CLIMATE CHANGE & SUSTAINABILITY

Best practices in the global economy

Keynote speaker/moderator

ERIC ISRAEL *is a managing director with responsibilities for Sustainability and Climate services of KPMG US New York. Prior to coming to the US, he was the audit partner within the sustainability services practice in the Netherlands, and was a member of the Advisory Group on Economic Indicators for the next generation of the Global Reporting Initiative (GRI).One of the first chartered environmental accountants in Europe, Israel received this license in 1999 from the University of Amsterdam.*

Panelists

ROBYN McGUCKIN, *director of the Resource Efficiency Management Center for MWH Global.*

RONALD M. SHERGA, *founder/owner Sherresults LLC, Arlington, Texas.*

JOHN GIMIGLIANO, *principal with KPMG's Washington National Tax Office in the Energy and Natural Resources Group.*

A perfect storm of legislation and regulations connected to climate change is gathering strength worldwide and taking aim at businesses that fail to prepare for the attendant risks and economic impacts, according to Eric Israel, speaking at a seminar presented by the Global Enterprise Institute, a collaboration between KPMG and the University of Colorado Denver's Institute for International Business and Center for International Business Education and Research.

"You have to understand what is happening in this perfect storm and no one knows exactly where or when it will end. Businesses will need to prepare themselves," said Israel, adding, "There are new risks that need to be incorporated into a company's risk management system."

As identified in 'Climate Changes Your Business,' a 2008 report by KPMG, there are four major risks that have the potential to scuttle a company:

Regulatory. New laws and proposed regulations are creating an uncertain business environment in which companies are hard-pressed to plan for the future or keep competitors at a distance.

Reputation. Reputation is the single most important message a company communicates to the public; for better or worse, it's part of the brand, accounting for one-third of a business' market value. Companies that are perceived as being indifferent to climate change practices run the risk of losing consumer confidence. "What happens if consumers won't buy your products anymore? said Israel.

Physical. Storms, floods, droughts, forest fires, heat waves are some of the more obvious physical risks. Less obvious are risks such as heat-related illnesses, increased commodity and transportation prices, property damage. If these risks cannot be mitigated, the business model may have to be revamped.

Litigation. "Companies in the US are at greater risk of litigation than companies in the rest of the world," said Israel. New state and federal carbon controls and requirements for greenhouse-gas disclosure could spawn lawsuits; companies with a heavy carbon footprint could potentially find themselves in a legal battle.

Innovation, cost reduction, competitive advantage

Sustainability - the offspring of climate change - is not only good for the environment, it's good for business. "The average lifespan of a company is less than 50 years," said Israel. "How you develop and refresh your business model in order to stay alive and stay in business for the longer term is what sustainability is all about."

It's also about future generations:

"We've found a new way to win in the marketplace…one that doesn't come at the expense of our grandchildren or the earth, but at the expense of the inefficient competitor."

–Ray Anderson, Former CEO, Interface, Inc.

There are various definitions of sustainability, but regardless of how you choose to define it "you have to understand what sustainability means for you as a company. From a strictly business perspective, sustainability relates to cost reduction opportunities, big and small. For example, Kraft Foods has found a way to reduce the paper board in their packaging by 30 percent, small cost savings that add up significantly over time," said Israel.

"That's one element of sustainability. Another is the competitive advantage that comes from innovation and reduced costs," said Israel. Companies that produce goods in a way that fails to consider environmental and social impacts create an opening for competitors ready and willing to fill the sustainability gap. "Tesla Motors saw a market opportunity for emission-free electric cars that General Motors had largely disregarded," said Israel. "Until then, no one had heard of Tesla."

Israel cited Coca Cola as another example of how innovation can help both the business and the environment. "Coca Cola has introduced a new plastic bottle made with up to 30 percent plant-based

material. With this innovation they can set a whole new industry standard for how to make and market bottles ... and in the process gain the competitive advantage."

Raining initiatives

Israel provided insights into a host of legislative, regulatory and industry initiatives that will impact the way businesses operate in the US and globally. Some are existing, some are new and some are on the table.

In the US...

• Proposed Clean Energy and Security Act of 2009. Passed by the House June 26, 2009. "The Obama Administration continues to push Congress to pass climate change legislation but political challenges remain. There are US companies lobbying in Washington to get that legislation because they don't want to deal with the uncertainty we currently have."

