

After the Crisis: the Economics of the P-C **Insurance Industry Energy Market Trends and Challenges**

Robert P. Hartwig, Ph.D., CPCU

President and Economist

Insurance Information Institute





Presentation Outline

- The Economic Storm: Reasons for Optimism, Causes for Concern
- Demand Drivers for Energy and Energy Insurance
- Looking Beyond the Crisis: Energy and Insurance Markets
- Energy Consumption, Capacity and Carbon Emissions
 - Long-Term Investment in Energy Sector and Insurance Implications
- Insurance Industry Financial Overview and Outlook
 - Profitability
 - Financial Strength
 - Premium Growth/Soft Market





Presentation Outline

- Insurance Industry Financial Overview and Outlook
 - Underwriting Performance
 - Capital/Capacity ____
 - Financial Market Impacts
- Tort System Review: Overview and Causes for Concern
- Catastrophe Loss Overview
- Deepwater Horizon: Implications for Energy and Insurance Markets









The Economic Storm

The US Economic Recovery Will Remain Weak Impacting Insurance and Energy Markets Alike





Reasons for Optimism, Causes for Concern in the P/C Insurance Industry

- Economic recovery in US is self-sustaining: no double dip recession
- European debt crisis will pass; concerns are overblown
 - Volatility will remain a reality, however
- No secondary spike in unemployment or swoon in payrolls
 - But job and wage growth will remain sluggish
- Global P/C (re)insurance has recaptured 100% of capital/capacity eroded away during the financial crisis
 - Critical given ongoing volatility and threat of severe hurricane season in the US and high catastrophe losses on a global basis

Source: Insurance Information Institute.







Reasons for Optimism, Causes for Concern in the P/C Insurance Industry

- Investment environment is/remains much more favorable
 - Volatility, however, will persist and yields remain low ____
 - Both are critical issues in pricing long-tailed commercial lines like WC, D&O
- Financial strength and ratings of global (re)insurance industries remained strong throughout the financial crisis in sharp contrast with banks
- Insurers avoided draconian outcomes in financial services reform
- Tort environment in US is beginning to deteriorate; no tort reform in US
- Major transformation of US economy underway with major opportunities for insurers through 2020 in health, tech, natural resources and energy

Source: Insurance Information Institute.





US Real GDP Growth: Exerts a Strong Influence on Energy Demand*

Real GDP Growth (%)

The Q1:2009 decline was the steepest since the Q1:1982 drop of 6.4%



Demand for Energy and Commercial Insurance Have Been Impacted by Sluggish **Economic Conditions**

*Estimates/Forecasts from Blue Chip Economic Indicators.

Source: US Department of Commerce, Blue Economic Indicators 7/10; Insurance Information Institute.



8%







Factors Influencing Demand for Energy and Insurance

Commercial and Consumer Demand Drivers Remain Tepid





Total Industrial Production

2007:Q1 to 2011:Q4F (%)



End of Recession in mid-2009, Stimulus Program Benefited Industrial Production and Insurance Exposure Both Directly and Indirectly, Albeit it Very Modestly; Stimulus Effect is Waning in 2010 and Will Be Gone in 2011.

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (7/10); Insurance Information Institute





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Source: Federal Reserve Board statistical releases at http://www.federalreserve.gov/releases/g17/Current/default.htm.





Auto/Light Truck Sales, 1999-2011F

(Millions of Units)



Car/Light Truck Sales Will Recover from the 2009 Low Point, but High Unemployment, Tight Credit Are Still Restraining Sales; Gas Prices Could Once Again Become a Factor, Too

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (7/10); Insurance Information Institute.





New auto/light truck sales fell to the lowest level since the

New Private Housing Starts, 1990-2011F (Millions of Units)



Weak Housing Markets Impacts Energy and Insurance Demand

Source: U.S. Department of Commerce; Blue Chip Economic Indicators (7/10); Insurance Information Institute.





