

Adapting the GER Model to Your Country or Planet

This PDF is for the implementers—engineers, planners, and visionaries—who need practical guidance on customizing the GER. It covers adaptations for Earth nations, non-warhead fuel options, and a futuristic take on using the GER on Mars.

Graphite Eternity Reactor: A Flexible Solution for Earth:

- The GER's open-source design is adaptable to any country's geology, water resources, and energy demands. Whether you're coastal, landlocked, earthquake-prone, or stable, the GER can fit your needs.
- Examples:
 - Iceland: Integrate deeper geothermal wells for bonus power.
 - Chile: Use seawater for cooling and steam generation.
 - USA: Scale up to a GER-Titan model for gigawatt-scale output.



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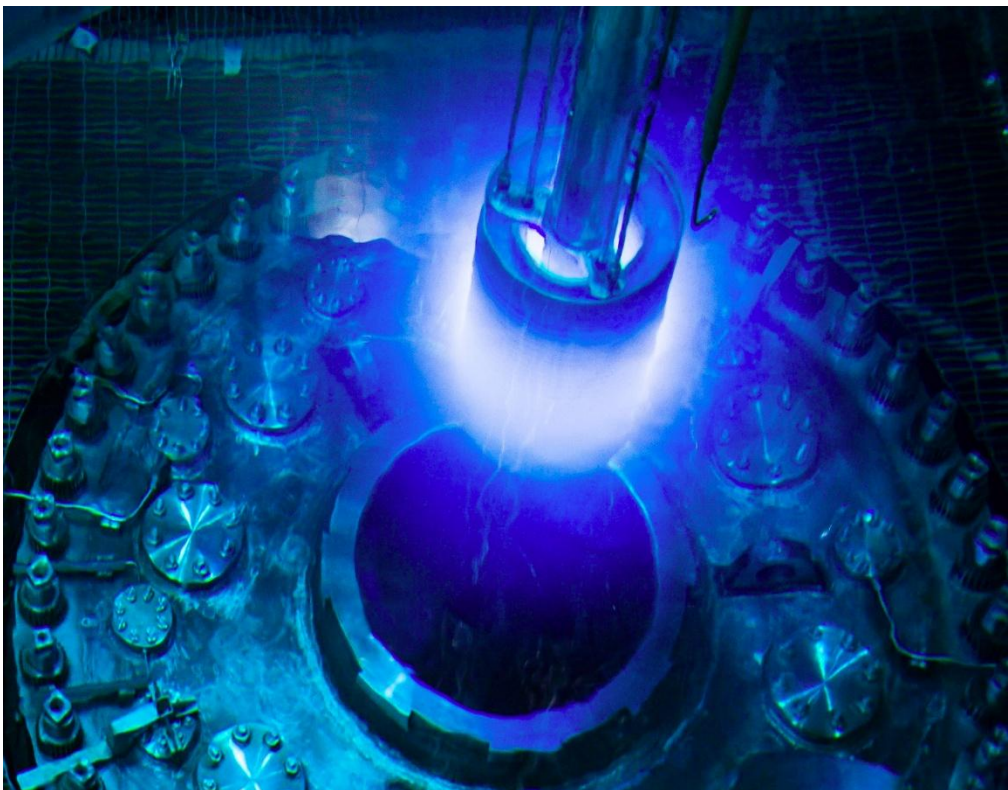
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Non-Warhead Fuel Options

Beyond Warheads: Civilian Fuel for GER:

- No warheads available? The GER can run on civilian nuclear fuels like enriched uranium or thorium:
 - Low-Enriched Uranium (LEU): 4.5% U-235, standard in traditional plants. Annual cost: ~\$1M (compared to free warhead fuel).
 - Thorium: Abundant and safer, thorium breeds U-233 in the GER's graphite lattice. Initial cost: ~\$500k for a Th-232 blanket.
- Switching is straightforward: replace the warhead-derived Triad cores with fuel rods or pebbles and tweak the neutron oscillation for efficiency.



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GER on Mars - A Vision for the Red Planet

Powering Humanity's Next Home:

- Mars lacks warheads, but the GER thrives in its harsh conditions:
 - Fuel: Use thorium mined from Martian regolith or import LEU from Earth.
 - Water: Extract from polar ice caps or use CO₂ sublimation for cooling.
 - Depth: Bury the GER 100 ft underground to shield it from radiation and dust storms.
 - Energy: One unit could power habitats, greenhouses, and fuel production for a colony of 10,000, lasting 300 years with waste recycled onsite.



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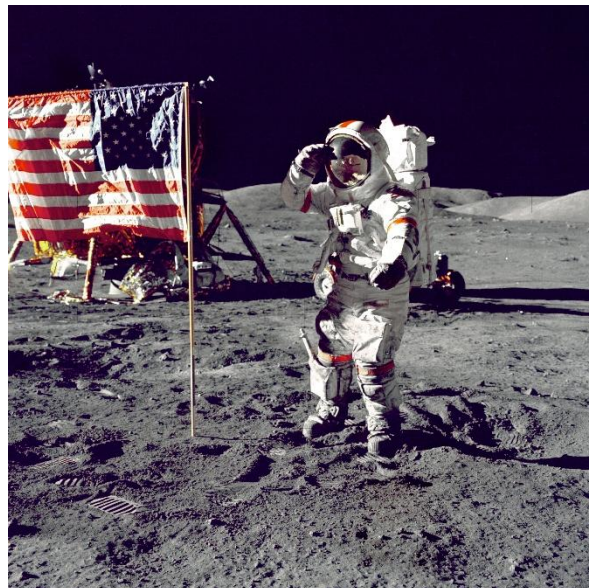
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Steps to Adapt GER Anywhere

Make It Yours:

- For Earth:
 - Assess geology (stable rock) and water sources (sea, river, or recycled).
 - Select fuel (warhead, LEU, or thorium).
 - Scale output (50 MW for standard GER, 1 GW for Titan).
 - Customize safety (e.g., extra quake-proofing in Japan).
- For Mars:
 - Mine thorium or ship LEU.
 - Use CO₂ cooling and solar-powered thermoelectric generators (TEGs).
 - Automate with AI to reduce crew needs.
- The GER's versatility makes it a universal energy solution, from Earth's cities to Mars' plains.



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