



## Senator Feinstein Delivers Global Warming Speech to Silicon Valley Business Leaders

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**San Jose, Calif.** – *U.S. Senator Dianne Feinstein (D-Calif.) today delivered a wide-ranging speech on global warming at an event sponsored by the Silicon Valley Leadership Group.*

*Senator Feinstein detailed the growing evidence of global warming and called on the business leaders to join her in supporting legislative measures to address the problem, including a mandatory cap and trade program, the Ten in Ten fuel economy bill, and a national energy efficiency program.*

***“With every challenge comes a new opportunity, and California is well positioned to take advantage of a new low-carbon economy. That is why the business community is so important – business must be on the cutting edge, developing the low-carbon energy technologies of the future,”*** Senator Feinstein said.

*The following is the prepared text of Senator Feinstein’s speech:*

“Today, I am here to discuss global warming -- the single greatest environmental challenge facing this planet. So let’s get right to it.

I know this leadership group recognizes the seriousness of this warming phenomenon. Some of your members have pledged to cut emissions 20 percent below 1990 levels by 2010. This is a good and helpful start. Also your support was critical to the passage of California’s groundbreaking greenhouse gas law. So thank you very much.

Now let me explain the gravity of the problem. Bottom line: the fuel we use to power our homes, our cars, and our businesses is causing the earth to warm faster than anyone expected.

The first seven months of this year, and the last three decades, were the warmest in the United States since national record-keeping began in 1895. And the Earth’s temperature has climbed to the highest point it has been in the past 12,000 years.

A scientific consensus has been forged. There is broad agreement that the Earth will only get hotter. The question is how hot and why?

First, how hot? If we act now and further temperature increases are kept to one to two degrees Fahrenheit by the end of this century, the damages – though significant – will be manageable.

But if we don't act, and warming increases by five to nine degrees, or even more, by the end of this century, the damage will be catastrophic and irreversible. That's why we must take action now.

So, each of us is confronted with a choice: a choice that will impact not only our future, but the futures of our children and grandchildren. Do we continue with a business-as-usual attitude? Or do we make the changes necessary to prevent catastrophe?

Now for the question, why? Quite simply, because we are addicted to fossil fuels. And it is the burning of these fuels – coal, oil, gasoline and natural gas and the greenhouse gases they produce – that is the primary cause of global warming.

Carbon dioxide, the most plentiful of the manmade greenhouse gases, is produced by power plants, cars, manufacturing, and to power residential and commercial buildings.

And here is the key: Carbon dioxide doesn't dissipate. It stays in the atmosphere for five decades or more – causing the Earth's temperature to rise. That means that the carbon dioxide produced in the 1950s, 1960s, 1970s, and 1980s is still in the atmosphere today. And the carbon dioxide produced today will still be in the atmosphere in 2050 and beyond. And there will be serious consequences for our planet unless we make major changes in our consumption of fossil fuels.

Leading scientists say that to stabilize the planet's climate by the end of the century, we need a 70 percent reduction in carbon dioxide emissions below 1990 levels by 2050. So the goal should be to stabilize carbon dioxide at 450 parts per million by 2050. This could contain further warming to one to two degrees Fahrenheit.

The Earth has already warmed 1 degree in the past century, and we are now seeing the dramatic effects:

- Glaciers are melting; oceans are rising; coral reefs are dying; species are disappearing.
- Extreme weather patterns have emerged – heat waves, droughts, hurricanes, floods – and they are occurring with greater frequency and greater intensity.
- In 2003, heat waves caused 20,000 deaths in Europe and 1,500 deaths in India.
- And the number of Category 4 and 5 hurricanes has doubled since the 1970's.

And global warming is also touching us closer to home. The Sierra snow pack is shrinking and the scope and intensity of forest fires in the west has increased. This is just the beginning.

Things will only get worse as Earth's temperature rises. The question is how much will the increase be?

If the temperature increases by another one to two degrees Fahrenheit over the next 100 years, we will see major -- but likely, manageable shifts -- in the world around us:

- Sea levels would rise by some six inches. Beaches would become inundated. Low-lying areas would flood.
- Large wildfires would increase by 10 percent.
- Electricity demand in California would increase by three percent.
- Africa and Latin America could see a 30 percent decrease in agricultural productivity, leading to increased hunger.

These are significant changes – but it is possible to adapt to them. But if nothing is done...if the Earth warms five to nine degrees Fahrenheit or more in the next 50 years, the face of our planet will change forever.

