in Mr. Klein's testimony (and referenced on page 6 of CLC's Opening Brief) was created for the litigation. While the diagram was created for the litigation to create an understandable picture for the Commission, the Comtech email and transition documents—both of which confirm CLC's position—were not. It is Comtech, not CLC, that is creating post hoc rationalizations on this point, and is doing so inaccurately.

***65.*** Public Counsel and Staff also make much of the fact that Mr. Klein's diagram includes one of the three demarcation points in the network.[127] There is one demarcation point for signaling messages sent from CLC to Comtech; a second demarcation point for signaling messages sent from Comtech back to CenturyLink; and a third demarcation point for the voice portion of the call.[128] Public Counsel and Staff imply that CLC did not include other demarcations because it had something to hide. Nothing could be further from the truth. As Mr. Turner explained, CLC did not identify additional demarcation points because they were "[redacted]" in the case.[129] Indeed, there are a plethora of switches and circuits involved in both ESInets. CLC did not identify all of those either. As would be expected, CLC created diagrams that identified the equipment and circuits central to

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[125] CLC Opening Brief ¶ 39 (Comtech identifies four separate STPs when there were only two).

[126] Public Counsel Opening Brief ¶ 21.

[127] Staff Opening Brief ¶ 18; Public Counsel Opening Brief ¶ 23.

[128] Turner, Tr. 388:1-389:13.

[129] Turner, Tr. 386:12-15.

the case. The 911 calls failed on the Comtech signaling links, and Mr. Klein's diagram identified the relevant demarcation point.

***66.*** Staff attempts to use language from Amendment M to justify its new argument that the demarcation point is at the Comtech RCL. Amendment M states that Comtech "shall be solely responsible for routing calls from the Demarcation Point between ESlnet I and ESlnet II to such Migrated PSAPs." According to Staff, because Amendment M uses the word "demarcation point" in the singular, it must mean there is one physical location for all aspects of the calling.[130] Each call to a Comtech PSAP during Phase 1 of the transition included multiple handoffs between CenturyLink and Comtech (nobody refutes this), with each company being responsible for call handling and transmission while that portion of the call/messaging was within its control. As Mr. Klein explained (and Staff acknowledges),[131] even after the 911 calls ends, the parties must work together—once again through the SS7 signaling network—to break down the call. Messages are once again exchanged between the parties to release the trunk, just like it was used to set up the call.[132] Just as with the definition of demarcation point, Comtech was responsible on its side of the demarcation point (no matter which demarcation you are talking about), and CenturyLink is likewise responsible on its side of the demarcation point (no matter which demarcation you are talking about). In reality, each call during Phase 1 of the transition involved multiple handoffs (physically and as a matter of responsibility). The network failure causing 911 calls to fail in Washington in December 2018 occurred, by its own admission, on Comtech's side of the network. It makes no logical sense that CLC would be held responsible for the design decisions made by Comtech regarding signaling links it procured for its side of the network.

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130 Staff Opening Brief ¶¶ 50-53.

131 Staff Opening Brief fn. 159.

132 Klein, Tr. 428:18-430:16.

***67.*** In taking this position, Staff cites caselaw for the proposition that plain language of a contract must be given its ordinary meaning.[133] However, all parties in this case agree that Amendment M does not precisely define the demarcation point. In that circumstance, courts routinely use expert testimony to "explain the meaning of technical terms and words of art." *Kries v. WA-SPOK Primary Care, LLC*, 190 Wn. App. 98, 119–21, ¶ 50, 362 P.3d 974, 983–84 (2015) (internal citations omitted). For example, in *Kries*, the court interpreted the medical term "open and draining wound." The court first looked to those involved with drafting the contract, but found no probative evidence of their intent. As a result, the court turned to expert testimony, which was relevant *because* the term at issue was an industry-specific term of art. *See* ¶¶ 48–49; ¶ 50.

***68.*** Here, Mr. Turner, an industry expert who worked for years troubleshooting SS7 signaling outages, explained that in his expert opinion, the term "demarcation point" in Amendment M could mean one location. At hearing, he explained further:

[133] Staff Opening Brief ¶ 51.

