We affirm

Contention 1 is REMs

MIT in 2016 finds

The rare earth elements (REEs) **are comprised of** the lanthanide **elements** plus scandium and yttrium, which have similar physical properties and are often found in the same ores and deposits. Specifically, REEs include the light REEs (LREEs) such as lanthanum, cerium, praseodymium, neodymium, samarium, europium, and the heavy REEs (HREEs) gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium and yttrium. While most of these elements are not actually rare in terms of general amount of these elements in the earth's crust, they are rarely found in sufficient abundance in a single location for their mining to be economically viable. REEs **[that]have many important applications in modern technology for which there is no equal substitute, but an increasing demand for these elements is straining supply.**

Unfortunately, this precious supply is at risk right now for the US through an imminent shortage.

The Netherlands Aerospace Centre in 2017 finds

With a more **permanent shortage of rare-earth minerals predicted by 2050, according to a U.N. report, scientists have begun to consider** the possibility of **deep-sea mining.** While large deposits have been speculated to lie on the sea floor, they haven't been found yet, and the environmental risks are substantial. Twenty-seven countries have signed agreements to partake, but external sources recommend an international approach.

However, ratifying UNCLOS gives the US the ability to access REMs in 2 ways

First by making claims

Timmons, testifying to the Senate Foreign Relations Committee in 2012 explains

The deep seabed offers a new opportunity for the United States to gain steady access to these vital rare earth minerals. Polymetallic nodules are located on the deep ocean floor. These nodules typically contain manganese, nickel, copper, cobalt and rare earth minerals. **However, U.S. companies cannot actively pursue claims in the areas** where these nodules are dense **unless the U.S. ratifies the Law of the Sea Treaty.**

Second by providing investment for technology

Khalifa of Seapower in 2012 finds

Khalifa, SeaPower, "Seapower - June 2012 - Page 18-19", 6/1/12, http://www.seapower-digital.com/seapower/201206?pg=20#pg20

Furthermore, Warren said, Lockheed's claims now are the only current active U.S.-based claims. Last July, the first four licenses for deep seabed exploration were granted by the International Seabed Authority (ISA), the organization created by the Convention to recognize mining claims beyond the continental margin, and two of them are held by China and Russia, she said. "The importance of these resources is well understood internationally," Warren said, describing the need to be a party to the Law of the Sea Convention in order to be an active participant and have authorities in, for example, the rule-making process within the ISA. "Other countries are moving forward quickly and

aggressively to access them. As the only U.S.-based claimant, our view is pretty straightforward. Business **initiatives to exploit deep seabed mineral resources will only** be able to **secure** the necessary **financial investments if done** pursuant **to** the **existing international framework."**

That's why Gallagher of the Templeton Law Journal concludes in 2014

Majorie Ellen Gallagher, Templeton International and Comparative Law Journal, "The Time is now", Spring 2014, https://www.comitersinger.com/wp-content/uploads/2018/01/2269_001.pdf (pg 7)

Further, methane hydrates114 are another potentially enormous alternative energy source found in the ocean with extraction technology in its infancy.115 **Unless the United States accedes to UNCLOS, U.S. companies will be less likely to invest in deep seabed mining** of the nodules and exploitation of methane hydrates, leaving untouched great resources that would add much revenue to the U.S. Treasury.

Without access to these metals, green technology would grind to a halt.

The UN Environment Programme finds in 2012 that

Near-term **worldwide shortages of R[are] E[arth] E[lements]s used in renewable and energy-efficient technologies,** such as wind turbines, solar cells, plug-in electric vehicles, and energy-efficient lighting is an emerging issue that may well **affect the development of clean energy** technologies and the growth of Green Economy. Any **restriction in** the **production and supply** of these rare earth elements **could have serious consequences for the world◆s transition to a clean energy supply** and would affect the global economy since the technologies are important in helping create jobs, promoting economic growth, and fighting climate change.

Because of the potential impact of such shortages on clean energy technologies and the Green Economy effort, UNEP may wish to play a role in helping to address the issue at national and international levels. Potential actions include improving its understanding of rare earth issues, and identifying activities it might undertake to inform and advise interested governments about them. The latter could include gathering and providing scientifically credible data and information at the global level, especially about availability in Africa and other developing regions, and alerting governments about the potential environmental consequences of rare earth minerals shortages, such as the effect on the deployment of clean technologies, as well as the impacts of rare earth mining on ecosystems and their services.

