IPERIONX GREEN HYDROGEN MARKET ASSESSMENT

IperionX Limited ("IperionX" or "Company") (NASDAQ: IPX, ASX: IPX) is pleased to release a presentation on green hydrogen and the critical importance of titanium metal to successfully scale this high growth market.

Green hydrogen production is forecast to surge by over 1,000x by 2030, driven by the increasing demand for clean energy, the need to reduce greenhouse gas emissions and record government incentives to accelerate the scale-up of green hydrogen. Titanium is an essential material for the Proton Exchange Membrane electrolyzers used in green hydrogen production and for hydrogen fuel cells that will power automotive, truck and bus transportation, as well as marine, aerospace and military applications.

The attached 'Green Hydrogen Market Assessment' presentation highlights that the expected surge in green hydrogen will require very large quantities of titanium - and without significant new investment in new titanium production capacity and far higher rates of titanium recycling - the potential global demand from green hydrogen could be as large as the entire current global titanium market by 2040.

Further, significant U.S. Government incentives, such as the $370 billion Inflation Reduction Act, which includes up to a $3/kg hydrogen production tax credit and a 30% capital expenditure tax credit, underpin near term growth in green hydrogen, providing opportunities for U.S. regions rich in plentiful renewable energy sources to be amongst the lowest cost global hydrogen producers.

IperionX is in advanced discussions with leading international customers that require low carbon and circular titanium metal for a range of advanced industries, including aerospace, defense, bicycle, luxury watches and jewelry, consumer electronics and automobiles. In addition to these valuable markets, IperionX is now in commercial discussions with a range of leading international hydrogen companies that want to source low carbon, 100% recycled titanium for green hydrogen electroyzers and fuel cells.

Titanium metal for green hydrogen is currently sourced over long distances from high carbon supply chains with traceability issues. To ensure the hydrogen economy is more affordable and more sustainable, the U.S. needs to re-shore low carbon titanium production and close the loop of the supply chain by recycling titanium metal.

IperionX's patented titanium technologies provides a pathway to low carbon, sustainable production of titanium metal, using 100% scrap titanium as feedstock. IperionX already produces high quality titanium powder from titanium scrap at an industrial pilot production facility in Utah, U.S.

To meet the demand for sustainable and lower cost titanium metal, IperionX has advanced plans to build a larger Titanium Demonstration Facility in Halifax County, Virginia. Once commissioned, IperionX has well-defined plans to rapidly scale the capacity of this innovative titanium production facility - in a low risk, modular fashion.

This announcement has been authorized for release by the CEO and Managing Director.

For further information and enquiries please contact:

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About IperionX

IperionX's mission is to be the leading developer of low carbon titanium for advanced industries including space, aerospace, electric vehicles and 3D printing. IperionX holds an exclusive option to acquire breakthrough titanium technologies that can produce titanium products that are low carbon and fully circular. IperionX is producing titanium metal powders from titanium scrap at its operational pilot facility in Utah, and intends to scale production at a Titanium Demonstration Facility in Virginia. IperionX holds a 100% interest in the critical minerals Titan Project, which has the largest JORC resource of titanium, rare earth and zircon rich mineral sands in the U.S.A.

Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward-looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

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Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

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IPERIONX

Green Hydrogen Market Assessment

"The Green hydrogen market needs low carbon and sustainable titanium"

