

Risk Management Can We?

Presented by

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Energy Risk USA 2009



Lets see how well we have
done

1937- New London, Texas

Natural Gas explosion is school
over 200 killed

Now use t-butyl mercaptan or
thiophane

1989-

Exxon Valdez

Spilled 10.8 million gallon of crude of coast of Alaska, Prince William Sound

Now require double hull crude carriers in all US ports

March 2009 Korean vessel found a drilling rig lost after IKE, Double Hull prevented any spill

2004- Explosion BP plant Texas City

Extensive damage. BP admitted fault but ignition came during recovery cycle but fatalities due to location of work trailers

2005-

Hurricane Katrina & Rita

- Failure of flood gates New Orleans
- Inadequate wave clearance & offshore platforms for class 5 storm
- Inadequate response FEMA

2008-

Hurricane Ike

Class 2 winds offshore

Class 5 storm surge Galveston Bay and
Trinity Bay

Now referred to as Integrated Kinetic
Energy

over 2,000,000 million customers lost power.
Unforeseen especially by CenterPoint.

1984- Bhopal India- Union Carbide pesticide plant

300 killed, thousands injured release of 42 tons of methyl isocyanate

Plant was not following safety and operating guidelines of Union Carbide

1986

Chernobyl, Ukraine explosion released more than 400 times the radioactivity than with atomic bombing of Hiroshima

Built a sarcophagus a cover for the reactor

That and Three Mile Island incident stopped any nuclear construction, in US in 1970's.

Now 4 projects being considered in Texas

2002

Approved repository site in Yucca Mountain
Nevada

Operational 2010, to be sealed 2035

Repository in solid rock 1000 feet underground and
on average 1000 feet above water table

Holds 77000 metric tons of waste

Plutonium-239 has half life of 24000 years

Cost \$9 billion

2010 budget includes no funding for Yucca
Mountain

Present 100 nuclear plants-20% of electricity

30 plants in planning stage

Asbestos- Alaska Pipe Line recognition Asbestosis and mesothelioma but was used in shipbuilding in 1940's

Used by the Ancient Greeks because of its soft and pliant properties- the miracle mineral

Over 80 companies involved with asbestos have filed for chapter 11 beginning with Johns Mansville

US Air Flight 1549

Sully Sullenberger

Airbus A 320-214

N10GUS

1988

North Sea- Piper Alpha Platform

Explosion many workers killed
platform severely damaged.

Equipment stacked near crew quarters

Due to economic effort for more
production

SEMPRA Energy

Owners of San Diego Gas & Electric- SDGE
2007 Wildfires in California

Have \$1.1 billion tower of liability insurance on aggregate basis and now totally consumed.

But in all my experience, I have never been in any accident... of any sort worth speaking about I have never seen but one vessel in distress in all my years at sea. I never saw a wreck and never have been wrecked nor was I ever in any predicament that threatened to end in any disaster of any sort.

EJ Smith

Captain-Titanic

1907

We can add others not directly part of energy but which impact us all

9-11	2001
Enron	2001
AIG	2008
Banking system	2007-08

We do live in a risky world

- Retain and pay from internal funds
- Control eliminate or minimize losses
- Transfer usually by insurance but can include contractual transfer

Insurance Buyer

Insurance Manager

Risk Manager

Director of Risk Management

Enterprise Risk Management

Sustainability Risk Management

Risks we have failed to manage

Banks

Investment Houses

Merrill Lynch

Lehman Bros

Bear Stearns

All from

Sub prime Credit Crises

Mortgage valued securities

CDO's- Collateralized Debt Obligations

Credit Default Swaps

AIG- a subject all its own

ERM

John Hampton- St Peters College

COSO

Failure

New Risks

Cyber Liability

Gamma- Ray Burst

Nanotechnology

Somalia Pirates

Global Warming





Thank you Al Gore for Global Warming

Raises questions

How do we?

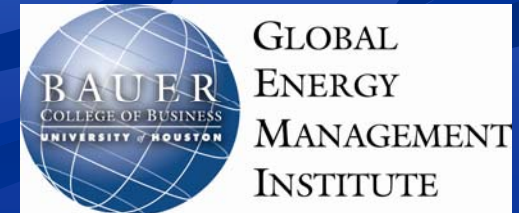
When do we start?

Can it make a difference?

Should we start with education?

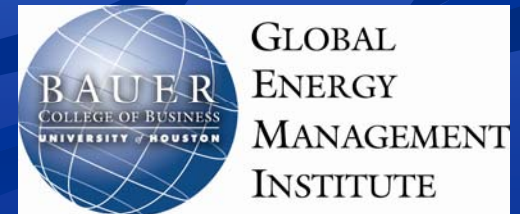
UH-GEMI: Founding Vision

- A premier human-capital supplier for the energy industry.
- A principal venue to join and develop issues of critical interest to the energy industry.
- A research partner for the industry.



