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Rethinking Clean Energy Innovation

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Meeting the challenges of global climate change will require a more open and collaborative approach to technology innovation, according to a [new report](#) from two public policy groups focused on clean energy and development strategies.

Development of clean energy technology demands open collaboration, a new report suggests.

The report — a joint effort of the [Clean Energy Group](#) and the [Meridian Institute](#) — encourages the creation of a “distributed innovation” model for renewable energy and other green technology development.

“Today, private companies use more creative strategies to develop pharmaceuticals or make soap or rent DVDs than governments use to research and develop low carbon technologies,” said Lewis Milford, the president of Clean Energy Group and the lead author of the report.

Mr. Milford and his co-authors suggest the formation of a collaborative network, using Internet-based tools, for managing clean-tech development. The system would operate as a sort of matchmaker, enabling any scientist from any discipline to propose solutions to particular technical challenges.

An independent institution, funded by public or private money or a combination of both, would manage the matchmaking process, as well as resolve the various barriers along the research and development chain — particularly funding gaps and legal issues associated with intellectual property.

The cross-disciplinary nature of the process is important, according to Jill Panetta, the former lead scientist at [InnoCentive](#), an open-innovation company, and a consultant on the recent report.

“In our work, we’ve had countless examples of creative problem solving by bringing together different people from different disciplines, who wouldn’t ordinarily work together to offer their expertise,” Ms. Panetta said.”

The authors of the report pointed to InnoCentive as a potential model for the sort of open-innovation they imagine. The InnoCentive Web site posts scientific problems from

its clients (known as “seekers”) to a global network of 185,000 “solvers.”

The seekers include pharmaceutical, chemical, biotechnology and consumer goods companies, while solvers can be experts from any field.

When the [Ocean Spill Recovery Institute](#), for example, needed a method to separate frozen oil from water in oil-recovery barges, they posted their challenge on the InnoCentive Web Site. A chemist from the cement industry, with no experience in oil-spill cleanup, solved this problem by adapting a tool that vibrates cement to keep it in liquid form.

Given that global energy demands are expected to almost double from 13 terawatts today to an estimated 22 terawatts in 2050, according to calculations cited in the report, Mr. Milford suggested that this sort of networked problem-solving is imperative.

“Over the next few decades, we are facing both a pressing environmental challenge and an enormous technology challenge, yet we are still using 1950’s style technology innovation techniques,” Mr. Milford said.

“If we really believe climate change is a planetary emergency, we need to try all innovation approaches to solve it.”