New home starts

Average Square Footage of Completed New Homes in U.S., 1973-2010:Q1

Square Ft



Source: U.S. Census Bureau: http://www.census.gov/const/www/quarterly_starts_completions.pdf; Insurance Information Institute.







Business Bankruptcy Filings, 1980-2010:Q1



Significant Exposure Implications for All Commercial Lines

Source: American Bankruptcy Institute; Insurance Information Institute





% Change Surrounding

Recessions

Private Sector Business Starts, **1993:Q2 – 2009:Q3***

(Thousands)



Business Starts Are Down Nearly 20% in the Current Downturn, Holding Back **Most Types of Commercial Insurance Exposure**

*Latest available as of June 7, 2010, seasonally adjusted Source: Bureau of Labor Statistics, http://www.bls.gov/news.release/cewbd.t07.htm.





US Unemployment Rate

2007:Q1 to 2011:Q4F*



* = actual; = forecasts

Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators (7/10); Insurance Information Institute





Monthly Change Employment*

January 2008 through June 2010* (Thousands)



Job Losses Since the Recession Began in Dec. 2007 Peaked at 8.4 Mill in Dec. 09; Stands at 7.4 Million Through June 2010; 14.6 Million People are Now Defined as Unemployed

*Estimate based on Reuters poll of economists.

Source: US Bureau of Labor Statistics: http://www.bls.gov/ces/home.htm; Insurance Information Institute





Real GDP Growth vs. Real P/C Premium Growth: Modest Association

Real GDP Growth vs. Real P/C (%)



P/C Insurance Industry's Growth Is Influenced Modestly by Growth in the Overall Economy

Sources: A.M. Best, US Bureau of Economic Analysis, Blue Chip Economic Indicators, 7/10; Insurance Information Institute

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				/
°.C.D-	-3.8%	-4.4%	-3.3%	-3.0%

-2% -4%

4% 2% 0%

8%

6%

Real GDP Growth



Inflation Trends: Concerns over Stimulus Spending and Monetary Policy Have Not Yet Materialized

Rising Inflation Would Pressure Claim Costs Severities via Higher Materials, Labor, Medical and Tort Costs





Sources: US Bureau of Labor Statistics; Blue Chip Economic Indicators, July 10, 2010 (forecasts).





P/C Insurers Experience Inflation More Intensely than 2009 CPI Suggests

(Percent)



Healthcare and Legal/Tort Costs Are a Major P/C Insurance Cost Driver. These Are Expected to Increase Above the Overall Inflation Rate (CPI) Indefinitely

*Measured Dec. 2009 vs. Dec. 2008.

Source: Bureau of Labor Statistics. Tort cost is 2009 Towers-Perrin estimate. WC figure is I.I.I. estimate based on historical NCCI data.





Services*



WC Medical Severity Rising at Twice the Medical CPI Rate



Sources: Med CPI from US Bureau of Labor Statistics, WC med severity from NCCI based on NCCI states.





Recent Appreciation of the Dollar Reduces Inflationary Pressure, Especially for Energy Inputs

US Dollar vs. Euro, 1999 through June 2010



^{*}As of June 2010.

Source: Source: US Federal Reserve, Board of Governors; Insurance Information Institute.







World Crude Oil Prices: 1997- July 2010

Dollars per Barrel*



^{*}All countries spot market price weighted by estimated export volume. Source: Energy Information Administration; http://tonto.eia.doe.gov/dnav/pet/hist/wtotworldw.htm







Beyond the Crisis

Impacts on Energy Demand, Supply and Insurance Exposure





Severe Recession Depressed US Energy Demand: Change 2009 vs. 2008

Percentage Change in Consumption, 2009 vs. 2008



Sources: Energy Information Administration based on Short-Term Energy Outlook, March 2009 and March 2010.





