



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

Electricity Sector Influenza Pandemic Threat Summary

Introduction

Business continuity planning for the electricity sector requires preparing for the full range of threats facing the owners and operators of the electric system. The electricity industry has ample experience in planning for significant events including Y2k, adverse weather, vandalism, equipment failure, terrorism, and other threats. The sector is now challenged by a new threat with some familiar characteristics along with some new dimensions.

Influenza Pandemic

The new threat is the possibility of an influenza pandemic caused by the H5N1 virus. The virus is currently infecting large populations of birds in Asia. The virus has also infected human beings with fatal results. It is reported to be spreading rapidly in domesticated birds and birds in nature. It has attracted serious attention by governments and health organizations throughout the world. Regardless of what happens with the H5N1 strain, medical experts all agree an influenza pandemic will occur in the future and the electricity sector's business continuity plans need to address the threat.

Planning Framework for the Electricity Sector

The objective of this document is to surface the pandemic threat, frame it for discussion, and provide information. The purpose of the associated Influenza Pandemic Planning, Preparation, and Response Reference Guide is to assist the electricity sector owners and operators in developing plans to manage the newest threat to the sector's business continuity. Many questions remain to be answered. The current situation is dynamic and sure to change. NERC has formed a task force to develop the Reference Guide and to revise it as this situation evolves. Task force membership includes:

Tom Bowe	PJM Interconnection
Stuart Brindley	Independent Electric System Operator
Bob Canada	Southern Company
Gian DiGiambattista	Ontario Power Generation
Herman Green	Consultant
Ken Hall	Edison Electric Institute
Stan Johnson	North American Electric Reliability Council
Barry Lawson	National Rural Electric Cooperative Association
Jim MacNeil	Independent Electric System Operator
Jim Miller	NiSource
Lyne Perreault	Hydro Quebec
Monique Weiland	California Independent System Operator

A New Jersey Nonprofit Corporation

Phone 609-452-8060 ■ Fax 609-452-9550 ■ URL www.nerc.com

Pandemic Defined

A pandemic is defined as a global outbreak when a new virus is able to be transmitted between humans resulting in serious illness and death worldwide.

Health care professionals predict a very high probability that a pandemic will occur in the future but the timing and impact will depend on many factors that are difficult to predict.

Current Situation

The H5N1 virus is an especially dangerous strain and closely resembles the 1918 strain which caused 50 million deaths worldwide. The 1918 pandemic had rates of infection for the entire population of up to 32 percent. In 2005, the fatal human cases have occurred in Asia and Turkey while migratory birds carrying H5N1 have been found in Europe (Ukraine, Turkey, and Greece) and Australia. The virus originated in birds and has been transmitted from birds to humans. So far, there is no evidence that the virus has been transmitted from human to human. Health officials believe this will occur although they can not predict when this might happen. The human mortality rate in Asia for those infected has been over 50 percent.

No vaccine has been developed yet for the H5N1 strain and production will not be able to gear up in time to provide widespread protection for large parts of the society. The antiviral drug Tamiflu may have some effectiveness against this virus but it is in short supply around the world.

Increased global interconnectedness has led medical experts to predict that if human-to-human transmission occurs, a human breakout of H5N1 virus could spread from Asia to North American in three to eight weeks. It would spread rapidly across the continent in a matter of weeks with an estimated 25 percent attack rate and these people may be ill for up to a week. Absentee rates of employees could approach 35 percent for the duration of the pandemic due to illness and other factors such as needing to take care of family members. The pandemic could last for 6 months.

Business Continuity Dimensions

The threat of a contagious disease pandemic to business continuity deserves careful consideration. It is different from most other threats for the following reasons:

1. **Worldwide Impact** — unlike many threats that are localized, a pandemic has the potential to impact operations simultaneously across North America and around the world. It will affect employees and the availability of resources and services the electricity sector depends upon.
2. **Duration** — an influenza pandemic could severely disrupt operations for six to eight weeks. Some level of fear would spread through the population prior to the actual outbreak and the actual “sickness” period would range from a day to a week for most individuals.
3. **Mortality** — the predicted rates vary significantly from .5 percent to 2 percent world wide. Even a low end mortality rate would cause severe disruption for employees who lose family members and friends. Business continuity plans need to recognize and address the anxiety levels employees will experience during a pandemic by providing empathy and support.

Historically, the electricity sector’s business continuity planning has been very effective. The industry now needs to enhance its planning to prepare for this emerging threat.

Additional information on this emerging threat can be found at:

<http://pandemicflu.gov> — U.S. Government Site

<http://www.who.int/topics/influenza/en/> — World Health Organization Site

<http://www.phac-aspc.gc.ca/influenza> — Public Health Agency of Canada

<http://www.cdc.gov/flu/avian/index.htm> — Center for Disease Control Site

<http://www.pandemicflu.gov/plan/businesschecklist.html> — DHS site (U.S.)