Negative: Strategic Minerals

By “Coach Vance” Trefethen

Case Summary: The AFF Plan enacts HR3240, the National Strategic & Critical Minerals Production Act. It's a law that attempts to streamline and speed up the development of mineral mining inside the United States. It does not change any policy regarding imports or exports of anything. It hopes to have the effect of producing more minerals domestically so we're not as dependent on imports, relying on its "effects" to achieve topicality.  
NEG Strategy: "China controls the mineral supply" is not a harm. It's not a harm until someone gets harmed. Even if China cut off the supply of vanadium, SO WHAT? What bad thing would happen to anyone in the US if we had to buy vanadium from somewhere else? Or graphite? "SO WHAT" is a perfectly valid answer to the so-called "harms" presented in many AFF cases in your debate league.

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Negative: Strategic Minerals

TOPICALITY

1. Entirely domestic

Link: HR 3240 contains not one line in it that restricts, regulates, taxes or changes anything about international trade

All the bill does is it claims to speed up the process for mineral mining inside the United States. There are no policies in the bill that are "within the bounds of international trade" at all.

Violation: Effects Topicality

We already know the Affirmative is going to come back up here in the 2AC and argue that because the bill might have the effect of reducing US imports of certain minerals, therefore since it affects the resolution it's therefore topical. But this is abusive because: ANYTHING could "affect" the quantity of things consumers in the US import in any given year. Raising interest rates, federal deficits, social security pensions, Medicare reimbursement rates, environmental regulations, and a million other things could "affect" foreign trade, but none of them are import or export policies within the bounds of international trade.

Impact on the round: Abuse justifies a Negative ballot

If you allow "effects topicality" like this, you are allowing Affirmatives to run virtually any case they want to, without regard to actually changing a trade policy. This is abusive to Negative teams because we cannot possibly be expected to prepare for an infinite number of Affirmative cases on any subject that might "affect" foreign trade. The best way to teach Affirmatives not to do this is to award a Negative ballot.

2. Extra-topical provisions

**Even if you're willing to let them slide on "effects topicality" if this might have an effect on imports, there are still things in HR 3240 that they can't even claim will have an effect on trade. Here are some examples.**

Example 1: Land reclamation funding

Text of HR 3240 the National Strategic and Critical Minerals Production Act of 2021 (accessed 21 Nov 2022) <https://www.congress.gov/bill/117th-congress/house-bill/3240/text?r=8&s=1>

(f) Financial Assurance.—Notwithstanding any other provision of law, the lead agency shall determine the amount of financial assurance required for reclamation of a mineral exploration or mining site. Such amount shall be sufficient to cover the estimated cost of contracting with a third party to reclaim the operations according to the reclamation plan, including construction and maintenance costs for any treatment facilities necessary to meet Federal, State, and Tribal environmental standards.

**END QUOTE. Whether mining sites get land reclamation funding or not, this will not even "affect" international trade. Foreign countries aren't waiting to see whether we plant trees on old mining sites before they trade with us.**

Example 2: Environmental impact statements

Text of HR 3240 the National Strategic and Critical Minerals Production Act of 2021 (accessed 21 Nov 2022) <https://www.congress.gov/bill/117th-congress/house-bill/3240/text?r=8&s=1>

IN GENERAL.—For any project for which the requirements of section 102(2)(C) of the National Environmental Policy Act of 1969 ([42 U.S.C. 4332(2)(C)](http://uscode.house.gov/quicksearch/get.plx?title=42&section=4332)) are not deemed satisfied by the lead agency under subsection (b), at the request of a project proponent, the lead agency, cooperating agencies, and any other agencies involved with the mineral exploration or mine permitting process shall enter into an agreement with the project proponent that sets time limits for each part of the permitting process, including— (A) the decision on whether to prepare an environmental impact statement or similar analysis required under section 102(2)(C) of the National Environmental Policy Act of 1969 ([42 U.S.C. 4332(2)(C)](http://uscode.house.gov/quicksearch/get.plx?title=42&section=4332));