Coal for Electricity



US Energy Expenditures as a % of GDP Have Been Hurt by Recession

Percentage of GDP



Source: Energy Information Administration, Short-Term Energy Outlook, March 2010; Ins. Info. Inst.







U.S. Total Electricity Consumption, 1999-2011P



Sources: Energy Information Administration: Short-Term Energy Outlook, March 2010; Insurance Information Institute.



Recession had a significant but in the long-run minor impact on electricity consumption

Modest growth in consumption is projected for both 2010 and 2011



Electricity Consumption in the United States* **1999-2011P**



*Change based on billions of kilowatthours used per day.

Source: Energy Information Administration, Short-Term Energy Outlook, March 2010, Insurance Information Institute.





2010P 2011P





World Primary Energy Consumption, 1990-2030P **Quadrillion BTUs**



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute.







Avg. Annual Change in Total Energy Consumption by Country/Region:2006-2030P

Average Annual Change in Consumption (Quadrillion BTUs)



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute





0.5%

Europe (OECD)

0.5%



Global Net Electricity Generation Is Growing Faster than Consumption



Sources: Energy Information Administration: International Energy Outlook 2009; Insurance Information Institute.



• Electricity generation is growing faster than total energy consumption This suggests that there is a net substitution away from other energy sources to electricity Implies a bright future

Requires significant insurance capacity



US Primary Energy Consumption by Source and Sector, 2008 (Quadrillion BTUs)



Sources: Energy Information Administration: Annual Energy Review 2008 accessed at: http://www.eia.doe.gov/aer/pdf/pecss_diagram.pdf ; Insurance Information Institute.





Electricity accounts for 40% of US energy demand. More than half (51%) of that demand is met via coal.



US Electricity Demand Growth: 1950-2035P (Billions Kilowatt Hours)



Sources: Energy Information Administration: Annual Energy Outlook 2010; Insurance Information Institute.



Electricity demand continues to grow but at a slower rate in response to slowing population growth and efficiency enhancements. Demand for insurance should be similar but could vary depending on liability environment.



US Electricity Generation Additions by Fuel Type, 2009-2035P (Gigawatts)



Sources: Energy Information Administration: Annual Energy Outlook 2010; Insurance Information Institute.





Natural gas will account for most of the capacity additions in the US longer-run. **Globally the major** will be from coal.





Energy Consumption, Capacity and Carbon

Long-Run Projections for the US Energy Sector Relative to the Global Energy Market and Insurance Implications


US Primary Energy Consumption As a Share of Global Consumption, 1990-2030P



2006 2010P 2015P 2020P 2025P 2030P 1990 2005

US Primary Energy Consumption

Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute calculations.









Avg. Annual Change in Electricity Generating Capacity by Country/Region:2006-2030P

Average Annual Change in Generating Capacity (Gigawatts)



Source: Energy Information Administration, 2009 International Energy Outlook, Ins. Info. Institute







US Share of Global Electricity Generation Capacity as a Share of Global Capacity, 1990-2030P



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute calculations.









Avgerage Annual Change in Carbon Dioxide Emissions by Country/Region: 2006-2030P

Millions of metric tons



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute







US & Global Carbon Dioxide Emissions, 1990-2030P

Millions of metric tons





Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute.





US Carbon Dioxide Emissions as a Share of Global Emissions, 1990-2030P



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute calculations.





US Consumption of Hydroelectric & Other Renewable Energy as a Share of Global Consumption, 1990-2030P



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute calculations.



0.9	25%	l S S L
	20%	hare c ≡nerg
7 0/	15%	of Glo y Cor
• 1 70	10%	bal R nsum
	5%	enew
	0%	able



World & US Nuclear Energy Consumption, **1990-2030P**

Billion kilowatthours



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute.





Avg. Annual Change in Nuclear Energy Consumption by Country/Region: 2006-2030P Billions of killowatthours



*OECD Countries.

Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute.







US Nuclear Energy Consumption as a Share of Global Consumption, 1990-2030P



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute calculations.