[redacted][134]

***69.*** Mr. Turner used his decades of experience to define how the term demarcation point applies in the real world.[135] Because the contract was created before the parties had finalized network design, the term in Amendment M was used generically to state that Comtech had responsibilities at various points, and CenturyLink in others—all depending on whether the focus was on the signaling or voice portion of the call. Mr. Turner concluded that "[redacted]." And understand it they did. Comtech recognizing that the four links that had difficulties were on its side of the network verifies that Comtech understood the same thing. The same is true of the network transition document which, from a signaling perspective, identifies the demarcation point exactly where CenturyLink points. The parties' intent and understanding is clear. *Hall v. Custom Craft Fixtures, Inc.*, 87 Wn. App. 1, 7–10, 937 P.2d 1143, 1146–48 (1997) (The goal of contract interpretation is to "determine and effectuate the parties' mutual intent.").

***70.*** In sum, Staff cannot meet its burden of proof and persuasion on the demarcation question either. The law, and the overwhelming evidence, prove that the signaling network failed on Comtech's side of the demarcation point.

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134 Turner, Tr. 391:24-393:7.

135 The only expert who defined the term demarcation point from Amendment M was Mr. Turner. Mr. Webber was silent on the subject, and Mr. Rosen did not define the term. While he said the location was not identified, he admitted the standard definition that a demarcation point is [redacted]. Rosen, Tr. 296:24-297:2.

### G. The Commission Lacks Jurisdiction Over CLC's Interstate Circuits.

***71.*** In its Opening Brief, CLC spelled out in detail why the Commission lacks jurisdiction over CLC's interstate circuits.[136] Staff, which admits that Comtech's signaling links "traversed a CenturyLink *interstate transport network,"*[137] argues that "because CenturyLink utilized its Green Network to provide 9-1-1 services in Washington State," the Commission has jurisdiction.[138] Staff continues that jurisdiction is defined by the end-to-end analysis, and "when the end points of a carrier's service are within the boundaries of a single state the service is deemed a purely intrastate service, subject to state jurisdiction for determining appropriate regulations to govern such service."[139]

***72.*** Staff makes CLC's point. The issues raised in this case have nothing to do with the voice portion of the call, which started and stopped in Washington. In a signaling context, messages go back and forth between STPs. The end points of the signaling circuits were Los Angeles, Las Vegas, Phoenix and Seattle.[140] None of the *SS7 messages originated and terminated* entirely within the state of Washington. Thus, the end points of the signaling messages—as opposed to the voice calling—were all interstate. And crucially, Staff is not making any supported allegation that any portion of CenturyLink's 911 network failed. Instead, they are scrutinizing CLC's interstate transport network, and only because Comtech unilaterally chose to place all four signaling links on that transport network.

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136 CLC Opening Brief ¶¶ 87-90.

137 Staff Opening Brief ¶ 20 (italics added).

138 *Id.* ¶ 46.

139 *Id.*

140 CLC Opening Brief, fn. 91.

### H. Staff Failed to Meet its Burden of Proof and Persuasion as to RCW 80.36.080, the First Cause of Action.

***73.*** RCW 80.36.080 provides in relevant part that: "service by any telecommunications company shall be rendered and performed in a prompt, expeditious and efficient manner and the facilities, instrumentalities and equipment furnished by it shall be safe, kept in good condition and repair, and its appliances, instrumentalities and service shall be modern, adequate, sufficient and efficient."

***74.*** While Staff and WMD quote the statute, they ignore the Commission's standard for determining whether the provision was violated. The question is whether CLC took "all reasonable steps to reduce the foreseeable risks of a 911 outage…."[141]

***75.*** Staff argues that CLC's decision to leave the IGCC effectively closed, instead of disabling the channel altogether after the Red Network outage, constitutes a violation of this provision. As described above, Staff claims "the evidence is overwhelming that failing to lock the proprietary communication channels was a deviation below the best practice of a telecommunications company."[142] The facts show the exact opposite.

