

**WESTERN STATES SEISMIC POLICY COUNCIL
Policy Recommendation 19-11**

Reliability of Lifeline Services

Policy Recommendation 19-11

WSSPC encourages utility regulatory bodies and utility service providers to implement current best practices and seismic design in the construction and maintenance of their infrastructure in order to assure satisfactory performance in future earthquakes. WSSPC also encourages the establishment of collaborative bodies, such as lifeline councils, to coordinate practices and examine interdependencies.

Executive Summary

Lifelines form a critical segment of the nation's infrastructure. Disruption can significantly affect the resiliency of a community. Use of existing guidelines as well as development of new guidelines can serve as an effective method of identifying and reducing risk.

Background

Lifeline infrastructure including, but not limited to, electricity, gas, telecommunications, water, and waste water are critical to a community's wellbeing. Some lifelines are still being constructed using old methods and technologies that are known to be inadequate by seismic experts.

Much of the nation's existing infrastructure has not been designed to perform satisfactorily under extreme conditions produced by major earthquakes, including severe ground shaking, earthquake-induced tsunamis, fault rupture, large landslides and liquefaction. Lifelines should be designed to provide reliable performance under expected earthquake loading conditions to ensure that the region can withstand future earthquake damage without crippling consequences. Critical infrastructure requires system and component vulnerability studies in order to understand potential damages and operational consequences. Mitigation of infrastructure with a high likelihood of failure with extreme loss-of-service consequences should be addressed. This policy recommendation is a reinvigorated effort to follow through on resolving infrastructure liabilities originally identified in FEMA 271 "Plan for Developing and Adopting Seismic Design Guidelines and Standards for Lifelines" (1995).

Internal Section:

Facilitation and Communication

Implementation

WSSPC recommends that member states, provinces and territories encourage both public and private lifeline operators in their areas to utilize available seismic design and performance guidelines in the construction and operation of their facilities.

A consideration in the continued evolution and development of guidelines should be their potential use in ongoing maintenance, rehabilitation and risk mitigation to existing lifelines to decrease infrastructure seismic vulnerability. Implementation can be accomplished by working with state agencies and regulators, such as public works, energy and water resource departments. Additional stakeholders include public and private utility commissions and drinking water programs.

Assessment

The effectiveness of this policy can be determined by the implementation of industry recognized guidelines by regulators and utilities.

History

- Policy Recommendation 16-11 was re-adopted as Policy Recommendation 19-11 by unanimous vote of the WSSPC membership at the Annual Business Meeting April 26, 2019.
- Policy Recommendation 13-11 was re-adopted as Policy Recommendation 16-11 by unanimous vote of the WSSPC membership at the Annual Business Meeting May 6, 2016.
- Policy Recommendation 19-11 was first adopted as Policy Recommendation 13-11 which was approved unanimously by vote of the WSSPC membership at the Annual Business Meeting May 3, 2013.