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Treasurer John Chiang and Leading Papal Advisor on Climate Change Open State's First Green Bonds Symposium

Both rally behind expanding financing for green infrastructure projects that counter climate change

SANTA MONICA, THE MILKEN INSTITUTE – California State Treasurer John Chiang and world-renowned climate scientist Dr. Ram Ramanathan, Professor of Climate, Atmospheric Science & Physical Oceanography at Scripps Institution of Oceanography, delivered remarks today to environmental and financial experts at the California Green Bond Symposium in Santa Monica.

Green bonds, have the potential to greatly increase the flow of affordable capital to pay for the conversion from fossil-fuel infrastructure to greener, carbon-free alternatives.

The symposium was hosted jointly by the Treasurer, <u>Environmental Finance (EF)</u>, a London-based publishing company that reports on green finance, and the <u>Milken Institute</u>, a public policy think tank that works to increase global prosperity.

A copy of the Treasurer's prepared remarks follow:

There is no better time than now to discuss climate change.

It has been a decade since Al Gore's "An Inconvenient Truth" stirred a generation.

It has been two years since 195 nations met and hammered out the Paris Agreement.

And it has been one year and 38 days exactly since the inauguration of President Donald Trump and the entrance of an administration that now threatens our efforts to preserve our planet for future generations.

The president and his top appointees have dismissed and denied the science behind climate change. I continue to scratch my head in utter disbelief that among the seven "dirty words" that are strongly discouraged by Trump's CDC are – now the kids in the audience should close their ears -- "evidence-based" and "science-based."

Within hours of his inauguration, Trump's team began marching the nation backward into a policy of retrenchment that ensures our continued dependence on fossil fuels.

We thought we would have some rough days ahead.

It has been worse than we imagined.

In the last decade, global sea levels have risen at an alarming pace, with the rate nearly doubling over the last century. The rising waters threaten to eventually swamp low-lying countries and coastal areas of the United States – from the bayous of Louisiana to the emerald waters of the Puget Sound.

Yet, Trump's interior secretary Ryan Zinke – as if resurrecting Sarah Palin's cry of "Drill, baby, drill!" – is proposing the largest expansion of offshore oil and gas drilling in U.S. history. Oil and gas companies are being invited to drill new wells in six zones along the coastline of northern, central and southern California.

Air pollution, a primary cause of climate change, kills 18,000 people every single day. And of the 18 hottest years on record, 17 have now occurred since 2000, with the last two years being the hottest.

Yet, Energy Secretary Rick Perry and others in the Trump Administration are wholly wedded to the ridiculous fiction that there is such a thing as "clean coal." This claim that America can continue its gluttony for coal without the resultant pollutants, carcinogens, and greenhouse gases can only come from an administration led by a man who claims he is a stable genius, as well as the most physically fit and uniquely qualified individual to have ever occupied the Oval Office.

Speaking of the President, as a candidate, Trump suggested global warming is a hoax "created by and for the Chinese" to make U.S. manufacturing noncompetitive.

And only last month, now as President, Trump doubled down on his climate denial. As icy cold gripped the northeast, he tweeted:

"Perhaps we could use a little bit of that good old Global Warming that our Country, but not other countries, was going to pay TRILLIONS OF DOLLARS to protect against..."

Hurricane victims in the Gulf States and Puerto Rico ... flooding victims throughout the Midwest ... and wildfire victims right here in California ... know better than anyone that "good old global warming" is real and not a laughing matter. Cumulative damages caused by floods, fires and other extreme weather events topped \$300 billion in 2017.

America ... America ... has abdicated its role as a global leader.

Trump carried through on his promise to cavalierly pull the United States out of the Paris climate accord – an agreement that is now supported by ... every ... other ... country ... on earth ... except... the United States.

While Trump is trying to convince us all that climate change is a hoax, the rest of the world is focused on solutions, and just as importantly, how to pay for those solutions.

The signatories of the Paris Agreement committed themselves to replacing infrastructure powered by fossil fuels with low-carbon alternatives.

Worldwide, the price tag for this conversion is pegged at \$93 trillion dollars ... that is trillion with a "T" ... including an estimated \$8 trillion dollars for the United States alone. To put the enormity of these numbers in perspective, understand that the national debt accumulated since the birth of this nation is slightly less than \$20 trillion dollars.

Paying for these investments is a challenge of the first order. So it is time for thinking that goes beyond the traditional approaches for financing our critical public works.

I believe the bond markets – and specifically "green bonds" – are an essential tool in raising the capital necessary to finance our transition to a low-carbon economy.

Likewise, the same tool may provide hope for our country's chronic underinvestment in infrastructure that leaves our roads dilapidated, our bridges at risk of collapse and many communities without safe, reliable drinking water.

