

## The Virtuous Cycle: Kick-Starting a Climate-Friendly Future

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Thank you, SzePing, for that introduction. I'm actually very deeply honored to be part of this inaugural Greenpeace Business Lecture Series in China and to join with Mr. Zhang, with Gerd Leipold, and with you -- leaders of industry, government, and just as importantly, civil society.

Today, I want to talk mainly about climate-friendly refrigeration. And I want to note some of the steps that our company has taken so far, but I also want to announce an expansion of our own commitment. Also, I'm not here to talk only about Coca-Cola.

I'm really here today to share some ideas about how we can work together to move the entire commercial refrigeration industry towards a climate-friendly future. We need a

broader solution, because no single company can solve the world's climate problems -- or refrigeration impacts -- not even one as global as Coca-Cola.

After all, we actually represent only 1 percent of compressor purchasers worldwide. So, if we're going to make a true difference, what we need is industry-wide action.

I also want to highlight the real business opportunities that this technology offers both the end users and the suppliers, and the unique opportunity this offers China to be recognized as a global leader on environmental solutions.

## **SUPPORTING EARTHQUAKE RELIEF**

Before I turn to that, however, I want to acknowledge that we are meeting in the aftermath of the Sichuan earthquake, a natural disaster whose scope, scale, and devastation has shocked us all personally and shocked the world. We mourn with you, and our thoughts and condolences continue to those who are injured and to the families of the victims.

We recognize that there's a long road ahead, and of course, we at The Coca-Cola Company will continue to support the relief efforts, as we have, in the weeks and the months to come.

## **WORKING WITH GREENPEACE**

I want to thank Greenpeace for creating this forum. For many years now, we've been working with Greenpeace, and I've come to know and really respect their organization and to respect Gerd in particular.

Greenpeace and other NGOs play a critical role in raising the world's awareness and fighting for a better, more sustainable future. Not only does society need Greenpeace and other NGOs, but we -- our business -- need you, as well.

If we're going to deliver the solutions that are required in the 21<sup>st</sup> Century, we need new partnerships among businesses, government, and civil society.

So Gerd, we welcome the challenges that you've given us so far, and the challenges that you're going to give us in the future because, ultimately, they help make our planet and our business more sustainable.

## **OUR APPROACH TO SUSTAINABILITY**

And that really captures our approach to sustainability. We recognize if the communities that we serve are not sustainable, then we do not have a sustainable business for ourselves. We recognize that we need to be part of the solution on global issues that threaten the communities we serve and that are relevant to our business, and therefore we've made a number of commitments.

- We've set the aspirational goal of returning to communities and to nature an amount of water equivalent to what we use in all of our beverages and in their production. We call it water neutrality.
- We're expanding our efforts to recycle and to reuse PET plastic bottles, and today we're building the world's largest PET bottle-to-bottle recycling facility in the United States.
- We also engage in significant work to understand our climate footprint and to set goals in this area, and I'll talk more about that in a few minutes.

## **OUR SUSTAINABILITY EFFORTS IN CHINA**

You can see some of these commitments coming to life here in China. For example, together with our bottlers, we're improving our water efficiency at our bottling plants. In China, we reduced the amount of water it takes to create our finished beverages by 8 percent last year alone. And globally, we're working with another NGO to set targets for improvement in our water use efficiency, and to help conserve and protect watersheds globally.

Here in China, we're focusing on projects around the Yangtze River. We've also invested globally in rainwater harvesting and storage systems. In Ningxia, we've improved the water supply for 3,000 residents. Now, this is a small example, but I talked about communities -- success is community-based.

We're working with the United Nations Development Programme and the Chinese government to enhance water access and sanitation in many parts of rural China.

And since 2005, we've partnered with the Beijing Organizing Committee for the Olympic Games, BOCOG, on an environmental education program that has encouraged more than 250,000 people to "Save a Barrel of Water." In the aggregate, this will benefit millions of people in China in the future.

Each one I've talked about is a small step, but every drop counts.

## **CLIMATE CHANGE REQUIRES ACTION**

When it comes to global warming, given the expertise in this room, I don't need to make the case that global climate change is occurring; that man-made gas emissions are a crucial factor; and that the implications for our planet are profound -- from biodiversity to public health, and from agriculture to water usage generally -- which makes it very relevant for a business like Coca-Cola.

So, let me just share one example of what's at stake if we do not act. One study projects that climate change could force 1 billion people to leave their homes over the next 50 years. That is 1 in every 9 people on this planet, 1 in every 9 of our consumers.