0	35%
	30%
	25%
%	20%
	15%
	10%
	5%
	0%

S S hare P **S** G lobal sum ption Nuclear



Energy Infrastructure

Huge in Investments Required over Next 30 Years in US and Globally; **Will Drive Demand for Energy Insurance Products Too**



World Net Effective Electric Power Generation, 1990-2030P

Trillions of kilowatt hoursc



Source: Energy Information Administration, 2009 International Energy Outlook, Insurance Information Institute.





2025 2030

31.8

World Energy Supply Infrastructure Investment by Category: 2001-2030P



Source: International Atomic Energy Agency, World Outlook for Electricity Investment.





Generation will account for 46% or \$4.5 trillion of all investment through 2030 to meet rising demand. Financial crisis had no significant impact on long-term global energy demand and the need to develop supply infrastructure

Electricity Supply Infrastructure: Despite Crisis, Huge Investments Needed Along With Insurance: 2001-2030 (Est.)



Source: International Atomic Energy Agency, World Outlook for Electricity Investment.





\$258

Middle East Africa



Proposed New Investments in US Energy Infrastructure Over Next 30 Years



Sources: National Geographic, June 2010; Insurance Information Institute.

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Insurance Industry Financial Performance

Impacted by Soft Market, **Volatile Investment Environment**





P/C Net Income After Taxes 1991-2010:Q1

\$ Millions

2005 ROE*= 9.6% gains vs. -\$8B in previous realized capital losses 2006 ROE = 12.7%\$80,000 2007 ROE = 10.9% 2008 ROE = 0.3% S \$70,000 \$44,15! Š **2009** $ROAS^1 = 5.8\%$ \$38,501 6 \$36,81 \$60,000 2010:Q1 ROAS = 6.7% \$30,773 \$30,029 \$50,000 \$24,404 \$21,865 \$20,598 \$20,559 6 \$19,31 \$14,178 \$40,000 0,870 \$30,000 5,840 3,046 \$20,000 5 \$10,000 Ф Э **\$0** -\$10,000 -\$6,970 91 92 95 96 97 **98** 99 93 94 5 6

* ROE figures are GAAP; 1Return on avg. surplus. Excluding Mortgage & Financial Guaranty insurers yields an 8.3% ROAS for 2010:Q1, 7.3% for 2009 and 4.4% for 2008. 2009 net income was \$34.5 billion and \$20.8 billion in 2008 excluding M&FG.

Sources: A.M. Best, ISO, Insurance Information Institute



P-C Industry 2010:Q1 profits rose vs. -\$1.3B in 2009:Q1, due mainly to \$1B in realized capital



9 10:Q1 8 7





P/C Premium Growth Primarily Driven by the Industry's Underwriting Cycle, Not the Economy





Shaded areas denote "hard market" periods

Sources: A.M. Best (historical and forecast), ISO, Insurance Information Institute.





Average Commercial Rate Change, All Lines, (1Q:2004–1Q:2010)

Percent



Source: Council of Insurance Agents & Brokers; Insurance Information Institute







Market Remains Soft as Capital Restored and Underwriting Losses Fall



Change in Commercial Rate Renewals, by Line: 2010:Q1

Percentage Change (%)



Most Major Commercial Lines Renewed Down in Q1:2010 by Roughly the Same Margin as a Year Earlier

Source: Council of Insurance Agents & Brokers; Insurance Information Institute









Change in Commercial Rate Renewals, by Account Size: 1999:Q4 to 2010:Q1

Percentage Change (%)



Source: Council of Insurance Agents and Brokers; Insurance Information Institute.







Cumulative Qtrly. Commercial Rate Changes, by Account Size: 1999:Q4 to 2010:Q1 1999:Q4 = 100



Source: Council of Insurance Agents and Brokers; Insurance Information Institute.



