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NASA Taps Three Companies To Design Nuclear Power Plants For the Moon (techcrunch.com)

Posted by BeauHD on Thursday June 23, 2022 @03:00AM from the We-Want-You dept.

NASA announced on Tuesday that it's contracting three suppliers to provide concept designs for nuclear fission energy systems designed for use on the moon. TechCrunch reports: The winning bids for this award came from Lockheed Martin, Westinghouse and IX (a joint venture from Intuitive Machines and X-Energy). Each will be working with a few partners to develop their systems, which will be "initial concepts" only for the purposes of satisfying this particular contract, and each will receive roughly \$5 million for their work, expected to take around 12 months.

NASA is aptly partnering with the Department of Energy (DOE) on this project, and the specs include a 40-kilowatt power generation capability, capable of generating that for at least a decade. That's about what a full charge on a current entry-level Nissan Leaf contains -- but as a fission generator it would obviously provide that continuously. It may not seem like much, but deployed singularly or in groups to support a lunar base, it could solve a lot of the challenges of the kind of prolonged occupancy of the moon that NASA plans to eventually establish through its Artemis program, which seeks to return humans to our largest natural satellite for ongoing science missions. NASA also notes that the work done for this contract could have other future applications for propulsion systems for long-range spacecraft for deep space explorations.

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Power != energy (Score:2)

by Norway (700585)

Is it that hard for technical writers to figure out the difference between power and energy? What kind of power is it? Same amount of power as what a nissan leaf contains? He might as well be saying a football field uses an olympic pool worth of water (with no reference to time over which it is used)

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by Norway (700585)

Anyone remember Space 1999?

Ok, that one was about nuclear waste storage...but I guess it could still happen sometime in the future if these lunar nuclear plants follow legacy nuclear waste protocols.

journalists keep getting dumber (Score:2)

by algaeman (600564)

Would it be so difficult to ask someone with a brain for an equivalent? This is the amount of power you could get from a diesel generator burning ~15 liters an hour.

How about for Earth first? (Score:1)

by Anonymous Coward

They're desperately needed here more.


1 hidden comment

Re: (Score:1)

by MacMann (7518492)

If you can afford to build nuclear reactors here on hearth nobody's stopping you but you ain't building those things with other peoples tax money.

Why not? Have you seen how much tax money is spent on corn ethanol fuel, wind subsidies, solar subsidies, hydroelectric dams, and so many other means of producing energy? We see tax money spent on building power plants all the time, be they coal, natural gas, or whatever. One big role of the government is providing infrastructure to aid in commerce, national security, and utilities. Building power plants is what people expect their taxes to do for them.

-
- **[Atomic batteries \(Score:2\)](#)**
by [Xenna \(37238 \)](#)
Aren't good enough for this?
<https://en.wikipedia.org/wiki/...> [wikipedia.org]
-
- **[Re: \(Score:2\)](#)**
by [algaeman \(600564 \)](#)
Not for 40kW. This is intended to be a fairly permanent installation.
-
- **[Re: \(Score:1\)](#)**
by [MacMann \(7518492 \)](#)
An atomic battery uses the decay of radioactive isotopes as the source of power, what NASA wants is something that runs on nuclear fission.
Atomic batteries are fine when power demands are small, and the duration in which the power is needed is very long. For the scales of power and time considered here that might not work so well. It would be interesting to see someone work out the math on an atomic battery option and compare that to what NASA has in mind. One thing is to work out the best material for t
-
- **[If it works on the moon then it works on Earth. \(Score:2\)](#)**
by [MacMann \(7518492 \)](#)
Seeing an article about putting nuclear reactors on the moon reminded me of a TED Talk I saw some time ago:
<https://www.ted.com/talks/kirk...> [ted.com]
In the talk is Kirk Sorensen talking about the energy needs of a human colony on the moon, and the challenges faced in getting that energy. On the moon people would need energy for heat, light, cooling, food production and preparation, processing of waste, and so much more. The challenges for getting energy on the moon is there is no wind for windmills. There's no
-
- **[Re: \(Score:2\)](#)**
by [Askmum \(1038780 \)](#)
Even if we would get this to work (thorium reactors have been in research for decades but nothing commercially viable has come from it), the risk of making a small nuclear power package are immense. The smaller you make it, the easier it gets to transport it. Or to steal it.
Do we really need to worry not only about the nuclear waste, but also about what people that are not so friendly to your government might do with it (and there is lots of domestic terrorism in the US). Reactors like this need to be as he
-
- **[Re: If it works on the moon then it works on Earth \(Score:1\)](#)**
by [flyingfsck \(986395 \)](#)
Ah yes, the Shoshdat Thorium trope. A Thorium reactor is a Uranium reactor and has all the problems of a Uranium reactor, plus a few more due to starting up with Thorium.
-
- **[Wot? \(Score:3\)](#)**
by [nospam007 \(722110 \) *](#) on Thursday June 23, 2022 @05:16AM ([#62643962](#))
In case of an accident, they'll let contaminated water into the Mare Tranquillitatis?
All the Moon-fish will die.
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