The impact is Aiding Africa

Kibben of the New Yorker in 2017 finds there is current interest in giving African countries green tech.

President Trump has derided renewable energy as "really just an expensive way of making the tree huggers feel good about themselves." **many Western entrepreneurs see solar power in Africa as a chance to reach a large market and make a substantial profit.** This is a nascent industry, which, at the moment, represents a small percentage of the electrification in the region, and is mostly in rural areas. There's plenty of uncertainty about its future, and no guarantee that it will spread at the pace of cell phones. Still, in the past eighteen months, these businesses have brought electricity to hundreds of thousands of consumers—many of them in places that the grid failed to reach, despite a hundred-year head start. Funding, much of it from private investors based in Silicon Valley or Europe, is flowing into this sector—more than two hundred million dollars in venture capital last year, up from nineteen million in 2013—and companies are rapidly expanding their operations with the new money. M-Kopa, an American startup that launched in Kenya, in 2011, now has half a million pay-as-you-go solar customers; d.light, a competitor with offices in California, Kenya, China, and India, says that it is adding eight hundred new households a day. Nicole Poindexter, the founder and C.E.O. of Black Star, told me

that every million dollars the company raises in venture capital delivers power to seven thousand people. She expects Black Star to be profitable within the next three years.

This is critical since Watkins of the Guardian in 2015 finds Today **in Africa, 621 million people** – two-thirds of the population – **live without electricity.** And the numbers are rising.

Renewable energy is beneficial for Africa in 2 ways

The first is reducing pollution

Roberts of Vox in 2017 writes

Some 1.2 billion people around the world lack access to electricity. 2.8 billion burn charcoal, wood, or other biomass to cook and heat their homes. **Lack of access to clean, reliable energy services**, or "energy poverty," is a terrible problem for those who face it, **lead[s]**ing to hours of drudgery **gathering fuels and high mortality from indoor pollution (which kills around 4 million people a year).**

The second is ending energy poverty

Reuters finds in 2017 energy is needed in order to have

education, healthcare, gender equality, water, agriculture, sanitation - *enough time to be implemented.*

Which is why the World Economic forum finds that we need renewable energy to end poverty,

Contention 2 is Offshore Wind

According to the US Energy Information Administration in 2018, oil prices are projected to rise above $113 a barrel by 2050.

Wind is better the further offshore it is.

Portman of Science Direct in 2009 finds

While there is still great potential for wind energy development on land where construction, operation, and maintenance costs may be cheaper, two factors support offshore wind energy in the US: (1) the public nature of the seabed and (2) the great resource potential (Musial and Butterfield, 2004; Offshore Wind Collaborative Organizing Group, 2005). **Winds blow stronger and more consistently offshore**. Musial and Butterfield (2004) estimated that **about 183 GW of energy is available at 30–60 m depth offshore of the US.**

The Office of Energy Efficiency reports the potential of offshore wind

Offshore wind resources are abundant, stronger, and blow more consistently than land-based wind resources. Data on the technical resource potential suggest more than 2,000 gigawatts (GW) could be accessed in state and federal **waters along the coasts of the United States**

[could access energy equivalent to] and the Great Lakes. While not all of this resource potential will realistically be developed, the magnitude (**approximately two times the combined generating capacity of all U.S. electric power plants**) represents a substantial opportunity to generate electricity near coastal high-density population centers.

Companies are already looking to start investing into offshore wind. **Gilpin in 2018 from inside climate news writes**

One other industry has spent decades constructing and maintaining such massive energy infrastructure that can survive the storms of the open ocean: oil and gas. Now, with global demand for wind power growing, **major oil and gas companies like Shell and Statoil are diversifying their portfolios by developing offshore wind**, and the companies that provide services to offshore fossil fuel platforms are seeing a new market rising in their wake.

"Offshore wind developing seemed like a natural skill set for offshore oil and gas companies," said Stephen Bull, senior vice president of wind and carbon capture storage for Statoil, a Norwegian oil and gas company. "From the Gulf of Mexico to Brazil and beyond, we see a similar supply chain and skill set and can grow within this area."

However, we must accede to UNCLOS to preserve security of offshore wind power in the future.

