



Enterprise Risk Management

IPR BRIEFING

Property Insurance

May 2010

Property Insurance Overview

Background

- BPA conducted a two year comprehensive analysis of the benefits of property insurance for mitigating the financial risk of damage to its major assets.
 - ▶ An insurance consultant, Marsh, was hired to help with the analysis.
 - ▶ A survey of utilities similar to BPA was conducted to determine common industry insurance practices, including typical types of policy coverage, limits, deductibles, etc.
 - ▶ A comprehensive inventory of the major FCRPS assets was conducted and replacement cost estimates were established.
 - ▶ An Earthquake Vulnerability and Impact Analysis was performed for FCRPS assets.
 - ▶ Indicative pricing was obtained for a potential property insurance policy for BPA including some policy alternatives.
- Implementation of a property insurance policy would take approximately 6-9 months.
- Concluded that purchasing property insurance could be an efficient and cost effective method for mitigating potential large financial risk exposure from damage to BPA's major generation and transmission assets.



Property Insurance Overview

- BPA has a large number of high value assets.
- Total replacement value of FCRPS assets is over \$50 billion.
 - ▶ Generation \$42 billion
 - ▶ Transmission \$8.5 billion
 - ▶ Other \$644 million
- BPA is largely uninsured, not self-insured
- BPA does currently purchase insurance for the Columbia Generating Station nuclear plant, WIES transmission insurance, and a few special purpose insurance policies.



Property Insurance Overview

- Historically, BPA has financed property repair or replacement losses by raising rates or reallocating budgets.
- Currently BPA's TPP calculations (the probability that BPA will have enough financial reserves to make all of its Treasury payments) does not take into account the risk of potentially high repair or replacement costs that could result from major damage to FCRPS assets.
- Federal agencies generally don't purchase insurance, but BPA is somewhat unique as a self-financed agency and it can legally purchase property insurance.
- TVA began purchasing property insurance covering its major assets 7 years ago.



Property Insurance Overview

Examples of BPA large property loss exposures:

- Large substation fire/explosion: \$50 million to \$100 million
- Large fire/explosion at Celilo Converter Station: over \$100 million
- Fire at a large generation plant such as Grand Coulee: over \$300 million
- Ross warehouse fire: over \$20 million
- Large fire in spare transformers at Ross: over \$100 million
- Terrorism (fire, explosion, intentional mechanical failure): over \$500 million
- Volcano eruption: over \$500 million
- Worst case earthquake loss: \$3.9 billion
- More probable earthquake loss: \$150 to \$250 million
- Catastrophic flood: over \$500 million
- Transformer bank fire: \$15 million to \$35 million
- Large control or server center fire: \$25 million to over \$100 million
- Mechanical breakdown at large generation station: over \$200 million



Property Insurance Overview

- Types of losses covered by property insurance
 - ▶ Major perils covered include mechanical breakdown, fire, earthquake, flooding, terrorism, explosion, lightning, wind and ice storm, hail, riot, vandalism, aircraft, volcanic action.
 - ▶ A BPA insurance policy would cover powerhouses and associated equipment, transmission substations, Ross complex, Dittmer, Celilo converter station, office buildings and contents.
 - ▶ Transmission lines and towers are not included in coverage.



Property Insurance Overview

Indicative coverage and pricing for BPA property insurance policy
(includes terrorism coverage)

Coverage levels:

Earthquake:	\$250 million each occurrence/annual aggregate
Flood:	\$500 million each occurrence/annual aggregate
All other perils:	\$500 million each occurrence
Deductible:	\$10 million each occurrence

Estimated Annual Net Premium: \$13-16 million

Other options can be developed to fit BPA's risk retention ability and budget.

Estimated BPA budget allocation – 67% Power, 33% Transmission



Benefits of Property Insurance

- Insurance provides a risk mitigation method for addressing large potential losses.
- Following a loss, insurance pays for the replacement cost of assets thereby reducing BPA cash requirements or the need to use long-term borrowing authority that must be repaid.
- Rate stability is enhanced by minimizing the financial blow from a major property loss.
- Insurance provides a relatively quick source of funds following a catastrophic event (typically within a few weeks). Federal financial aid (if available) could be less than needed or slow to obtain.
- Insurance companies provide loss control services including inspections of facilities and recommendations for reducing the frequency and severity of losses.
- Purchasing property insurance is a common electric utility industry practice that is well understood and used by BPA's customers.
- Purchasing property insurance is consistent with BPA's objective to manage risks in accordance with sound business principles.

