

## Another thing Utah Could learn from Kenya: Olkaria IV Geothermal Plant to be largest in World

By Juan Cole | Dec. 7, 2012 |



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Utah did not vote for President Obama, whose father hailed from Kenya. But that state has something else to learn from the east African country. [Scientists have found a massive geothermal hotspot in the Utah](#) that could be used to generate electricity, with natural steam. (Most electricity generation, including by nuclear plants, just consists of various ways to generate steam to turn turbines; the earth does a lot of that naturally).

But Nairobi is way ahead of Salt Lake City in this industry.

Kenya's planned Olkaria IV geothermal power plant at the Rift Valley, when completed, will be the largest such complex in the world! The underground hot springs in the Rift Valley have a potential to generate 2 gigawatts of electricity, i.e. as much as two nuclear plants.

The Olkaria II plant, built in the 1990s, currently contributes 105 megawatts to the national grid. Altogether, [the current 3 geothermal plants in the valley contribute 127 megawatts](#) altogether to the national grid.

Kenya is amazingly green in its electricity generation, with 44% coming from hydroelectric and another nearly 13% from other renewable sources. It wouldn't take much for Kenya to use solar and wind to get the other 40% or so of its electricity from green sources, and the large amounts of hydro and geothermal energy would be very useful in providing base power that isn't as intermittent as wind and solar. Maybe helping Kenya become 100% green is a good project for President Obama after he leaves the White House (Jimmy Carter has had major public health and other achievements as an ex-president).

[NTVKenya reports:](#)



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<http://www.ntv.co.ke>

Built in the 90s, Olkaria II power station has been able to generate some 105 megawatts to boost the national grid. The plant solely relies on steam which is tapped some 3000 meters beneath the earth to generate electricity. Before the construction of Olkaria II, Olkaria I power station had the capacity to produce 45 megawatts of electricity. The planned Olkaria IV, when completed, will be the largest geothermal power plant in the world. Nimrod Taabu now looks at the importance of these two power plants operated by KenGen in supplementing the National grid and why geothermal energy is fast becoming more popular and reliable than hydro and wind energy."

Take a lesson, Utah.

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## 5 Responses



**JT McPhee** 2012.12.07 08:34

The cool thing about Olkaria geothermal project is that it's located in an area where there's already lots of seismic activity, as in earthquakes. So there's no likely way of figuring if any of those quakes are as a result of the drilling and pumping that's part of the cycle.

Geothermal has been rejected by a lot of locales, due to the surprising incidence of, you guessed it, earthquakes, nuisance and destructive, occasioned by the projects. [link to nytimes.com](#) There are several US areas, other than parts of Utah, where the planet has hot zones relatively near the surface, that might like the tar shale of Canada be "profitably" exploited. Query whether the "externalities" that might flow, pardon the pun, from that kind of pricking of Mother Earth's skin, would be accounted for either in the planning and construction, or when "stuff happens" after the fact. Remember Fukushima! How's TEPCO's stock doing these days?

Maybe the people of Utah, including a large number of Mormon believers, might be concerned less about short-term feeding of the fever of Energy Hunger and more about what a place that some geologists suspect might be a place for a great Georedefinition, along the lines of past cataclysmic volcanism.

If we don't understand all the possible unanticipated consequences, maybe we ought be a little careful about messing with stuff like this...



**joe from Lowell** 2012.12.07 01:50



Sticking with coal and oil would be safer?

There is not “do nothing” scenario, JT. We either find alternatives to get off fossil fuels, or we don’t.

Oh, and while “Energy Hunger” is all scary and stuff, I suspect the Kenyans use different terms, like “having lights in my house.”



**JT McPhee** 2012.12.08 06:55

Nice mischaracterization. I said no such thing. Alternatives to combustion sure as hell are needed, but how about this time we understand what we are buying into? Does “Fukushima” or “fracking” have any resonances for you? There are externalities that proponents who profit from one technology or another would and already do obscure.

Oh, and as to the lives of Kenyans and “scary stuff,” where do you get off implying I don’t care about, and as a nurse I actually do something about, the welfare of my fellow humans, here and everywhere?



**JT McPhee** 2012.12.08 08:10

Oh, and to save you or Bill the trouble, let me write it for you: “Just because you are a Vietnam vet, that doesn’t mean you know anything about anything,” and “Just because you are a nurse, that doesn’t mean you give a damn about Kenyans.”

Does it help that my son-in-law is Ghanaian? Or does that get discounted too?



**joe from Lowell** 2012.12.07 12:10

This wouldn’t be the first time Africa has leapfrogged the West in the deployment of new technologies. Large parts of the continent skipped over telephone landlines entirely and deployed cell towers as the first telecommunications infrastructure.

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