April 2023

Nasdaq ASX

NASDAQ & ASX: IPX
ABN 84 618 935 372

Disclaimers

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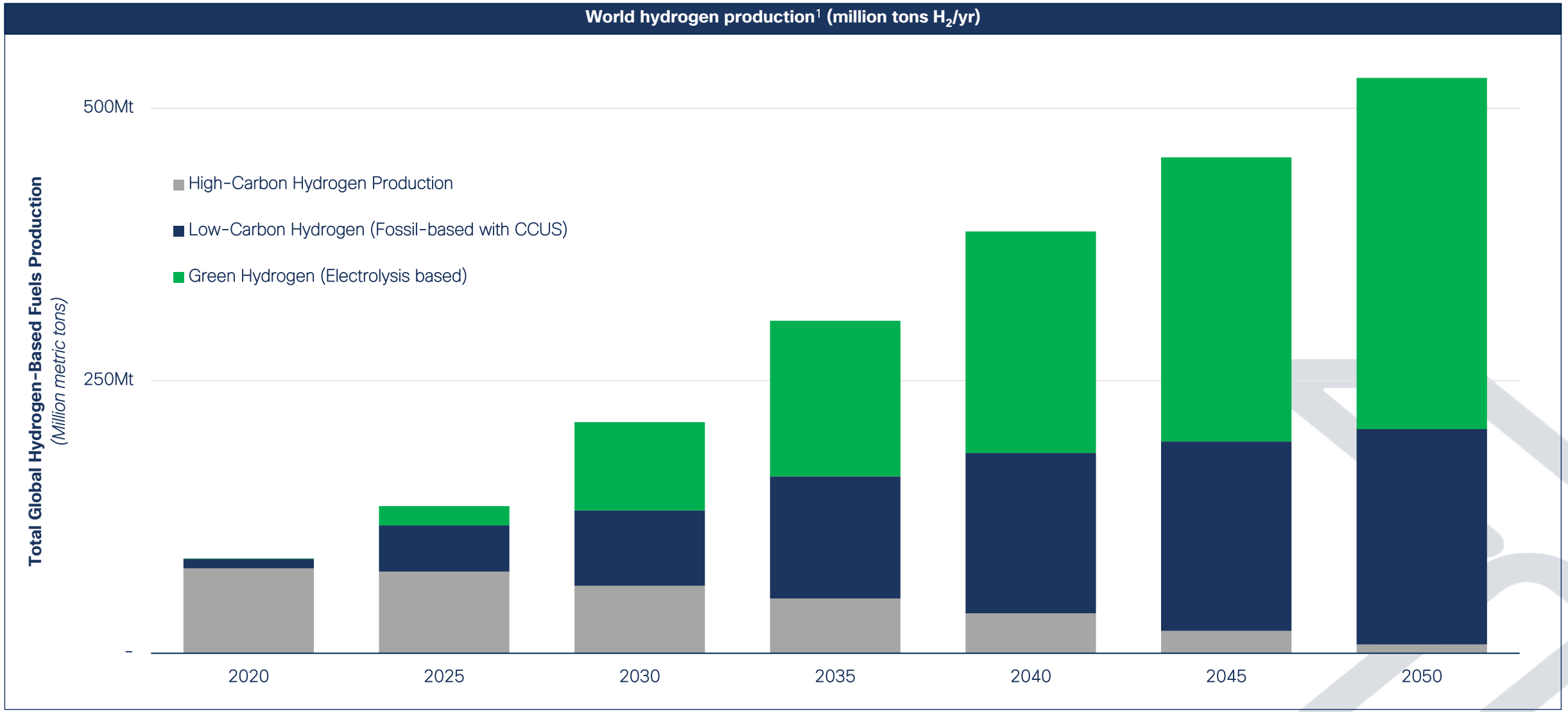
Green hydrogen market analysis: Titanium

- The green hydrogen market is forecast to rapidly accelerate and may see global production growth of +1,000x by 2030[1]
- These forecasts are underpinned by powerful government subsidies and incentives for green hydrogen production, including from the Inflation Reduction Act and the EU Hydrogen Bank[1]
- This generational scale-up in green hydrogen is likely to drive record demand for Proton Exchange Membrane (PEM) hydrogen electrolyzers and fuel cells – and these technologies require large quantities of titanium metal
- Titanium's high strength-to-weight ratio, corrosion resistance and durability are essential for robust, long-life and efficient hydrogen PEM electrolyzers and fuel cells
- The global titanium demand from green hydrogen alone has the potential to exceed the entire current global titanium sponge market by 2050 under IperionX's upside demand scenario estimates[1]
- To make the green hydrogen economy more affordable and sustainable, the U.S. needs to domestically re-shore titanium production and close the supply chain loop by recycling titanium metal