**END QUOTE. Deciding whether or not to write an environmental impact statement is also not something our foreign trade partners are waiting for. If we do or if we don't, it doesn't change even $1 of international trade, because our foreign trade partners don't care.**

Impact on the Round: Abuse justifies a Negative ballot

If you allow them to run a plan that might "affect" the resolution and then goes on to do several things that don't affect the resolution even remotely, you've opened the door to Affirmatives being given permission to just ignore the resolution and run any plan they want. This is abusive to Negative teams who have to research to prepare for policy debates. This has to stop, and the way to stop it is to vote Negative and send a message that this is abusive.

OVERVIEW: 4 areas of concern.

HR 3240 claims it is needed for 4 types of minerals.

Text of HR 3240 the National Strategic and Critical Minerals Production Act of 2021 (accessed 21 Nov 2022) <https://www.congress.gov/bill/117th-congress/house-bill/3240/text?r=8&s=1>

(6) China currently controls the majority of worldwide production of certain minerals, including—   
(A) rare earth minerals;  
(B) graphite and graphene;  
(C) lithium; and  
(D) vanadium.

**END QUOTE. We're going to break down our responses specifically to each of the four.**

INHERENCY

1. Status Quo solves for Rare Earth elements

Non­mine sources are available if they’re ever needed in case of any supply problem with Rare Earths

Tim Worstall 2015 (rare earths expert and senior fellow at free market think tank, Adam Smith Institute) 23 Mar 2015 “What 60 Minutes Got Wrong About Rare Earths and China” FORBES (accessed 22 Nov 2022) <https://www.forbes.com/sites/timworstall/2015/03/23/what-60-minutes-got-wrong-about-rare-earths-and-china/#7fe0abef2a2a>

There’re rare earths in all sorts of other minerals: other minerals that we already process for other reasons. It would be entirely possible to extract what we desire from the materials we throw away at other already producing factories. For example, I spent a few tens of thousands of my own money on checking a process to extract them from the wastes of aluminium (more strictly, alumina) production. It works, no doubt about it. And the reason that I’m not currently running such a factory is because it would be stupid to do so. It would lose money: as Molycorp is. There an English process that could make iron, titanium, alumina and the rare earths from that same waste: there’s even a possibility that that process could be economic. There’re rare earths (that we know how to extract, even if not profitably) in the wastes of zirconium production, other mineral sands, tin, there’s some vast amount in the fly ash (the soot from coal burning) that we currently dump in vast ponds by the tens of millions of tonnes each year.

Existing mines could solve for any China supply disruption

James Vincent 2019 (journalist) 23 May 2019 "Rare earth elements aren’t the secret weapon China thinks they are" (accessed 22 Nov 2022) [https://www.theverge.com/2019/5/23/18637071/rare-earth-china-production-america-demand-trade-war-tariffs (brackets](https://www.theverge.com/2019/5/23/18637071/rare-earth-china-production-america-demand-trade-war-tariffs%20(brackets) added)

In the event of a ban, one of the most important backstops would be America’s Mountain Pass mine. Although the mine was closed after Chinese rare earths drove down prices, the facility is intact and resumed production last January. Recent [estimates](https://www.nytimes.com/2019/05/23/business/china-us-trade-war-rare-earths.html) suggest it’s already supplying one-tenth of the world’s rare earth ores (though not their processing), and in the event of an embargo, it would be possible to bring Mountain Pass back up to speed. “By far the cheapest and fastest way to bring more material into the market — if there was a disruption — is just sitting there in California,” says [rare earth expert and associate professor of political science at the University of Notre Dame, Eugene] Gholz. “It’s not like starting from scratch.” [rare earths expert and senior fellow at free market think tank the Adam Smith Institute, Tim] Worstall agrees: “Producing rare earth concentrate is near trivially simple,” he says. “I, or any other competent person, could produce that from a standing start within six months in any volume required.”