***76.*** Staff and Public Counsel have not put forward a single standard stating that telecommunications companies must "disable" unused internal channels not accessible to anyone. The standards they cited all concerned network security and channels a person could hack into from the outside world. The IGCC is not that type of channel, as Mr. McNealy explained. Moreover, even for channels accessible to the outside world (unlike the IGCC), the standards say carriers should disable *or control* them, and Infinera did control the IGCC. It took a one in a billion packet malformation—an event that was so unusual that no one had ever heard of before, and that could not be replicated in a

[141] Docket UT-190209, Order 03 ¶¶ 24-25 (Initial Order) (footnotes omitted) (citing UT-140597 Order 03 ¶ 25).

[142] Staff Opening Brief ¶ 62.

laboratory environment—to propagate the malformed packets through the Green Network. Neither Staff nor Public Counsel even address the incredibly unlikely and unpredictable nature of the packet malformation that led to the packet storm. Instead, as in prior cases, they ask the Commission to impose strict liability. In their view, because an event is *possible* (as judged in hindsight, after it has occurred),[143] it is by definition a "reasonably foreseeable" event. However, the Commission does not apply a strict liability standard. Staff and Public Counsel have not asserted, let alone proven, that this malformation was reasonably foreseeable or predictable.

*77.* Staff tries to support its argument by stating that no CLC witness could come up with a reason not to lock the IGCC.[144] This is both untrue and in conflict with Staff's own brief, which spells out the reasons CLC witnesses described in detail for not locking the IGCC beyond its effective closure.[145] In reality, there are a plethora of reasons why Infinera recommended, and CenturyLink agreed, to maintain the status quo on the Green Network. Specifically:

[redacted]

[143] Public Counsel Opening Brief ¶ 45 (citing possibility as the standard).

[144] Staff Opening Brief ¶ 63.

[145] Staff Opening Brief ¶ 32.

[redacted]

***78.*** For these reasons, CenturyLink followed the advice of the equipment manufacturer, the entity with the most relevant knowledge and expertise about the equipment that experienced issues in December 2018. As described above and in its Opening Brief, this is the action of a prudent carrier trying to make a decision to limit risk. It is not the action of a carrier that falls below the standard of care.

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[146] McNealy, Ex. TJM-1TC at 9 ("[redacted]"); McNealy, Tr. 501:23-503:12.

***79.*** WMD says RCW 80.36.080 concerns contracts for telecommunications services, and because 911 calls failed the purported breach of contract leads to regulatory liability.[147] As an initial matter, as described above, CenturyLink did not breach its contract with WMD. The Green Network outage did not prevent CenturyLink from delivering a single 911 call to its PSAPs. It was Comtech who appears to have run afoul of its contract with WMD by creating a signaling network with a known single point of failure.

***80.*** As described above and in its Response to Public Counsel's Motion for Summary Determination, this is not a breach of contract case. The Commission has no jurisdiction over breach of contract causes of action. The question is whether CLC violated the Washington statutes or rules alleged in the Complaint. If a simple failure to complete 911 calls constituted a breach of contract and therefore created regulatory liability, the Commission would have reached that conclusion in the Docket Nos. UT-140597 and UT-190209. That did not occur.

***81.*** Public Counsel recognizes the Commission's standard of foreseeability and finds that the Commission must find CLC failed to properly design the 911 system, and that failure caused a widespread outage.[148] There was nothing wrong with CenturyLink's network design. As a result, while citing the proper standard, Public Counsel argues a violation occurred because the Red Network outage "showed it was possible" for a packet storm to propagate thorough the IGCC.[149] The standard is not possibility but reasonable foreseeability, and a packet malformation that caused [redacted]

[147] WMD Opening Brief ¶ 15.

[148] Public Counsel Opening Brief ¶ 52.

[149] Public Counsel Opening Brief ¶ 45.

[redacted]) is not foreseeable, let alone reasonably foreseeable.

***82.*** Public Counsel also argues that CenturyLink was contractually obligated to create a redundant network.[150] It did. The fact that all of the 911 calls to its PSAPs completed is evidence of this fact. The problem was that Comtech did not properly design its signaling network, and then hid this fact from all other interested parties, including CenturyLink and WMD. Comtech's network design violated Comtech's obligation to create a network with no single points of failure.

***83.*** Staff rests its entire theory for its first cause of action on the Red and Green Network outages. It has not come anywhere close to meeting its burden of proof and persuasion on its first cause of action.