Pricing today is where is was in Q4:2000 (pre-9/11)





Capital/Policyholder Surplus (US)

Shrinkage, but Not Enough to Trigger Hard Market



Policyholder Surplus, 2006:Q4-2010:Q1E

\$ Billions



*Includes \$22.5B of paid-in capital from a holding company parent for one insurer's investment in a noninsurance business

Sources: ISO. A.M .Best.





Ratio of Insured Loss to Surplus for Largest Capital Events Since 1989*

Percent		Th	The Financial Crisis at its Peak Ranks				
18%		as	s the Largest	t "Capital Ev	ent" Over		
15%			the P	ast 20+ Years	S	13.8%	
12%		9.6%		10.9%			
9%			6.9%		6.2%		
6%	3.3%						
3% 0% -							
0 /0	6/30/1989 Hurricane Hugo	6/30/1992 Hurricane Andrew	12/31/93 Northridge Earthquake	6/30/01 Sept. 11 Attacks	6/30/04 Florida Hurricanes	6/30/0 Hurrica Katrin	

* Ratio is for end-of-quarter surplus immediately prior to event. Date shown is end of quarter prior to event

** Date of maximum capital erosion; As of 9/30/09 (latest available) ratio = 5.9%

Source: PCS: Insurance Information Institute







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Financial Crisis as of 3/31/09**





Investment Performance

Investments Are a Principle Source of Declining Profitability





Property/Casualty Insurance Industry Investment Gain: 1994–2010:Q1¹

\$ Billions



In 2008, Investment Gains Fell by 50% Due to Lower Yields and Nearly \$20B of Realized Capital Losses. 2009 Saw Smaller Realized Capital Losses But Declining Investment Income

1 Investment gains consist primarily of interest, stock dividends and realized capital gains and losses.

* 2005 figure includes special one-time dividend of \$3.2B.

Sources: ISO: Insurance Information Institute.





Treasury Yield Curves: Pre-Crisis (July 2007) vs. June 2010



Sources: Board of Governors of the United States Federal Reserve Bank: Insurance Information Institute.





20Y 30Y

3.95% 4.13%

5.00%

5.19%



Lower Investment Earnings Place a Greater Burden on Underwriting and Pricing Discipline

*Based on 2008 Invested Assets and Earned Premiums **US domestic reinsurance only

Source: A.M. Best: Insurance Information Institute.



-7.3%





Financial Strength and Ratings

Industry Has Weathered the Storms Well





P/C Insurer Impairments, 1969–2009



69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09

The Number of Impairments Varies Significantly Over the P/C Insurance Cycle, With Peaks Occurring Well into Hard Markets

Source: A.M. Best: Insurance Information Institute.





Reasons for US P/C Insurer Impairments, 1969–2008



Source: A.M. Best: 1969-2008 Impairment Review, Special Report, Apr. 6, 2009



Deficient Loss Reserves and Inadequate Pricing Are the Leading Cause of Insurer Impairments, **Underscoring the** Importance of Discipline. **Investment Catastrophe** Losses Play a Much Smaller Role

Deficient Loss Reserves/ In-adequate Pricing 38.1%





Underwriting Trends – **Financial Crisis Does Not Directly Impact Underwriting Performance: Cycle, Catastrophes Were 2008's Drivers**



Commercial Auto Combined Ratio: 1993–2010P



Commercial Auto is Expected to Remain Reasonably Profitable in 2010

Sources: A.M. Best: Insurance Information Institute.







P/C Reserve Development, 1992–2011E



Reserve Releases Will Expected to Taper Off in 2010 and Drop Significantly in 2011

Note: 2005 reserve development excludes a \$6 billion loss portfolio transfer between American Re and Munich Re. Including this transaction, total prior year adverse development in 2005 was \$7 billion. The data from 2000 and subsequent years excludes development from financial guaranty and mortgage insurance. Sources: Barclay's Capital; A.M. Best.