2. Status Quo solves for Graphite

US and Canada already have initiatives ramping up to increase graphite availability

Nicole Willing 2022 (journalist with Argus Media) US battery directive advances graphite projects 22 Apr 2022 (accessed 22 Nov 2022) <https://www.argusmedia.com/en/news/2324666-us-battery-directive-advances-graphite-projects> (brackets added)

Syrah announced on 19 April that it received a conditional offer for a $107mn [million dollar] loan from the US Department of Energy to finance the expansion of the Vidalia plant to a capacity of 11,250 t/yr [tons per year] of anode material. The agreement comes after US president Joe Biden issued a directive on 31 March to use the Defense Production Act to secure US battery supply chains for EVs and renewable energy storage. The directive is also providing impetus to other projects in the US to build graphite-processing facilities, including US-based Westwater, which is constructing the first phase of its Kellyton natural graphite processing plant; US-based Graphite One, which has partnered with Chinese anode producer Sunrise (Guizhou) New Energy Material for its proposed US graphite material plant; and Hong Kong-based Graphex, which plans to establish a US CSG facility via a joint venture with Emerald Energy Solutions. For the near term, Canada is the second-largest graphite supplier to the US after China, and companies such as Nouveau Monde Graphite and Northern Graphite are accelerating their projects to supply the North American market.

Recycling graphite eases import concerns

Andy Uhler 2022 (journalist ) 3 Nov 2022 " As EV sales accelerate, battery makers face a new shortage of a crucial mineral: graphite" (accessed 22 Nov 2022) https://www.marketplace.org/2022/11/03/electric-vehicle-batteries-graphite-shortage/

In the meantime, companies like Tesla that import graphite are paying more for the mineral. The price has climbed by nearly a third since this time last year.  That’s prodded the American Battery Technology Co. to onshore some production in part by recycling old batteries. “So we can recover the majority of components in a battery, purify them all the way back up to battery-grade quality, and then sell them back into the domestic market,” said Ryan Melsert, the company’s CEO.

3. Status Quo solves for Lithium

Biden is already funding US lithium sources, and self-sufficiency isn't needed anyway

David Kramer 2021 (news editor at American Institute of *Physics*) 21 May 2021 PHYSICS TODAY "Fears of a lithium supply crunch may be overblown" (accessed 22 Nov 2022) (brackets added) https://physicstoday.scitation.org/doi/10.1063/PT.3.4745

President Biden’s $2 trillion jobs and infrastructure package, announced on 31 March, reserves $174 billion to stimulate the US market for EVs. [electric vehicles] The prodigious sum underscores the surge in demand that lies ahead for the lightest metal. Nearly all the growth in lithium consumption in the next decade will be attributable to EV batteries, Miller and others say. Some growth in demand for electric utility-scale storage batteries is expected during the latter part of the decade. In the longer term, other types of battery chemistry, such as flow batteries now in the R&D phase, will likely compete with lithium for large-scale storage applications where weight and size are less important. Although specifics haven’t been released, Biden’s EV plan would seek to secure domestic automakers’ supply chains, beginning with the raw materials, and to stimulate more EV battery manufacturing in the US. But [economics professor at the Colorado School of Mines, Roderick]Eggert says a better strategy would be to diversify US lithium sources globally. Self-sufficiency would be much more costly, he says. “It’s less of an issue of will there be enough and more of an issue of will there be a diversity of sources brought into production in a time frame that matches the growth in demand.”

4. Status Quo solves for Vanadium

New US production of vanadium is already ramping up to replace imports

US Dept of Commerce, Bureau of Industry & Security 2021. 18 Nov 2021 Publication of a Report on the Effect of Imports of Vanadium on the National Security: An Investigation Conducted Under Section 232 of the Trade Expansion Act of 1962, as Amended" (accessed 22 Nov 2022) <https://www.federalregister.gov/documents/2021/11/18/2021-24957/publication-of-a-report-on-the-effect-of-imports-of-vanadium-on-the-national-security-an> (Gladieux and AMG are US producers of vanadium)

Although the United States is reliant on imports of vanadium pentoxide, ferrovanadium, or vanadium-bearing waste products to meet domestic demand, this import reliance will be mitigated by a major expansion being carried out by AMG Vanadium doubling their ferrovanadium production capacity, and the soon-expected completion of Gladieux's renovation, which will reintroduce significant domestic vanadium pentoxide production. In addition, two mining projects are in the exploratory or permitting phase, potentially adding domestic production capacity as soon as 2023.