Major Educational Programs

- **Undergraduate Global Energy Management (GEM) Program**
- **Graduate Energy Certificates**
- **China GEMBA program**



Global Energy Management (GEM) Program

- **GEM-Professional Program (Option to do a 5 year BBA/MS in Finance)**
- **GEM-Track**
- **Global Energy Management Minor**



China GEMBA Program

- EMBA program in Beijing and Houston for Senior SINOPEC and CNPC Executives on leadership track
- Instruction by UH Faculty in Beijing; Students Come to Houston for a few courses & graduation



GEMI Conferences & Workshops

- **Energy Trading & Marketing**
- **Recent Trends in the Power Industry**
- **Petrochemicals & Refining**
- **Bio-fuels**

Risk Management Scholarships

Bauer- Annual

3- Houston Marine Insurance Seminar

2- Local Chapter RIMS

4- Dedicated Endowments

New Courses

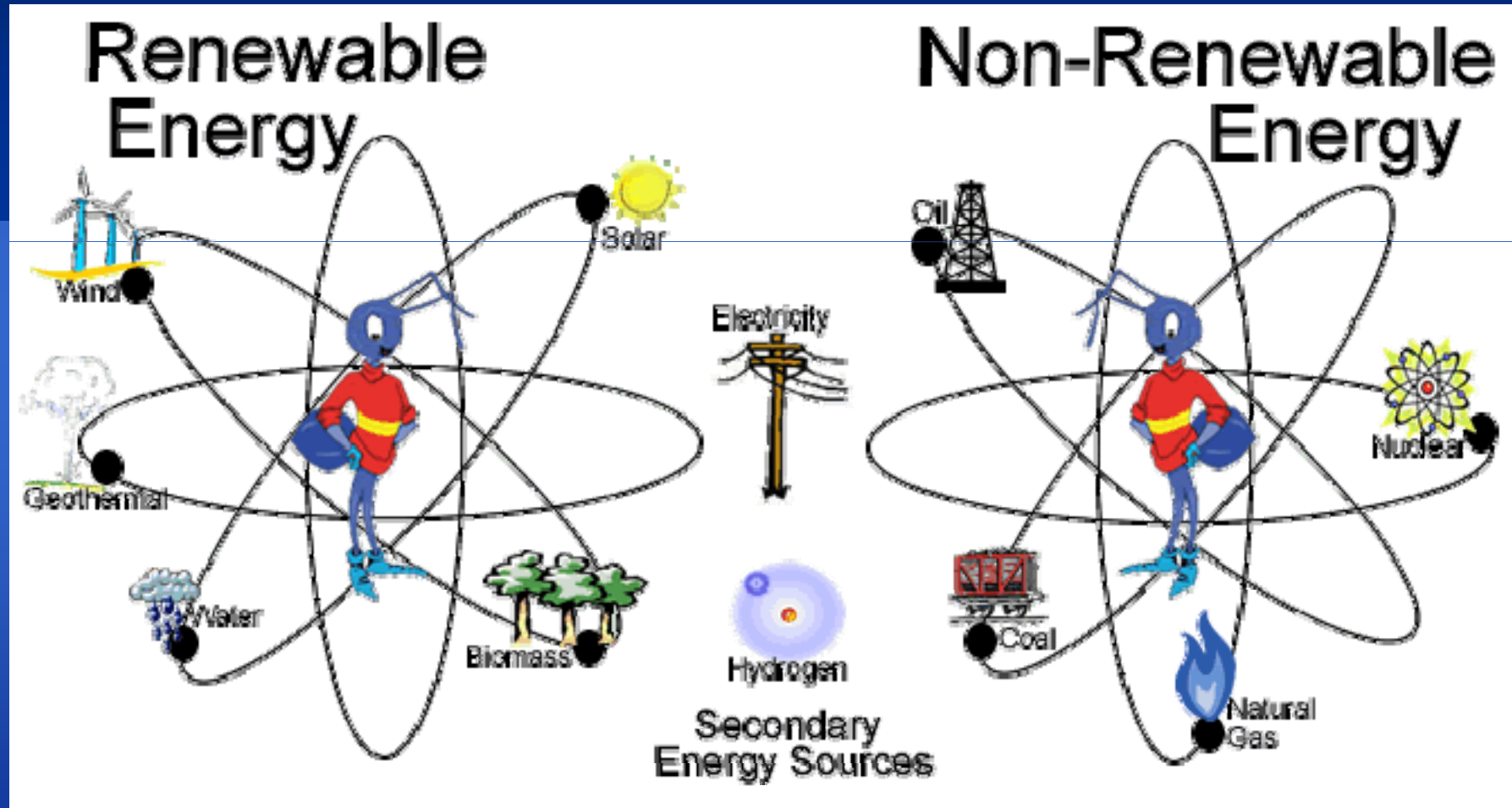
Carbon Trading-

January 2009 EMBA

Petroleum Engineering-
Degree Plan

Fall 2009

All of these sources provide us the energy we need to live our busy lives.



Tier I

John Gresham- The Associate

Bermuda Monetary Authority

Tier I- USA

Texas – 3

UT, A&M, Rice

California- 9

New York- 7

Research Funds \$150 million plus

Tier One Committees

1. National Competitiveness
2. Student Success
3. Community Involvement
4. Athletic Competitiveness
5. National and Local Recognition
6. Resource Competitiveness

Tier One Contributions

- 5,000+ new jobs
- \$129 million in wages to the regional economy
- \$7.5 million in additional state revenue
- \$202 million in local sales

Insurance Regulation

State Regulation

Federal Regulation

Optional Regulation

Insurance CZAR Candidate

Opinions

Insurance Patriarchs

Maurice (Hank) Greenberg

Warren Buffett

A third one as replacement

Is ERM the answer?

Is RMI education the answer?

Can Tier I help this conundrum?

Can insurances continue “business as usual”?

Is the insurance market stable?

Will the regulation applying to insurance, state vs. federal change?

Will we have federal regulation?

Will new leaders become known for the insurance industry?

Summary

We all have risks

Our challenge is to finance the losses that occur

Risk management is the art of selection of the method(s) to pay

We cannot eliminate all risk nor should we

Risk Assumption

Assume risks that are comfortable and predictable

Transfer those risks that could negatively impact
your company

Be mindful of the risk bearing capacity of your
company

There are limitations- one is Chapter 11