The Greenland and Western Antarctic ice sheets would melt completely. These two ice sheets currently hold 20 percent of the Earth's fresh water. Flooding would occur. Hurricanes, tornadoes and other severe weather would become more volatile than ever. Malaria would spread.

Here in California: One-half to two-thirds of the Sierra snowpack would disappear. This is equal to the water supply for the 16 million people in the Los Angeles basin. The rise in sea levels would cause catastrophic flooding – and the San Francisco/Bay Delta would be especially vulnerable. Catastrophic wildfires would more than double.

We had a mild taste of that future in July. Here in San Jose, temperatures spiked to well above 100 degrees. And it was far worse in other areas of the State. More than 160 people died. Death Valley temperatures soared to 126 degrees.

Scientists warn us that we may be close to a tipping point. And beyond that tipping point, catastrophe becomes a virtual certainty.

Refuse to act, or act too slowly, and humans will have caused the most sudden temperature shift since the dawn of civilization.

But, if we act soon and decisively, further global warming can be limited to one to two degrees Fahrenheit. This, I emphasize, should be our goal.

We must control and contain the warming. The question is: how do we do it?

The United States emits some 25 percent of the world's greenhouse gases, though we have but four percent of its population.

The largest contributor to global warming is electricity generation -- 33 percent -- followed by transportation -- 28 percent. These two sectors combine to make up 61 percent of the problem.

The remaining contributors are:

- Industry – 20 percent
- Agriculture – 7 percent
- Commercial – 6.5 percent
- Residential – 6.5 percent

Let me be clear: there is no silver bullet. Every business, home, and industry must do its share. So what can be done?

Let's begin with electricity generation – which is the single largest piece of the global warming puzzle. Electricity generation is responsible for 33 percent of global warming gases in the United States. And the biggest culprit here is pulverized coal.

Coal, alone, produces 27 percent of annual carbon dioxide emissions, or 2.1 billion tons every year. Globally, coal produces 9.3 billion tons of carbon dioxide every year – or one-third of all global greenhouse gas emissions. So it's critical that we find ways to clean up coal or find alternatives.

Earlier this year, the Senate Energy Committee held a conference on the way forward on global warming. The consensus was that a mandatory cap-and-trade program was the most effective way to prompt changes in energy production, especially with regard to coal. We are working to create such a program.

We would begin with two complementary bills reducing greenhouse gas emissions from the electricity and industrial sectors.

Here's how it would work: A cap on the amount of critical global warming gases – including carbon dioxide, methane, and nitrous oxide – would be established on all major emitters.

In all likelihood, the cap would remain at present levels for a few years to allow companies to change their operations. Gradually, these caps would be tightened, and emissions reduced.

Electricity producers would have two ways to meet the cap: either implement new technologies, or purchase credits from other companies that have reduced their emissions below the target cap.

Allowances will be made to provide financial incentives for coal producers to make the necessary changes. So, the cap would be met—and national levels of carbon dioxide would be reduced over time.

One of the key elements of our program is that it would allow farmers and foresters to participate and earn credits for emission reductions through green practices.

These include:

- tilling land less frequently;
- planting trees on vacant land; and
- converting crops to those that can be used for bio-fuels.

Farmers and growers would be able to earn dollars for acres converted to carbon sequestration and reduction.

Next we need to include other major industrial producers of carbon dioxide in a similar regime.

History shows that cap and trade can work. It's not a revolutionary concept. Using the Clean Air Act, a cap-and-trade regime was implemented in the 1980s to reduce sulfur dioxide and nitrogen oxide emissions from electric utility plants in the northeast. These are the primary culprits of acid rain.

In the 16 years it has been in place, sulfur dioxide emissions have been reduced by about 34 percent (5 million tons) and nitrogen oxide emissions have been reduced by 43 percent (3 million tons). So cap and trade has been used, and it has been effective.

And on greenhouse gases, the governors of seven northeastern states are instituting a cap-and trade system known as the Regional Greenhouse Gas Initiative. It goes into effect in 2008.

Their plan is to cap carbon dioxide emissions from electricity plants at current levels until 2015; and then begin reducing emissions incrementally to achieve a 10% reduction by 2019.

But a patchwork of regional programs won't work. California will have one standard. The seven northeastern states will have another standard. This does not make good long term sense. A national program is needed.

We also need to launch a major program to reduce emissions from the transportation sector. The transportation sector includes emissions from cars, trucks, planes, and cargo ships.

