

Hello, everybody! Mikha'el here to give you all yet another Mega Man calc! This time, I will be re-evaluating something that I analysed ages ago for Mega Man Legends. It's this lore [here](#)!

I did make a calc for this [here](#), but I do find this unreasonably low-balled. Why? Well, because [the results put it comparable to IRL volcanic eruptions that have happened in the past and were nowhere close to causing an ice age](#). Heck, realistically, it's impossible for a single volcano to erupt and single handedly cause an Ice Age, not even a VEI 8 one. This would mean this fictional eruption is FAAAAAR above all the ones that have historically happened. The only event comparable that got close to causing a century-long ice age and even blocked all sunlight for a decade is the Chicxulub Impact, the one that killed all the dinosaurs and [caused a 15 year winter](#). And [we all know that event is a yield of 100 Teratons of TNT](#). It could be higher given that it was probably gonna last a century rather than 15 years, or it could be lower given the mechanisms are different (volcanic eruption that lasts months vs meteor impact). So I'll just for now estimate that this is the yield for now. This would scale to a high

In addition, the script reveals that multiple refractors could be made from all this magma energy that was going to erupt as Tron Bonne said. So 1 refractor would be made with a portion of this energy. For this calc, I will assume that she got 10 refractors from this given even by Mega Man Legends 2 the Bonnes still have financial problems. So with 10 Teratons of TNT per refractor.

That's the energy of a Refractor of the size seen below. We know that these refractors are similar to the one that Volnutt found in the first island in the game, which is large enough to fit the Flutter. So I shall calc the general energy density of Refractors.



991px = 0.77 meters
944px = 0.7335 meters
294px = 0.2284 meters
492px = 0.4965 meters

All dimensions figured out, now to find the volume. The shape looks like one of those [rectangular bipyramids](#). So I shall just calculate the volume of 2 pyramids and 1 rectangular prism and then add their volumes.

[Volume of pyramids](#): 0.019 m³

[Volume of prism](#): 0.18 m³

Summing them up gives us 0.218 m³. Cool. And 10 Teratons of TNT are contained in this Refractor. And divide this by the energy it gives us....

Energy density: 10 Teratons of TNT / 0.218 m³ = 45 teratons of TNT per cubic meter
(Country level)

Cool beans. This is how much energy a Refractor with a volume of 1 cubic meter would have. This will be useful for another calc I have planned.

By the way, I checked the context and the Key Refractor would scale to the whole 100 Teratons of TNT yield because it's used as a fuse to let the machine create all those other refractors, which is stated to be well above the average high-level refractor. Who scales to these values? You will all find out in due time.