Dwyer of the Minnesota Journal of International Law writes in 2009,

Currently, proposed offshore wind projects are located within the territorial waters. But as technology improves and the incentives for wind power increase, installations will be pushed further offshore into what would be the EEZ. But **before** such **developments [for wind farms in the EEZ] can be contemplated,' UNCLOS must be implemented to secure the rights to develop wind power and provide clarity in the law that governs such sites**. **The rights currently enjoyed by the United States** to its continental shelf **are not sufficient to** adequately **protect the** exclusive and positive **right to develop offshore wind projects in those waters.** But ratification of UNCLOS will guarantee U.S. rights to develop the EEZ. If the US fails to ratify UNCLOS, it can still build offshore turbines within the EEZ. The problem is that there would be no internationally recognized governing law. Unsettled law leads to poor economic efficiency. The lack of a governing law in the EEZ limits the incentive to develop offshore wind projects. Current offshore projects within the territorial waters already face uncertainty in U.S. law, which has been a significant obstacle to their success. **Uncertainty in the international law** applicable to the EEZ **may be too great a risk for developers. Developers have no reason to believe the United States would protect their interests over diplomatic relations or shipping concerns.** UNCLOS provides, at the very least, a suggestion for how those disputes should be resolved and an indication for how they can be avoided, so constructing a coherent approach to developing offshore wind in the EEZ is possible.

Concluding that

The future of offshore wind will likely **depend on ratification of UNCLOS.**. Offshore wind is in its infancy in the United States, but has great potential to supply a large portion of the nation's energy needs.66 To [supply a large portion of the nation's energy], accomplish this development, the United States will need to expand farther offshore.67 While expansion would require new advances in offshore wind technology, such expansion is economically viable.66 The incentives to pursue such expansion will likely increase as the pressure to combat global warming increases and fossil

fuel prices continue to rise.69 By ratifying UNCLOS now, the United States can secure its future in offshore wind energy. UNCLOS, unlike the 1958 conventions, incorporates legal recognition for offshore wind power.7 " It also expands on the law necessary to protect offshore resources and developments. Furthermore, it provides an arbitration forum to resolve conflicts between countries that relate to the law of the sea.

The impact is reducing air pollution.

Environment America quantifies that

Assuming **[If]** that **wind energy** generation **grows** over time **to meet 30 percent of the nation's electricity needs by 2030,** that **[and] a significant and rising amount of that energy comes from offshore wind energy**, that onshore wind energy is distributed across the United States in a manner similar to wind energy built to date, and that wind energy displaces fossil fuel-generated power (see Methodology), **America can** achieve significant reductions in global warming pollution. If America were to set a course for generating 30 percent of its electricity in 2030 using wind power, the nation would **avert** 705 million metric tons of carbon dioxide in 2025 and **968 million metric tons of carbon dioxide pollution in 2030,**. That's equivalent to: • 24 percent of forecast U.S. power plant carbon dioxide emissions in 2025 and 36 percent of forecast power plantemissions in 2030. 24 • The annual carbon dioxide emissions from 185 typical coal-fired power plants in 2025 and from 254 coal plants in 2030. 25 • Emissions from nearly 150 million of today's vehicles by 2025 and more than 200 million of today's vehicles by 2030. 26 • 10 percent of America's 2005 emissions of global warming pollution by 2025 and 13 percent of those emissions by 2030. 27 • 2.5 percent of 2005 global carbon dioxide emissions in 2025, and 3.5 percent of those emissions in 2030. 28 Achievement of 30 percent wind energy by 2030 would result in **[and results in] carbon dioxide emissions from electricity generation 40 percent lower than in 2005**. The EPA's proposed Clean Power Plan calls for reductions in power plant pollution of 30 percent relative to 2005 levels by 2030. Rapid development of wind energy, therefore, can help enable many states to achieve the emission reduction goals of the EPA's Clean Power Plan while taking a strong step to prevent the worst impacts of global warming. 29

This is beneficial as Delvin from Rutgers university in 2017 writes that air pollution is linked to lung disease, heart-related diseases and type 2 diabetes.

Cutting emissions would therefore save thousands of American lives. A study conducted by Duke University reported on by Milman from the guardian in 2016 finds that

A 75% reduction in transport emissions would save 120,000 lives by 2030, the Duke study calculated, while **a 63% cut in energy emissions would prevent a further 175,000 deaths [by 2030].** Most of these saved lives would be in cities and states that contain high concentrations of polluting industry, such as Ohio and Kentucky.

https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-AEO2018&cases=ref2018&sourcekey=0

http://minnjil.org/wp-content/uploads/2015/11/Kieran-Dwyer_-UNCLOS-Securing-the-United-States-Future-in-Offshore-Wind-Energy.pdf