It makes up approximately 28 percent of carbon dioxide emissions. And passenger vehicles alone – cars, light-trucks, and SUVs – make up 20 percent of all U.S. emissions (1.2 tons).

Fundamentally, there are two ways to reduce these emissions.

1. Improve the fuel efficiency of vehicles.

2. Move away from oil and gasoline-based fuels and toward alternatives.

Bottom line: we must do both. The good news is that the technology exists to significantly improve the fuel economy of these vehicles. The bad news is that Detroit and many foreign auto manufacturers refuse to utilize the technologies to produce better fuel economy.

So Senator Olympia Snowe of Maine and I have offered legislation that would require the mileage for all cars, pick-up trucks, and SUVs to be increased from 25 to 35 miles per gallon over the next 10 years.

If this bill becomes law:

- 420 million metric tons of carbon dioxide would be prevented from entering the atmosphere by 2025. That is the equivalent of taking 90 million cars off the road in one year.
- 2.5 million barrels of oil a day would be saved by 2025. By coincidence, this is the amount of oil imported daily from the Persian Gulf today.

So, if the fuel economy of vehicles is increased, it will be a major step in the right direction.

The other side of the transportation coin is alternative fuels.

As long as our nation continues its addiction to oil, we cannot sufficiently slow the warming trend. That's why we need to develop new, clean technologies and alternative fuels. This includes the electric plug-in hybrid, bio-diesel fuels, hydrogen power, and E-85 made from cellulosic ethanol.

Thirty-seven million gallons only of biodiesel were produced in 2004 in the United States. But that number more than doubled to 75 million gallons in 2005. But additional incentives are still needed to move much more aggressively toward producing and using alternative fuels.

So that's the electricity and transportation sectors.

But America needs to become much more energy efficient as well – both in terms of green building code standards and individual conservation and energy use. An aggressive energy efficiency program could prevent a substantial amount of carbon dioxide going into the air.

This would come from the incorporation of energy efficient building materials in construction – such as insulation, more efficient windows, and renewable technologies like solar or wind.

This type of green construction is also cost-effective. An initial \$100,000 investment can result in a savings of \$1 million or more over the life of a building of 20,000 square feet – which

is about the size of a Borders bookstore. And the bigger the building, the greater the potential savings.

Individuals can also make a difference. This means carpooling, using energy efficient light bulbs, and choosing ENERGY STAR appliances.

ENERGY STAR home products, such as air conditioners, furnaces, refrigerators, dishwashers, phones, DVD players, and televisions, must become a standard buying practice for all Americans. In 2005, these products saved consumers \$12 billion, and reduced emissions by nearly 5 percent. All of these changes are easy to do, and they can really make a major difference.

In California, energy use per person has not gone up in the past 20 years, while national energy use has skyrocketed by 50 percent.

Last September, the State announced a \$2 billion energy efficiency and conservation program to decrease carbon dioxide emissions by approximately 3.5 percent (3.8 million tons) by 2008. That is the equivalent of reducing California's electricity emissions by 3.5%, or taking 650,000 cars off the road. California's program can and should be replicated on a national level.

I'm sorry to say that there won't be a national global warming bill this year. But early on in the 110<sup>th</sup> Congress, I plan to introduce a series of bills:

1. A mandatory cap-and-trade program, which would provide substantial emissions reductions by 2050, enough to stabilize the climate and prevent dangerous climate change. There would be one bill for the electricity sector, and another for the industrial sector.
2. A bill requiring all passenger vehicles – cars, SUVs and light trucks – to have increased mileage of 10 mpg within the next 10 years. That means mileage would go from 25 miles per gallon today to 35 miles per gallon by model year 2017.
3. An alternative fuels bill that requires 70 percent of all vehicles produced after 2014 to be flex-fuel capable. The cost is small, \$100 per vehicle. These vehicles would be required to have a green gas cap to show the owner that the car can accept other fuels. We would also require that gas stations owned and operated by major oil companies have at least one pump that provides alternative fuels. This will ensure that there is both a supply of alternative fuels and demand for them in the market place.
4. A national energy efficiency program -- modeled after what California has achieved, including strict appliance and building standards and requiring utilities to use energy efficiency measures to meet a portion of their demand.
5. Elimination of the protectionist tariff (54 cents per gallon) placed on Brazilian ethanol, which prevents its competition with domestic production. It is estimated that Brazilian produced E-85 will be cheaper and work better. It was put in to protect corn ethanol, which is not energy efficient.

