

U.S. DEPARTMENT OF COMMERCE PRESENTATION

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On Hurricanes and China's Green Economy, Outbound Foreign Domestic Investment and Students in the U.S.

- The following is the text of a speech delivered on Friday, September 15, 2017 by David Elkin at the Department of Commerce in Washington, D.C.

Hello to all of those in attendance here at the U.S. Department of Commerce in Washington D.C. and to those joining this presentation from remote locations. My name is David Elkin and I am Managing Director of GreenWorld Capital, LLC, an international merchant bank formed in 2008 and based in Philadelphia. GreenWorld maintains a significant focus on cross-border transactions involving companies and investors in the U.S. and China in various sectors, including the environment.

I'd like to thank you all for attending today's Department of Commerce event, with a special thanks to Tali Levine for inviting me to be here. Tali has been an extremely valued relationship for my company over the past 6 years, introducing GreenWorld to state department officials, and others, across China, Israel and South Africa. Whenever called upon, Tali has been willing to help. The state department is fortunate to have someone as dedicated and resourceful as Tali working on their team and I'm very pleased to call her my friend.

My talk today will touch on various developments in the U.S. China investment landscape in the area of the environment and bilateral foreign direct investment – separate topics - but with considerable overlap of interest in both countries, and the world. I plan to speak for about 20 minutes, followed by a brief Q&A. Since there are a number of you dialing in, I will not be using any slides – other than a few very introductory slides that are being projected here for those physically present.

Also, next month there will be a discussion on various aspects of the U.S. China economic relationship, with an incredible panel of experts including representatives from Albright Stonebrige, Huawei, Goldwind, Dentons, American Enterprise Institute and the Woodrow Wilson Center. It will likely be held at Dentons in D.C. Attendance will be limited so if you are interested in receiving an invitation please email me at david@greenworldcap.com and I'll pass it on to the appropriate people.

On with the show –

As relates to the environment, I'd be remiss to not start off by discussing the devastation caused by Hurricanes Harvey and Irma and offer our continued prayers for the well being and recovery of everyone impacted by these devastating storms. Hurricane Harvey dumped more than 51" of rain in parts of east Houston, the largest rainfall in the history of the lower 48 states. Hurricane Irma generated sustained winds of 185 MPH, the strongest Atlantic Basin hurricane in history. You know, back in 2012, after Hurricane Sandy, then NYC Mayor Michael Bloomberg made a statement that was featured on the cover of Business Week – I'm sure many of you remember. He said "its global warming stupid". I'm not qualified to speak much about the science of climate change, but it seems to me that there has been a stunning dearth of discussion on why we are seeing storms of such unprecedented, truly biblical, strength and causing such unprecedented destruction.

It's estimated that when the full impact is accounted for, Harvey and Irma will have generated \$290 billion of property and economic damage, exceeding 1.5% of the U.S. GDP. If we add in an estimated \$170 Billion from Katrina and \$80 Billion from Sandy that totals \$540 billion. That's just 4 recent headline-making storms.

A large part of the clean energy debate in the U.S. regards the economic cost of renewable energy. I did some back of the napkin calculations on how much renewable energy power generation could be built with \$540 billion. For ease of reference I assumed that all \$540 billion was spent on onshore wind at \$1.3MM per MW. The result is that \$540 billion would build approximately 415 GW of wind power generation, about 5 times the amount of wind power currently constructed in the U.S., with the capacity to provide 35% of the total current U.S. electricity consumption. Please understand that the above are all estimates – none of which I take ownership of - but this is only 4 storms. If we're talking about the cost of renewable energy – you really need to talk about the cost of climate change.

Of course far more dear is the loss of lives and the social impact on those affected, both in the U.S. and globally. For those on an island like Barbuda, that Irma left uninhabitable after destroying 95% of the buildings on the island, life may never be the same.

While the clean energy discussion in the U.S. is driven by considerations of economics and, by some, global leadership, in China it is driven by pollution and the outcry of Chinese citizens for their government to clean up their environment. It is, in the view of many, an existential issue for the Chinese government.

In April of 2015 then U.S. Secretary of Commerce Penny Pritzker and then U.S. Secretary of Energy Ernest Moniz headed a trade mission to China, *specifically* to help U.S. companies launch or increase their business in China across the a wide range of environmental technologies. The technologies being discussed during that trade mission were all subsumed

within the Strategic Emerging Industries identified in China's 12th FYP, all integral to China's addressing its environmental crisis and all targeted for enormous investment through 2030 and beyond. I had the pleasure of meeting with your colleague Tom Dycus following the mission, who gave me a much-appreciated briefing.

