

**Secretary of Commerce Gary Locke**  
**Remarks at “Clean Energy in the Global Marketplace”**  
**U.N. Conference on Climate Change**  
**Copenhagen, Denmark**

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Hello everyone.

We're all here this week for the same reason. The world is facing a climate crisis that demands unified international action, and each of us is trying to do our part.

At this conference, you'll hear scientists describe the grave dangers in store for the world's environment and its people if we do not move swiftly to curb greenhouse gas emissions.

On this basis alone, we have a moral obligation to act. And I am proud to say that since taking office, President Obama has already done more to mitigate climate change than any president in U.S. history.

One of his first acts in office was to sign a Recovery Act that included \$80 billion in clean energy investments that will help double America's renewable energy-generating capacity in three years, while creating thousands of good jobs.

Just last week, President Obama announced that the United States would commit to a 17 percent reduction of our greenhouse gas emissions by 2020 over 2005 levels and an 83 percent reduction by 2050.

These measures—along others the president has made to drive tough new efficiency for automobiles, appliances and consumer electronics—are historic. But they are only the beginning of what must be done.

Unfortunately, during these tough economic times, some see only peril in efforts to fight climate change and transition to a clean energy economy.

That's an entirely understandable reaction.

For many, concern about a seemingly distant climate problem is just not a priority when you are struggling to hold onto a job, pay your bills or feed your family.

But anyone who is concerned about the availability of good jobs and the future of the world economy, needs to be engaged on climate change too.

If seas keep rising, floods start increasing and droughts start spreading and lasting longer, you'd better believe:

- that's going to be bad for business;
- bad for job creation, and
- bad for the quality of life for our children and grandchildren.

The leaders gathered here this week have the means and the responsibility to prevent this terrible future from coming to pass.

And if we take serious action to combat climate change, we won't just be passing on a cleaner, healthier planet to our children. We'll also be laying a foundation for decades of sustainable global prosperity.

Because the development of the clean energy and energy efficiency technologies that we need to curb greenhouse gas emissions could spur one of the greatest economic opportunities of the 21st century.

And it could put millions of people to work in high-skill high-wage jobs.

The world has simultaneous environmental and economic deliverance within our reach, if only we can find the political will to grasp it.

That is what I'd like to spend my time talking about with you today.

Whenever people discuss the economic potential of clean energy, we inevitably hear the phrase "green jobs."

Unfortunately, some who are hostile to climate change action and clean energy investment have taken to deriding green jobs as little more than a marketing tool contrived by environmentalists.

As President Obama said this past summer, there is a lot of "misinformation that there's somehow a contradiction between clean energy and economic growth."

That's a false choice.

Thanks to the unprecedented clean energy provisions in our Recovery Act, we've already gotten a glimpse of how clean energy can start putting people back to work.

- Just visit Northeast Building Products in Philadelphia, Pennsylvania. Because of the energy-efficiency tax credits for homeowners in the Recovery Act, Northeast has gone from one shift to three, and increased sales by more than 33 percent, since last year. The company has expanded its labor force from 180 to 268, and is producing 4,000 windows per week, compared to 2,500 per week a year ago.
- Or go to Phoenix, Arizona, where a company called eTEC is using a matching Recovery Act grant for a pilot project that builds charging stations for battery-operated cars.

This pilot project will help create infrastructure to power as many as 5,000 electric vehicles in 11 cities across America. Most important, this project will allow eTEC to grow its workforce from about 30 employees to as many as 750.

Even in difficult economic times, we are seeing glimmers of hope like this across America. And this is just the beginning of the potential for a new clean energy economy.

Think for a moment about the long-term emissions targets we are all considering. President Obama is calling for an 83 percent reduction in greenhouse gas emissions by 2050.

You're not going to meet those targets with a wind or solar farm here and there. What's required is nothing less than completely rethinking the way we produce and consume energy.

For well over a hundred years, much of the world has enjoyed two luxuries that helped propel the greatest burst of sustained economic growth in human history.

Number one: fossil fuels were cheap and abundant.

And number two: we either didn't know about or didn't care about the greenhouse gas emissions caused by burning those fuels.

Those days are over.

The cost of fuel has risen, while the cost of those emissions is ferociously high. If we don't curb the carbon, we imperil the planet. In the next few decades, we need to rebuild and reinvent virtually every industrial activity; from power generation and transportation to manufacturing and construction, to run efficiently and economically in a carbon constrained world.

