INNOVATION THAT MATTERS

ENERGY & CLIMATE

Wayne Balta, Vice President, Corporate Environmental Affairs, IBM
Energy is an extremely important subject. It fuels our economies; it gives us quality of life as we know it. At the same time, thanks to science we've been able to learn that the ways in which we've generated energy and consumed energy are putting us on a path toward change in our climate -- a change that could be catastrophic if we don't address it thoughtfully today.

Dr. Kunio Yoshikawa, Professor, Tokyo Institute of Technology
As a scientist and engineer in this field, I think now its right time to start very serious action to prevent global warming and also the emission of greenhouse gases.

Nick Donofrio, Executive Vice President, Innovation and Technology, IBM
There's no denying we can't walk away from this. We can't neglect it. Now is our time to face these issues.

Eileen Claussen, President, Pew Center on Global Change
Some people talk about energy, some people talk about climate. But really they're talking about the same problem.

How do we get more energy and how do we make sure that we protect the climate?

Guido Bartels, General Manager, Global Energy & Utilities Industry, IBM
So as IBM we aspire to help achieve truly reliable and sustainable global energy system for the 21st century and beyond.

John Davies, Vice President, Green Technology Research, AMR Research
We look at big companies like IBM as having a great influence on getting people to understand what the issues are and promoting those changes.

Claussen
Innovation is really the key to the future here, because we are going to be living in a carbon-constrained world. So the company that innovates I think is the company that's going to be really successful.

a variety of voluntary initiatives

Balta
IBM has had a longstanding involvement in the issues of environmental protection and conservation. In fact, going back to 1971, our chairman at the time, Tom Watson, Jr., put in place the company's first corporate policy on environmental protection.

In addition to paying attention to our own internal operational performance we have engaged in a variety of voluntary initiatives with outside organizations.

Kathleen Hogan, Director, Climate Protection Partnerships Division, U.S. EPA
We take the climate change issue at the US Environmental Protection Agency very seriously.

One area where IBM has really demonstrated leadership is within our Climate Leaders Program.

Balta
Between 1990 and 2005 IBM has reduced its CO2 emissions 40 percent.

We've reduced our emissions of PFCs 58 percent between 2000 and 2005.

Hogan
A great example of IBM innovation is their work within our perfluorocarbon semiconductor partnership where they went out and invented new processes, new substitutes to the perfluorocarbons. So they brought all that effort to the table to come up with solutions that you really couldn't have thought of a few years earlier.

And that just demonstrates the dedication that IBM brings to solving problems like this. And it is what makes IBM a leader.

a good corporate citizen

Claussen
The Pew Center on Global Climate Change is a non-profit organization trying to find answers to deal with the problem of climate change.

We are interested in working with progressive companies who will both reduce their own greenhouse gas emissions and who will work with us on public policies that will result in a piece of legislation where everyone has to reduce their greenhouse gas emissions.

Just think about a company like IBM. They're concerned not only with their process emissions, but they're also concerned with the products they produce and making sure that those use as little energy as possible and therefore result in as few greenhouse gas emissions as possible.

There's no question that IBM has been a really good corporate citizen here.

As a result of everything that IBM has done, they've avoided nine million metric tons of greenhouse gas emissions. If only we could have other companies doing the same thing.

an intelligent utility network

Balta
Going forward, we're going to rely on a variety of sources for our energy. And as we take the existing manner in which electric power is produced, we must find ways to pursue intelligent energy.

Tom Standish, Group President, Regulated Operations, CenterPoint Energy
One of the issues we have is that fundamentally the electric utility business is unchanged from the time of Thomas Edison.

Centerpoint is working on designing an intelligent utility network, a network that has the capability of measuring data out in the field, of analyzing that data, and then when necessary taking action on that data to restore the system back to its original condition.

We believe there is a tremendous increase in our ability to have an efficient grid to deliver the power more efficiently to the customer, for the customer to be able to understand their consumption patterns, their bills, and to make intelligent decisions about their use of energy in the home, and for us to allow the grid to be more of a digital grid.

IBM is bringing IBM's technology, expertise, their innovation in the field, to a real world setting here at Centerpoint Energy.

It's our collaboration with IBM that has allowed the Intelligent Utility Network to move to a level that will truly be transforming for the electric utility industry

running energy-efficient data centers

Patricia Lawicki, Vice President, CIO, Pacific Gas & Electric Company
PG&E is one of the largest utilities in the United States. It services two thirds of California. 14 million customers that we service on a regular basis.

