

How Equipment Breakdown Coverage is Evolving and Expanding

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Andrea Ezerins is a vice president at the Hartford Steam Boiler Inspection and Insurance Company, where she is responsible for corporate underwriting within the treaty division. She is in charge of the profitability, rates, and terms and conditions of HSB's client companies.

Andrea has been the underwriting liaison for Hartford Steam Boiler's renewable energy team for the last several years, and she has spoken about green building insurance, renewable energy, and other emerging issues at several insurance company events and industry events.

Andrea earned her Bachelor of Science in business from University of Connecticut, graduating magna cum laude. She earned her CPCU designation in 1992 and her ARM in 1993.

Session Description:

We have seen many changes and technological innovations during the past 150 years but never has change been more rapid than what we now experience. **The pace will only intensify.** The equipment people and businesses rely on have increased in complexity involving many businesses and individuals that never relied heavily on technology and equipment before. This presentation will review the changes and trends that are impacting not only the equipment breakdown exposures but property exposures as well.

Specifically this session will discuss how technology, energy efficiency, water scarcity, and other trends will impact us, including smart grids, the miniaturization of equipment, and new communication technology. It will also cover equipment breakdown exposures associated with the above and will include new coverage developments for HO, FO, and Commercial insurance, and how breakdown insurance addresses these different segments.

Top Three Session Ideas

Tools or tips you learned from this session and can apply back at the office.



1. _____

2. _____

3. _____

How Equipment Breakdown Coverage is Evolving and Expanding

Session Outline

Overview

The Pace of Change

Energy Trends

- Energy Consumption
- Renewable Energy
- Energy Conservation & Efficiency
- Primary Energy Efficiency Opportunities
- Smart Grid
- Energy for Transportation
- Emergency Power Generation

Technology Trends

- Equipment Evolution
- Cloud Computing
- Virus/Malware

Economic/Social Trends

- Aging Equipment
- Aging Population
- Decentralized Healthcare

Solutions

- The Simple Seven: Covered Equipment Categories
- Equipment Breakdown: Broadened Coverage Scope
- Commercial Equipment Breakdown Coverage
- Evolving Equipment Coverage Needs
- Loss Prevention and Inspection Service
- Farmowners Equipment Breakdown Coverage
- Homeowners Equipment Breakdown Coverage

Trends & Impacts: What to Keep in Mind

Questions & Answers



HOW EQUIPMENT BREAKDOWN COVERAGE IS EVOLVING AND EXPANDING

Andrea Ezerins
February 28, 2013

Risk Solutions



Hartford Steam Boiler



The Pace of Change



Think

The equipment you depend upon today that wasn't available 5 or 10 years ago.

The same is happening with your **INSUREDS.**

Major Trends



Energy



Technology



Economic/Social

Rapidly shaping and changing the **businesses, homes, and farms** you insure.

Energy Trends



- Energy Consumption
- Renewable Energy
- Emergency Power Generation
- Smart Grid
- Energy Efficiency
- Energy for Transportation
- Emergency Generators



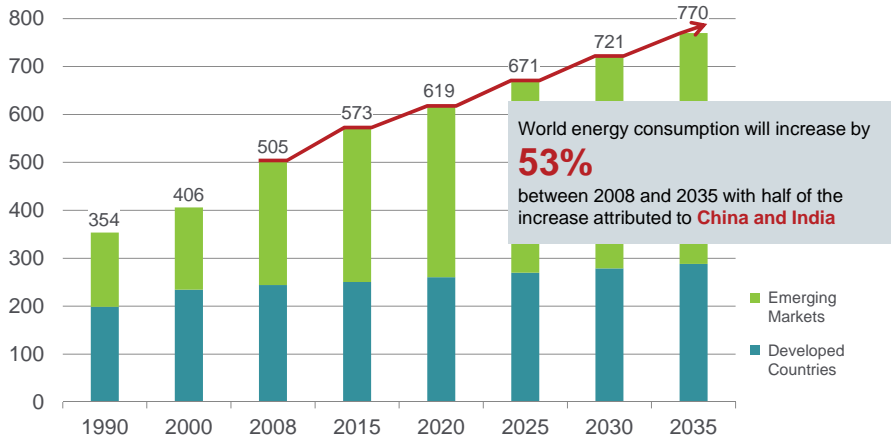
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Trend: Energy Consumption