Scientists from the Intergovernmental Panel on Climate Change tell us our global society needs to reduce greenhouse gas emissions between 50 and 80 percent in this

century. If we are going to meet this challenge, then every sector of society will have to be part of that solution.

## **POLITICAL ACTION IS ALSO NEEDED**

So, today I'm focusing on what business and NGOs can do together, but I also want to acknowledge that political systems must also act.

That's why, last November, Coca-Cola and many other companies signed a communiqué prior to the Bali meeting. We asked world leaders to work towards a strong international framework to govern global carbon emissions and to combat climate change.

## **A UNIQUE MOMENT**

I believe that we stand at a unique moment in time, a window when we can still make changes that will prevent the worst forms of climate change from happening.

For example, look at hydrofluorocarbons, known as HFCs. Today, in order to cool food, beverages, or the air in our offices and homes, the world mainly uses HFCs. And, as you heard earlier, unfortunately, they are a potent greenhouse gas.

Today HFCs represent only 2 percent of the climate change problem. But, they are forecast to grow to 8 percent by 2050.

We don't need HFCs because alternatives are available.

If just the commercial refrigeration sector moved to climate-friendly alternatives by 2050, the corresponding emission reduction in that year alone would be 1.2 billion metric tons -- about the same as the total annual emissions of Germany or Japan.

## **COCA-COLA'S IMPACT ON CLIMATE CHANGE**

So what is Coca-Cola's connection to climate change? We've examined our carbon footprint, and it touches on four areas:

- our packaging,
- our manufacturing operations and those of our bottling partners,
- transportation,
- and our focus today -- cold drink equipment.

We, of course, are working to reduce our impact in all of these areas. For example, on packaging, we are making bottles that have less plastic or less glass in them, through a process known as "light-weighting." And as you've already heard, we are making investments on recycling around the world.

In our manufacturing operations, our intention is to grow the business, and not the carbon, and we are making investments in energy efficiency at every single one of our nearly 1,000 plants with our bottlers around the world.

On transportation, already some of our bottlers have adopted hybrid trucks, and others are implementing green distribution systems to reduce miles and emissions.

## **COLD DRINK EQUIPMENT**

That brings me to cold drink equipment, our largest single impact on global warming.

Let me just define what they are -- cold drink equipment refers to those glass-door coolers that you see in convenience stores, the vending machines you'll find in cinemas, and the fountain equipment you see in restaurants.

Our bottling system around the world has more than 10 million coolers and vending machines in place today.

They impact the climate in three ways:

- through their energy use,
- in the insulation foam that is used inside,
- and in the refrigerant gas which is used in their cooling system.

## **ENERGY USE**

Let's start with energy use. As you would expect, the more energy a cooler uses, the more greenhouse gases which are released from creating that energy.

Energy use is an indirect contributor to greenhouse gases, but it is the largest factor, by far.

Back in 2000, we made a commitment to improve the energy efficiency of our equipment by 40 to 50 percent by 2010, and we are well on our way to making that happen.

Much of that improvement comes from a special piece of technology which we are adding to our coolers. We've collaborated with a firm called Elstat Electronics, Ltd. to develop an energy management system we call EMS-55.

This special piece of software contained in the equipment learns how a cooler is used, and it adjusts the operation, in order to become more efficient. For example, when a vending machine is typically not used on a weekend, it turns the refrigeration system down.

And the energy savings are really significant. A machine equipped with EMS-55 would use up to 35 percent less energy than an equivalent machine.

## OUR 1 MILLIONTH ENERGY MANAGEMENT SYSTEM



To illustrate our progress in deploying this technology across our system, I'd just like to show you one of the base units. This little unit here represents the 1 millionth -- 1 millionth -- energy system that we have acquired over the past 4 years, and put into our equipment in order to reduce our energy use and our greenhouse gas emissions. 1 million are already in use.

These 1 million are saving an estimated 1.1 billion kilowatt hours per year. They're preventing an estimated 575,000 metric tons of greenhouse emissions every year. So, we're reducing the greenhouse gases caused by the energy use through what we call "smart energy management."

So, now what about HFCs from our coolers themselves? It actually comes from two sources -- the insulation foam inside a cooler and the actual refrigerant use itself.

### INSULATION FOAM

The insulation foam is, by far, the biggest factor. At about this time last year, we announced that we have removed HFCs from the insulation from all of our new coolers. That eliminates 75 percent of the direct emissions from our coolers, which means, in fact, that we have eliminated the largest single element where we use HFCs in our coolers.