Workers Compensation Combined Ratio: 1973–2010P



Workers Comp Underwriting Results Are Deteriorating Markedly

Source: A.M. Best; Insurance Information Institute.







Shifting Legal Liability and Tort Environment

Is the Tort Pendulum Swinging Against Insurers?



Important Issues & Threats Facing Insurers: 2010–2015

Emerging Tort Threat

- No tort reform (or protection of recent reforms) is forthcoming from the current Congress or Administration
- Erosion of recent reforms is a certainty (already happening)
- Innumerable legislative initiatives will create opportunities to undermine existing reforms and develop new theories and channels of liability
- Torts twice the overall rate of inflation
- Influence personal and commercial lines, esp. auto liability
- Historically *extremely* costly to p/c insurance industry
- Leads to reserve deficiency, rate pressure

Bottom Line: Tort "crisis" is on the horizon and will be recognized as such by 2012–2014







Trial Bar Priorities

- Reverse U.S. Supreme Court decisions on pleadings
- Eliminate pre-dispute arbitration
- Erode federal preemption
- **Expand securities** litigation

Source: Institute for Legal Reform.





- Pass Foreign Manufactures Legal Accountability Act
- Grant enforcement authorities to state AGs
- "Federalize
- legal reforms

Confirm pro-trial lawyer judges – Madison County"

Roll back existing



Over the Last Three Decades, Total Tort Costs* as a % of GDP Appear Somewhat Cyclical \$ Billions



* Excludes the tobacco settlement, medical malpractice

Sources: Tillinghast-Towers Perrin, 2008 Update on US Tort Cost Trends, Appendix 1A; I.I.I. calculations/estimates for 2009 and 2010







Business Leaders Ranking of Liability Systems

Best States

- 1. Delaware
- 2. North Dakota
- 3. Nebraska
- 4. Indiana
- 5. Iowa
- 6. Virginia
- 7. Utah
- 8. Colorado
- 9. Massachusetts
- 10. South Dakota

New in 2009

- North Dakota
- Massachusetts
- South Dakota

Drop-offs

- MaineVermont
- Kansas

Worst States

- 41. New Mexico
- 42. Florida
- 43. Montana
- 44. Arkansas
- 45. Illinois
- 46. California
- 47. Alabama
- 48. Mississippi
- 49. Louisiana
- 50. West Virginia

Midwest/West has mix of good and bad states.

Source: US Chamber of Commerce 2009 State Liability Systems Ranking Study; Insurance Info. Institute.



Newly Notorious

New Mexico Montana Arkansas

Rising Above

Texas South Carolina Hawaii



The Nation's Judicial Hellholes: 2010

Watch List

- California
- Alabama
- Madison County, IL
- Jefferson County, MS
- Texas Gulf Coast
- Rio Grande Valley, TX

Dishonorable Mention

- AR Supreme Court
- MN Supreme Court
- ND Supreme Court
- PA Governor
- MA Supreme Judicial Court

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Sacramento County

Source: American Tort Reform Association; Insurance Information Institute





Average Jury Awards 1999 - 2008



Source: Jury Verdict Research; Insurance Information Institute.





2007 2008



Securities Class Action Suits Filed: 1991-2010*



*Securities fraud suits filed in U.S. federal courts as of June 30, 2010 Source: Stanford University School of Law (securities.stanford.edu); Insurance Information Institute







Catastrophic Loss – Catastrophe Losses Trends Are Trending Adversely



US Insured Catastrophe Losses



*Through June 30, 2010.

Note: 2001 figure includes \$20.3B for 9/11 losses reported through 12/31/01. Includes only business and personal property claims, business interruption and auto claims. Non-prop/BI losses = \$12.2B. Sources: Property Claims Service/ISO; Munich Re; Insurance Information Institute.





Global Natural Catastrophes: January – June 2010



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Natural Disasters in the United States, 1980 – 2010

Number of Events (Annual Totals 1980 – 2009 vs. First Half 2010)



Source: MR NatCatSERVICE





U.S. Winter Storm Loss Trends

Annual totals 1980 – 2009 vs. First Half 2010

Average annual winter storm losses have increased over 50% since 1980.