HARMS

1. Overall response for all minerals: No crisis

Energy-Critical Elements (ECE's) are not under China's control and there's no policy change needed (nor would it work if we tried)

Tim Heffernan 2015 (independent journalist, *writes about heavy industry, economics and the environment for*The Atlantic, Popular Mechanics*and other magazines*.) “Why Rare­earth Mining in the West is a Bust”, June 26, 2015, (accessed 22 Nov 2022) <http://www.hcn.org/issues/47.11/why-rare-earth-mining-in-the-west-is-a-bust>

Over the past five years, numerous nations have brought new ECE supplies to market, eliminating most threats of monopoly control. (The brief Chinese monopoly on rare-earth elements has long since been broken.) Mining industry analysts see little evidence that the market will fuel a burst of American ECE production, and little reason to believe that one could or should be ignited through policy.

2. A/T "Rare Earth minerals / National Defense" (F-35 airplanes and submarines)

"Entirely untrue" that F-35 airplane needs 1/2 ton of rare earths. Each plane only uses a tiny amount

Tim Worstall 2015 (a rare earths expert and senior fellow at free market think tank the Adam Smith Institute) 23 Mar 2015 “What 60 Minutes Got Wrong About Rare Earths and China” FORBES http://www.forbes.com/sites/timworstall/2015/03/23/what­60­minutes­got­wrong­about­rare­earths­and­china/#7e8f 4a74253d (accessed 23 Nov 2022) (brackets added) (parentheses in original)

Which brings us to that defense argument. Is there an over-riding defense related reason as to why we might want to do this? It's most certainly true that the US military does not like to purchase anything made of Chinese materials, I've had that condition imposed upon me in a contract. That the rare earths contained do not come from China, were not processed there. How important is it?  
**[The next 2 sentences are Worstall quoting someone who supports the AFF claim about the F-35, which Worstall does not agree with**:]  
A prime example of that is the new F-35 fighter jet, the most technologically advanced weapons system in history. Each one contains nearly half a ton of rare earths. Former White House Official Dan McGroarty says that's just for starters.   
[**END Worstall's quote from someone else**]  
Really not sure where that information is coming from but given that an F-35 unloaded (ie, without pilot, fuel or weapons) weighs some 14 tonnes or so it really is most unlikely that there's half a tonne of rare earths in there. So unlikely as to be entirely untrue in fact. Rare earths are important to the project, yes. The most important being the coating for the blades in the jet engine which is made from yttrium, a rare earth. But while yttrium is a rare earth it's not a lanthanide. So we don't need one of those billion dollar lanthanide separation plants. And we also don't need to get it from a rare earths mine as there's plenty of other potential sources for it. So many potential sources in fact that even I, who does not normally deal with yttrium, have had vague discussions with people about supplying that program. And as I recall it the demand was for some 2 tonnes (yes, "two tonnes", not two thousand or anything) of yttrium a year. Which doesn't go all that far over a fleet of F-35s if each one needs 500 kg. And of course they don't need 500 kg per plane, they're using it to make a very thin film over those blades in those jet engines, just to protect the surfaces.

Don't need to worry about China nor the rare earth supply chain for the F-35

Tim Worstall 2015 (a rare earths expert and senior fellow at free market think tank the Adam Smith Institute) 23 Mar 2015 “What 60 Minutes Got Wrong About Rare Earths and China” FORBES http://www.forbes.com/sites/timworstall/2015/03/23/what­60­minutes­got­wrong­about­rare­earths­and­china/#7e8f 4a74253d (accessed 23 Nov 2022)

China does not currently have a monopoly, nor 90%, of the supply of rare earths. 60 Minutes is also wrong on the geology and metallurgy of the rare earths. We do not need to have mines to produce them, we can extract from other minerals that we already process. They are used in various defense programs, I know that very well as I've supplied more than one of them. But they're not important to the extent that 60 Minutes seems to think and even the one that is important to the F-35 doesn't have to come from the traditional rare earths supply chain.

