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# What's next after Copenhagen?



By [Karen Cho](#)

**Was there too much riding on the United Nations Climate Change Conference which concluded in Copenhagen at the weekend?**



Two energy experts, who recently took part in International Energy Week in Singapore, seem to think so.

**Daniel Yergin**, chairman of IHS Cambridge Energy Research Associates and Pulitzer-prize winning author of *'The Prize: The Epic Quest for Oil, Money and Power'*, had expected the climate talks would not lead to a binding process, but rather would be a “process that goes on.”

Likewise, Harvard Kennedy School Professor **Bill Hogan**, who is also the Research Director of the Harvard Electricity Policy Group, had predicted that “declared success but little else” would emerge from the summit. “Perhaps next year maybe in Mexico, when the next round of the COP (Conference of the Parties) meets in Mexico, some stronger agreement would take place,” he told INSEAD Knowledge on the sidelines of the Singapore Electricity Roundtable.



At the Copenhagen talks, five countries, including the US and China, reached an accord on carbon emissions but the conference failed to bring about a

legally-binding treaty.

Does this mean that the global warming talks was all for naught? Yergin, for one, believes this is an issue which has momentum. “We’ve never seen such an emphasis on energy innovation all across the energy spectrum that we see today. We do know that unprecedented efforts are going into renewables and alternatives. I think wind probably shouldn’t be called an alternative anymore: it’s another form of electricity generation. Solar has an ultimate logic but it’s behind in scale and it needs improvements in cost. The hot thing today is how batteries and electric cars have come to the fore.”

Yergin in fact believes we have moved from an “age of oil” to a “century of energy innovation,” adding that the intense push for innovation is being driven by two powerful forces -- the quest for clean energy and the need to provide energy for economic growth.

He also believes the most important energy innovation of this decade to be the development of natural gas extracted from shale. Though it’s been known to be a resource for many years, he says the technology has only been recently “liberated” in the US.

But according to Hogan, innovation can also upset the natural order of things. He says the discovery of unconventional shale gas, which even the experts could not have predicted, has changed the energy mix in the US. “One of the biggest impacts on the LNG (liquefied natural gas) market came because of the massive expansion of the production of natural gas from shale ... So the United States had been expected to be a big importer of LNG, and now it's probably not going to happen.”

Nevertheless he believes the benefits of innovative technology far outweigh its propensity to be unpredictable, as innovation will be a key driver for change in the green agenda, an agenda that also encompasses the electricity sector -- also part of his ongoing research at Harvard.



As electricity is a major emitter of CO<sub>2</sub>, Hogan believes restructuring the electricity markets and implementing a 'smart grid' system will be important in terms of curbing emissions. "So having efficient markets, having clear price signals, having the prices reflect the reality, as opposed to something which is masked through the effects of regulation, would be very important in going forward."

"There's a lot of talk for example about building smart grids, and a smart grid means many things to many people: like intelligence and information in the grid; smart meters that can keep track of consumption; smart devices that can use that information. But if you have smart grids and you have dumb prices, you're not going to give people the incentive to take advantage of the opportunities that are there. So I think it's critical that we improve the quality of the pricing models that we're using."

Another plausible way of curbing CO<sub>2</sub> emissions, Hogan says, is by tackling the carbon itself. "I think the more relevant question is that can we capture the carbon and sequester it and deal with that kind of problem ... in a world in which we do use a lot of coal. And I think that's one of the game changers that we need, and exactly how well it's going to work and how successful it's

going to be and competitive is an open question.”

He is also in favour of putting a price on carbon to motivate people to become more energy efficient. “When there’s a price on carbon, not just in Europe but in the United States and in China and in Singapore, that’s going to provide a very strong incentive for innovation and new green technologies that will transform new businesses and what happens particularly in the electricity sector.”

The energy market, however, may be a little less daunting. Yergin explains: “The thing about energy efficiency, when you look at it in all its pieces, it's not very dramatic, it doesn't sound very dramatic. The cumulative impact is dramatic ... It's how companies organise themselves, what kind of investments (they) make. And it does -- and I think that's a key point -- it really does require investment.”

“We have not yet ever seen an energy-efficient refinery, but it’s a process and shaped by pricing, by policy, by mandate to regulation, by security, by the pace of technological innovation. Our attitudes and values are very important part of it, and of course climate.”

Although the compromise deal, which was brokered at the eleventh hour, did not lead to a binding agreement as many had hoped for, the issue of climate change is now centre stage and, going forward, this can only mean progress -- even if it may be protracted.

*Daniel Yergin and Bill Hogan were in Singapore for International Energy Week which was held in mid-November.*

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