The 2015 China Clean Tech Trade Mission was a follow-up to the climate accord reached by President Obama and President Xi at the Asia Pacific Economic Cooperation Forum, or APEC, in Beijing in November 2014. As part of the APEC accord, the U.S. agreed that, by 2025, it would emit 26-28% less carbon than it did in 2005, and China agreed to peak its carbon emissions by 2030, if not sooner, and to increase the share of non-fossil fuels to 20% of their energy mix by 2030. The APEC Climate Accord was hailed by President Obama as a "historic agreement" and a "major milestone in the "U.S. - China relationship".

As to the content of China's commitment made at APEC in Beijing – which is still China's official target - experts have opined that China's emissions could well peak by as early as 2025, so President Xi's commitment to peak emissions by 2030 seems pretty much business as usual.

However, for China to generate 20% of its 2030 energy from non-fossil sources will require the addition of an estimated 800-1000 GW of nuclear, wind, solar, hydro and other zero-emission generating capacity by 2030. That is close to the entire current electricity generating capacity of the United States!

China is on track to accomplish this goal. In 2014 China added almost 58 GW of non-fossil fuel power generation at which time we calculated that if China maintained that same level of addition through 2030 they would add 928 GW of non-fossil generation through 2030, easily meeting their goal. How are they doing since? Well, in 2016 China added 71 GW of non-fossil generation, including 12 GW of hydro, 7 GW of nuclear, 18 GW of wind and 34 GW of solar. To put this in a little perspective, in 2016 U.S. solar power generation grew an impressive 95%, bring the total U.S. solar capacity to 40 GW. At the end of 2016 China's capacity was at 77 GW, almost twice the U.S. At the end of 2016 U.S. wind energy nameplate capacity stood at 82 GW. China's installed capacity was at 149 GW. China has significant transmission issues, so a large amount China's renewable capacity is not grid-tied. But that's a discussion for another day.

According to The World Bank, China's resource availability is considerably greater than that required to support this development goal.

We estimate the total cost of this build-out at \$2.5 Trillion.

And globally, China's position in renewable energy manufacturing is dominant, with 9 of the world's top 10 solar manufacturers in China and 7 of the world's top 15 wind turbine

manufacturers in China. Of course been a lot of controversy surrounding the impact of Chinese renewable energy products, particularly solar, in the U.S. and globally.

Moving on to China outbound foreign direct investment, I started speaking about this topic in around 2011, largely citing early work by AM-CHAM in Shanghai, the Woodrow Wilson Center, which published an excellent 2011 article call “An American Open Door”, as well as Dr. Derek Scissors of the American Enterprise Institute, then at the Heritage Foundation. Dr. Scissors will be a panelist at next month’s conference. At the time all were theorizing about why China OFDI was likely to grow significantly, based primarily on FDI theory and looking at FDI statistics globally. There were many skeptics who believed that China’s economic opportunities on the mainland were so compelling that meaningful outbound FDI would not occur. There were also many skeptics who felt that Chinese investment in the U.S. would not materialize because of resistance, at least perceived resistance at the time, to Chinese investment in the U.S.

While there are current discussions in China and the U.S. regarding the future of China outbound FDI to the U.S., it’s now about whether it should be reined in.

According to the United Nation’s Conference on Trade and Development, or UNCTAD, China’s outbound FDI in 2016 was \$183 billion, reflecting an increase of almost 44% over 2015, and making it, for the first time, the 2nd largest provider of foreign direct investment in the world, behind only the U.S. The U.S. OFDI in 2016 was \$299 billion, which, while the largest in the world, was actually less than U.S. OFDI in 6 of the last 10 years. Interestingly, China’s outbound FDI in 2016 equaled 1.6% of its 2016 GDP of \$11.2 trillion and the U.S. OFDI in 2016 was 1.6% of its 2016 GDP of \$18.57 trillion. While China’s OFDI flows in 2016 were, by far, it’s largest ever, the only thing that is surprising is the trajectory of growth, not the absolute amount of the outbound FDI or their outbound FDI as a percentage of GDP. In fact, according to UNCTAD, the average G-20 nation has OFDI flows equal to 2% of GDP and the average OECD nation has OFDI flows equal to 2.8% of GDP. There’s a lot of room for growth.