Some \$3.6 trillion dollars must be spent by 2020 on transportation, energy, schools, water and other facilities to bring the nation's infrastructure up to acceptable standards.

The Golden State alone faces a funding gap of \$359 billion dollars over the next 10 years in meeting its public infrastructure needs.

While Trump wants to preserve the infrastructure of the past, I look at green bonds as a tool to pay for the infrastructure of the future.

So, what exactly are green bonds?

Simply, green bonds are debt issued by either corporations or public agencies to finance climate-friendly or other environmental projects.

Since the first issuance in 2008, among other things, green bonds have been used to generate solar and wind power, reduce methane emissions, build more efficient transportation, protect against floods, and provide clean drinking water.

Green bond issuances are booming worldwide. Just nine years after the issuance of that first green bond, the total amount of green bond issuance grew to an estimated \$155 billion in 2017.

There have been many milestones. California was the first state to reach \$5 billion dollars in municipal green bond issuances. That was in November of 2017.

Individual green muni bonds have been used by public agencies across California – from Trinity County in the north to San Diego in the south and points in between.

Despite impressive progress, green bonds still represent a tiny fraction of the worldwide bond market.

Here in the United States, green bonds comprise less than one-tenth of one percent of all outstanding debt.

China – where visibility is measured in yards, not miles, because of pollution – is looking to become the world leader in issuing green bonds to fund environmentally friendly projects. Meanwhile, the Trump administration dawdles and debates whether climate change even exists.

And here I want to say that ... unlike Trump, who has threatened fire and fury on the Korean Peninsula, and boasted about trade wars the world over ... the only conflict or competition I want to win is who can raise the most green capital to promote environmental protection, build clean infrastructure, and improve living standards for people.

There is great latent potential in the still young green bond market. It has the potential to release a torrent of new and affordable capital for the U.S. to meet its infrastructure and climate change needs for decades to come.

In 2016, I searched for ways to hasten the maturing of our green bond marketplace, conducting a five-city national listening tour during which I met with three dozen of the nation's most influential investors.

Together, these investors control trillions of dollars in investable funds. They told me repeatedly that there are numerous barriers to shifting more of the funds they control to environmentally friendly projects.

But they also viewed these barriers as surmountable. A vibrant green bond market is within reach, they assured me.

Those hours of wide-ranging discussions and probing questions were distilled into a report titled Growing the U.S. Green Bond Market – Volume 1: The Barriers and Challenges.

This report covered a number of issues, ranging from the culture wars over the legitimacy of climate change to hyper-technical impediments to market development.

Later today, we will preview some of the results from yesterday's extremely productive Milken Institute Innovations Lab. What is an innovations lab, you ask?

Think of a hack-a-thon, but instead of gathering computer experts to crack complex code, we convened global leaders in climate science, public policy and

the capital markets to break the back of the problems outlined in my first green bonds report.

Within the next two months, we will publish the full results of yesterday's hack-a-thon.

From all of this it is clear that green bonds offer one of the best actionable solutions to financing a healthy, prosperous and enduring future for generations to come.

As the Irish statesman and philosopher Edmund Burke once wrote, "The only thing necessary for the triumph of evil is for good people to do nothing."

The fate of our planet and mankind hangs in the balance of a degree or two Celsius. We must muster both the will and the way to shift from a fossil fuel-based economy to one that is carbon free.

More than a decade ago, when the existential threat of climate change first entered the public mainstream, skeptics contested the science ... and argued nothing should be done ...

When the scientific community reached consensus that climate change is to blame for rising sea levels, warming global temperatures and extreme weather patterns, the skeptics argued that humans were not the cause. And, again, argued nothing should be done.

Today, the overwhelming body of scientific research has established an irrefutable link between global warming and human activity. Still the skeptics argue that nothing should be done because it is "too costly", "too disruptive," or just "too soon."

The skeptics and deniers are wrong. And they always have been.

It is up to good people to act now. California is committed to moving forward and I am committed to finding a way to pay for it.

I invite this community of innovators and thought leaders to join me in this next step. Together, we can harness the awesome potential in this young and exciting marketplace. I admit ... green bonds sound boring. But this is about acting responsibly and ensuring California continues to lead the nation with a progressive vision.

At a time when the White House is doubling down on energy policies developed for a bygone century, green bonds will empower ordinary people to use the marketplace to serve the public good – and more.

We are creating an opportunity for Americans who care deeply about drinkable water, breathable air, and clean transportation to invest in that very future.

And ... Washington can't stop us.

Thank you.

Watch the livestream here:

https://www.facebook.com/CaliforniaSTO/videos/875923375911091/

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