

FACT SHEET | 

CHINA COMPETITIVE RISK ANALYSIS



6 CRITICAL RISKS RELATED TO DEPENDENCE ON CHINA-SOURCED CAPACITOR FILMS FOR FUSION ENERGY



Today, China produces over 80% of the world's Biaxially-Oriented Polypropylene (BOPP), which is used in the current generation of pulsed power capacitors. While the US has the technology innovation lead today, this leadership will erode if we continue to rely on China for manufacturing. Technology development is useless unless we can build and improve devices. Our Fusion and power grid technology development heavily relies on foreign products due to the exclusive international control of the BOPP capacitor film supply. We create risks related to sharing IP and possible policy change, as seen on metals for EV batteries. We must begin reshoring our manufacturing capabilities to protect and ensure our leadership in fusion energy, EMALS, and EVs and to sustain and scale our national power grid.

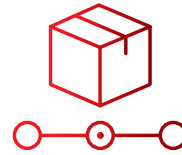
1



INTELLECTUAL PROPERTY

China has continuously failed to enforce intellectual property laws and respect global patents. It is impossible to manufacture in China without significant risk to IP.

2



SUPPLY CHAIN

Today, China controls over 80% of the capacitor film manufacturing process, which places our fusion energy and power grid at significant risk of supply issues.

3



POLICY & TARIFFS

China has proven it will institute predatory tariffs and anticompetitive policies, as we saw with rare earth minerals, impacting access to critical materials and pricing in the open market.

4



PRODUCT CAPABILITIES

China could easily change or alter product quality and capabilities for capacitor films delivered to the US, which would limit innovation and increase costs for fusion energy and our power grid.

5



ADVERSARIAL ALIGNMENT

China and Russia have forged closer ties since the start of the Ukraine war and China has proven they will supply technology and conduct trade in opposition to US and EU sanctions.

6



ECONOMIC LEVERAGE

The dependence on China for BOPP capacitor films is another leverage point for them versus U.S. policy related to Taiwan, Russia, trade, and many other areas of disagreement with China.

6 WAYS NANOPLEX CREATES STRATEGIC ADVANTAGES FOR FUSION ENERGY AND THE U.S. POWER GRID



Peak Nano was founded in 2016 to leverage revolutionary advances in nanotechnology for defense, energy, and communications. Case Western Reserve University, DARPA, and the Naval Research Laboratory created the replacement for China-based BOPP, named NanoPlex™ technology. NanoPlex-based capacitors store up to 4X more energy, in half the footprint with significantly improved thermal stability and device lifetime. NanoPlex capacitor films can be vital to accelerating U.S. fusion energy programs, scaling and scandalizing our power grids, powering EV charging, and supporting many other pulsed power applications vital to national security.



1



US-BASED CAPACITOR FILMS

NanoPlex is the only viable solution to reshore U.S.-based capacitor film production. We have created a strategic opportunity to eliminate China from this critical technology for fusion energy and our power grid.

2



US-BASED MANUFACTURING

NanoPlex capacitor films are the only high-energy films manufactured in the U.S. NanoPlex can alleviate our risk and dependence on China for this critical technology.

3



US INTELLECTUAL PROPERTY

NanoPlex is the only capacitor film designed and engineered in the U.S. Over 20 global patents protect it. Our intellectual property has never been shared with manufacturers in China.

4



ALLIED SUPPLY CHAIN

The NanoPlex supply chain and manufacturing equipment are 100% driven by allied nations. We can scale our manufacturing processes in the U.S. to ensure a secure supply chain for the U.S. and our allies.

5



DRIVE U.S. POLICY & JOBS

NanoPlex will enable U.S. policy by removing negotiating leverage related to critical technology. Peak is reshoring high-paying, high-tech jobs as we expand our manufacturing facilities there.

6



U.S. FUSION LEADERSHIP

Fusion energy represents the first viable technology to provide 24/7 power generation for our nation. It will support the growth of our power grid, data centers, and the U.S. manufacturing with clean energy.