1. Refer to details on slides 4, 6 and 9.

The green hydrogen market

Forecast to rapidly accelerate, with potential for green hydrogen production growth of +1,000x by 2030



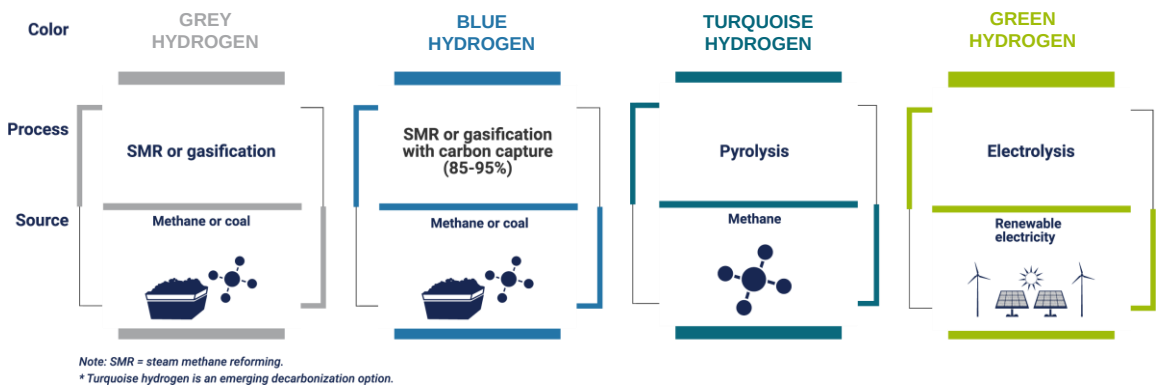
1. Adapted from IEA – Future of Hydrogen (2019), IEA Net Zero by 2050: a roadmap for the global energy system (2021), and Global Hydrogen Review (2021). Green Hydrogen shown as hydrogen production from electrolysis.

What is green hydrogen?

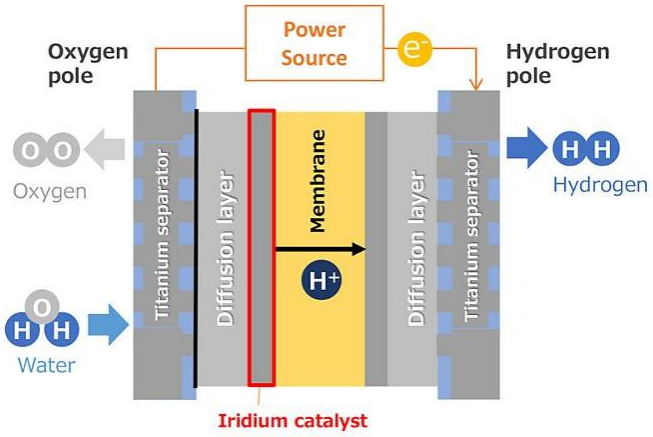
Green hydrogen uses net-zero carbon or renewable energy

- Green hydrogen is efficiently produced when renewable energy is used to split water into hydrogen and oxygen via water electrolysis
- A hydrogen fuel cell works using the inverse operation, combining hydrogen and oxygen to create electricity with water as a by-product
- Creating hydrogen consumes a lot of energy in splitting the hydrogen from oxygen, creating a highly corrosive environment
- Leading companies, such as Toyota, use titanium for electrolysis stack components to improve the durability of equipment attributed to titanium's high corrosion resistance
- Titanium's high strength-to-weight is also important to improve the power density of fuel cells used for transportation

Hydrogen production by type[1]



Hydrogen production via Proton Exchange Membrane (PEM) electrolysis[2]

