

Sun setting on Japan's solar energy boom

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Renewable energy in Japan faces increasingly stiff competition from nuclear and fossil fuel-generated power

The sun is setting on Japan's clean-energy boom, despite projects like a massive floating solar farm near Tokyo, as the government cuts subsidies and bets on nuclear and coal-fired power, critics say.

Workers at the floating [power](#) station, one of the world's biggest, have just finished laying about 50,000 interconnected panels on a vast dam reservoir.

Taking up space equivalent to several Tokyo Dome-sized baseball stadiums, the vast carpet of panels will supply power to about 5,000 homes from early 2018.

The project is the centrepiece of a solar-dominated wave of renewable [energy](#) investments that followed the 2011 Fukushima nuclear disaster.

The accident forced the shutdown of reactors that had supplied about one-quarter of resource-poor Japan's energy.

To plug the gap, electricity providers have been obliged since 2012 to buy power generated from green suppliers, including solar, at above-market rates—known as feed-in tariffs—fixed by the government each year.

But renewable energy investments have plateaued and are set to fall in the coming years as Tokyo cuts back subsidies while commodities including coal, oil and natural gas remain cheap.

Japan is also facing a shortage of land for new solar installations.



Nuclear reactors mothballed since the 2011 Fukushima disaster have recently been restarted as Japan moves away from renewable energy

Kyocera, which is behind the floating farm south of Tokyo, is building a solar plant on an abandoned golf course.

"Several dynamics in the Japanese power sector have shifted since (2012)—such as weakening government support, cheaper fuel alternatives and electricity sector reform—which have all contributed to the slowdown in growth," BMI Research said in a report.

'Simply insane'

Some say Japan's future solar potential now sits squarely on the roofs of millions of homes.

"There is still a big potential for the Japanese market," said Atsuhiko Hirano, head of Solar Frontier, a unit of Japanese oil giant Showa Shell.

"Utility-scale projects have been the driver so far. In contrast, the residential market has not grown so much. So there is still much more area where we can grow.

"(But) we are pushing the government to go further."

Solar accounts for a small fraction of Japan's energy mix—3.3 percent in 2015. But Tokyo has said it wants renewables—also including hydro and wind power—to account for 22 to 24 percent of the total by 2030.



Some advocates of solar power say the future lies with using panels on home roofs rather than large-scale utilities, such as this one at Ichihara city

Critical government support appears to be waning, however, as Tokyo drives a push to restart mothballed atomic reactors—an unpopular move among the nuclear-wary public.

The pro-nuclear drive is supported by utilities, which complained about being forced to buy and distribute subsidised power, especially with oil and natural gas prices at multi-year lows.

Japan is also raising eyebrows with plans to invest billions of dollars at home and abroad in new power plants fired by cheap coal—even as it calls for more green power at home.

That includes half a dozen large coal-fired power stations within about 100 kilometres (60 miles) of Tokyo, which Greenpeace has branded "simply insane" over health concerns posed by air pollution.

Energy security

Coal is also the biggest climate change culprit, generating more carbon pollution per unit of energy generated than oil or gas.

Within the G7 club of rich nations, Japan is alone in investing heavily in coal-fired energy on its own soil, with more than 40 new power plants in the pipeline.

That sets it apart from even big polluters such as China and India which are pushing away from coal-fired power—although US President-elect Donald Trump has vowed to bring back coal and refocus US energy policy on fossil fuels.



Scarcity of land has seen some solar farms in Japan built on water, such as this one near Yokosuka city

"Japan is betting its economy and energy security on risky coal investments," said Taylor Dimsdale, Washington-based head of research at energy think-tank E3G.

"The coal development pipeline in the rest of the G7 countries has dried up with no further plants expected beyond a handful of projects that are already under construction."

Japan was among the worst performers in terms of countries cutting back on energy-related CO₂ emissions in an annual ranking released during UN climate talks in November.

Critics say they don't have much hope for Tokyo's long-term commitment to renewable energy.

"After the Fukushima disaster there was an infatuation with [renewable energy](#) and the government was clearly pressing the accelerator," said Kimiko Hirata, international director for the Japanese NGO Kiko Network.

"But since then, I feel like it's putting the brakes on that policy and concentrating its focus on revising nuclear power and building new coal-fired power plants."

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