## I. Staff Failed to Meet its Burden of Proof and Persuasion as to RCW 80.36.220, the Second Cause of Action.

***84.*** RCW 80.36.220 provides that "Telecommunications companies shall receive, exchange and transmit each other's messages without delay or discrimination, and all telecommunications companies shall receive and transmit messages for any person." In its Opening Brief, CLC cited testimony from Public Counsel witness Chase proving that Staff could not meet its burden on this claim.[151]

***85.*** Staff argues that CenturyLink's Green Network outage kept it from transmitting messages.[152] In reality, the exact opposite is true. CenturyLink transmitted messages to Comtech, and Comtech did not transmit messages back. CenturyLink did everything it could and should have done. Moreover, as CLC explained in its Opening Brief, this statute does not even concern network outages; it concerns a refusal to transmit messages

[150] Public Counsel Opening Brief ¶ 54.

[151] CLC Opening Brief ¶¶ 121-126.

[152] Staff Opening Brief ¶ 64.

(i.e., the blocking of calls). Thus, the statute does not apply to this case. Staff cites no cases remotely similar to this one in which RCW 80.36.220 has been applied, analyzed or even considered.

***86.*** Once again, Staff's argument that a violation occurred depends on the Red/Green outage issue, an issue it was unaware of before the Complaint was filed. And once again, Staff fails to recognize the myriad of reasons why it did not make sense for CenturyLink to disable the IGCC on the Green Network altogether after the Red Network outage.

***87.*** Public Counsel takes a different tack, arguing that CLC was hands off and did not try and help with the transition despite a contractual obligation to do so. This is absolutely false. As CLC explained in its Opening Brief, all elements of the transition from CenturyLink to Comtech were discussed and negotiated among CenturyLink, Comtech, Intrado and WMD. Contrary to Public Counsel's unsupported narrative that CenturyLink dictated design decisions[153]—most notably the selection of SS7 interconnection for the two ESInets—the parties worked collectively.[154] WMD confirms that design decisions were collaborative and cooperative. Indeed, the record is replete with detailed correspondence and planning documents corroborating CenturyLink and Intrado's engagement and participation.[155]

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[153] *See* Lobdell, Ex. VL-1TC at 5:12-7:9 (summarizing Public Counsel testimony). Further confirming CenturyLink's lack of dictatorial authority in this process, CenturyLink initially opposed the three-phase transition design, and expressed concerns about the implications of being in the call flow for Comtech-destined 911 calls. Lobdell, Ex. VL-1TC at 4:1-5:3; Ex. VL-2. Ultimately, the three-phase approach was reasonable, but its adoption over the concerns of CenturyLink demonstrates that CenturyLink did not unilaterally control the transition process or design.

[154] Lobdell, Ex. VL-1TC at 7:10-9:15.

[155] *See e.g.,* JDW-20C, version 14 of Comtech's transition project management tracking sheet identifying numerous areas of negotiation and collaboration. It appears WMD is now arguing the opposite. If WMD thought CenturyLink should do more to effect the transition, the time to raise that concern was during the transition in 2016/2017—not in a legal proceeding in 2022.

***88.*** Once again, Staff has fallen far short of meeting its burden of proof and persuasion. Here, the evidence shows that CenturyLink did the very thing the statute concerns; it transmitted messages each and every time.

### J. Staff Failed to Meet its Burden of Proof and Persuasion as to WAC-480-120-412, the Third Cause of Action.

***89.*** WAC 480-120-412 requires that "[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." "Major outage" is defined by WAC 480-120-021 as "a service failure lasting for thirty or more minutes that causes the … *total loss of service to a public safety answering point or emergency response agency*…." (emphasis added).

***90.*** None of the CenturyLink-served PSAPs suffered any outage, let alone a total loss of service. CLC predicted and refuted Staff's, Public Counsel's and WMD's arguments in its Opening Brief.[156] It will not repeat those arguments again.

***91.*** Once again, Staff has fallen far short of meeting its burden of proof and persuasion. Here, the evidence shows that CenturyLink did not need to notify its PSAPs about an outage because they did not experience one.