• EPA Mandatory GHG Reporting Rule. Requires certain organizations/facilities to submit annual GHG (greenhouse gas) emissions reports to the EPA. Signed on Sept. 22, 2009.

• State Initiatives: (1) California AB 32 requires businesses to inventory and report greenhouse gas data; (2) Regional Greenhouse Gas Initiative (RGGI), a limited GHG cap-and-trade program for electric utilities in Northeast US, in place since 2008.

"If federal legislation stalls it doesn't mean that the states will stall," said Israel. "If this is being regulated on a state-by-state basis that will be a real nightmare for businesses as they will need to comply with various legislation by state instead of one federal legislation requirement."

• Commodity Futures Trading Commission (CFTC). The CFTC announced on August 14, 2009 that it is considering imposing new regulatory requirements on a carbon trading instrument offered by the Chicago Climate Exchange. "For business it means that you have to know what your carbon footprint is at this particular time. And if we have a carbon trading system, how can we mitigate our risks? That is the preparation piece I'm referring to because we're going to see a regulator move into this area," said Israel, adding, "As the CEO of a company, I would rather see legislation than regulation."

The SEC recently issued interpretative guidance for existing disclosure obligations about the impact of climate change and climate-related risks that are material to public companies. "In order to address this interpretive guidance, companies will first have to know their exposure to climate change risk."

In the US and globally...

• Global Reporting Initiative (GRI). Voluntary initiative to report on a company's environmental, social and governance (ESG) programs and performance. "This is an effort to develop standards for sustainability reporting," said Israel. "A KPMG survey concludes that 80 percent of large global companies are issuing a sustainability report, and 75 percent of those companies are using the global reporting initiative."

• The Sustainability Consortium. A partnership of researchers from leading global universities, NGOs, government agencies, and business partners seeking to establish scientific standards to ensure the sustainability of consumer products. KPMG is a founding member.

• National Association of Insurance Commissioners. The industry is requiring insurance companies to disclose to regulators and investors the financial risks they face from climate change (as of 2009).

• Carbon Disclosure Project (CDP). Initiative by the financial investors sector that requires Fortune 500 companies to voluntarily report on their carbon emissions.

• Proposed International Standard on Assurance Engagements (ISAE) 3410, Assurance on GHG Statements. Released in June 2009 in anticipation of international requirements of mandatory verification of carbon emissions.

"There are many developments cur-

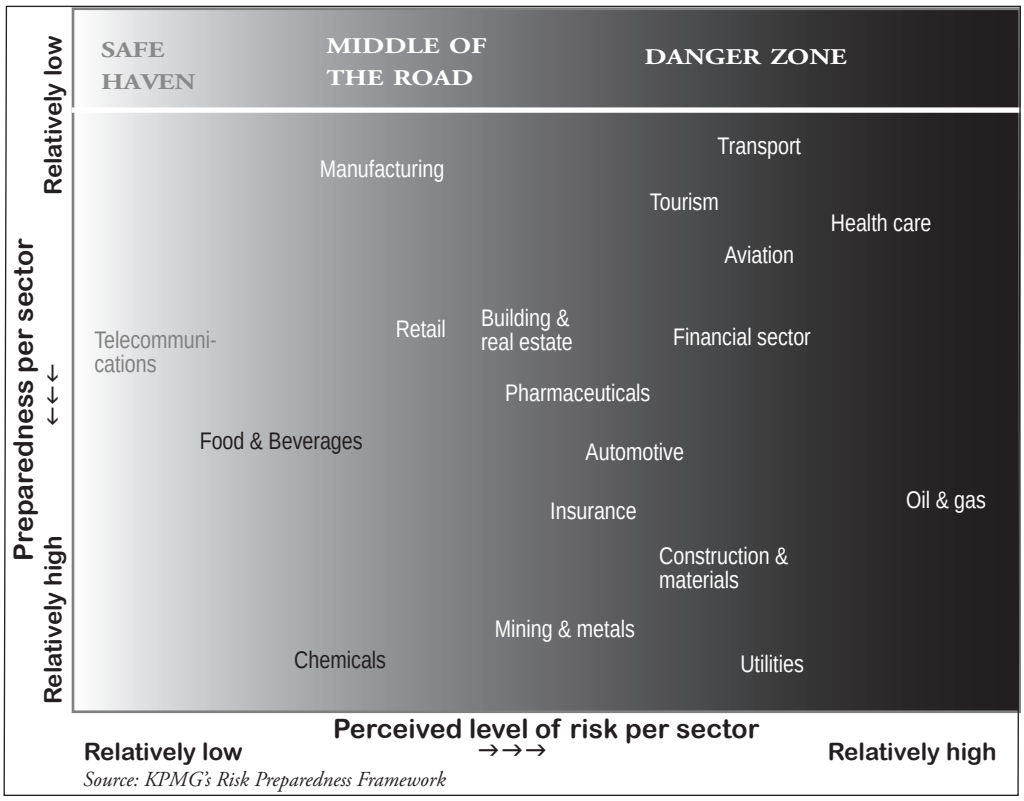
How prepared is your sector to weather a perfect storm?