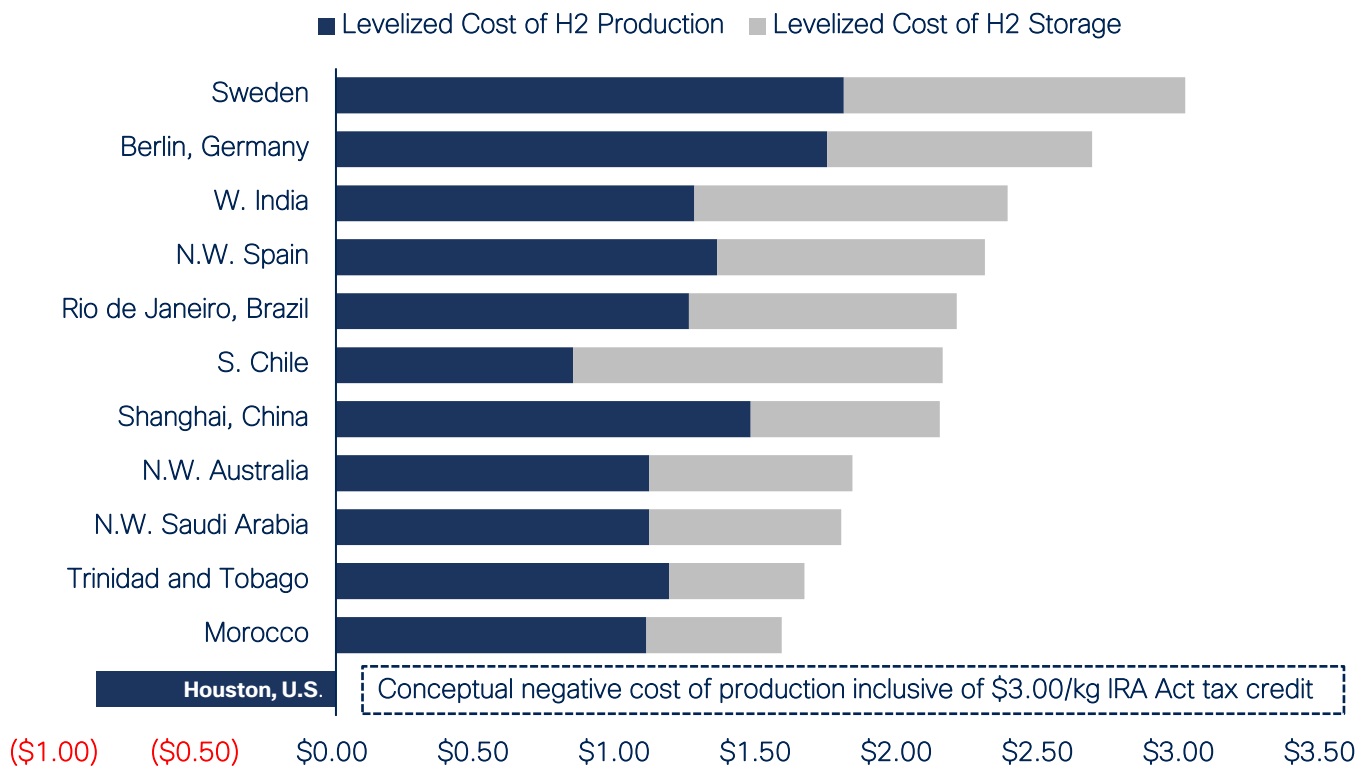


1. Source: International Renewable Energy Agency.
2. Source: Toyota (image link).

Government incentives underpin growth in green hydrogen

Estimated cost of green hydrogen production & storage[1] (US$/kg H_2)

U.S. Inflation Reduction Act incentives provide the opportunity for U.S. regions rich in renewable energy sources, like Texas, to be the lowest cost producer globally



U.S. Inflation Reduction Act incentives

~$370 b

Funding to address U.S. energy security and climate change

U.S. Inflation Reduction Act

Up to $3 / kg

Clean hydrogen production tax credit

Clean Hydrogen Production Tax Credit (Section 45V)

Up to 30%

Capex tax credit

Advanced Energy Project Credit (Section 48C)

1. Source: Rocky Mountain Institute – Fuelling the Transition: Accelerating Cost Competitive Green Hydrogen (2021). Figures shown are after RMI's assumed near term cost reduction, excluding IRA Act incentives.