### REFRIGERANT GAS: FROM CFCs to HFCs to CO<sub>2</sub>

That leaves us, then, with the gases that are contained inside the refrigeration system itself, which is the other 25 percent of the HFCs.

These refrigerant gases, through a cycle of compression and expansion, create the cold that keeps our beverages fresh.

Now, even though we have very stringent operating standards to capture and destroy these gases when a cooler is taken out of service, some of the gas is, in fact, emitted into the atmosphere during the production process or through leakage.

We've had success in the past. Years ago, like everyone else, our equipment used CFCs, chlorofluorocarbons. And when we discovered that these chemicals were implicated in depleting the ozone layer, we moved to the best technology that was then available. Yes, HFCs, and that was in 1994.

HFCs are used as an ozone-neutral gas, so that solved that problem. Unfortunately, however, we learned that they are a potent greenhouse gas.

So, about 8 years ago, with alternatives within reach, we took a very clear public stance. Encouraged by and together with Greenpeace, we were among the very first companies to say, "Our future shall be HFC free." I want to reiterate that goal in front of all of you today.

The world does not need HFCs. We could all switch to alternative technologies based on natural gases, and we can have a significant positive impact on climate protection.

We've actually spent nearly \$40 million to identify and test the best alternative refrigerants.

As with all research, we went down some technological "blind alleys" before we found the best solution, and that did cost us time, but the important thing is that we believe today we have, in the aggregate, the best answer.

## **CO<sub>2</sub> – A CLIMATE-FRIENDLY REFRIGERANT GAS**

As a result of our work and the work of our technology partners -- some of whom are here today -- and our equipment suppliers, who are also here today, we have determined that the best alternative to use is CO<sub>2</sub>.

Now, there's somewhat of an irony around CO<sub>2</sub> because some say, "Well, wait a minute, isn't that the gas that's released when we produce electricity or drive cars? Isn't CO<sub>2</sub> actually part of the overall problem?"

Well, yes it is, but it also happens to be 1,300 times less potent than HFCs, and when we use CO<sub>2</sub> in our refrigeration system, it also becomes 5 percent more energy efficient.

We've made extensive developments with companies present here today -- with Sanyo, Danfoss, Embraco, and Sanden. We've tested CO<sub>2</sub> machines in the lab, in the field, and on some 10,000 Coke machines.

CO<sub>2</sub> works. It's more efficient, and importantly, it is safe. It is the future, and now we are taking steps to making it a reality.

## **ALL OUR COOLERS AT THE BEIJING OLYMPICS WILL BE HFC-FREE**

One of those steps has already been announced. This summer, at the Olympic Games here in Beijing -- which we know are going to be hugely successful -- all of the refrigeration equipment we use will be based on CO2 and will feature our energy management system.

So, on display outside and here, you'll see some of the technology that we will be using at the Games. Some of our suppliers are here and are ready to give you more information.

## **ANNOUNCING A NEW EXPANSION OF OUR COMMITMENT**

Now, I'd like to announce our next step in scaling up our commitment to climate-friendly refrigeration.

I'm pleased to announce The Coca-Cola Company and its bottlers will purchase and deploy 100,000 CO2 coolers by the end of 2010. This will be the largest deployment of this new technology by anyone, by a very, very long shot.

Is this a significant step forward for us? Yes. This new commitment will multiply by a factor of 10, the number of CO2 units that we currently have on the market.

Is it enough? No, because our intention is to move all of our purchases of cold drink equipment towards being HFC-free.

## **THE "CHICKEN AND THE EGG" DILEMMA**

So, we're not there yet, and the reasons can best be described as "the chicken and the egg" problem -- the old question of which comes first.

- It's very difficult for companies like ours to buy more climate-friendly coolers until the price comes down.
- But the price won't come down until other companies other than us buy more.

We need a way out of this dilemma -- out of this "Catch-22" -- and I want to propose one today. It will address one thing that has held us back over the past 8 years -- price.

## **WE NEED TO ELIMINATE THE PRICE PREMIUM**

Currently CO2 refrigeration is significantly more expensive than HFC refrigeration, primarily because it does not have the production scale that HFCs have, and they've developed that over the last decade.

We are willing to invest in these coolers -- the 100,000 -- at a significant premium price. But it only really acts and is successful, if it helps trigger the market, as a whole; if it is transformational, and it creates a supply base with the scale necessary to make CO2 refrigeration more affordable in the long run.

