

The Threat of a Boron Market Shortage

The world market for boron is facing a shortage due to rising demand. Boron is a strategic material and demand is projected to grow due to its multiple uses.

NEW YORK, NEW YORK, USA, May 4, 2022 /EINPresswire.com/ -- What is [Boron](#)

Boron is a metalloid element found in minerals and rocks, usually combined with other elements such as oxygen or magnesium. Boron is also present in seawater, but only at deficient levels.

Plants absorb boron from the soil and use it to build strong cell walls. Animals that eat plants can also get boron in their diet.

Applications and Demand for Boron

Boron is a crucial element in many industrial and military applications. It is used as a dopant in semiconductors, an agent in pyrotechnics, and a neutron absorber in nuclear reactors. For health, Boron is also an essential component of growth and the maintenance of bones.

Boron helps heal wounds and increases the body's use of estrogen, testosterone, and vitamin D. It boosts magnesium absorption, lowers inflammation, and raises antioxidants. Boron also protects against pesticides and heavy metals and improves brain electrical activity, cognitive performance, and short-term memory.

For many years and even today, boron's primary commercial uses have been for glass and ceramics manufacturing with improved strength and durability. Boron reduces glass viscosity to create smooth surfaces and lower thermal expansion for professional catering and laboratory use. These glasses and ceramics are also widely used in phones, cars, and house construction.

Boron can also be used as an additive to solar panels, where it plays a critical role. It decreases the reflexivity while increasing the efficiency of panels. The solar market is expected to grow at more than 20% per year until 2026.

Furthermore, by 2050, wind and solar are expected to generate up to 70% of the world's



electricity. With electricity generation increasing 2.5x over the same period, boron's use in both technologies will undoubtedly be a huge boon to the industry.

Also, Boron is an essential component in the production of neodymium magnets.

Currently, Boron is only produced in a few countries. Like lithium, Boron has a small supply chain with limited resources, but demand is rapidly increasing, for instance, for use in powertrains in electric vehicles.

5E Advanced Materials ([FEAM](#)), newly-listed on NASDAQ, estimates that various Boron compounds make up around 2.5% to 3% or 46 kg to 50 kg of an EV weight. It is expected that the EV market will grow from approximately 6.3 million units sold in 2021 to between 26.8 million and 34.8 million by 2030. Its use in EVs appears to be another area of explosive growth.

However, EVs aren't the only use for permanent magnets; all modern vehicles use them to some extent. They are used to improve fuel efficiency by assisting with crankshaft rotation. Other applications include the manufacture of various electronics, disc drives, and actuators.

Samarium-cobalt magnets are the most common alternative to neodymium magnets, but they are typically used only in the defense and aerospace industries. The market for permanent magnets is currently projected to grow to \$23.4 billion by 2027, from \$16.4 billion in 2021.

It seems like the [boron market](#) will grow steadily over time. For now, the production gradually declines as existing deposits deplete, which results in an imbalance between demand and supply, leading to higher prices like \$1,250 per tonne, exceeding previous estimates of \$739 per tonne.

Credit Suisse predicts that boron demand will rise significantly within three years. As a result, the relative need for boron will increase rapidly, and these elevated prices are likely to continue.

With glass and ceramics manufacturing accounting for approximately half of boron's commercial usage and fertilizer accounting for about 20%, there is plenty of growth in boron's emerging uses. Solar panels, neodymium magnets, and advancements in advanced materials all offer explosive growth opportunities that significantly reduce the element's reliance on existing revenue streams. However, there may be even more opportunities for boron's use to expand as new applications for the element emerge.

According to Credit Suisse, boron demand could grow more than tenfold by 2050 under a high-growth scenario. At that point, decarbonization technologies would account for more than 90% of boron demand. A sector that currently accounts for only a small portion of boron's current demand is positioned to become the most important.

While the next five years appear promising, the next couple of decades could be a game-changer

for the boron market. So, perhaps it's not just the short-term that investors should concern themselves over. With this in mind, now could be a great time to get involved in this exciting industry.

Boron Supply Profile

Presently, the boron supply chain is relatively weak. Turkey accounts for 60% of global boron sales, with state-owned Eti Maden controlling the production. Eti Maden and Rio Tinto (RIO), which produces most of its boron in the United States, contain 85% of the total boron supply. "You can literally count all the boron deposits in the world on the one hand," says Tim Daniels, CEO of Erin Ventures. The graph below depicts all of the boron projects that aim to go into production shortly.

5E Advanced Materials' Fort Cady asset represents a required source of incremental borates supply in the United States (and likely globally) that is distinguished by its highly convenient location for domestic consumption (as opposed to obtaining from overseas, specifically Turkey, which supplies 84% of boron-related imports per the USGS). It has the smallest environmental footprint, with additional ESG initiatives in the works (solution extraction, geothermal potential).

Seeking Investment Opportunities

Boron appears to be in a similar position as lithium was ten years ago, a relatively limited supply chain with extraction, concentrated primarily in South America and Australia and dominated by a few companies. Because demand was not particularly high and applications offered only limited growth, there was little investment in the sector. When EVs became popular, the market was rocked into action, and the lithium market grew tremendously.

When a "rare" mineral becomes essential, it becomes significantly limited quickly. It is not that we will run out of boron, but the market to enhance rapidly in the future.

Lithium was selling for \$5,160 per tonne in 2010. While spot prices have risen to more than \$100,000 per tonne, the long-term contract price for lithium appears to be closer to \$22,000 per tonne. This is the kind of future for boron. However, boron deposits appear to be far more scarce than lithium deposits.

Boron prices were as low as \$569 per tonne in 2020; however, the increase to \$1,250 per tonne this year indicates that the market appears to be gearing up for the upcoming shortage and will only enhance soon.

Over the last few weeks, 5E Advanced Materials (FEAM) has quickly emerged as the favorite player in the boron market. FEAM is a junior boron miner seeking to establish a boron project in Southern California.

With the largest known boron deposit that Eti Maden or Rio Tinto does not own, 5E will become

the third-largest boron producer with the unique ability to utilize boric acid feedstock to integrate into more value chains vertically. It is engaged in developing a fully integrated and diverse portfolio of boron+ advanced materials business with the primary emphasis on green end uses that enable decarbonization.

Brendan McMahon

BORATES TODAY

editor@borates.today

Visit us on social media:

[Facebook](#)

[Twitter](#)

[LinkedIn](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/571029402>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2022 Newsmatics Inc. All Right Reserved.