So when we talk about the potential of job creation arising from clean energy investments, we're not just talking about someone working for a solar or wind company. We're talking about creating an entirely new model of economic growth. We're talking about millions of new blue and white collar jobs:

- Engineers developing and designing energy-efficient lighting, meters, and factory processes;
- Mechanics rebuilding rickety electric grids with sensors and controls that monitor and distribute clean energy more effectively;
- Construction workers producing and installing green building materials;
- Environmental consultants helping companies and governments improve emissions and energy monitoring;
- Plumbers and technicians who install smarter irrigation systems to feed fields producing next-generation biofuels

The potential new business and new job creation is astounding. The question is of course, how do we get from here to this promising energy future?

The first thing we've got to do to transition to a clean energy economy is to simply learn from what we know already works. Our host country for this conference, Denmark, certainly provides a useful example.

In 1970, Denmark was almost entirely dependent on foreign sources of oil and coal for its energy. Today, it is a net exporter of natural gas, oil and electricity. Fully 20 percent of its energy comes from renewable sources. And even though Denmark's GDP has doubled in the past 40 years, its overall energy consumption has remained basically the same.

This did not happen by chance.

Over the years, the government of Denmark has built a regulatory infrastructure that provides for easier financing, permitting and zoning of renewable energy and energy efficiency projects. And it has put an added price on gas and all carbon-based fuels that make renewable energy investment more cost competitive.

Of course, other countries have different demographic and geographic profiles than Denmark, but there is certainly ample opportunity to model future policies based on what the Danes have done.

In the United States, we are exceptionally proud of some of the measures we've taken to become cleaner and greener, especially in regards to energy efficiency. In the past 25 years, the amount of energy it takes to create a dollar of GDP in the U.S. has fallen by about two percent per year.

This seemingly slight improvement in our energy efficiency has saved an amount of energy that corresponds to taking one billion cars off the road.

The U.S. government has played a large role in accelerating this trend with the adoption of more aggressive fuel efficiency standards for automobiles and our Energy Star program, which helps drive efficiency in appliances and consumer electronics.

But our private sector has also taken many impressive steps on its own.

Tomorrow and Sunday, the U.S. Department of Commerce, along with the Confederation of Danish Industry, is hosting the Bright Green Expo to showcase companies, including more than 35 U.S. companies, that are already leading the way with innovation and intelligent technologies as the solution to the global climate challenge.

GE, FedEx, Intel and virtually all of the large American companies represented at Bright Green have made commitments to reduce their carbon footprints by 25 percent or more—much of which will come from better energy efficiency.

These companies have discovered that efficiency doesn't just make sense for the environment. It makes sense for your bottom line.

When you waste less energy, you become more profitable and when a company becomes more profitable, it can create more jobs.

In fact, using energy more efficiently may be the single biggest action we can take right now to mitigate climate change and build a cleaner economy.

With efficiency, we don't have to depend on scientific breakthroughs or engineering miracles. We're not waiting for economies of scale to get big enough so efficiency can compete with other energy alternatives.

It's merely a way of maximizing the amount of energy you get from existing sources.

An upfront investment in efficiency is on average five times cheaper than investments in new supplies. And it is immune to the volatility in energy markets.

Efficiency is an economical investment whether oil is \$25 or \$250 a barrel, because it is not competing with fossil fuels.

According to the McKinsey Global Institute, the growth rate of worldwide energy consumption could be cut by more than half over the next few decades through more energy-efficiency efforts.

So, we know what works. Efficiency works. Smart incentives work. And we can build on that.

But traveling on our current path has only gotten us so far, and when we start considering more fundamental changes to the way we use energy, that's where things get difficult.

The world has spent a century investing trillions of dollars in pipelines, refineries and fueling stations to deliver fossil fuels; and in the factories, cars, homes and

businesses that run on them. That creates strong vested interests in keeping things just the way they are.

To chart a new direction, we need government to be aggressive in funding clean energy research and development, and in shaping market rules and regulations to incentivize clean energy innovation.

But this climate problem is too big, and the need for innovation too great, to be solved by government alone. To beat climate change, we're going to have to mobilize the single most powerful force for innovation that exists in the world: Our people.

In every one of our countries, we have entrepreneurs and inventors brimming with new ideas to solve our energy challenges. It is important to remember that many of the technologies needed to successfully cope with climate change simply don't exist yet.