As federal agencies look to exert more control over carbon emissions, every industry sector will come under increased scrutiny. "Preparedness is key," Israel said. Are your sector and your company prepared to deal with new rules that will impact the way you do business?

The chart (right) indicates the level of risk a company might confront at this time. Some risks are subject to change due to unanticipated events that could nudge a sector into a higher zone; for example "a prolonged drought would have a huge impact on the risk for the food & beverages sector," said Israel.

"Being proactive allows you to identify specific risks and ensure that you are in compliance with new regulations as they are enacted." Also, early action to reduce emissions saves money in the long term.

Safe haven: reasonably high level of preparedness for relatively low risks
Middle of the road: risk is roughly matched to preparedness
Danger zone: risk is markedly greater than preparedness



Source: KPMG's Risk Preparedness Framework

rently going on with respect to reporting standards and assurance standards," said Israel. "Reporting has always been a consideration of economics; it is now also an ethical consideration. Formal assurance reporting is still low and that's a little bit of a concern because how do we know that the information reported is reliable and accurate?" Israel said that before issuing a report a company has an obligation, perhaps through an internal audit, to ascertain that the information is accurate.

"One of the interesting trends we currently see is the integration of sustainability reports with financial reports. Only a few companies are doing this in the US, and in those cases the auditor's report is limited to financial information only. I think that's a very difficult sell to stakeholders." ◆

Robyn McGuckin

An engineer with a background in energy, Robyn McGuckin is director of the Resource Efficiency Management Center for MWH, an energy and environmental engineering, construction, and water resource management firm headquartered in Broomfield, Colo. "Resource Efficiency Management is fundamentally our sustainability business," said McGuckin, who has worked on projects in international development around the globe. "We work closely with the utility sector, primarily on the water side," she said. "The water utilities sector is not as prepared to deal with climate change as the power sector, yet the risks to the water sector are very high."

Water projects – drinking water, place water, water reuse and also the energy side of water, which is hydropower – keep MWH engineers busy worldwide. "Pretty much anything that water touches in a significant way we will engineer, from preliminary studies thru feasibility to design and project management and construction management," said McGuckin.

There are four major impacts of climate change that require greater attention.

1. Hydropower. Currently, hydropower is one of the largest sources of renewable energy in the world, accounting for about 63 percent of the energy produced from renewable sources and 19 percent of the world's electricity. In the US, hydropower provides about 10 percent of our electricity today, higher in regions such as the Pacific Northwest. "Combining hydropower with other sources of renewable energy would go a long way to improving energy costs and usage."

2. Energy consumption. "In the western states, particularly in California, energy consumption in the water sector is about 20 percent of that state's total energy consumption, mostly because water is being shipped across the state. Colorado is not that different though the numbers are a little lower. So any effort to reduce energy consumption improves the cost effectiveness and the security of that water utility."

3. Greenhouse gas emissions. "The EPA reports that in the US the water sector is the 5th largest source of methane emissions and the 8th largest source of nitrous oxide emissions. That's significant when you consider that methane has a global warming potential of 21 times that of carbon dioxide and is a source of energy. Methane is natural gas and we ought to be capturing it and using it. Nitrous oxide has a global warming potential of 310 times that of carbon dioxide over a 100-year time frame."

