

A conversation with Armond Cohen on July 23, 2013

Participants

- Armond Cohen – Co-Founder and Executive Director, Clean Air Task Force
- Alexander Berger – Senior Research Analyst, GiveWell

Summary

GiveWell spoke with Armond Cohen about the importance of nuclear energy and carbon capture and storage, as well as the impact philanthropists can have on the energy sector.

Note: This set of notes was compiled by GiveWell and gives an overview of the major points made by Armond Cohen.

Nuclear energy and carbon capture and storage

CATF believes that nuclear energy and carbon capture and storage (CCS) are both a part of the energy portfolio we need to avoid catastrophic climate change but that they do not receive sufficient attention from the climate change community. This is something that many in the clean energy community have been intellectually aware of for some time. For instance, CCS was the largest single carbon abatement option in the global power sector identified in the Design to Win report from 2007, which called for significant investment in CCS. While some people at environmental nongovernmental organizations (NGOs) would agree that both nuclear energy and CCS are important parts of the clean energy landscape, neither is part of the normal operating priorities of such organizations.

Mr. Cohen and CATF are working to raise awareness of the importance of nuclear energy and CCS as a part of the climate solution.

In Mr. Cohen's view, part of the reason that environmental NGOs tend not to focus on nuclear or CCS issues is that their senior staff members normally come from politics or academia rather than industry or utilities (with the exception of some people who have worked on renewables like wind or solar), and are therefore not typically familiar with the practicalities associated with operating power grids; those practicalities suggest why large baseload high capacity factors energy sources are necessary and intermittent resources such as solar and wind are not likely to be sufficient to supply all power needs. This knowledge gap is also true of the philanthropic foundations that are working to promote clean energy. There also appears among some within the advocacy and philanthropic community to be an a priori rejection of any fossil-related energy sources including or especially with CCS, or nuclear power.

Philanthropy and energy

There are some valuable approaches to clean energy philanthropy that existing foundations are not fully taking advantage of. Their efforts have typically been very narrowly focused on policy advocacy, often not paying much attention to actual technology development or deployment. CATF has successfully acted as a convener to bring together investors and businesses and advocates to help get a pioneering CCS plant built in Texas, a \$2.5 billion deal that likely would not have happened without CATF's involvement. CATF is working to develop more such projects, focusing in the near term on natural gas plants, and launching several similar projects in China.

Doing this kind of demonstration project in the short term is important for long term emissions reductions. First, in the US, the Clean Air Act requires proof of concept for a technology to be mandated, so it has to actually be in use before the policy can come into play. Second, the first iteration of a technology will inevitably be more expensive than future implementations, so the earlier nuclear energy and CCS deployment begins, the earlier they will be affordable at scale.

These kinds of projects could play a particularly large role in driving down the long-term emissions from China and the rest of the developing world, which is where the bulk of coal plants are going to be built in the next few years.

This kind of early commercialization effort requires not only business-to-business collaboration, but also policy advocacy. For example, the Texas project referred to above required a \$500 million grant from the US government to pay for carbon capture equipment; this grant was assisted by long term policy advocacy by CATF, NRDC and others. In addition, commercial interest in CCS will be strongly spurred by the pending EPA carbon rule, which, if approved in its proposed form, would ultimately require all US fossil plants to meet an emissions standard consistent with the application of CCS. In addition, CATF, NRDC, and others are advocating a small tax credit to spur the use of CCS for enhanced oil recovery, which can help underwrite the costs of early projects.

On the nuclear side, similar technology demonstration and policy opportunities are presented. Advanced nuclear designs are on the horizon that use radically different technologies, fuel cycles, and designs; these innovations promise enhanced safety, reduced cost, and reduce waste and proliferation concerns. Philanthropy could support both business-technology networking to advance these designs, as well as policy changes to speed them to market such as enhancement of the Nuclear regulatory Commission's review capacity, reform of regulation to allow international cooperation on demonstration projects, and funding for early demonstration.

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