World Energy Consumption: 1990 to 2035 (Quadrillion BTU)



Source: U.S. Energy Information Administration – International Energy Outlook 2011

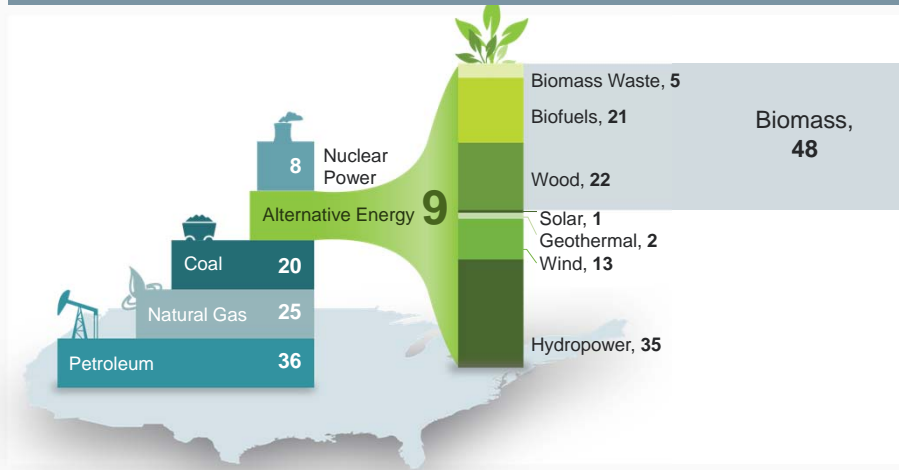
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Trend: Energy Consumption



2011 U.S. Energy Consumption by Source, Percent



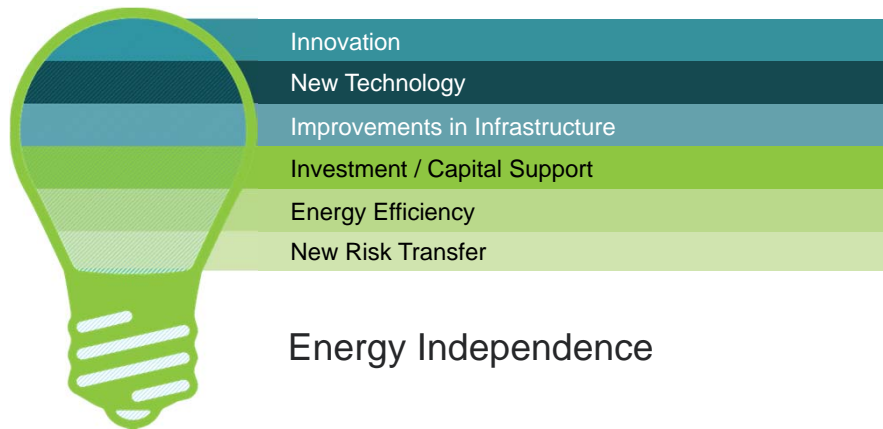
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Impact: Energy Consumption



New opportunities for Insurance and Financial Service firms help facilitate...



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Trend: Renewable Energy



Renewable energy is driven by

- Governmental incentives
- Technology that improves efficiency and reduces cost
- Price of natural gas & oil

\$257 billion

invested worldwide in
renewable energy in 2011

Today's renewable energy sources will increasingly become mainstream during the next decade.

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Impact: Renewable Energy



Increasing installs

mean more of your customers will see emerging loss exposures.



Your customers will be looking for: Risk transfer capacity, loss control advice and consultation resources.

Insurance Exposures

Liability-attractive nuisance, abandonment exposures.

PD to wind turbines and solar panels-wind, lightning, hail, ice; damage to roofs from solar panels.

Equipment Breakdown.