4. Availability and timing of water resources. "Water sustains us and sustains our businesses. But when spring runoff occurs earlier and flows faster, flooding can occur and adversely affect the economy. When the runoff is late and slow, water in reservoirs falls to low levels and may not be able to serve the population." Reservoirs can be engineered to withstand these extremes, but studies that aid in understanding the effects of climate change, particularly in high altitude states like Colorado, would be beneficial.

Nothing refreshes like a cold glass of water – provided it looks clear and tastes good. This is no less than a quality-of-life issue that affects individuals and their communities, said McGuckin. "It is a huge concern of ours as a company, and all our engineers feel personally invested in the mission to make it the best. In countries such as Australia which has been under a prolonged drought, the objective is to improve the entire system of water management so that the cost is lower to those individual users."

McGuckin is "pretty certain cap and trade legislation is dead but will be replaced by something else. When that happens, utilities aren't going to be exempt." Compliance will affect the cost of water initially and the cost of all goods and food products eventually.

"Savings can be achieved by saving resources, which is why our practice is called resource efficiency," said McGuckin, explaining that "a lot of our work is about integrating sustainability into our ongoing practice. Whether it's a native water conveyance project where we're looking at ways to reduce the energy consumption or whether it's a hydropower project where we're looking at ways to increase hydropower by raising dams, the goal is always to improve efficiency and, therefore, sustainability."

> In many ways sustainable practices are a return to money-saving fundamentals

Despite the recession, MWH has enjoyed steady growth "primarily because our clients are looking for ways to save money, to be more efficient." In many ways, McGuckin said, "sustainable practices are a return to the fundamentals of sound business practices where a penny saved is a dollar earned. Reducing the energy costs of a gallon of water produces savings very quickly when you're using millions of gallons of water a day. For many of our clients energy is a No. 2 cost so it makes sense to pay attention to the fundamentals," she said.

"We try to accomplish three things in our company:

- save money through energy conservation and energy efficiency;
- help our clients make money by optimizing internal and external processes to become more efficient;
- help clients obtain the financial incentives needed to go forward. We've been able to identify ways for our clients to cut their capital costs on solar projects by 50 percent through federal and state incentives.

"These three approaches increase the ROI (return on investment) and shorten the payback period – one year or less for manufacturing and industrial clients. For clients in other industries, the payback period can be quite a bit longer," said McGuckin.

MWH first started working on renewable energy projects "in the late 90s as all of us became aware of climate change as an issue and sustainability as an opportunity. Our clients began to ask for these types of services and as a result we developed innovative tools around carbon emissions and

energy conservation." ◆

Ronald M. Sherga

The founder/owner of Sherresults, Arlington, Texas, Ron Sherga has designed, managed and owned numerous companies focused on the recovery of materials, energy reduction and end of life solutions, with specific focus on sales and marketing, plant personnel and business development teams in the raw materials and finished goods areas. Sherresults was originally formed to provide independent testing, research and sales for plastic scrap and other waste challenges, and now exists as an entity for consulting and as a tax and liability protector.

"I am recognized for bringing value to my clients in areas that have been loss leaders or highly undervalued," said Sherga who has a patent pending for carbon credit and sequestration. "Groups such as the EPA and FTC have expressed interest and I am hoping to use their support to gain deeper political support," said Sherga.

"Corporate social responsibility isn't just a fad; it has a proven value to stockholders, consumers and the health of your business. At the very least," said Sherga, "consumers will give your product or service preferential treatment when considering their purchases, and that goes right to your bottom line."

A company starting on the road to sustainability will not find much guidance in the way of benchmarking. So a company might not have the tools to measure progress as they move toward that goal. "There are a lot of suppositions and assumptions but at its core, sustainability is about access to the marketplace."

Walmart is a prime example of how a company goes about ensuring that products sold in their stores meet the sustainability standards they have established. The Walmart Sustainability Index requires each of the retailer's 100,000 global suppliers to evaluate their own company's sustainability, measure the sustainability of their products and answer a lengthy questionnaire about the results. "If you want shelf space and access to Walmart's consumers you're going to have to answer those questions," said Sherga.

Walmart is not alone in looking out for the planet. In the shift to sustainable products, many companies are changing the way they do business. "You can't put flooring in a building today if you can't fill out a questionnaire guaranteeing a life cycle story for that product. You don't even get to be at the table."

Eric Israel noted that "some companies won't sell their carpet to you, they'll lease it, and at the end of the lease they will take it back and lease you a replacement."

