BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

| | | |
|---|---|---|
| In the Matter of the Nebraska Public Service Commission, on its own motion, to investigate practices related to network reliability and requirements governing notification for service interruptions. | ) | Application No. C-4272/PI-169<br><br>ORDER OPENING DOCKET<br><br>Entered: May 12, 2010 |

BY THE COMMISSION:

O P I N I O N  A N D  F I N D I N G S

The Nebraska Public Service Commission (Commission), hereby opens this investigation on its own motion to investigate practices related to network reliability and standards governing telephone service interruptions. On April 1, 2010, Windstream Communications Inc. (Windstream) experienced a substantial service outage which interrupted telephone service for a number of wireline and wireless consumers calling to and from Lincoln and surrounding communities. More significantly, this service outage affected the ability of many consumers to reach emergency responders for an extended period of time.

At its public meeting held on April 6, 2010, the Commission questioned Windstream as to whether this service interruption was unique to Windstream or whether other carriers might have their networks designed in a similar manner. The Commission expressed concern that other areas may be vulnerable to service outages. Windstream informed the Commission the potential existed for other outages as Windstream stated it followed network design and maintenance standards common to industry practice. While we will continue to investigate the Windstream service outage, we find that a statewide investigation will assist the Commission in considering policies or rules aimed at reducing the likelihood that substantial service outages similar to the Windstream service outage will occur in other areas of the state.

Telecommunications carriers in Nebraska are subject to regulation by the Commission "to ensure the delivery of essential and emergency telecommunications service."[1] According to the Commission's rules, telecommunications carriers are under a general obligation to take "all reasonable efforts to prevent interruptions of access line service."[2]

---

[1] *See Neb. Rev. Stat.* § 86-128 (2008).
[2] Title 291, *Neb. Admin. Code*, Chapt. 5, § 002.03A.

Printed with soy ink on recycled paper

Communications technology has changed significantly over the last decade. Industry standards developed to ensure network reliability have also continually evolved. While no one Commission rule dictates network engineering and design specifications, telecommunications carriers are expected to utilize recognized industry standards in their network to ensure that adequate access line service is provided to the public.[3]

According to a 2004 Report and Order of the Federal Communications Commission (FCC), more than seven hundred "best practices" have been developed for use by carriers and manufacturers in reducing the likelihood, and length, of network outages, for facilitating the restoration of failed communications services, and for improving the security of communications networks.[4] These best practices were developed through the work of the Network Reliability Council, now known as the Network Reliability and Interoperability Council.[5] In addition, other engineering firms such as Telcordia[6] and industry groups such as the Alliance for Telecommunications Industry Solutions (ATIS)[7] have developed industry standards related to network integrity, diversity, and redundancy. We believe that carriers rely on these industry practices to assess network integrity. In this investigation, the Commission requests input on these and other industry practices to determine whether they are being followed, and whether any specific standards should be incorporated in our rules.

Above all, the Commission's main focus in this investigation will be the impact of communications disruptions on public safety. The Commission will look at ways communications providers can minimize the disruptions to 911 access through network design. For example, the Commission will solicit comment on how telecommunications carriers can improve network reliability by adding selective routers or inter-tandem trunking mechanisms to their network design so that communications traffic can be diverted to other carriers' networks.

---

[3] *See id.* § 002.02A.

[4] *In the Matter of New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Report and Order and Further Notice of Proposed Rule Making, para. 15 (Rel. August 19, 2004) (Outage Order).

[5] *See* www.nric.org for the best practices referenced by the FCC in its Outage Order.

[6] Telcordia is a communications development and consultation firm that provides education, training, and other consultation services to communications firms. *See* www.telcordia.com.

[7] ATIS is a membership organization that provides industry standards and guidelines to its members. *See* www.atis.org.

Printed with soy ink on recycled paper

The Commission hereby schedules a technical workshop with industry participants. The workshop will focus on how carriers have implemented industry standards in their own network and what the Commission can to do ensure that such practices are being followed. The workshop shall be held on **July 13, 2010,** at 1:30 p.m., in the Commission Hearing Room, 300 The Atrium Building, 1200 N Street, Lincoln, Nebraska, 68508.

An additional consideration is the notification that should be given when a network disruption occurs. Now more than ever, networks are interconnected and interdependent which makes coordination with state and local governments and other carriers essential. Building upon the existing service outage reporting requirements, the Commission would like to discuss ways to improve the responsiveness of the carriers to state and local authorities and to other carriers when a service outage occurs. Understandably, during the initial stages of a service outage a carrier will not know exactly what caused the outage or the extent of an outage. However, to the extent that some immediate notification can be given, state and local authorities and other providers can work to minimize the impact of disruptions.

The Commission's service outage reporting requirements were adopted in 1995 prior to the extensive use of email communication and electronic reporting. Although, nothing in the Commission's requirements prohibits notification by electronic mail, the Commission seeks comments on mandating an electronic notification system where possible. Where not possible, the Commission may designate an alternative notification process. Accordingly, we seek comment on ways to improve service outage reporting to ensure that companies convey this information to the Commission, and other entities, in a concise, uniform and timely manner.

In 2004, the FCC extended its outage reporting rules to include third-party reporting of Signaling System 7 (SS7) communication disruptions.[8] SS7 networks provide information to process and terminate telephone calls for wireless, wireline, local, long distance, or internet service providers.[9] Our service outage reporting requirements are silent as it relates to SS7 communication disruptions. Therefore, the Commission seeks comment on whether to modify its service outage reporting requirements to include a requirement for third-party SS7 providers. We seek comment on what the threshold should be for third-party SS7 reporting requirements.

---

[8] *See Outage Order*, paras. 145 through 149.

[9] *Id.* para. 144.

Printed with soy ink on recycled paper

At the technical workshop, the Commission may seek comment on these and other issues related to notification. Interested parties unable to attend the workshop in person may either call in to the workshop via teleconference bridge which will be made available prior to the workshop, or file written comments on or before **July 13, 2010**, discussing recommendations on industry practices and notification. Written comments should be sent electronically to Deena.Ackerman@nebraska.gov.

O R D E R

IT IS THEREFORE ORDERED by the Nebraska Public Service Commission that the above-captioned investigation be and it is hereby open for public comment.

IT IS FURTHER ORDERED that a technical workshop be and it is hereby scheduled for **July 13, 2010,** at 1:30 p.m., in the Commission Hearing Room, 300 The Atrium Building, 1200 N Street, Lincoln, Nebraska, 68508.

MADE AND ENTERED at Lincoln, Nebraska, this 12th day of May, 2010.

NEBRASKA PUBLIC SERVICE COMMISSION

COMMISSIONERS CONCURRING:

Ted Johnson

Anne Boyle

Tim Schram

//s// Frank E. Landis
//s// Gerald L. Vap

Chairman Gerald L Vap

ATTEST:

Phil Ryan

Executive Director

Printed with soy ink on recycled paper