A/T "Submarines " - They don’t matter. New sensor technology will render submarines obsolete soon

Tory Shepherd 2021 (journalist) 4 Oct 2021 "Will all submarines, even nuclear ones, be obsolete and ‘visible’ by 2040?" (accessed 23 Nov 2022) https://www.theguardian.com/australia-news/2021/oct/05/will-all-submarines-even-nuclear-ones-be-obsolete-and-visible-by-2040

The Australian National University’s National Security College report [Transparent Oceans?](https://nsc.crawford.anu.edu.au/publication/16666/transparent-oceans-coming-ssbn-counter-detection-task-may-be-insuperable) found that transparency is “likely or “very likely” by the 2050s, a decade after Australia’s new fleet of nuclear-powered subs is due to enter service. A multidisciplinary team looked at new sensor technology, underwater communications and the possibility of tripwires at choke points. They also examined new ways to detect chemical, biological, acoustic and infra-red signatures, finding that even with improvements in stealth submarines will become visible. The report found “future technologies will make the oceans broadly transparent and counter-detection technologies will not have the same salience in the decades ahead as they have had previously”. China has already developed [submarine-spotting lasers](https://www.abc.net.au/news/2019-10-04/chinese-scientists-are-developing-lasers-to-find-submarines/11570886).

3. A/T "Rare Earth minerals - cutoff of trade from China"

Response #1: No impact in the AFF 1AC

It's not a harm until someone gets harmed. The 1AC raised the issue of the 2010 Chinese trade cutoff with Japan, but cited no evidence and didn't even make the claim that anyone was harmed by it. It doesn't matter if China threatens or even does a cut-off, if other trading nations find other sources and their industries aren't harmed, then the cutoff has no impact and we shouldn't worry about it.

Response #2: When China cutoff of Rare Earths in 2010, markets solved and it had no impact. China's monopoly has been broken

Tim Worstall 2015 (a rare earths expert and senior fellow at free market think tank the Adam Smith Institute) 23 Mar 2015 “What 60 Minutes Got Wrong About Rare Earths and China” FORBES http://www.forbes.com/sites/timworstall/2015/03/23/what­60­minutes­got­wrong­about­rare­earths­and­china/#7e8f 4a74253d (accessed 23 Nov 2022)(ellipses in original)

And what did happen? China did try to exercise its monopoly, the world did roll up its sleeves and both Molycorp and Lynas went into production. Between the two of them they produce very much more than 10% of global consumption of rare earths (in fact, reasonable estimates are that they produce more than total non-China consumption of them) meaning that China simply doesn't have that monopoly being talked of. As I said would happen and as a result Alex Tabarrok over at Marginal Revolution has said of my 2010 [analysis](http://marginalrevolution.com/marginalrevolution/2014/11/what-happened-to-the-rare-earth-crisis.html):  
Bonus points to Tim Worstall, economist blogger and rare earth dealer, who in 2010 at the height of the crisis pointed out that rare earths were neither rare nor earths and China’s monopoly had been won only by low prices that accrued to our benefit. ...(...)... Nailed it.  
I don't, by the way, claim great prescience over this. It was obvious to anyone at all with even the most limited knowledge of the industry and of mining economics. The problem that 60 Minutes is talking about, the Chinese rare earth monopoly isn't a problem because the monopoly has been broken.

4. A/T "Graphite" - Not a problem

Graphite concerns are about making Electric Vehicles

Nicole Willing 2022 (journalist with Argus Media) US battery directive advances graphite projects 22 Apr 2022 (accessed 22 Nov 2022) <https://www.argusmedia.com/en/news/2324666-us-battery-directive-advances-graphite-projects>

With EV production running ahead of industry expectations in the US and Europe, supply of graphite for battery anode materials is tightening and there are concerns about the industry's ability to continue meeting demand. EV and battery producers are looking to secure supply from outside China, with the supply chain disruptions caused by the Covid-19 pandemic and geopolitical tensions raising questions about raw material security.