Incidental Exposures

Property owners, manufacturers of systems components, contractors who transport, install and maintain alternative energy equipment.

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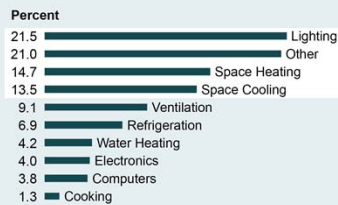
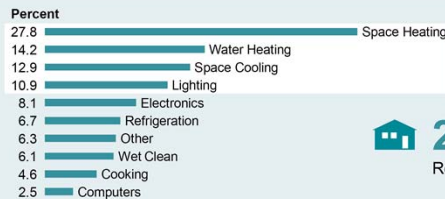
Energy Efficiency



Savings of 20% or more
are possible for many businesses and homes.

- Energy conservation and efficiency is one of the most significant opportunities for the U.S. economy.
- Energy savings run from low-cost behavioral changes – i.e. turning off computers when not in use; to capital investments in energy efficient equipment.
- Retail firms often must sell \$50 in product to earn \$1 in profit. Many businesses see that Green = \$ Green.

\$1 Trillion in Energy Efficiency Savings, Over 10 years for \$279 Billion Investment



Source: Deutsche Bank Climate Change Advisors 2012

Trend: Primary Energy Efficiency Opportunities



Businesses, Farms, and Homes **spend 3–5 times more on energy** than they do for commercial or personal insurance.



Even a modest reduction in energy expense will go a long way toward delivering value on their insurance.

Insureds are becoming more aware of the importance of energy efficiency and its impact on their balance sheet.

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Trend: Smart Grid



Electrical Grid: **Outdated and inadequate** to support future demand. Target for cyber and terrorist attacks.



Smart Grid is **critical** if we are to use energy from 'new' sources.

Ultimately touches every business and home.



Almost **50 million smart meters** will be deployed.



Smart Grid could **produce a \$130 billion value** for the U.S.



Source: McKinsey

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Impact: Smart Grid



Access to reliable high-quality electrical power is critical for property, liability, and equipment breakdown insurance.



- Smart meters are revolutionizing how power is consumed. Users will modify how they use equipment to gain favorable electrical rates.
- Smart meters improve power quality and reliability.
- Smart meters with detection capabilities can offer new loss control techniques.
- Privacy concerns.

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Trend: Energy for Transportation



Plug-In and Compressed Natural Gas Vehicles



A million vehicles will need charging stations in the U.S. by 2015



2/3 Commercial



1/3 Residential

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Impact: Energy for Transportation



Plug-In Vehicles



- New liability, property and equipment exposures.
- Electric cars require high voltage.
- Natural gas vehicles require high pressure.

Special training will be needed for those who operate, maintain, or fuel alternative vehicles.



Charging Stations

Place significant demands on the electrical infrastructure of a business or home.

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Trend: Emergency Power Generation



Significant growth in the number of emergency generators for the foreseeable future. Power outages are driving the Emergency Power Generation trend.

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Impact: Emergency Power Generation



What new hazards do emergency generators create?



- Bodily injury: Improper installation, need for transfer switches to eliminate “back feeding” utility lines, and injured utility workers.
- Property damage: Improper fuel handling.
- Equipment breakdown.
- Spoilage.
- Power surge.

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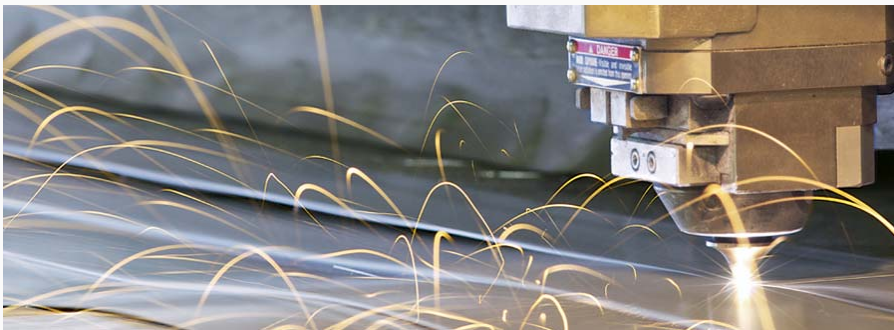
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Technology Trends



 Tech Trends

- Equipment Evolution
- Cloud Computing
- Virus/Malware



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Trend: Equipment Evolution



The building block of computer chip is the transistor.

