OurEnergyPolicy.org

Andrew Revkin hosted a discussion at OurEnergyPolicy.org (OEP) examining the need for R&D funding for energy progress based on his interview with Bill Gates. Here is a snapshot of the perspectives offered by OEP's diverse community of experts. To read the full discussion, please visit: OurEnergyPolicy.org.

"And the overriding issue is the challenging scale of limiting global warming as humanity's growth spurt – in both population and resource appetites – plays out." ***- Andrew Revkin***

"A little bit of the trap people get into is they think, okay if we're meeting some 2030 goal, we must be on the way, because we just do more of what we did." ***- Bill Gates***

Key Points: Revkin's Bill Gates Interview

Funding:

"[T]he US Department of Energy invests around $2.5 billion per year in clean energy, and all the rest of the US agencies invest almost as much indirectly...On a global level, government research in 2014 for renewable energy was $5.1 billion and corporate RD&D hit $6.6 billion." – **Scott Sklar**, The Stella Group, LTD

"Creative financing, like feed-in tariffs used to assist the solar industry, should also be applied to reduce nuclear power capital costs. If memory serves me, an OECD analysis showed that about 40% more megawatts of nuclear power plant capacity could be purchased at no additional expense if the cost of money decreased from 10% down to 5%." – **Herschel Specter**, Micro-Utilities, Inc.

"The initiative Gates and others launched is welcome and will be helpful. But the billions in additional public funding some have called for will be hard to come up with, given economic, fiscal, and political realities." – **Lewis J. Perelman**, Perelman Group

R&D:

"We can R&D great existing technologies, but until business model innovation can make them cheap, we cannot use them. This valley of death is a critical area, that hopefully Bill Gates innovation fund addresses." – **Alex Gilbert**, Spark Library

"The probability is low that increased R&D spending by governments and businesses on energy storage, for example, will radically change the renewable-energy solution approach in the next 20 – 30 years. If significantly lower-cost battery technologies were developed, they could still be integrated into deployed solar/wind power networks and replace some natural gas power plant use." – **Henry M. Goldberg**, Independent Consultant

"We ought to dramatically scale up government and philanthropic public sector research. We also ought to make sure that if someone builds a better mousetrap, they can find a market." – **Carl Pope**, Former Executive Director of the Sierra Club

"We know from Econ 101 that Step One is pricing carbon...We know from Econ 102 that a parallel step is subsidizing R&D. This is perhaps tougher to get right in practice, but the logic is equally compelling." – **Gernot Wagner**, Environmental Defense Fund

OurEnergyPolicy.org

Climate Change:	"As Gates aptly emphasizes, and consistent with Roger Pielke Jr.'s 'Iron Law' any climate fix that undermines economic development or increases poverty is a nonstarter that the broad public will not accept." – **Lewis J. Perelman**, Perelman Group "The challenge — still, sadly — is raising the level of (national) debate around climate and energy to the point where there's finally some serious action...As long as people are talking about climate (and not assailing the other, pro-climate side), good." – **Gernot Wagner**, Environmental Defense Fund
Renewable Deployment:	"[P]ushing inadequate, inefficient renewable energy systems into deployment before they are truly competitive — and that, being durable, will stay in place for many years even decades — reduces market opportunities for better, competitive systems that may come later." – **Lewis J. Perelman**, Perelman Group "Replacing coal and the natural gas (i.e. the bridge fuel) with wind and solar seems like the clear solution. However, to make these least-cost intermittent renewables dispatchable and reliable, the world (except for the U.S.) is turning to 21st century hydropower and hydroelectric pumped storage." – **Nate Sandvig**, Clean Energy Development, LLC "I would focus on battery storage relative to deployment of existing energy technologies. Efficient battery storage makes the whole system work better (and at a much cheaper cost)." – **Bill Klun**, MJ Beck Consulting
Carbon Pricing:	"With a price on carbon, the private sector will invest massive amounts of money in R&D and deployment of clean energy solutions. Wind and solar will not just be deployed to support new energy needs, they will replace existing coal and natural gas power plants." – **Dan Miller**, The Roda Group "[The idea that] pricing will drive investments in negative emissions technologies (and policies) on a scale necessary to handle gigatons of CO2 a year could be perceived as just as wishful as Gates's vision of research-driven mega-miracles. Just look at the sputtering history of conventional carbon dioxide capture and sequestration (without the massive biomass harvests)." – **Andrew Revkin,** Pace University Senior Fellow for Environmental Understanding "Long-term clear policy that accurately priced the cost of emissions would create an environment that would modify behavior in the near term (paving the way to 2030 goals) and provide the economic incentive for development of new technologies by the private markets." – **Elias Hinckley**, Sullivan & Worcester "While investment in enhancement of current renewable energy options and potential breakthrough technologies is salutary, we also need to get serious about putting a price on carbon that more realistically reflects its externalities, as well as operationalizing the OECD's call to phase out fossil fuel subsidies which obviate a level playing field in the energy sector." – **Wil Burns**, Forum for Climate Engineering