"Cradle to cradle is not always the best carbon footprint and you still have to figure out a solution for the material you've taken back," said Sherga. "You don't get off scot-free nor should you, but I do think leasing is going to become a huge component of the carpet business."

Energy use, water consumption, security and more are all part of the life cycle that can make a product more or less marketable. But answering questions about it is not a fun activity. The LCA (*see sidebar*) is a tool designed to make the task easier. "How important is the LCA as a measurement tool?" Israel asked.

"I think people are already doing assessments and don't recognize they're doing it; they're already tracking emissions as part of their supply and value chain," said Sherga. "LCA tends to be geared more toward materials. Companies like KPMG, with their auditing mindset, can help businesses think about their supply and value chain in terms of assessing efficiency and sustainability. One way or another, if you're not involved in the life-cycle assessment you will be out of business," said Sherga.

Eric Israel: How can we be sure that the life cycle of a product is what the company says it is? How do you mitigate the risks?

"We need a great deal more transparency than we currently have," said Sherga. "But a lot of the tools that would create that transparency are lacking, and that leaves the door open for fraud and scams."

A way to ensure transparency is through third-party verification using proven hard metrics, asking questions and tracking the product through the entire life cycle, said Sherga. "There's a moral issue that is particularly important in the global economy. We're sending stuff off to be made in China, Europe, Africa. Do we know that what we're sending is being made and used properly? Somebody challenged me the other day about our heatwave system. We don't make that, China makes it.

Said Israel, "When you're outsourcing overseas, you have to have ethical sourcing guidelines."

"Absolutely," Sherga agreed, adding that everyone in the organization needs to understand those guidelines and be involved in developing and implementing sustainability practices. Not all employees will be quick to get on board with these changes but I'm a big believer in finding something you can easily accomplish and proving it to your workforce. Build a consensus. Then no one in the company can deny it can be done because it's been proven. It will take leadership, not management, to drive sustainability.

So establish that leader. ◆

John Gimigliano

When we will have climate change legislation is "the big question," said John Gimigliano in response to a question from Eric Israel. Gimigliano is a principal with KPMG's Washington National Tax Office in the Energy and Natural Resources Group. Prior to KPMG, he was Senior Tax Counsel for the House Committee on Ways and Means. He was lead tax counsel for the House during negotiation of the Energy Policy Act of 2005 and played a central role in the Economic Stimulus Act of 2008, the Tax Relief and Health Care Act of 2006 and the Small Business and Work Opportunity Act of 2007.

"I don't think anybody could have foreseen the way the last year went politically. I'm glad that at KPMG we were mostly right about what we told our clients, that the cap and trade bill was going to be incredibly difficult to do politically," said Gimigliano.

"Obama could not bring Republicans on board and, frankly, couldn't bring a sizable portion of Democrats in the Senate on board. Such a complicated and controversial piece of legislation is very difficult to do in an election year."

Gimigliano believes a cap-and-trade bill could pass either late in Obama's first term

Life-Cycle Assessment (LCA) is a technique used to assess the environmental aspects and potential impacts associated with a product, process, or service, by:

- compiling an inventory of relevant energy and material inputs and environmental releases;
- evaluating the potential environmental impacts associated with identified inputs and releases;
- interpreting the results to help you make a more informed decision.

or, assuming he's reelected, early in the second. Cap and trade isn't dead, it's in a very deep coma."

Depending on how the votes break in upcoming elections, cap and trade either gets a second chance at life or passes on to that great legislative black hole in the sky.

"It increasingly seems Democrats are going to take some lumps in the midterm elections in 2010," said Gimigliano. "If they lose 20 to 30 seats but not necessarily control of the House or the Senate, then the thinking will be there's been a shift to the political right. In that scenario, the Democrats' focus could be on maintaining the majority and trying to work with Republicans by making small, incremental changes. In that scenario we don't see cap and trade.

"In another scenario, Democrats losses are limited in 2010 and the political dynamic starts to stabilize. If the economy has rebounded by then, Obama could look a lot like Reagan in 1984 when the economy bounced back and Reagan won in a landslide. If that happens to Obama in 2012, Democrats will have the wind at their backs again and it could be a good year for cap and trade.