1960's, "state of the art" radios had 8 transistors.

Today, hundreds of millions of transistors in a chip the size of a finger nail.

Trends suggest computers 10 years from now will be at least **20 times** more capable than today.

Where will this technology take us?

- Revolutionary manufacturing equipment.
- Medical diagnostic equipment that can accurately predict our health.
- Toasters controlled by smart phones.
- Cars that drive themselves.

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Impact: Equipment Evolution



- Technology has enabled equipment to think, talk or form networks.
- Change the way we live and work.
- Complex technology requires more knowledgeable users.
- Opens doors to hackers.
- Fragile technology more prone to damage.
- Greater income dependencies.

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Trend: Cloud Computing



By 2020, expenditures for cloud computing are projected to

increase by
\$200B



Businesses are realizing information technology is **not something they must own**, operate or control. It is becoming a purchased utility.

Many can **rent** a better IT capability than they can afford to own.

Many homes are using the Cloud for **social media** and **other applications**.

Source: Forrester Research (HSB Outpacing change, Tab #2)

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Impact: Cloud Computing



Multiple insureds can be impacted by a single event at a data center.

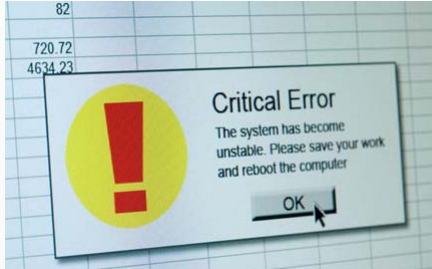


- Cloud data centers can be damaged or destroyed by natural or man-made perils. Over half of data centers are outside of the U.S.
- Cloud users will want coverage for service interruption service, data restoration and security. "All Risk" Cloud coverage will increase.
- Data processing will become a purchased utility, like electricity.

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Trend: Virus/Malware



Equipment that can connect to the internet is at-risk for virus/malware attacks (i.e. Stuxnet).

Machine-to-machine communications markets will grow from:



403 million new variants of malware created in 2011, up 41% from 2010.

Cyber security for equipment networks is becoming strategic for businesses.

Source: Strategy Analytics ((2008) See OPC tab #1
Source: Symantec 2011 Internet Security Threat Report, Vol. 17 www.symantec.com/threatreport

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Impact: Virus/Malware



- As equipment connectivity increases, so does vulnerability to cyber attacks, creating new property and equipment exposures.
- Attacks on equipment can create different losses – fires, civil commotion, freeze-ups, etc.
- A virus or malware attack equipment can result in widespread disruption.

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Economic/Social Trends

- Aging Equipment
- Aging Population
- Decentralized Healthcare



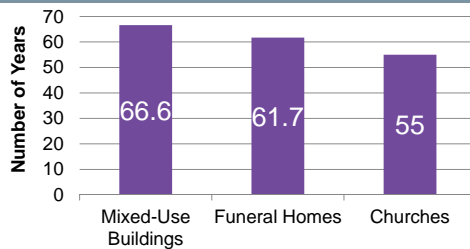
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Average commercial structure in the U.S. is

41.7 years old



Three Oldest Structures are...



- Building age is a strong proxy for equipment age.
- Economic incentive defer equipment replacement to maximize life of existing equipment.
- Older equipment is less efficient, however it is economical to maximize the life of equipment until operating costs or unexpected outages dictate replacement.

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Impact: Aging Equipment



False economics of old equipment



- Older equipment can be less efficient and prone to failure and breakdown.
- Unexpected outages can result in lost business income or spoilage.
- Replacement parts may be unavailable – requiring a complete replacement and large capital outlay.
- Out-of-date software may make data recovery expensive, if not impossible.

