

## Megasolar Japan: The Prospects for Green Alternatives to Nuclear Power

### メガ太陽熱発電の日本—核発電にたいする環境による代替案の見通し

Andrew DeWit

### Megasolar Japan: The Prospects for Green Alternatives to Nuclear Power

By Andrew DeWit

James Montgomery, the News Editor of Photovoltaics World, suggests in his January 14 "Are Japan's Megasolar Plans Falling Apart" (<http://www.renewableenergyworld.com/rea/news/article/2012/01/are-japans-megasolar-plans-falling-apart?>) that Japan's renewables revolution is stalled and its feed-in tariff (FIT) "an awkward parting gift" of former PM Kan Naoto. Montgomery's article seems to be a near verbatim copy of a January 9 piece that's presently behind a paywall in Japan's Nikkei Weekly, the Japanese version of the Wall Street Journal. The Nikkei article was titled "Son's grand megasolar plans stall as governors direct attention elsewhere." (<http://e.nikkei.com/e/ac/tnw/Nni20120109IS3SOLAR.htm>) Both articles insist that Son Masayoshi, the chairman of Softbank and Japan's most wealthy and innovative capitalist, has run on the rocks in his plan to drive a renewable energy revolution in Japan. Moreover, the title for Montgomery's now widely circulated article (being copied to thousands of sites just 19 hours after upload) clearly implies that the core of Japan's renewable energy shift as a whole is in question.

Make no mistake: a collapse of megasolar plans

in Japan would gravely imperil the country's capacity to ramp down reliance on fossil fuels as well as nuclear and pull back into the lead of the renewable energy shift in which the Germans, the Chinese and even the Pentagon are already making huge strides. Megasolar projects give Japan's big, innovative actors such as Softbank, Sharp, Mitsui, Kyosera, and scores of other firms, together with a rapidly expanding list of prefectures, cities and towns, the incentive to deploy solar on a very large scale.



Their interest in doing so is key to increasing renewable power capacity while reducing its costs, which is what diffusion accomplishes. And with these big players' capital, land, human, administrative and other resources devoted to solar, the domestic political base for renewables becomes that much more potent. That potency helps overcome the nuclear village's incentives and capacity to oppose an energy shift. Megasolar thus helps ensure that householders, farmers, NPOs and other actors have allies in their efforts to press for

regulatory reforms, the FIT, grid expansions and other supports for their own small-scale as well as medium and large-scale solar, wind, biomass, and other renewable projects. In short, Japan's power politics is about political coalitions; and for the numerous small fish to lose their effective alliance with the brightest of the business world's big fish would probably make it very difficult to keep the political process in Tokyo focused oift. But many of the Nikkei and Montgomery articles' assertions are patently wrong. Softbank's plan the policy changes needed to promote an energy shns and Japan's megasolar projects in general are in fact thriving, as I want to explore in some detail below. In fact, the articles' assertions are so at odds with the facts that it is hard to imagine the original authors (Fujita Tetsuyo and Unno Taro of the Nikkei staff) did not have a pretty big axe to grind on renewables and CEO Son himself. And by extension difficult to envision the Nikkei running the original piece without sharing that agenda.

Let us first take a step back to the initial weeks following the mid-March meltdown of the Fukushima reactors. As readers will remember, it was CEO Son Masayoshi who went up to Fukushima on March 22 to offer what support he could as well as ensure that mobile communications were working for afflicted residents. Son saw for himself the devastation, disorganization, and - via a Geiger counter in his car - sharp escalation of radioactivity on the route from Tokyo. He also watched the incredible and unashamed dereliction of duty and outright lying by Tokyo Electric (TEPCO) and the central government. A capitalist skilled in creative destruction of politically connected vested interests, and with some experience of the internal workings of TEPCO, he immediately grasped both the need and the opportunity for a renewable revolution.

Son then consulted with the major players in Japan's renewable energy community in Japan, including iida Tetsunari of the Institute for

Sustainable Energy Policies (ISEP), and got a detailed tutorial on the extensive Japanese subnational government-NPO-business renewable energy organization that had been expanding for years. He also learned of the limited FIT in Japan and the role of Germany's comprehensive FIT in taking that country from 6% renewables in its electrical generation a decade ago to 20% last year. In other words, Son quickly got up to speed on the fact that subnational institutions and smart policies were already there to be built upon in order to foster a sustainable energy shift in Japan.