Source: Property Claims Service, MR NatCatSERVICE





U.S. Thunderstorm Loss Trends

Annual Totals 1980 – 2009 vs. First Half 2010

Thunderstorm losses have quadrupled since 1980.



Source: Property Claims Service, MR NatCatSERVICE





Outlook for 2010 North Atlantic Hurricane Season*

Forecast Parameter	Average (1950-2000)	2010 Forecast*
Named Storms	9.6	18
Named Storm Days	49.1	90
Hurricanes	5.9	10
Hurricane Days	24.5	40
Major Hurricanes	2.3	5
Major Hurricane Days	5.0	13
Accumulated Cyclone Energy	96.1	185
Net Tropical Cyclone Activity	100%	195%

The 2010 hurricane season is expected to be nearly twice as active as the long-run average (195% of normal)

*Forecast as of June 2, 2010

Source: Colorado State University, Department of Atmospheric Sciences; Insurance Information Institute







Probability of Landfall of at Least One Major Hurricane (CAT 3-4-5) in 2010*

Region	Average Over Last Century	201
Entire U.S. Coastline	52%	
U.S. East Coast Incl. FL Peninsula	31%	
Gulf Coast from FL Panhandle to Brownsville, TX	30%	
Caribbean	42%	

The probability of a major hurricane making landfall somewhere along the US coast is greatly elevated in 2010, including a 50% chance along the oil spill-impacted gulf coast

*Forecast as of June 2, 2010

Source: Colorado State University, Department of Atmospheric Sciences; Insurance Information Institute









Distribution of US Insured CAT Losses: TX, FL, LA vs. US, 1980-2008* \$ Billions



* All figures (except 2006-2008 loss) have been adjusted to 2005 dollars. Source: PCS division of ISO.





Florida Accounted for 19% of All US Insured **CAT Losses** from 1980-2008: \$57.1B out of \$297.9B





The Deepwater Horizon Disaster

Insurance and Energy Market Implications



Largest International Oil Well Blowouts by Volume, as of July 12, 2010

Date	Well	Location
April 20 2010-present	Deepwater Horizon	Gulf of Mexico, USA
June 1979-April 1980	Ixtoc I	Bahia del Campeche, Mexico
October 1986	Abkatun 91	Bahia del Campeche, Mexico
April 1977	Ekofisk Bravo	North Sea, Norway
January 1980	Funiwa 5	Forcados, Nigeria
October 1980	Hasbah 6	Gulf, Saudi Arabia
December 1971	Iran Marine International	Gulf, Iran
January 1969	Alpha Well 21 Platform A	Pacific, CA, USA
March 1970	Main Pass Block 41 Platform C	Gulf of Mexico
October 1987	Yum II/Zapoteca	Bahia del Campeche, Mexico
December 1970	South Timbalier B-26	Gulf of Mexico, USA

*Based on estimate of 50,000 barrels per day for 781 days derived from Flow Rate Technical Group whose members include U.S. Geological Survey (USGS), NOAA, Bureau of Ocean Energy Management (part of DOE) and outside academics. Does not include offset for any amounts recovered. Source: American Petroleum Institute (API), 09/18/2009; http://www.api.org/ehs/water/spills/upload/356-Final.pdf and updates from the Insurance Information Institute.





Bbl Spilled

est. 4,050,000	thru
July 12*	

3,300,000

247,000

202,381

200,000

105,000

100,000

100,000

65,000

58,643

53,095



Gulf Coast Near Deepwater Horizon Site



Sources: Energy Information Administration



On April 20, 2010, an explosion and fire occurred on the offshore drilling rig Deepwater Horizon, which had been drilling an exploratory well in approx. 5,000 ft of water in the Gulf of Mexico, 52 miles SE of Venice, Louisiana.