Doesn't matter what happens to Graphite: There aren't enough computer chips to build those EV's anyway

Aarian Marshall & Matt Simon 2022 (journalists) 15 Mar 2022 WIRED "It’s a Perfect Time for EVs. It’s a Terrible Time for EVs" (accessed 22 Nov 2022) https://www.wired.com/story/its-a-perfect-time-for-evs-its-a-terrible-time-for-evs/

Even the most basic new gas-powered car might require 100 chips to power its engine, safety, and infotainment systems; advanced EVs can have more than 1,000. But [supply shocks owing to the global reach of Covid-19](https://www.wired.com/story/year-everyone-remembered-chips-matter/) made it even harder for automakers to find the chips that make their cars go. Now, analysts project the crunch will get even worse because Ukraine is a [major producer of neon gas](https://www.wired.com/story/ukraine-chip-shortage-neon/), which semiconductor makers use to power the lasers that write on computer chips. Experts say efforts to ramp up chip production in the US won’t bear fruit for years. Largely because of the chip crunch, US sales of vehicles may hit only 15 million this year, 2 million below a normal production year, says Warren Browne, an automotive veteran who now runs his own supplier consultancy. “The chip shortage overwhelms everything,” he says.

5. A/T "Lithium" - Not a problem

China isn't a significant supplier of Lithium: It comes from Australia, Argentina, Bolivia and Chile

David Kramer 2021 (news editor at American Institute of *Physics*) 21 May 2021 PHYSICS TODAY "Fears of a lithium supply crunch may be overblown" (accessed 22 Nov 2022) (brackets added) https://physicstoday.scitation.org/doi/10.1063/PT.3.4745

Western Australia now supplies around 60% of the world’s lithium from five mines containing an igneous rock known as spodumene. Most of the remaining global supply comes from salt flats in Argentina, Bolivia, and Chile, in the form of brines that contain high concentrations of the light metal.

6. A/T "Vanadium" - Not a problem

The big "problem" with imported vanadium in today's economy: Low prices. Great problem to have!

US Dept of Commerce, Bureau of Industry & Security 2021. 18 Nov 2021 Publication of a Report on the Effect of Imports of Vanadium on the National Security: An Investigation Conducted Under Section 232 of the Trade Expansion Act of 1962, as Amended" (accessed 22 Nov 2022) https://www.federalregister.gov/documents/2021/11/18/2021-24957/publication-of-a-report-on-the-effect-of-imports-of-vanadium-on-the-national-security-an

The biggest challenge the industry faces is low and volatile vanadium prices. Prices are currently below the levels required for cost effective primary production in the United States, and make it difficult for secondary producers to source feedstock and operate profitably. Adding to producers' woes are the major demand declines due to COVID-19, with demand for vanadium in titanium products hit especially hard as a result of decreased consumption by the aerospace industry.

SOLVENCY

1. No mining boom is possible

Nothing anyone in Washington can do to boost US minerals production to levels needed for AFF to solve

Tim Heffernan 2015 (independent journalist, *writes about heavy industry, economics and the environment for*The Atlantic, Popular Mechanics*and other magazines.*) “Why Rare­earth Mining in the West is a Bust”, June 26, 2015, (accessed 22 Nov 2022) <http://www.hcn.org/issues/47.11/why-rare-earth-mining-in-the-west-is-a-bust> (brackets added)

In short, a new American mining boom is nowhere in the cards, and the global nature of ECE [energy critical elements] production means that neither Silicon Valley nor Washington, D.C., can do much to change that. The Intermountain West, whose mines supplied the raw materials for every economic revolution of the 20th century — copper for electrification, coal for industrialization, uranium for the Atomic Age — faces something completely unexpected in the green and digital 21st: the prospect of a comprehensive bust.