It could be next-generation biofuels, modular nuclear reactors, electric cars charged by a smart electricity grid, or carbon capture and storage that completely changes the way the world uses energy.

It could be all of the above.

Perhaps the original idea for these innovations will come from a government research lab. But if history is any guide, the commercialization and real-world application of these technologies will be pioneered by private sector innovators and entrepreneurs.

That is why a preeminent goal of government energy policies needs to be making it as easy as possible for private sector people to develop new energy solutions and bring them to market.

We have a long way to go.

To start, we need to rethink a variety of harmful incentives that actively work against clean energy development.

To cite just one example, too many of our countries subsidize both the production and consumption of fossil fuels.

President Obama has proposed the elimination of the subsidies and the IEA and OECD estimated that this one step could cut greenhouse gas emissions 10 percent by 2050.

But this is hardly the only wrongheaded incentive we have.

In countless ways large and small, countries throughout the world have been rewarding exactly the behaviors we are seeking to change.

We cannot say on the one hand say that we want more clean energy, while at the same time providing a slew of financial incentives that promote carbon intensive fuels.

And the more we reward the status quo, the more we dissuade innovators from coming up with new energy solutions.

We simply must eliminate financial incentives that work against clean energy and efficiency, and begin creating new ones that promote it.

That is perhaps the most important feature of the comprehensive energy and climate legislation supported by President Obama and recently passed by our U.S. House of Representatives.

This bill features a market-based cap on carbon pollution that will send a surefire market signal to every entrepreneur and business in America that it's safe and profitable to make long-term investments in clean energy.

Unsurprisingly, there are naysayers who claim, without any substantive evidence, that a market-based cap on carbon emissions will usher in economic Armageddon.

But these claims are unconvincing, because we have seen similar assertions debunked in an eerily similar version of our current energy debate.

Back in the early 1990s, the United States began considering a market-based approach to curb acid rain pollutants. Prominent trade groups estimated that compliance would cost business \$50 billion a year and lead to sky-high utility bills.

To hear the doomsayers tell it, current climate change legislation is even worse.

But unfortunately for the doomsayers, addressing acid rain ended up costing less than five percent of industry's estimate—and when you account for inflation, consumers' electricity rates actually declined by almost 20 percent over the next decade and a half.

The message here is simple: When you get the incentives right, the private sector can respond with solutions that are both more effective and more affordable than anyone would have imagined.

I have no doubt that the same thing is possible when it comes to the technology to mitigate climate change.

And as the United States works to make conditions more favorable for clean energy investment at home, we will seek to do the same around the world.

In today's global economy—where ideas are just as likely to be discovered in Shanghai as San Francisco—we need to do everything we can to keep markets open and allow for the free flow of capital and ideas across our borders.

And we've got to keep working to create a global legal infrastructure that ensures that those people or companies who take great risk to create world-changing innovations must also have the promise of reward.

That is a key philosophical pillar of our continuing efforts to expand and improve global intellectual property protection.

Even with the optimism I have about our ability to discover new energy solutions that can mitigate climate change and spur the creation of millions of new jobs, I suffer no illusions that this will be easy.

World energy demand is going to increase 50 percent by 2030.

Let me just put that in perspective for a moment:

Generating that kind of energy would require building a new coal fired power plant somewhere in the world every single day for the next 27 years.

It'd be hard enough to meet that demand with any source of energy we could find

But we're not looking for any old type of energy. This new energy has to be clean to avoid catastrophic climate change. And it has to be affordable, to keep our economies growing.

I don't think the world has ever faced a challenge this daunting before.

But that doesn't make it any less urgent that we act.

The way I see the climate change challenge is relatively simple:

*We, the countries of the world, can either make difficult choices now. Or, we can have impossible choices forced on us later, when climate change gets worse and fossil fuel resources become scarce.*

The United States chooses to act now.

If we fail to meet our climate challenge, our children will live with the legacy of our inaction. They will ask us why we stood by and allowed their planet to become hotter, dryer and harsher.

But if we rise to the occasion, we can write a fantastic new chapter in the world's story. Our children will tell their children about how we rose from the brink of a global depression to build a cleaner, more sustainable economy that enables people around the world to live healthier, wealthier and more productive lives.

That's a story worth telling. And it's one I hope we can continue to write here in Copenhagen in partnership with the global community.