The platform subsequently sank, with 11 crewmembers presumed dead, and the uncompleted well leaking oil.



Operating Group for Deepwater Horizon: Joint Venture



As of early July, BP says that its costs have exceeded \$3 billion, including \$105 million paid on 32,000 claims. BP CEO Tony Hayward is insisting "Other parties besides BP may be responsible for costs and liabilities arising from the oil spill, and we expect those parties to live up to their obligations." But Anadarko accuses BP of gross negligence.

Source: Barclays Capital research note 05/10/10; I.I.I. research.





oil spill. BP is self-insured, so large portion of losses will not hit the insurance industry. On June 1, 2010, U.S. Attorney **General said federal authorities have** opened criminal and civil investigations into the spill.

Horizon is a joint venture led by BP. **BP** has said it will assume liability for all "legitimate claims caused by the

Insured Losses Significant, But Manageable Insured Loss

- The loss is a major event for the offshore energy insurance and reinsurance market
- Companies with direct exposure to the Deepwater Horizon oil rig are insured for losses totaling between \$1.4 billion and \$3.5 billion, according to initial reports
- The risks are well-syndicated, with the insured loss spread across a broad range of insurers and reinsurers on a global scale
- Since BP, which owns 65% of the Deepwater Horizon consortium self insures, a large portion of the losses *will not* hit the insurance industry.
- Lawsuits against equipment manufacturers, suppliers and sub-contractors, and business interruption claims, will likely increase total insured losses.
- BP said it will assume liability for all legitimate claims caused by the oil spill. Primary liability for clean up costs will be with BP consortium.

Source: Insurance Information Institute (I.I.I.); Barclays Capital research note 05/10/10; Credit Suisse research note 05/11/10







Long-Run Implications of Deepwater Horizon on **Energy & Energy Insurance Markets**

- Deepwater Horizon Will Become the Single Most Expensive **Environmental Disaster in US History**
- Reaction (and Overreaction) to Spill Will Have Multi-Decade Impact on Energy Business
 - Impacts will not be confined to offshore oil & gas industry





Long-Run Implications of Deepwater Horizon on **Energy & Energy Insurance Markets (cont'd)**

- Current Administration's Hostility Toward Some Energy Segments is **Obvious and Politicization of Deepwater Incident Means There Are** Potential Impacts On:
 - Carbon legislation (cap & trade)
 - Coal mining & equipment (not just in the US)
 - Oil sands and pipeline project
 - Utilities
 - Nuclear power
 - Alternative energy
 - Fiscal policy/"stimulus" ____





Long-Run Implications of Deepwater Horizon: US Energy Policy Shift

- Danger that Deepwater Results in "Three Mile Island Effect"
 - Regulatory, political reaction could make future deep water drilling impossible (logistically, economically)
 - Higher (unlimited) limits of financial responsibility
 - Drilling moratorium remains in effect despite impact on jobs, economy
 - CA, FL no longer willing to consider offshore drilling
- Hostility Toward Fossil Fuels Intensifies
 - More regulation (not necessarily based on facts or science)
 - Higher taxes on energy producers
 - Higher costs for consumers
 - Continued/higher subsidies for alternative fuels/technologies







Long-Run Implications of Deepwater Horizon: US Energy Policy Shift (cont'd)

- Corporate Governance
 - Accountability for issue will quickly rise to the highest levels
 - The Tony Hayward Legacy







Oil Spill Testimony by I.I.I.

Hearing on the Liability and Financial Responsibility for Oil Spills under the **Oil Pollution Act of 1990 and Related** Statutes

House Committee on Transportation and Infrastructure

> Testimony of Robert P. Hartwig, Ph.D., CPCU President & Economist **Insurance Information Institute** New York, NY

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Insurance Information Institute Online: www.iii.org

Thank you for your time and your attention!

Twitter: twitter.com/bob_hartwig

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