Titanium is fundamental for green hydrogen

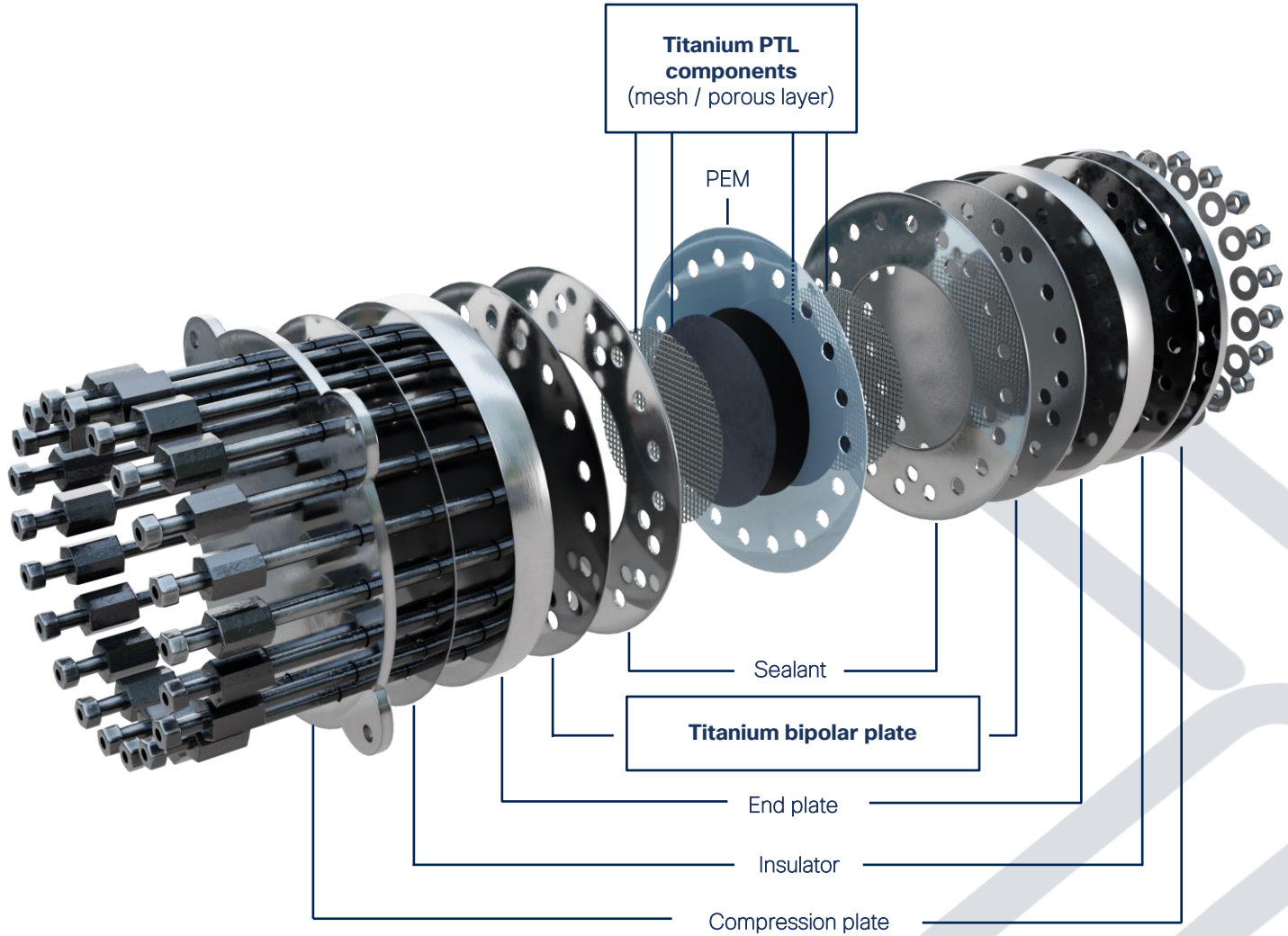
Titanium is a critical material for green hydrogen due to its corrosion resistance, durability and strength

Indicative raw material intensity in a PEM water electrolyzer stack[1]

(g/kW electrolyser capacity)