One of PG&E's core values is really energy efficiency. It's part of our DNA.

And IBM stepped in to say they wanted to be a partner, and they had the same type of core value and how could we help bring solutions to the market.

One of the largest growth areas we see as a utility company is the expansion and the draw that data centers have on our power grid…aspects of power draw and cooling, specifically.

So what we need to do is we need to look at ways to run those data centers more efficiently.

What IBM was able to bring to us is really a complete look at that data center environment. They were able to bring sensors, they were able to bring in equipment and people and research technicians that really made a difference in how we approached the entire configuration of the data center and not just a piece or a part of the data center itself.

We're very effectively collaborating with IBM and doing research with IBM in how we can actually bring something that will help the industry overall.

innovating with smart meters

Erik De Heus, CEO, Oxxio B.V.
Meeting energy demands in the Netherlands just like actually the rest of the world requires thinking holistically about discovery, production and distribution while keeping in mind environmental issues of course.

Bartels
Oxxio out of my home country is a retailer in the Netherlands where you have a deregulated electricity market and gas market, a very innovative…innovative company.

De Heus
Since we are as a small company geared towards quick time to market, quick advantages to customers, we felt that the power of IBM combined with the agility of Oxxio is a very good combination of forces.

Bartels
And what they wanted to do is to implement automated meter management so that you have digital meters at the end user, which are able to do two-way communication.

De Heus
We replace the existing meters which are typically the traditional meters, by a smart meter. And on a daily basis we collect all the 15 minutes data throughout the day of each customer that has this meter installed. So on a daily basis customers can see on the Internet in a very easy fashion their consumption, but also what have they done throughout the day which actually helps to reduce their consumption.

Donofrio
When you do something like smart metering, you can definitely have an impact on the way the end consumer ends up either thinking about or considering not consuming that last bit of electricity. Giving people better line of sight. Helping consumers understand the consequences of their action, has got to be one of the most powerful forces for change as we deal with this issue of climate, of the environment, energy and technology and how they intersect.

the intelligent oil field

Bartels
When we talk about intelligent energy what we mean is it becomes increasingly important that there's a very diverse portfolio of energy sources.

Balta
Now, of course, any time you speak about energy the conversation has to involve oil, because that practically speaking is our predominant source of energy today. Now, as we use oil we should pay attention to extracting it and developing it in smarter ways.

Bartels
And at IBM, for that we have developed a very innovative solution which we call the Intelligent Oil Field.

The Intelligent Oil Field is applying smart technology, sensing technology. But also advanced analytics to be able to connect all the different parts of an oil company together to have better real-time information on which then can be acted.

Balta
For example, we can use information technology modeling simulation visualization to enable oil companies to more intelligently identify where oil exists and how most efficiently to pull it out of the ground.

Bartels
You can look at a company like IBM in developing and delivering and selling solutions to clients, which enable customers or businesses to do their business more effectively, more efficiently and that's fantastic.

the power of collaborating

Davies
We look at businesses solving the problems in front of us in regards to energy and the environment, and when I think about the future from my children and what they'll inherit, we look at leaders like IBM who are creating tremendous innovations that will help us overcome these challenges.

Yoshikawa
I think IBM has the same dream with me and

I am quite optimistic about the future of earth because technology will save earth.

Hogan
The innovations that we're seeing through IBM's leadership and their work through the partnership programs with us really do matter. It touches everybody's lives.

Bartels
IBM aspires to be a leader in this space. We aspire to be the company who brings all the different pieces of the puzzle together, to work with the rest of the industry, to work with government, to work with research organizations, with academia, with other thought leaders.

Balta
We at IBM certainly don't have all the answers. But we do have a lot of assets and by collaborating with other leaders we can together develop solutions and more intelligent ways of delivering energy that will be more efficient and mitigate risks over global climate change.

Donofrio
It is time now to deal with this issue. How are we going to do that? We're going to do it with this idea of innovation. We're going to do it openly; we're going to do it collaboratively. We're going to do it because we're going to apply multi-disciplined skills to it. And we're going to do it globally. These are the important ingredients here in the 21st century for us to be able to bring together. My God, it's only our earth in the final analysis. And if not us, then who?

[END OF SEGMENT]