Son therefore championed a comprehensive FIT in Japan as well as the Renewable Energy Council that are referred to in the Montgomery article. Both of these initiatives have already born fruit and continue to do so. The FIT was approved by the Diet on August 26 2011, and will expand renewable support from solar to wind, small hydro, geothermal, and biomass. The article correctly notes that the price-setting mechanisms and the duration of the price guarantees have yet to be decided, and suggests that the fix is in and "Son's dreams of as megasolar future could end up as pie in the sky."

But neither the Montgomery nor the Nikkei article bothers to tell us why the FIT's. price-setting mechanism and other details are to be decided by a five-member committee whose membership was to be determined by the Diet last December. But decision on the membership has been delayed because in late November the DPJ proposed a membership including three representatives of the nuclear village, who would have been the majority on the five-member committee. Their recommendations would undoubtedly have been for very low and short price guarantees, which would restrict the incentives to install renewable energy projects. The FIT has been adopted by roughly 85 national and subnational jurisdictions, and has proven itself, according to the International Energy Agency, the United Nations

Environment Program, and other international organizations, to be the most effective and efficient policy for fostering a shift to renewable energy. Because the nuclear village's supporters were about to gain majority representation on this important committee, supporters of renewable energy, including elements among the Diet parties, the prefectures and other local governments, renewable energy producers and manufacturers, NGOs, farmer groups, and other interests, worked together to force the DPJ executive to delay submitting those names to the Diet.



When the Diet session ended on December 9, 2011 so did the DPJ plan to put nuclear village representatives in key positions in the process for deciding how aggressively to use the FIT to foster renewable energy. The membership of that committee remains to be decided, and will be one of the items on the agenda of the ordinary Diet session that will begin on January 24, 2012. It is difficult to see the same contentious names being offered up, as in the interim the nuclear village's fortunes have taken a serious hit with the impending nationalization of TEPCO. The firm is clearly bankrupt due to the rapidly increasing costs of the Fukushima tragedy, the inability to restart

its other nuclear assets as well as get a free hand in passing on the costs of the extra coal, gas and oil it's purchased to generate power. The nuclear village's core remains adamant in its desire to restrict renewable energy, oppose deregulation of monopolized power utilities, and contain the expansion and smartening of the grid. But as the village's supportive institutions and dense economic rewards continue to unravel in the wake of March 11, we can see its once compact shape and clout dissipate as constituent interests demur or even defect.

So it is, to be frank, bizarre that the Nikkei would run a piece declaring that Japan's megasolar projects are melting into air as governors' "concern over Japan's power needs had given way to interest in fostering international exchanges." In fact, the great majority of Japan's local governments, and not just prefectural governors, are increasingly enthusiastic about renewable power projects as well as the prospect of the comprehensive FIT coming into effect on July 1 of this year.

That enthusiasm of local governments is evident across the range of renewable power options. Japan's local press in particular carries several articles per day on local government initiatives in not just solar, but wind power, geothermal, small hydro, and biomass. As noted, all of these renewable energy sources will be covered by the FIT from July, and the local governments view this policy change as an excellent chance to bolster their economies as well as enhance energy self-sufficiency.

These objectives were important even before Fukushima, due to the expanding local organization fostered through ISEP and other NPOs. The locals were also encouraged by such programs as the "green decentralization" initiative of the General Affairs Ministry. This ministry's program became effective from 2009, and among other things deployed YEN 3.9 billion to assess renewable energy potential

among 35 prefectures, 10 designated cities, and 99 cities, towns and villages. The initiative overall (it is not limited to renewables) reflected the longstanding and intensifying desire of local governments to create communities and regions that are sustainable not only in environmental terms but in economic and fiscal terms as well. Japan's declining population and rising public debt have eroded the fortunes of most local governments due to the shift of population to the major urban centers, especially Tokyo, as well as the hollowing out of the industrial base as firms exit from a shrinking economy and the increasing costs brought on by the high yen, the burden of the aging society, and other factors.