>400g	Titanium
~100g	Stainless steel
<50g	Aluminum
<5g	Copper
<1g	Iridium
<0.5g	Platinum

PEM water electrolyzer stack components[2]



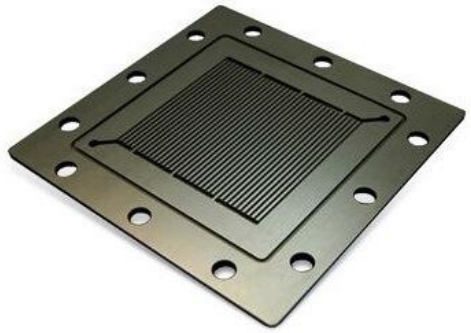
1. Source: Adapted from Kay Bareiß et al, Applied Energy, 237, 862–872, 2019.
2. Source: Adapted from Selamet, O.F. et al., Int. J. Hydr. Energ., 36, 11480– 11487. 2011.

Titanium components in PEM electrolyzers

- Titanium is essential for key Proton Exchange Membrane (PEM) electrolyzer components, including bipolar plates and Porous Transport Layers (PTL), due to its superior corrosion resistance, durability and strength
- PTLs for electrolyzers use spherical and angular CP titanium powder[1]
- IperionX's titanium technologies can produce low carbon, 100% recycled spherical and angular powder using scrap titanium as feedstock

Titanium Porous Transport Layer (PTL)

Bipolar plate



Major western PEM hydrogen electrolyzer producers

SIEMENS energy · nel · plug™ · Cummins · ITM POWER · ohmium

BloombergNEF's list of the world's largest PEM hydrogen electrolyzer makers[2]

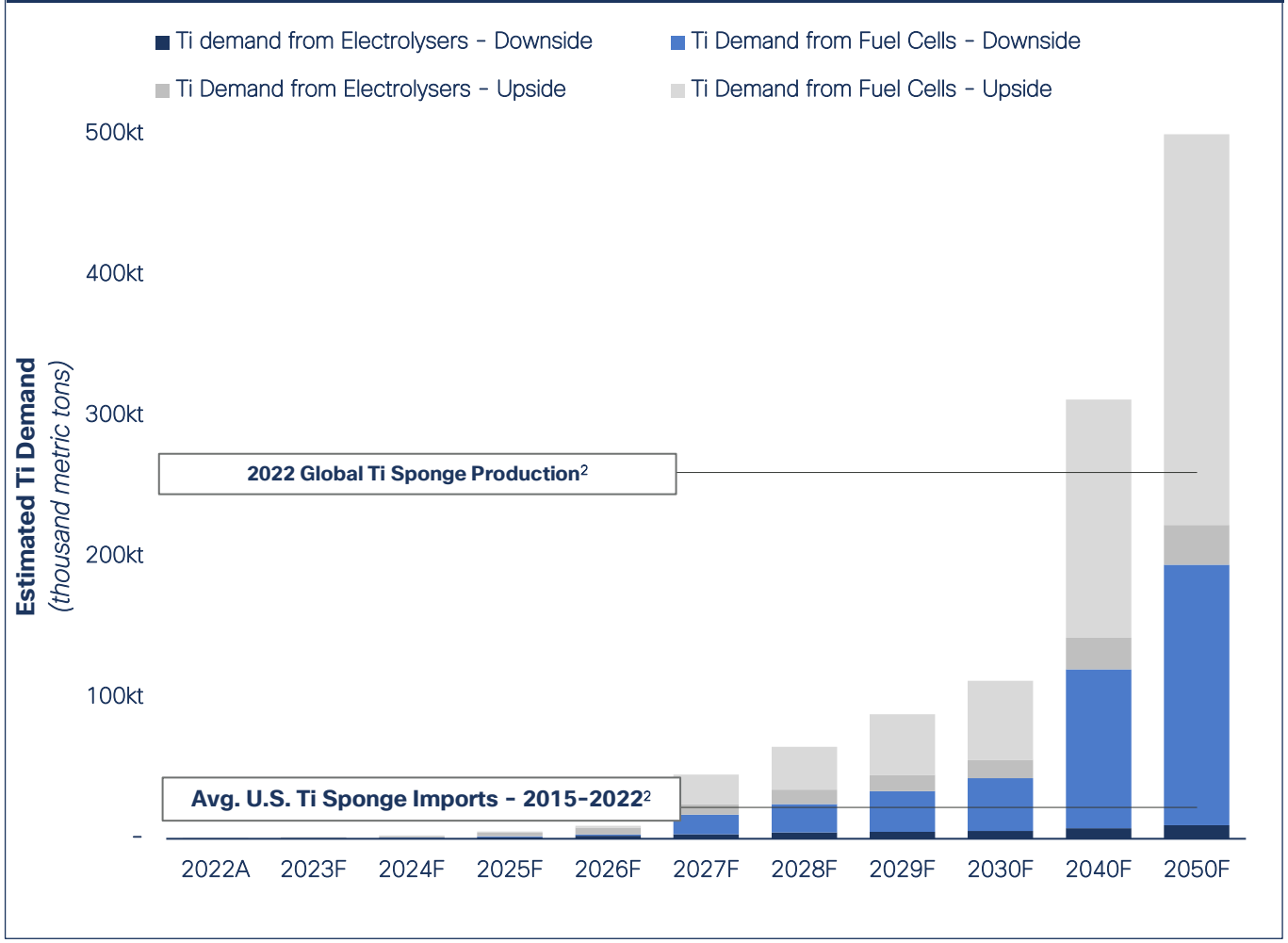
Manufacturer	2023 capacity (GW)	Country	Electrolyzer type	Market cap. (US$)
Plug Power	3.0	USA	PEM	$5.3 billion
ITM Power	2.5	UK	PEM	$0.6 billion
Ohmium	2.0	USA	PEM	Private
Cummins	1.6	USA	PEM	$33.2 billion
Siemens (Energy)	1.3	Germany	PEM	$18.7 billion
Nel	0.6	Norway	Alkaline / PEM	$2.1 billion

