



Developing countries have chance to start green energy development

Developing countries are relatively well positioned as they expand their energy capacity, with a banquet of climate-clean, sustainable, and renewable sources to choose from, while developed countries try to overcome centralization and replace long-established fossil and fissile sources bound up in laws and regulations, a French energy expert says.

Magali Dreyfus, a visiting fellow at the National Graduate Institute for Policy Studies in Tokyo, told the Asian Development Bank Institute that developed countries are looking at ways to step back from reliance on nuclear energy, oil, and coal, and to overcome legal and regulatory impediments to restructuring their energy mix.

Europe, the United Kingdom, and the United States, to name a few, are heavily reliant on nuclear energy and fossil fuel to meet home and industrial demand for electricity—in some cases 80 percent of power comes from fission—and rules define who can produce electricity for the local and national grids.

In 2015, France adopted the Energy Transition for Green Growth law to clear the bureaucratic path and battle climate change, with ambitious targets for energy transition and greenhouse gas reduction.

But Dreyfus warns that while countries such as France and Japan are heavily reliant on nuclear energy, centralized decision making means the process of change is slow.

It is a kind of revolution in France, because it is a very slow-moving country, I would say, and a very centralized country. Japan is also a very centralized country where local government hardly has any power and the energy system is based on nuclear power.

Germany, by contrast, is far more decentralized than France and is doing much better in its transition to renewable energy because local and regional governments can build small-scale distribution networks, Dreyfus says.

She calls it ...

A system managed by sub-national and local governments, as well as by community or citizens. It involves the participation of those communities or local government. Citizens advise the projects from the very start. What kind of targets, what kind of system we want to achieve, but also financing. The future is decentralization, so it invites us to consider how you can shift from a highly centralized system to a decentralized system. A centralized system is characterized by usually a few units of protection and transmission and distribution and supply, often provided by one or a few operators, often monopolistic.

For France to fully convert to sustainable energy, it will require changes to national laws and international agreements, negotiation within the European Union, which prohibits subsidized industries, while meeting the needs of citizens who don't necessarily like wind farms in their vineyards. It will also require national and transnational partnerships, because energy is becoming a huge international issue.

That's mostly relevant maybe for developing countries, or countries where you don't yet have universal access to energy. Energy decentralization is often presented as a way to very quickly get a system that provides energy so it doesn't require as much investment as building your power plant, as setting up a very centralized and big system.

In many places, it is presented as a cheap and quick alternative to provide energy to the people. Of course, it is completely different in France or Japan, but this is something to keep in mind. Energy decentralization is also in the discourses of many development agencies.

Dreyfus said the developed world is undergoing a top-down transition in an interconnected global context, where sources of fuel and energy are not so much

negotiated on the international stage but at local levels, over land for wind and solar farms and other forms of sustainable energy and smaller companies or towns responsible for meeting energy demand.

Climate change is a big issue. International law is advanced in that regard. It has set targets in industrialized countries, including France and Japan. They are binding targets, so they are somehow also effective there. Fossil fuel is related to the level of greenhouse gases that we have in atmosphere, which warm up the earth.

There has long been debate about how much oil is left, although as prices rise, new technologies emerge to tap an increasingly scarce and finite resource. There is concern that an oil peak is approaching, after which supplies will fall, making oil more and more expensive, despite alternative but costly methods such as fracking. Oil importers will become more and more vulnerable to manipulation by some exporters.

Nuclear power, of course, is also very much contested for security and environmental concerns such as reactor failures, the possibility that processed uranium will fall into the hands of radical groups, and economic viability. The cost of building and running nuclear plants is high. I would just mention a nuclear industry report that says that nuclear is outdated, it's pointless to invest in it, half of the energy in developed countries comes from nuclear plants. Only the Peoples Republic of China still pursues a nuclear energy strategy, while most are trying to withdraw from it. Nuclear energy is retreating as renewable energy—wind, solar—advances. So the production curves speak for themselves and show that, from an economic perspective, it may be very much better to focus on renewable energy such as wind and solar.

Simply turning off nuclear reactors and shutting down greenhouse-gas-producing power stations is not a solution. Energy demand is constant and growing and, as one source of power is taken off the grid, another has to replace it.

It is feasible that greenhouse gases can be reduced by 40 percent by 2030 as the ratio renewable of energy increases by 32 percent. We should improve

energy efficiency and reduce the share of nuclear in producing electricity from 75 percent to 50 percent by 2025. It is relatively easy to shut down nuclear energy, but then you have to replace that power, which means a rise in renewable energy rather than a shift back to fossil fuels.

Dreyfus says getting local governments involved in sustainable energy production provides economic and social benefits such as job creation to their locales. Popular support is there for sustainable power, which should remove obstacles from citizens' groups who routinely object to new fossil fuel or nuclear projects and wind farms, which can now take nine years to be approved.

Financing remains a major issue, she says.

A premium should be given to new market actors to attract investors. Small producers often have problems attracting investors. In France, and I think it's a global trend, energy decentralization is gaining momentum but for different reasons. So in developing countries, perhaps an immediate solution is to get energy access for people who are isolated. But in more industrialized countries, that is also a way to empower to their citizens and to answer environmental issues.

That was Magali Dreyfus, a researcher at the French National Center for Scientific Research since 2013, and affiliated with Center for European Research on Administration, Politics and Society, Lille University. She is a visiting fellow at the National Graduate Institute for Policy Studies in Japan.

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