And Senator Craig Thomas and I are working on a plan to use Wyoming Powder River Coal to produce cleaner electricity by sequestering carbon dioxide. The power will then be sold to Western States including California.

These bills are just the beginning.

Additionally, the U.S. should make addressing global warming a top priority and join the European Union and other nations in reducing emissions. The U.S. can, and must lead, but it cannot solve the problem itself.

Here's why: the United States certainly leads in the production of greenhouse gases, but we are closely followed by China, Europe, Russia, Japan, and India. So all countries must participate in a global solution to a global problem.

The Kyoto Protocol is certainly not perfect, and it will expire in 2012. But the U.S. needs to be a leader to ensure that there is a framework in place after 2012 to prevent catastrophic climate change.

The U.S. should also lead an effort with China to create a public-private partnership fund to prioritize bilateral global warming projects. China's coal use outpaces that of the U.S., EU, and Japan combined. Coal accounts for 70 percent of China's energy needs. China is building a new pulverized coal power plant every week. China will soon pass the United States as the biggest emitter of carbon dioxide. If China continues its course, it could cause carbon dioxide levels to quadruple.

So it's vital to engage China and help it solve its energy needs with cleaner fuels. That is why a private/public partnership that funds key carbon dioxide reduction projects on a bilateral basis is so important.

I would like to encourage the Silicon Valley venture capital community to consider investing in joint ventures to develop clean power quickly in China, as well as the United States.

Taken together, the policies I've outlined tonight can make a significant difference. You have to look no further than Great Britain to see what can be accomplished. Great Britain has brought its emissions to 14 percent below 1990 levels.

They've done this through a comprehensive program requiring electricity suppliers to generate 10 percent of their electricity from renewables by 2010, making grants available for the installation of renewable sources, and providing incentives for the use of more fuel-efficient vehicles and alternative fuels.

The Senate passed a similar program last year, but, unfortunately, it was dropped in conference by the Republican majority. We will pursue this in the next Congress.

The good news is that California is again leading the way—and thanks to your help, the State now has on the books a law to reduce greenhouse gas emissions to 1990 levels by 2020.

The State has also entered into a partnership with Great Britain to share best practices on how to reduce emissions. And it has enacted a law requiring a 30 percent reduction in greenhouse gases from the tailpipes of passenger vehicles by 2016.

Ten other States have followed California's lead, and Canada has adopted similar regulations.

And earlier this year, Los Angeles joined the Clinton Climate Initiative, along with 21 of the world's largest cities to create an international consortium to reduce costs on energy-efficient products and share ideas on cutting greenhouse gas pollution.

With every challenge comes a new opportunity, and California is well positioned to take advantage of a new low-carbon economy. That is why the business community is so important—business must be on the cutting edge, developing the low-carbon energy technologies of the future.

And already, businesses are proving that you can do well by doing good.

Those companies here today that are participating in the Sustainable Silicon Valley Carbon Dioxide Reduction Initiative have saved over \$20 million, while setting a path to reducing emissions 20 percent below 1990 levels by 2010.

And that's just the start. With the passage of California's new global warming law, California will be home to the green technology industry.

Substantial venture capital funding is available today for clean energy projects expected to generate between 48,000 and 75,000 new jobs in our State over the next five years.

Here are just a few of the most promising:

- A Silicon Valley start-up -- Bloom Energy -- has raised \$165 million to develop clean fuel cells that will produce both electricity and hydrogen to fuel our vehicles.
- Bill Gates has joined with venture capitalist Vinod Khosla to spearhead investment efforts in ethanol plants which, when completed, will produce 220 million gallons by 2009.
- And others are investing in new ideas – inexpensive solar panels, windmills that can be built in your backyard for \$10,000, and geothermal energy that harnesses the heat of the Earth.

California is leading the way, and these efforts are important. But in the end, we need national leadership to do what needs to be done. Working together, I believe we can reduce our emissions sufficiently to stabilize the Earth's climate, to minimize warming, and slow global temperature increases to 1-2 degrees to avoid catastrophic climate change.

Here is what I ask of you. Work with industry leaders in other states to support immediate action on climate change.

Add the Silicon Valley voice in support of passage of a mandatory cap and trade program, the Ten in Ten fuel economy bill, and a national energy efficiency program. And, at the same time, prove that becoming a low-carbon economy is good for business and the economy. Don't shift the burden to the next generation.

The choice is clear. It is time to stop talking and to begin acting.

Thank you."

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