"While cap and trade might not happen in the short term, there are a lot of other things that may happen in the next 12-24 months. Congress may attempt to pass a narrower energy bill that would not be as politically challenging as cap and trade legislation. For example, there's a good chance they will consider a federal renewable portfolio standard (RPS) this year, requiring that by a certain date a certain percentage of power sold in the US has to come from renewable resources such as wind, solar, biomass.

"That goal, 20 percent by 2020, has already passed the House and may be considered by the Senate this year. Fifteen or 20 percent might not sound like a lot, but consider: The US is now the world's largest producer of wind energy, thanks to billions of dollars in investments. We added 10,000 megawatts of wind power to the grid last year that shatters all previous records; it's massive, yet it amounts to only 3 percent of the grid. So if we can get to 20 percent by 2020 that is the size of a ship." However, Gimigliano pointed out that a 20 percent renewable standard could put great stress on the country's electric transmission grid.

"Renewables represent a seismic shift in how energy is produced, stored and transmitted. For businesses that are worried about their consumption, an RPS is going to have a profound effect on their energy sourcing and efficiency." Whether or not cap and trade ever passes, Gimigliano said, "you have to think about energy efficiency because there is a chance of a bill passing that will negatively affect your business."

Israel: How important are tax credits to development of renewables?

"Very important," said Gimigliano. "The American Wind Energy Association publishes a chart every year that shows the amount of stored wind capacity in any given year. Then they cross reference those figures with the years the wind energy tax credit has been in effect and when it expired. The chart shows massive wind development in the years the tax credit has been offered. In 2006, when there was a long-term extension of the wind tax credit, wind installations doubled from 10,000 megawatts of capacity to more than 20,000 megawatts by 2008. The stimulus bill in 2009 provided another extension and we added an additional 10,000 megawatts."

How many megawatts were added in the years when the tax credits had expired? "Almost zero," said Gimigliano.

"Investments are driven by tax credits. Coal-generated electricity is very cheap, 4-5 cents per kilowatt hour; wind is 7 or 8 cents; solar 17 or 18 cents. You've got to make up those differences somehow and the way that we do that in the US is through tax incentives."

Israel: How effective is the use of those tax credits for tax-paying entities, and are businesses taking full advantage of them?

"The tax credits work well when people are paying taxes. The typical vice president of taxes in a Fortune 500 company is aware tax credits are out there. What I don't think they're aware of is the financing mechanisms to convert those tax credits to cash. In the financial sector, the big Wall Street players know how to do this. But Wall Street is not the big player in financing renewables that it once was so the renewable sector is concerned about where the next generation of investors is going to come from," said Gimigliano.

If not from Wall Street, "renewable investments in the US will have to come from major companies that appreciate the tax and strategic benefits of renewable energy financing. What KPMG brings to these transactions is the ability to help put a project together from inception to financing to operation.

"To participate in renewable project development is gratifying on a personal level. You actually walk the site to see the wind project or the solar project and realize that a lot of jobs have been created and you played some role in making that happen," said Gimigliano. "When several hundred million dollars are invested in a facility a lot of people take home a lot of paychecks and that makes a difference in the community." ◆

> CAP AND TRADE LEGISLATION IS NOT DEAD, IT'S IN A VERY DEEP COMA

Audience Q&A

Are we missing out in the US because we don't have cap and trade legislation that would create trading of carbon emissions credits?

Robyn McGuckin: One of the reasons the trade market in Europe is booming right now is because the economy is down. When the economy goes down, energy consumption goes down. If your energy consumption has gone down below your base line, you've created a lot of carbon credits. So right now the market could be booming because all the energy producers in the EU are actually producing a lot less greenhouse gas emissions. Which means they're got carbon credits to trade and now is the time to do it because when that consumption comes back up their emissions credits will go back down.

Ronald Sherga: If you are a trader, you're missing out; if you're in the renewable sector you've lost out; if you're a manufacturer or public utility you probably think we can wait. So it depends on which side of the transaction you're on. As the EU becomes more sophisticated in managing carbon markets, US companies are falling behind in terms of developing a business strategy around trading.

McGuckin: What we've talked about today is the probability aspect of sustainability. It's not just about corporate social responsibility, it's about driving greater efficiencies through your operations. The more efficiently you manage your resources, the more you optimize the process and create less waste, the more money you save. ◆