### K. Staff Failed to Meet its Burden of Proof and Persuasion as to WAC-480-120-450, the Fourth Cause of Action.

***92.*** WAC 480-120-450 requires "(1) Local exchange companies (LECs) must provide enhanced 9-1-1 (E911) services…."

***93.*** CLC fully explained the meaning and application of WAC 480-120-450 in its Opening Brief.[157] Staff and Public Counsel ignore the text of the rule (as they did throughout earlier phases of this cases, including pre-filed testimony and hearing). They seek

[156] CLC Opening Brief ¶¶ 113-117.

[157] CLC Opening Brief ¶¶ 118-120.

astronomical penalties, yet utterly fail to connect the facts of this case to the rule. The rule requires a LEC (in its capacity as an Originating Service Provider) to offer 9-1-1 functionality to allow its local customers access emergency services. The focus of this case is entirely on CLC in its capacity as an IXC, not as a LEC. There is not a single fact or document in the record suggesting that, as an OSP, CLC customers were denied 9-1-1 dialing functionality.

***94.*** Staff's arguments here ignore the plain language of the statute. As such, Staff has fallen far short of meeting its burden of proof and persuasion.

### L. <u>There is No Basis to Fine CLC—the Factors Weigh in Favor of CLC</u>.

***95.*** Public Counsel devotes 12 pages of its Opening Brief to the factors the Commission reviews when determining whether to fine a company. Again, CenturyLink understands the importance of 911 calling; however, most of those cited standards are facially inapplicable, and regardless there is insufficient record evidence of violation to require or even permit penalties.

***96.*** For example, one factor is whether the violations were "intentional." There is zero evidence of intentionality; quite the opposite is true. As CLC has shown many times, it managed its 911 network, issues with the transition and decisions about its Green Network professionally at all times. Understanding this factor does not apply, Public Counsel tries to morph the standard into "irresponsibility."[158] This is indicative of Public Counsel's arguments, which (being kind) exaggerate the facts. It argues CLC did not produce CDRs; it did. It tries to blame Comtech's network design on CenturyLink; it claims CenturyLink was not invested in or assisting during the network transition, when the record shows overwhelming involvement and assistance.[159] None of these assertions

[158] Public Counsel Opening Brief ¶ 64.

[159] *See, e.g.,* Stockman, Ex. JWS-1TC at 58:9-59:14.

is true.

***97.*** CLC described its position on the demands for fines in its Opening Brief,[160] and will not repeat that here other than to say that the most important enforcement factor to be considered is the likelihood of recurrence, which precludes the assessment of penalties against CLC. CenturyLink is no longer the 911 provider in Washington, and thus penalizing it in connection with the December 2018 outage (which was primarily caused by Comtech) would defy the Commission's stated scope and purpose of its penalty authority:

> Even if we were to conclude that the outage violated RCW 80.36.080 and WAC 480-120-450(1), *we would not assess a penalty for the violations*. 'The Commission's ultimate objective in any enforcement action is to obtain compliance with applicable law.' [footnotes omitted] Penalties primarily provide an incentive to comply with legal requirements. * * * *CenturyLink no longer even provides 911 service under contract with WMD. Assessing penalties under these circumstances would provide no incentive whatsoever for CenturyLink to comply with applicable law*."[161]

## IV. CONCLUSION

***98.*** CLC recognizes that 911 calling is critical. However, there is no evidentiary support for the notion that CLC caused 911 calls to fail during the December 2018 network outage. During the Green Network outage, 911 calls completed to CenturyLink-served PSAPs. There is no doubt whatsoever that the thousands of failed 911 calls failed to complete because of Comtech's faulty network design. Staff has fallen far short of its burden of proof and persuasion on all aspects of its claims.

[160] CLC Opening Brief ¶¶ 121-126.

[161] Docket UT-190209, Order 03 ¶30 (Initial Order) (emphasis added).

***99.*** For the reasons set forth in its Opening Brief, its Response to Public Counsel's Motion for Summary Determination, its pre-filed testimony, and this Response Brief, CLC respectfully requests that the Commission deny the complaint in all respects, and find for CLC.

Respectfully submitted this 10th day of February 2023.

CENTURYLINK

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