Businesses and homeowners must know

What renovations or maintenance should be performed on equipment if it is being operated beyond its life expectancy.

The implications for their exposure to property and/or bodily injury loss if the renovations/upgrades are not made.

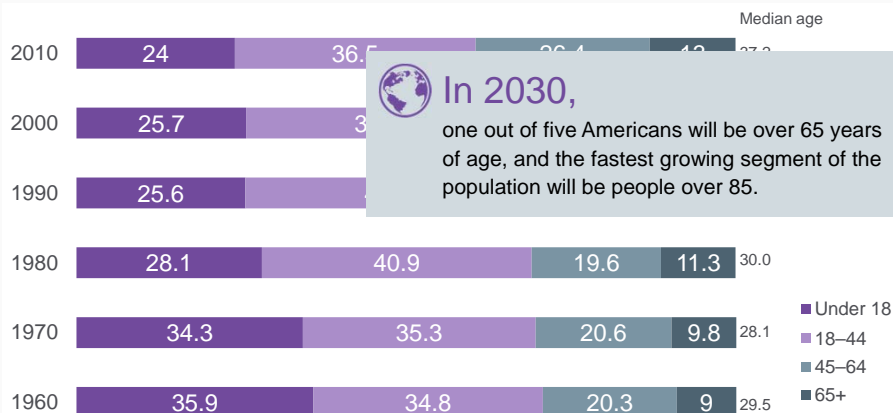
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Trend: Aging Population



Age Distribution and Median Age: 1960–2010



In 2030, one out of five Americans will be over 65 years of age, and the fastest growing segment of the population will be people over 85.

Sources: U.S. Census Bureau, 2010 Census Summary File 1, Census 2000 Summary File 1, 1990 Census Summary File 2C, 1980 Census Summary File 2C, 1970 Census of Population, Vol. 1, Characteristics of the Population, Chapter 8, Table 50 and 1960 Census of Population, Vol. 1, Characteristics of the Population, Chapter C, Table 156

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Impact: Aging Population



Insurers face new challenges, particularly with coverage that provides bodily injury (auto, on-premises liability and workers comp exposures).

Homes will change to allow people to live independently and safely. These changes will have equipment implications.

- Skilled workers leave the workforce, creating knowledge gaps, particularly in the areas of equipment maintenance and operation.
- Employee training will become an increasingly important component in managing workers comp and liability.

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Trend: Decentralized Healthcare



Home healthcare equipment market is expected to grow 7% annually through 2016.



Healthcare spending in the U.S. has outpaced economic growth for many years.



- Healthcare spending will continue to consume a greater share of the nation's economic output in the future.
- Major medical diagnostic equipment (CT Scanners and MRIs) will migrate to smaller "Main St." medical office buildings or clinics.
- Routine medical care and in-home medical devices are likely to increase.

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Impact: Decentralized Healthcare



More advanced medical equipment will move from the hospital to the home or business, resulting in new equipment exposures.



Smaller offices or clinics may purchase equipment from secondary markets. This equipment will likely be older, or refurbished, making it more prone to loss.



Equipment is often added to an insured location with no change in value, or insured at less than full replacement value.

It is important to understand sophisticated medical equipment in order to properly insure it.

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Solutions



Major Trends



Energy



Technology



Economic/Social

Equipment Breakdown can help protect your insureds from emerging risks.