The U.S. has historically been the largest global recipient of FDI, at about 17% and China’s outbound FDI to the U.S. has generally been tracking at this percentage, equaling 17% in 2014, and a record \$46 billion, or 25%, in 2016. Year-to-year comparisons are skewed by large transactions in one country or another, such as ChemChina’s recently- approved \$43 billion acquisition of Swiss agricultural giant Syngenta. But all signs point to the U.S. continuing to be a major recipient of growing outbound FDI WELL ALMOST ALL SIGNS!

There are headwinds – headwinds in China that can impact the growth of China OFDI generally, and headwinds in the U.S. that can impact China outbound FDI to the U.S.

As for headwinds in China, amid slowing domestic growth the government is concerned, about the dramatic growth in outbound FDI and the fact that China’s outbound FDI now exceeds

China's inbound FDI. New rules are being put in place that could impact China outbound FDI going forward, most specifically for private investors as opposed to State Owned Enterprises.

In the U.S. we have a somewhat disparate opinions and goals regarding China FDI at the federal, state and local level. The Trump Administration has expressed significant concerns about China's growing economic influence in the U.S. and abroad and the Committee on Foreign Investment in the U.S., or CFIUS, which is charged with reviewing potential acquisitions of U.S. companies by foreign entities for national security concerns, seems certain to undergo reform. It seems that the CFIUS reform may expand the CFIUS mandate beyond considerations of national security to include various economic considerations, one of which may be a "net benefits test". There are currently several vacancies on the 9 member CFIUS, but nonetheless, CFIUS reform is likely to progress this year and, if and when passed, could have a significant impact on U.S. inbound FDI, from China and elsewhere.

Notwithstanding the headwinds, there are major forces seeking to attract China FDI across the U.S. The presence of the U.S. Foreign Commercial Service in China is 3 times larger than it is in any other country. Select USA was created in 2011 specifically to attract FDI to the U.S. State and local governments across the U.S. maintain a larger presence, both directly and through liason relationships in China, than any other country in the world – virtually all focused on attracting investment from China. I have spent considerable time with state and local officials in PA in connection with their efforts to attract Chinese investment to Pennsylvania in general and in the Philadelphia region, in particular.

Inbound Foreign direct investment is integral to the U.S. economy. In June 2011 the President's Council of Economic Advisors published a report on the importance of inbound FDI to the U.S. Economy. It is very revealing. In 2008 U.S. majority owned affiliates of foreign companies:

- Employed 5.7 million U.S. workers (5% of the private U.S. workforce, and 13% in the U.S. manufacturing sector);
- Paid compensation that averaged more than \$71,000 per U.S. employee in 2008 (as compared to average earnings of \$54,000 for full-time annual workers in the economy as a whole);
- Owned \$11.7 trillion in U.S. assets;
- Generated \$3.5 trillion in annual sales;
- Invested \$188 billion in capital expenditures (11.3% of total U.S. private investment);
- Invested \$40.5 Billion USD in R&D (14.3% of total U.S. private R&D); and
- Were the source of 18.1% of U.S. exports

There are many other factors in the U.S. and China that will influence our bi-lateral relationship in the future across many arenas, including the environment and FDI. There is one that I'll

mention specifically, and that is the growing number of academically talented and highly motivated Chinese students being educated in at U.S. colleges and universities. In 2007 there were approximately 80,000 Chinese students being educated in the U.S. In 2011 that number grew to almost 200,000 and in the calendar year 2015-2016 that that number grew to over 328,000, equaling 31.5% of all international enrollments in the U.S. Chinese students in the U.S. included the children or grandchildren of 5 of the 9 members of the Politburo's Standing Committee, the supreme decision making body in China. This is only one factor among many, and there is a lot of uncertainty in the short term regarding the China outbound FDI to the U.S. and U.S. China cooperation regarding the environment. But I believe that the number of talented, and influential, Chinese students being educated in the U.S. today is a leading indicator of the prospects for the future of cooperation between the U.S. and China, in the environment, foreign direct investment and many other areas – the short term is a bit hazy, but long-term I'm very bullish.

Thank you again for the opportunity to speak with you today. I'm happy to try to answer any questions.