No US mines will open up to produce any strategic minerals because they can't compete with global economic forces

Tim Heffernan 2015 (independent journalist, *writes about heavy industry, economics and the environment for*The Atlantic, Popular Mechanics*and other magazines*.) “Why Rare­earth Mining in the West is a Bust”, June 26, 2015, (accessed 22 Nov 2022) <http://www.hcn.org/issues/47.11/why-rare-earth-mining-in-the-west-is-a-bust>

I’d also bet that we won’t have one again any time soon, nor a new lithium mine (to add to the single, small one now operating), nor a vanadium mine (despite promising new uses for the metal), nor any mine for any of the 62 so-called energy-critical elements. Each is vital to modern digital or energy technology. The U.S. contains potential sources for many of them, and powerful voices in politics and business insist that the country must exploit them. But despite skyrocketing demand for the energy-critical elements, would-be domestic producers just can’t compete with global forces.

2. Refining in China

"China monopoly" isn't solved by mining: China is the only place mine output can be processed into usable Rare Earth Elements (REEs)

Prof. June Teufel Dreyer 2020 (Senior Fellow in the Asia Program at the Foreign Policy Research Institute, is Professor of Political Science at the Univ of Miami) 7 Oct 2020 "China's Monopoly on Rare Earth Elements - And why we should care" (accessed 23 Nov 2022) .*https://www.fpri.org/article/2020/10/chinas-monopoly-on-rare-earth-elements-and-why-we-should-care/*

In other words, readying REEs for use, whether from the land or the sea, is time consuming and expensive. China controls nearly all of the world’s processing facilities, with even REEs taken from the ground in other countries being sent there for refining. Lynas, the exception, sends its ores to Malaysia for processing. Valuable though Lynas’ contribution to the rare earth problem be, it is a less than perfect solution. The corporation’s mines have a lower rare earth content than those of China, meaning that Lynas must mine more materials to extract and isolate heavy rare earth metals such as dysprosium, a crucial component in data storage applications, thereby raising costs.

**END QUOTE. When you dig the raw ores out of the ground, you get a ton of rock has to be processed to get the minerals out of it into their pure useable form. But the places that do that are in China, and the AFF plan doesn't even claim to solve for processing facilities. All those rocks we dig out of the US are all going to be immediately shipped to China for processing even if the AFF plan worked. If China is a problem, then it will still be just as much of a problem after the Plan.**

3. No import solvency evidence

AFF never reads any evidence that says imports from China drop significantly after their plan

After all the hype, panic and worry about China, we expected to hear at least one piece of evidence that says "Do this plan and we'll achieve independence from Chinese imports." But we never did. AFF never does give you the justification for their plan that they themselves said they needed to justify an AFF ballot.

DISADVANTAGES

1. Environmental damage

Link: AFF plan repeals or reduces environmental safeguards

It's one of the big claims of their bill. If it doesn't, then it doesn't do anything to expedite or increase minerals in the United States. Environmental safeguards are where most of the delay is for mining, according to them.

Link: The reason we import at low cost from China is they mine Rare Earth elements without environmental safeguards

LOS ANGELES TIMES 2019 (journalist Alice Su) 29 July 2019 " The hidden costs of China’s rare-earth trade " (accessed 22 Nov 2022) https://www.latimes.com/world-nation/story/2019-07-28/china-rare-earth-tech-pollution-supply-chain-trade

They are called “rare” not because they are necessarily hard to find, but because the extraction process is expensive and toxic. In the last two decades, China has come to dominate global rare-earth production by investing in mining and processing without enforcing adequate environmental safeguards. By turning a blind eye to the environmental and human costs, major manufacturers have helped support China’s expansion while reaping financial benefits because of the relatively low cost of supplies.