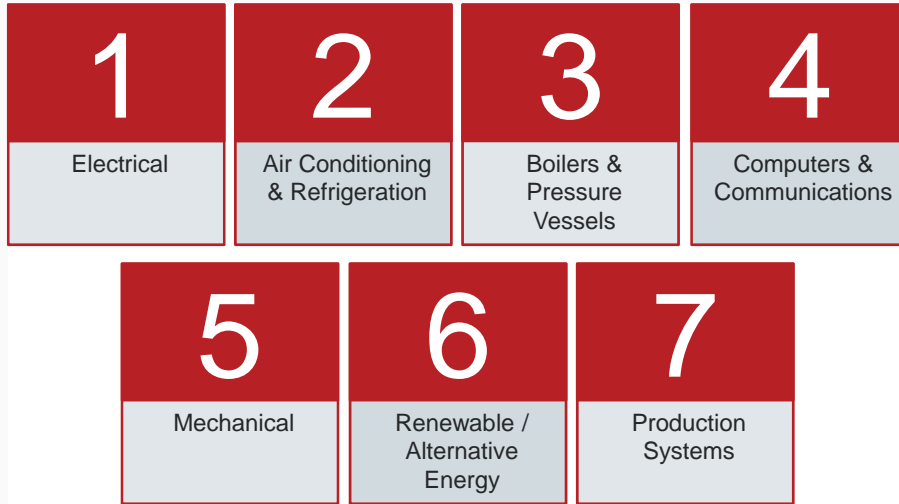
Valuable Coverage and Services

EB covers physical and financial damage resulting from an equipment breakdown; provides value-added service; and fills a gap in the property form.

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The Simple Seven: Covered equipment categories



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Equipment Breakdown: Broadened Coverage Scope



- Property damage.
- Off premises property damage.
- Business income.
- Extra expense.
- Service interruption.
- Contingent business income.
- Perishable goods—spoilage and ammonia contamination.
- Data restoration.
- Expediting expenses.
- Hazardous substances.
- Green equipment.
- Environmental, safety and efficiency improvements.
- And more.

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Commercial Equipment Breakdown Coverage



- Insureds rely on business-critical equipment that is subject to unique risks.
- Equipment not covered by property policy, potential losses can be costly.
- Fills coverage gap and protects the heart of a business: Pays for equipment breakdown or failure, as well as loss of business income and spoilage.
- Can include additional coverage for efficiency upgrades.
- Knowledgeable underwriters and claims professionals.
- More than protection: Prevention.

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Evolving Equipment Coverage Needs



Evolving exposures



- Increased device portability.
- Fragile technology / sensitive circuitry.
- Data loss due to breakdown.
- Emergency power generation.
- Demand for energy efficiency.
- Sustainability / environmental concerns.
- Alternative energy / renewables.
- Networking dependencies on suppliers.

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Evolving Equipment Coverage Needs



Coverage needs



- Cover equipment off-premises.
- EB cover for electronics PD & BI.
- Data recovery costs (not just media).
- Broad definition of covered equipment.
- Incentives for upgrade replacements.
- Recycling & environmental certification.
- EB cover for electrical & mechanical.
- Contingent business income.

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Loss Prevention and Inspection Service



- Knowledgeable inspectors perform required jurisdictional inspections.
- OnSight inspections help uncover other property and casualty risks.
- Infrared thermography, transformer oil and gas analysis, equipment training and other services.

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Farmowners Equipment Breakdown Coverage



- Pressure to reduce costs and yield has made farms more efficient than ever.
- Farms depend on equipment, yet most farmowners policies provide no protection for equipment breakdowns.
- Farmowners EB covers equipment in barns and other buildings, irrigation machinery, refrigeration systems, electrical generators, and GPS equipment.
- Covers equipment in the farmhouse, such as AC and furnace.
- Provides protection for any resulting loss, such as business income or spoilage.
- Provides additional "Environmental" coverage to help farmers upgrade to more efficient systems following a loss.

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Homeowners Equipment Breakdown Coverage



Homeowners rely on systems for essential services: Heating, cooling, water, power, communication, security and entertainment.

Coverage gap: Typical HO policy provide no coverage for equipment breakdown. Unexpected equipment losses can cost thousands.

Boiler or Furnace	\$4,000
Central Air System	\$5,000
Water filtration System	\$2,500

Provides additional "Environmental" coverage to help homeowner upgrade to more efficient systems following a loss.

Configured to cover a wide range of interior and exterior home systems.

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Trends & Impacts: What to Keep in Mind



Energy



Technology



Economic/Social



- Keep an eye on trends.
- Educate ourselves.
- Make our products relevant to these trends.
- Share information.

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FOR YOUR ATTENTION

Andrea Ezerins
February 28, 2012=3

Risk Solutions



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