So when Son proposed the Council on Renewable Energy to the prefectures, 19 signed up on May 25 and this number expanded to 35 (of the 47 in total) by midsummer. In addition, Son and the major urban centers in Japan set up a Renewable Energy Council for designated cities, with 17 of Japan's 19 designated cities now being members. A significant degree of attention focused on these Renewable Energy Councils in the national press because of Son's role in encouraging former Prime Minister Kan Naoto to embrace the comprehensive FIT and get it through the Diet. But there were and continue to be a wide variety of other initiatives being undertaken at the local level. It is in fact striking to watch Japan's local activism unfold as subnational governments big and small organize among themselves on a regional basis as well as according to the respective types of renewable energy. They are innovating, in the face of a central government whose political class often seems inept and is certainly suffering a declining legitimacy among voters.

These local initiatives are also being backed up by the General Affairs Ministry, which is of course ramping up its green decentralization programme. But in addition, the Ministry of

Agriculture, Forest and Fisheries is undertaking a range of initiatives to facilitate farmers' adoption of small hydro, solar, and other power-supply options. The ministry is in the midst of deregulating the use of farmland in order to help farmers take advantage of expanding opportunities, which could help to boost their incomes as well as, perhaps, attract new entrants into the rapidly ageing farming sector. And gaining increasing confidence as the Ministry of Economy Trade and Industry's (METI) grip on energy policy weakens, the Environment Ministry is also working to foster the spread of renewable energies at the local level. METI itself is also increasingly activist in this area, being driven along by the strong anti-nuclear and pro-renewable reaction of much of Japanese society in the wake of last year's meltdowns.

As testament to the strength of the local mobilization of megasolar, Japan's "Environmental Business ([http://www.kankyo-business.jp/news2012/2012\\_0113\\_a.html](http://www.kankyo-business.jp/news2012/2012_0113_a.html))" (a Japanese publication) noted on January 13 that it was setting up a specially dedicated site to track the rapidly expanding number of local government projects in this area. Its announcement pointed out that 10 prefectures have already started on megasolar projects with 9 others prefectures busy studying energy options that include megasolar. In addition, two others have already completed their public tendering process for partners in megasolar initiatives. The announcement goes on to stress that CEO Son's Renewable Energy Council was instrumental in stimulating this expanding interest in megasolar and other renewable energy sources. It also argues that the July implementation of the comprehensive FIT will certainly further accelerate prefectural use of the FIT in order to strengthen their industrial bases as well as enhance their energy self-sufficiency.

So it is odd to read the Nikkei and Montgomery

arguments that Softbank's initiatives are failing because quite the reverse seems true if one reads the Japanese press. One can quite literally find convincing evidence by just picking at random through a Google search on Softbank and megasolar. For example, a December 16 article in the environmental technology section of the Japanese publication "IT Monoist (<http://monoist.atmarkit.co.jp/mn/articles/1112/16/news046.html>)" notes that Softbank's projects continue and that power generation from its test project in Obihiro city in Hokkaido began the previous day. The article goes on to describe the test as one of various kinds of solar modules, to determine which are best suited to the local temperatures and other conditions. The test project includes 7 Japanese, 2 Chinese and a Canadian firm for a total of 10 firms that have supplied photovoltaic panels to the project. The article also notes that the same prefecture will also feature 2 other tests, one near the sea and one near the mountains, to check the influence of local conditions on power output. Moreover, a January 1 article in the Chugoku Shinbun (<http://www.chugoku-np.co.jp/News/Sp201201010051.html>) (a regional Japanese daily) outlines how prefectures in the region (which include Hiroshima, Yamaguchi, Okayama, Shimane and Tottori) are accelerating plans for megasolar projects. Softbank has a project in the city of Yonago (Tottori Prefecture). But reflecting the locals' expansion of their own initiatives in the wake of Son's catalytic activism last spring, Softbank's is only one of 17 projects for Tottori alone. Among the 5 prefectures that comprise the Chugoku region, there are already a total of 65 megasolar projects under consideration.

In fact, Softbank's renewable projects are going so well that it is moving into the wind and geothermal generation business as well.

A straw in the wind is provided by the attendance by more than 5,000 Japanese and international participants on January 14-15

2012 at the Yokohama "Global Conference for a Nuclear Power Free World (<http://www.npfree.jp/english.html>)."

