Confidence

I had the distinct pleasure this past Tuesday of moderating a panel of top experts on clean tech and the state of its global development: ***Clean Energy For All*** was a part of the "Fueling Our Future" series at NYU's Center for Global Affairs where I teach. Our guests were Travis Bradford, from SIPA and the Prometheus Institute; Vignesh Gowrishankar, from NRDC; and Minoru Takada from the UN's Sustainable Energy for All initiative. CGA's Dean, Vera Jelinek, welcomed our guests and the full house of audience members.

After giving an overview, I started off with this question: "From your perspective, how and where do you see clean energy fulfilling its promise?" Bradford's response set the tone and provided context for the evening's discussion. He described the amazing progress that has occurred in the past ten years, from zero optimism about renewables, to the recognition that solar and wind, among others, are today cost competitive with fossil and nuclear power and are already playing a big role in meeting needs. He pointed out that renewables are taking a huge share now - as much as 50% - of new installed electric power capacity. (Bloomberg New Energy Finance predicts that 70% of all new installed capacity to 2030 will be renewables.)

Gowrishankar gave some sober perspective in pointing out that, although renewables are growing very, very well, problems remain, among them a shortfall in policy support. We are still fighting the "incumbents." (That's the polite way of saying the "special interests" which so vigorously, often viciously, have been defending their cash flows, e.g. the Koch Brothers.) We need to generate more political will on clean energy in order to drive its continued growth.

Dr. Gowrishankar also flagged less-than-adequate transmission infrastructure to help connect population centers to some of the vast renewable resources, like wind power on the Great Plains, that are available to us. (The story here, however, is not wholly negative for the near term: we have 330 GW of new transmission capacity in the pipeline over the next six years, according to Navigant Research.)

Takada had a "good news, bad news" perspective as well. The bad news is that modern

renewables are today still a relatively small piece of total energy. One colossal impediment is the hard fact of global fossil fuel subsidies: more than half a trillion dollars in 2012, despite the efforts of key multinational groupings like the G-20 and the OECD to phase them out. The good news, though, like the burgeoning of renewables and new transmission, is that policy makers, both in government and the private sector, and general publics around the world, are steadily gaining **confidence** in our ability to transition away from fossil fuels. Here's one good indicator I might point out: Prices for clean energy stocks rose 54% in 2013 from 2012.

Takada has been seeing, for instance in Japan - the third largest economy in the world - a growing sense that renewables can supplant the power from nuclear plants. (Japan may never restart as much of two thirds of its installed nuclear capacity, as many of the plants are deemed unsafe and, in any event, two thirds of the public don't want any of them restarted. Takada, as it happens, is from Fukushima.) I pointed out the drive by many of the top actors in Japan's heavy industrial sector to create a global presence in developing and manufacturing floating wind turbines. Japan, not incidentally, is experiencing the fastest investment growth in renewables in the world, increasing 80 percent in 2013 over 2012 levels to almost $29 billion, according to Pew's Clean Energy Program.

I asked the panelists about the state of play on clean tech in transportation. Bradford was less sanguine about our progress in this sector than he was about the power sector. We are still 95% dependent on liquid fuels - almost all of that petroleum - for our transportation. He pointed out the direct correlation between high oil prices and economic downturns. It's not a coincidence, Bradford said, that the economies of countries with a high dependency on fossil fuels, like Spain, Portugal, Greece and Italy, are struggling so mightily.

I mentioned in response - being the cockeyed optimist that I am - that some analyses have demand destruction, owing to the predicted exponential growth in hybrid and electric vehicles, bringing us sooner, rather than later, to the "end of the age of oil." These are Deutsche Bank's words, not mine.

Takada brought it all back to a level, I think, of personal responsibility. We have a choice - a moral choice in many ways - to help alleviate energy poverty and to foster sustainable development; to protect the climate system, our air and water, and public health; to mitigate the risks of conflict and food insecurity that our actions are exacerbating. I pointed out that this echoes the message of Al Gore's book, Our Choice - an excellent book, by the way, and one I've used in my classes.

We cannot shirk this responsibility, we have to face it, live up to it and, in Takada's phrase, to keep *pushing forward*, to further generate the confidence and the momentum that he sees growing and are essential to our eventual success.