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MISSION INNOVATION

Interview with US Energy Secretary Ernest Moniz

US Energy Secretary Ernest Moniz sat down with the Center on Global Energy Policy's David Sandalow at COP21 in Paris earlier this week to discuss climate change and energy innovation. Secretary Moniz highlights the recent announcements of Mission Innovation and the Breakthrough Energy Coalition in the transcript below.

David Sandalow: *Thanks for sitting down with me Mr. Secretary. What are you doing here in Paris?*

Secretary Moniz: I'm helping deliver President Obama's message on climate change. As the President emphasizes, clean energy technologies are central to meeting the challenge of climate change. Roughly two-thirds of the heat-trapping gases released each year come from the energy sector. Any solution to carbon change requires a transition to low-carbon energy sources.

At the US Department of Energy we've been investing heavily in clean energy technologies for many years. We provided early funding for solar, wind and many other clean energy technologies to help them grow to scale. Today our programs are over \$4 billion per year and include funding for early stage innovation, demonstration projects and commercialization. We manage an extraordinary national lab system that has helped produce some of the world's most important energy innovations and has the potential to do much more. That's one reason I'm so excited about Mission Innovation.

David Sandalow: *What is Mission Innovation?*

Secretary Moniz: It's an initiative announced by President Obama and leaders from 19 other countries last week here in Paris. Each of these countries pledged to double their investment in clean energy R&D over the next five years.

Participating countries span five continents. They represent 58% of the world's population and include the five most populous countries in the world – China, India, the US, Indonesia and Brazil. They include countries with high penetration of renewables in their power sectors such as Canada, Norway, Denmark, Brazil, Chile and Germany. They also include some of the largest oil and gas producers, such as of course the US, but also Saudi Arabia, the UAE, Mexico and Norway.

Together the Mission Innovation nations provide over 80% of the government investment in clean energy around the world, adding almost \$10 billion annually in energy R&D when doubling is reached in 2020. Doubling this innovation investment is going to make a big difference, not only for taking on climate change, but also for increasing energy access, boosting economies, and promoting energy security.



David Sandalow: *What type of innovations do you expect?*

Secretary Moniz: We have potential for innovations in the full range of low-carbon technologies. That includes solar, wind, storage, nuclear, CCUS, energy efficiency and more. Different countries have different priorities – this will be a broad-based global effort.

At US DOE, our initiative to implement Mission Innovation will be broad-based. It will include work on specific low-carbon technologies as well as systems solutions. It will encourage greater effort and collaboration by all participants in the innovation process – including individual innovators, universities, private companies and National Labs.

David Sandalow: *Does this depend on approval from Congress?*

Secretary Moniz: In the US, Congress appropriates funding for the federal government. The programs we’re talking about here deliver enormous economic, security and environmental benefits to the American people. They have the support of a broad range of stakeholders including many business leaders. I believe Congress will approve budgets for Mission Innovation in the years ahead.

David Sandalow: *Does the success of these programs depend on businesses commercializing the technologies developed in government research programs?*

Secretary Moniz: Yes – that’s why Mission Innovation was developed in parallel with the Breakthrough Energy Coalition, announced at the same time by Bill Gates and 27 other investors from 10 countries around the world. This Coalition has committed to investing in clean energy technologies to move them from the laboratory to the marketplace in countries participating in Mission Innovation. They will exercise more patience and risk tolerance than is typical for clean energy investors. It sends a strong signal to the energy industry: there are significant commercial and economic development opportunities in accelerating a cleaner energy future. The fact that this group of investors has joined together with the stated goal of “patient but transformational” investment underscores the critical importance of Mission Innovation and highlights the value of public-private partnerships.

David Sandalow: *Any final thoughts?*

Secretary Moniz: Clean energy is a growing economic opportunity. The global clean energy market is growing rapidly, and early innovation will surely have an advantage in that marketplace. The US solar industry now employs more people than vehicle manufacturing and has been adding jobs twenty times faster than the wider economy.

I also believe that clean energy technology innovation that continues strong cost reduction is ultimately the solution to climate change. We need to accelerate clean energy innovation now if we’re going to be able to get to the very deep reductions in greenhouse gases we need to in the not-too distant future. That cost reduction will also allow us to advance universal energy access in developing countries, even as they follow a clean energy pathway.