In summary, the Montgomery piece copied from the Nikkei to Renewable Energy World perhaps represents Japan's variant of climate denialism. Japan isn't the resource-rich US, so it doesn't have Republican primary candidates currying favor with fossil-fuel interests and the anti-science crowd by denying the reality of climate change and the desperate need for an energy shift. But Japan does have a political and bureaucratic establishment, in the central government, that is uncomfortable with the country's post-3.11 climate change and prefers instead to continue coddling the utility, manufacturing and financial arms of the nuclear village. Big near-term tests for the sustainability of this approach include naming representatives to the FIT's price-setting council as well as crafting stringent conditions for nationalizing TEPCO. The domestic and international media are critical to clarifying the issues and options, and let us hope they do better than this disinformation on megasolar.

*Andrew DeWit is Professor of the Political Economy of Public Finance, Rikkyo University and an Asia-Pacific Journal coordinator. With Kaneko Masaru, he is the coauthor of Global Financial Crisis published by Iwanami in 2008.*

*Recommended citation: Andrew DeWit, 'Megasolar Japan: The Prospects for Green Alternatives to Nuclear Power,' The Asia-Pacific Journal Vol 10, Issue 4 No 1, January 23, 2012.*

### **Recent articles and reports on Japan's alternative energy agendas:**

"Are Japan's Megasolar Plans Falling Apart? (<http://www.renewableenergyworld.com/rea/news/article/2012/01/are-japans-megasolar-plans-falling-apart>)" James Montgomery

"Son's grand megasolar plans stall as governors direct attention elsewhere." (<http://e.nikkei.com/e/ac/tnw/Nni20120109IS3SOLAR.htm>)

"Environmental Business ([http://www.kankyo-business.jp/news2012/20120113\\_a.html](http://www.kankyo-business.jp/news2012/20120113_a.html))" (a Japanese publication) noted on January 13

December 16 article in the environmental technology section of the Japanese publication "IT Monoist (<http://monoist.atmarkit.co.jp/mn/articles/1112/16/news046.html>)"

January 1 article in the Chugoku Shinbun (<http://www.chugoku-np.co.jp/News/Sp201201010051.html>) (a regional Japanese daily)

5000 Japanese and international participants attended this (<http://www.npfree.jp/english.html>) event. See this (<http://www.npfree.jp/>) also.

### Articles on related subjects

• Peter Lynch and Andrew DeWit, Feed-in Tariffs the Way Forward for Renewable Energy (<https://apjff.org/-Peter-Lynch/3654>)

• Andrew DeWit, Fallout From the Fukushima Shock: Japan's Emerging Energy Policy (<https://apjff.org/-Andrew-DeWit/3645>)

• Sun-Jin YUN, Myung-Rae Cho and David von Hippel, The Current Status of Green Growth in Korea: Energy and Urban Security ([https://apjff.org/-Sun\\_Jin-YUN/3628](https://apjff.org/-Sun_Jin-YUN/3628))

• Son Masayoshi and Andrew DeWit, Creating a Solar Belt in East Japan: The Energy Future (<https://apjff.org/-Andrew-DeWit/3603>)

• Kaneko Masaru, The Plan to Rebuild Japan: When You Can't Go Back, You Move Forward. Outline of an Environmental Sound Energy Policy (<https://apjff.org/-Kaneko-Masaru/3508>)

• Andrew DeWit, The Earthquake in Japanese Energy Policy (<https://apjff.org/-Andrew-DeWit/3501>)

• Andrew DeWit and Sven Saaler, Political and Policy Repercussions of Japan's Nuclear and Natural Disasters in Germany (<https://apjff.org/-Andrew-DeWit/3525>)

• Andrew DeWit and Iida Tetsunari, The "Power Elite" and Environmental-Energy Policy in Japan (<https://apjff.org/-Iida-Tetsunari/3479>)

• Edward B. Barbier, Toward a Global Green Recovery: The G20 and the Asia-Pacific Region ([https://apjff.org/-Edward\\_B\\_-Barbier/3383](https://apjff.org/-Edward_B_-Barbier/3383))

• Arjun Makhijani and Mark Selden, Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy (<https://apjff.org/-Arjun-Makhijani/2496>)