Link: Toxic waste is the reason we DON'T produce Rare Earths in the US

James Vincent 2019 (journalist) 23 May 2019 "Rare earth elements aren’t the secret weapon China thinks they are" (accessed 22 Nov 2022) https://www.theverge.com/2019/5/23/18637071/rare-earth-china-production-america-demand-trade-war-tariffs

China’s sway in the rare earths market is a fairly recent state of affairs. Between the 1960s and the 1980s, the majority of the world’s supply was actually produced in America, from the Mountain Pass mine in California. The mine’s processing plant was shut down in 1998 after problems disposing of toxic waste water, and the whole site was mothballed in 2002.

Link: Even China admits: Rare Earth Element mining creates huge toxic dump sites

Alec Dubro 2022 (journalist) 14 June 2022 "The Rare Earth Dilemma" (accessed 22 Nov 2022) <https://fpif.org/the-rare-earth-dilemma/> (brackets added)

The irony is that China has been moving in the opposite direction: to rid itself of mining because it’s an extremely dirty and destructive process. In Inner Mongolia, the site of China’s largest REE [Rare Earth Elements] mine, the huge mining city of Baotou is adjacent to the equally huge and toxic artificial dump site called Baotou Lake. Everybody wants rare earth elements. But nobody really wants to deal with the environmental consequences.

Solvency/Disad dilemma: The only way to match China's production of Rare Earths is to trash the environment.

**Either you avoid the environmental disaster by not doing the mining - in that case the AFF plan doesn't solve. Or you go ahead and do the mining, and you accept the environmental disadvantage.**

LOS ANGELES TIMES 2019 (journalist Alice Su) 29 July 2019 " The hidden costs of China’s rare-earth trade " (accessed 22 Nov 2022) https://www.latimes.com/world-nation/story/2019-07-28/china-rare-earth-tech-pollution-supply-chain-trade

In 2010, alarmed by China cutting rare-earth exports to Japan, Congress asked the Government Accountability Office to evaluate the U.S. defense supply chain’s vulnerabilities. But the U.S. has made little advancement in diversifying the supply, partially because few other countries are willing to copy China’s low-cost, high-pollution version of rare-earth processing.

Impact: Sickness and death from radioactive black sludge

LOS ANGELES TIMES 2019 (journalist Alice Su) 29 July 2019 " The hidden costs of China’s rare-earth trade " (accessed 22 Nov 2022) https://www.latimes.com/world-nation/story/2019-07-28/china-rare-earth-tech-pollution-supply-chain-trade

The results are jarring: In mineral-rich regions of China, poisoned water and soil have caused abnormal disease rates in “cancer villages” from which impoverished residents cannot afford to move. Crops and animals have died around a crusty lake of radioactive black sludge formed from mining waste near a major mining site in Baotou, Inner Mongolia. It’s so large that it is visible by satellite.

A/T "But we have environmental safeguards China doesn't have" - US mines can have environmental damage just like China

Petra Zapp, [Andrea Schreiber](https://link.springer.com/article/10.1557/s43577-022-00286-6#auth-Andrea-Schreiber),  [Josefine Marx](https://link.springer.com/article/10.1557/s43577-022-00286-6#auth-Josefine-Marx) & [Wilhelm Kuckshinrichs](https://link.springer.com/article/10.1557/s43577-022-00286-6#auth-Wilhelm-Kuckshinrichs)  2022 (all are with Institute of Energy and Climate Research-Systems Analysis & Technology Evaluation, Germany ) 17 March 2022 "Environmental impacts of rare earth production" (accessed 23 Nov 2022) https://link.springer.com/article/10.1557/s43577-022-00286-6

The leakage rate is high for Baotou deposit because the tailings pond has no liner system or vegetation cover. Because the dam is located about 35 m above the Yellow River, the tailings pond poses increasing toxicity risks to water, soil, and air through leakage, dust formation, and rain erosion. The Baotou tailings are contaminated with radioactive thorium with a mean concentration of 5% and high concentrations of dissolved solids, chlorides, sulfates, fluorides, ammonium, boron, manganese, and iron. Western sites such as Mountain Pass and Mt Weld are equipped with liner systems and can respond to leakage. However, even at these facilities, the tailings ponds have a high potential for environmental damage should accidental releases occur.