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Introductory Remarks
by
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Acknowledgements

Good Morning.

I am Bob Marlay, with the U.S. Department of Energy. My counterpart in China is Counselor LIU Zhiming, who will speak next. We are the co-Directors of the U.S.-China Clean Energy Research Center, a co-sponsor of this workshop.

On behalf of the Department of Energy, I would like to welcome our many distinguished guests and participants, particularly as many as 30 who have come from such a long distance, China. Welcome to all.

I would also like to thank our meeting hosts and organizers, namely:

- Stanford University and its Law School (Dean Mary Elizabeth MAGILL)
- The Steyer-Taylor Center for Energy Policy and Finance [Dan REICHER, the Center's Executive Director, and Jeffery BALL, Scholar-in-Residence, formerly from the Wall Street Journal]
- U.S.-China Clean Energy Forum [Dennis BRACY, Stacy BAIRD, XU Wei Hibbeln]
- Ministry of Science and Technology [JIN Xiaoming, LIU Zhiming, WANG Qiang, CHEN Jiying]

Under Secretary David Sandalow -- my boss at DOE -- is passionate about what we are doing here. In fact, it was his vision and leadership that conceived and helped launch this effort, now nearly 4 years ago.

He will give a keynote address here tomorrow morning. He apologizes for not being here today. Presently, he is with Secretary of Energy Chu at the opening of DOE's annual summit of innovators and entrepreneurs at the Advanced Research Projects Agency for Energy, known popularly as "ARPA-E".

U.S.-China Clean Energy Research Center

For those of you who may not be familiar with the U.S.-China Clean Energy Research Center -- or as we call it, "CERC" -- it is a bilateral research initiative to accelerate clean energy technology development and deployment in both countries.

Briefly summarizing its lineage, it is what we call in Washington a "Presidential Initiative". It was:

- Launched by two Presidents – Presidents HU Jintao and Barack Obama;
- Chartered by the countries' highest-level science officials:
    - Minister of Science and Technology, WAN Gang; and
    - Secretary of Energy, Steven CHU;
- Strongly supported by MOST and DOE, with the equivalent of $150 Million pledged over 5 years, shared equally by both sides;
- Organized under a novel Government-to-Government Protocol; and
- Empowered by a novel Intellectual Property Annex that:
    - Strengthens protections of IP;
    - Facilitates the joint creation of IP, and
    - Enables the exploitation of IP through licensing under favorable terms and conditions to the participants in the individual research projects.

Why CERC?

So, one might ask, why would such an "experiment" in clean energy innovation rise to this level of diplomatic interest? It is because our two countries share common strategic interests. A few well known facts, I think, may bear repeating:

- The United States and China are the world's two largest economies;
- We are the world's largest producers and consumers of energy;
- We depend heavily on coal for electricity production.

- We account for 40 percent of global emissions of greenhouse gases;
- Oil is our life-blood and we import more than 1/2 from insecure sources;
- We place high priority on improving energy efficiency;
- We are expanding and modernizing infrastructure, much of which has yet to be built and can be significantly influenced by advances in technology;
- Both countries see scientific discovery and innovation as a means to inspire and spur economic growth and improve the quality of life of all citizens; and
- Both countries have vast intellectual capacities for solving BIG problems.

So, Why Not Work Together?

The key idea of CERC is to address our joint challenges better, faster and cheaper by finding productive ways to work together and learn from each other.

We now have 3 CERCs – Clean Vehicles, Advanced Coal Technology, and Buildings Energy Efficiency -- each funded over 5 years at $50 million a piece.

- We have 88 projects, of which more than two-thirds are joint;
- We are supporting more 1,100 researchers; and
- We have more than 110 partners.

We believe that we are building a "new model" for enhanced S&T cooperation between our two and creating an attractive platform for collaborative research and business investment.

Early Signs of Success:

We are already are seeing some early signs of success.

- We are seeing some technical breakthroughs in all 3 CERCs;
- Research and business relationships continue to expand and deepen;
- Researchers have access to and are taking advantage of unique experimental platforms and data in the other's country;
- Industrial partners are guiding R&D planning, buttressed by serious cash and in-kind contributions;
- Business ventures are exploring ways to collaborate with CERC, share data, and accelerate new technology deployment;
- Additional private partners are seeking to join;

- Other countries are beginning to take notice and observe our progress.

The elements of CERC that, I believe, are attracting interest are:

- Support and engagement by the two governments at the highest levels – in Washington and Beijing;
- Ambitious technical projects are focused on important problems;
- We have built strong teams of distinguished and creative scientists and technical leaders;
- Emphasis on "collaboration" (joint work), not just "collegial" work;
- Strong, but flexible, framework for protecting intellectual property (IP);
- Endorsements of IP frameworks by the two governments, which enables oversight and encouragement of compliance; and
- A guaranteed right to exploit IP in the other country's territory, which can potentially facilitate access to expanded markets for new technologies.

Building on Hainan

This workshop builds on -- and extends -- the work of an earlier IP workshop in Haikou, Hainan Island, China, and held one year ago. Its findings are documented in the excellent summary by Professor Joanna Lewis, which is posted on our CERC website.

We learned there that:

- There are significant differences between the US and Chinese patent systems;
- US and Chinese inventors would benefit from understanding these differences better;
- There may be advantages to conducting R&D under US-China governmental agreements . . .
- But this brings additional and specific IP considerations unique to government-funded research or state-owned assets in both countries;
- The treatment of background IP is very important in collaborative R&D;
- For an agreement to be enforceable in China, mandatory provisions of Chinese law must be complied with;
- There are differences in the definition of "exclusive license" in US and Chinese law, which can lead to confusion;

- The CERC's Technology Management Plans (TMPs) have established a more flexible international IP regime than previous S&T agreements; giving rise to new opportunities; and, so on.

I recommend that you read Professor Lewis paper at www.US-China-CERC.org.

Looking Ahead

We believe that we are on to something good here.

In 2012, there were 4 independent evaluations of CERC, including one commissioned by MOST, and carried out by China's National Council of Science and Technology Evaluation in China. Some findings are, and these are not my words, I quote:

- CERC is a "milestone initiative", that is "pragmatic" and "win-win";
- It enables and new kind of relationship, built on mutual trust, understanding, and friendship;
- It provides for protection of background IP, agreement on rights, and provides means for resolution of disputes;
- CERC has a governance structure that facilitates collaborative work; and
- The "technology management plans", with government endorsements, are "groundbreaking".

Charge to Participants

So, in closing, I ask, "How can we take this to the next level?" We have 2 days. With all of this experience and knowledge in one place, let us learn as much as we can and address the following questions:

- How can we strengthen the practice of IP protection in US-China relations?
- Can we successfully apply the CERC model without high transactions costs?
- When challenged, will our agreements hold up?
- If there are sticking points, can we fix them?
- If appropriate, can we extend the CERC's IP features more broadly to other domains of bilateral science and economic cooperation?

If our two countries can find practical ways of working together on cutting-edge innovation – with IP protected -- we will undoubtedly accelerate technology development, speed its deployment, and realize sooner the resulting benefits for the peoples of both countries.

This is a challenging but most worthy goal.

I wish you a most educational and productive workshop.

Thank you for your attention.