# Analysis: High Costs Keep Japan Focus on Nuclear

ELAINE KURTENBACH, AP Business Writer

TOKYO (AP) — Japan is once again without atomic energy as its only operating nuclear reactor went offline Sunday for refueling and maintenance, and other plants remain closed for intensified safety checks following the 2011 meltdowns at the tsunami-stricken plant in Fukushima.

This Jan. 26, 2012 file photo shows the No. 4 reactor, left, and the No. 3 reactor at Kansai Electric Power Co's Ohi nuclear power plant in Ohi, Fukui prefecture, western Japan. The No. 4 reactor restarted in July 2012, along with the plant's No. 3 reactor, which went offline for maintenance on Sept. 2, 2013. Japan will once again be without atomic energy as its only operating nuclear reactor, the No. 4 reactor at Ohi plant, goes offline Sunday, Sept. 15 for refueling and maintenance, and other plants remained closed for intensified safety checks following the 2011 meltdowns at the tsunami-stricken plant in Fukushima. **(AP Photo/Shizuo Kambayashi, File)**

Despite signs that the Fukushima crisis is worsening, Japan's commitment to restarting many of its 50 idled reactors appears stronger than ever, a year after a previous government said it would begin to phase out nuclear power completely.

Prime Minister Shinzo Abe, who took office in December, says nuclear power remains essential, even with a surge in generation capacity from solar, wind and other renewable sources, and that the world's No. 3 economy cannot afford the mounting costs from importing gas and oil.

Four nuclear plant operators have applied to restart a dozen reactors under revised safety guidelines, though the pace will be relatively slow, with the first expected to come online early next year at the earliest. Inspections take about six months for each reactor, and obtaining consent from local governments may also take time.

Only two reactors had been operating in Japan since July 2012, both at Ohi in the western prefecture of Fukui. The No. 3 reactor was shut down for maintenance on Sept. 2, and the No. 4 reactor was taken offline late Sunday night and came to a full

stop in the early hours of Monday, according to their operator, Kansai Electric Power Co.. They are among the dozen that have applied to restart.

The disaster at the Fukushima Dai-ichi plant, the worst atomic accident since the 1986 Chernobyl explosion, prompted a rethink of plans to raise nuclear capacity from one-third to over half of total demand.

Even with little to no nuclear power, Japan has managed to avoid power rationing and blackouts. Industries have moved aggressively to avoid disruptions by installing backup generators and shifting to new sources, such as solar power.

Recent disclosures that the Fukushima plant is still leaking radiation and struggling to handle contaminated water used to cool its reactors have raised alarms over whether the situation is as fully under control as Abe says.

Still, the government appears certain to scuttle the commitment to end the use of nuclear power gradually that was made a year ago under a different administration.

While surveys indicate the public remains opposed to nuclear power, the demonstrations by hundreds of thousands after the Fukushima disaster have diminished, perhaps sapped by the pain to the pocketbooks of Tokyo households now paying 30 percent more for electricity than before, with more rate hikes to come.

The issue is cost, and to a lesser extent, concern over a resurgence in climate-changing carbon emissions due to increased use of coal and oil to generate power. Clean energy still accounts for only 10 percent of total consumption — most of it hydropower. Much of the new capacity approved has yet to come online.

Reliance on imported oil and gas has surged from about 60 percent of energy consumption to about 85 percent.

Japan posted a trade deficit in 2011 for the first time in 31 years, and another deficit of 8.2 trillion yen ($82.4 billion) in 2012. About half of the increase stemmed from rising fuel costs, according to the trade minister, Toshimitsu Motegi. The recent weakening of the Japanese yen has added to the burden on the economy from oil and gas imports.

Abe and others in favor of resuming nuclear power contend that renewable energy is too expensive and unreliable — wind doesn't always blow, the sun doesn't always shine.

Apart from those issues, national security requires that Japan retain some self-sufficiency, and the only way to do that is by relying at least in the near term on nuclear energy, said Masamichi Adachi, an economist at JPMorgan in Tokyo. While Japan's suppliers of uranium tend to be stable industrial nations, most of its oil comes from the volatile Middle East.

But the reasons for keeping the nuclear industry afloat extend beyond the

imperatives of trade balances and balance sheets.

Having invested billions of dollars (trillions of yen) in nuclear plants and technology it is counting on selling to a burgeoning global industry, many of Japan's business and political leaders appear reluctant to give it up. Local communities are divided: many have relied heavily on nuclear plants for jobs and tax revenues, but worry over potential risks.

Still, Abe has pledged to pursue renewable energy and backed reforms that would separate power generation and distribution, aimed at getting utilities to retool their electricity grids so they can absorb solar and wind power generated by households, companies and other independent sources.

Other initiatives include improving the efficiency of thermal power plants, installing computerized "smart meters," using more energy-efficient construction materials and design and expanding the use of energy-efficient LED lighting.

Over a year ago, the government set a new, higher feed-in tariff for renewable energy, and companies are investing heavily in wind and solar power, transforming defunct golf courses into solar farms and building offshore wind turbines.

Such companies include phone carrier Softbank, trading houses Mitsui & Co. and Marubeni Corp., Toyota Motor Corp.'s Toyota Turbine and Systems Inc. and Oji Paper, among others. Since April 2012, Japan has increased its generation capacity from renewable sources by 15 percent to about 3.4 million kilowatts.

"Over the last two years, there's been a realization among the big players — Toyota, Hitachi, shipbuilders — that there's a huge opportunity in power," said Andrew DeWit, a professor at Rikkyo University in Tokyo. "We're also seeing radical efficiency gains."

Even if Japan's nuclear plants are allowed to restart, many will soon reach their 40-year operating limits, raising the issue of whether and how they will be replaced. Meanwhile, the disposal and security of nuclear waste are issues yet to be resolved.

For now, however, it appears any phase-out of nuclear power will be very gradual.

"In the long term if we can create new resources that are more efficient than the current oil-based system, then we can rely less on nuclear power, that's quite possible," Adachi said. "But it will take quite a long time."

—

Associated Press writer Mari Yamaguchi contributed to this report.

**Source URL (retrieved on *12/19/2014 - 7:12am*):**
http://www.chem.info/news/2013/09/analysis-high-costs-keep-japan-focus-nuclear