That price premium needs to come down so that we, and others in industry, can adopt sustainable equipment much more rapidly than we are today. As I mentioned -- Coca-Cola represents only 1 percent of compressor purchases worldwide. But we are large, and we are visible enough to act as leaders and as triggers to move refrigeration on a sustainable path, but we need overall industry collaboration.

## **A CALL TO ACTION**

So, today, in addition to announcing our expansion of our climate-friendly coolers, I am issuing a Call to Action:

- a Call to Action to our peers in the commercial refrigeration sector to join us in investing in CO2 systems.

Once we send a clear signal to our suppliers that we are moving in that direction, they will have the certainty that they need to invest in new production facilities -- to meet the demand that we are creating.

As our suppliers make those investments, the price premium for sustainable equipment will fall, and we -- and everyone else -- will be able to buy more climate-friendly cooling equipment.

This is a virtuous cycle, but it can only begin when all of us walk forward together. That's why I'm issuing this Call to Action today.

## **REFRIGERANTS, NATURALLY!**

I'm pleased that there are other companies that have already stated their intention to move to HFC-free refrigeration. They've joined us in an initiative called "Refrigerants, Naturally!" It aims to raise awareness on the emergence of natural refrigeration and to share the experience of like-minded operators. Several other companies are considering moving in the same direction.

Refrigerants, Naturally! is one of the sponsors of a conference in Denmark this September, and we will be happy to provide more information for anyone who is interested in attending that event.

## **A REAL BUSINESS OPPORTUNITY**

To our friends in the supplier community, climate-friendly refrigeration represents a real business opportunity. Today, too few people are buying this equipment, but it is the equipment of the future, and the suppliers who invest today will have the advantage tomorrow.

We've seen this in other industries. For example, the automakers who invested in hybrid engine technology before the current energy problems are starting to reap the rewards of that today.

## **EARLY INVESTMENTS PAID OFF FOR OUR EMS SUPPLIER**

Closer to home, when we started investing in the energy management systems, the market was small. Our supplier was practically bankrupt. Today, as I've noted, we've bought over one million units. More importantly, our supplier now has a growing business starting to sell this technology to others. And that supplier, Elstat, now builds nearly 20,000 EMS units every week here in China and ships them to roughly 70 countries.

So here's just one example of why we believe the suppliers who embrace climate-friendly refrigeration today will be rewarded by the market tomorrow.

Now, let me add that we're in discussions with suppliers to find out just what it will take to get to our goal -- cost parity for CO<sub>2</sub>, and we're eager to continue that dialogue and hear their responses.

## **OPPORTUNITY FOR CHINA**

Finally, I want to note that climate-friendly refrigeration provides an opportunity for China to be recognized as a world leader in climate solutions. If other companies join us in creating demand for this equipment, we could see suppliers here in China expanding their production facilities for climate-friendly equipment.

When that happens, it'll be easier and more cost-effective for this equipment to be deployed throughout China, and of course that means it will be cheaper because it will not be subject to the current import duties.

Further, by embracing the next generation of refrigeration technology, China can create added value and earn a competitive advantage in the marketplace.

## **CONCLUSION: HOW DO INDUSTRIES CHANGE?**

In conclusion, I believe that at the heart of this whole discussion is one simple question:

- How do industries change?

There are several drivers.

- Consumers can demand something different.
- Governments can intervene with subsidies or regulations.
- Technology can offer new products, or new ways to make them.
- And changes in price and availability can cause industries to adapt.

Today, however, none of these factors are advanced enough to drive the commercial refrigeration industry towards climate-friendly solutions as quickly as our planet requires.

We cannot wait for consumers or governments or technology or price to move us towards sustainable solutions. Instead, we must use another lever to make progress -- collective choice.

That's why we're scaling up our investment and calling on the rest of our industry to join us. It only works if all of us work together towards the CO2 solutions that I'm talking about.

When we do, we will start a virtuous cycle in which our demand builds capacity, capacity reduces price, and lower price spurs wider adoption that benefits our planet.

We are not content to wait for that virtuous cycle to begin on its own, so we're doing what we can do inside our own business, calling on industry, and working with organizations like Greenpeace, with you, Gerd -- to drive change faster.

We may only make one percent of the problem, but we understand that because of our brand awareness, because of our global reach, we have an opportunity to play a leadership role. And as we say within our company, "If not us, who?"

To help our planet, we need to push the demand curve, act faster than regulation, define the technology, and drive down the price. That means only one thing -- we must all work together.

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