1. Source: Industrial Manufacturing Technologies of Porous Transport Layers for a Proton Exchange Membrane Electrolyser, Ornetzeder, 2020.
2. Source: BloombergNEF 'A Breakneck Growth Pivot Nears for Green Hydrogen' – November 2022.

Green hydrogen demands more titanium

Potential for rapid increase in titanium demand to meet electrolyzer and fuel cell scale-up

Estimated titanium annual demand[1] (metric tons)



Rapid increase in titanium demand

+1,000x

growth to 2030

Green hydrogen demand growth forecast[3]

+300 kt

potential demand by 2040

Titanium demand from green hydrogen alone has the potential to exceed the entire current global titanium sponge market by 2050 under upside estimates[1]

Titanium recycling provides a responsible, lower cost and ethical supply for the hydrogen market. ESG and consumer expectations demand a low carbon, circular solution

1. IperionX proprietary estimates for implied titanium demand from hydrogen PEM electrolysers and hydrogen fuel cell in electric vehicles.
   Sources: IEA Global Hydrogen Review (2022); IEA Net Zero by 2050: a roadmap for the global energy system (2021); Federal Ministry of Transport and Digital Infrastructure - Industrialization of Water Electrolysis in Germany (2018). Upside Case assumes 50% of IEA's forecasted Electrolyzer production is attributable to Proton Electrolyte Membrane electrolyzers requiring titanium in the BiPolar Plates and Porous Transport Layer components, and 95% of forecasted manufacturing capacity is used to produce electrolyzers. Assumes that 50% of IEA's forecasted Fuel Cell EVs require approximately 300 fuel cells each with titanium-intensive BiPolar Plate components. Assumes 8% light vehicle FCEV penetration, 16% e-bus, and 16% heavy-duty vehicle FCEV penetration into global EV market figures by 2050. Wright's Law scenario assumes that 10% material intensity savings accrue with each doubling of global PEM capacity.
2. Source: U.S. Geological Survey.
3. Source: IEA Net Zero by 2050: a roadmap for the global energy system (2021).

High risk global titanium supply chain

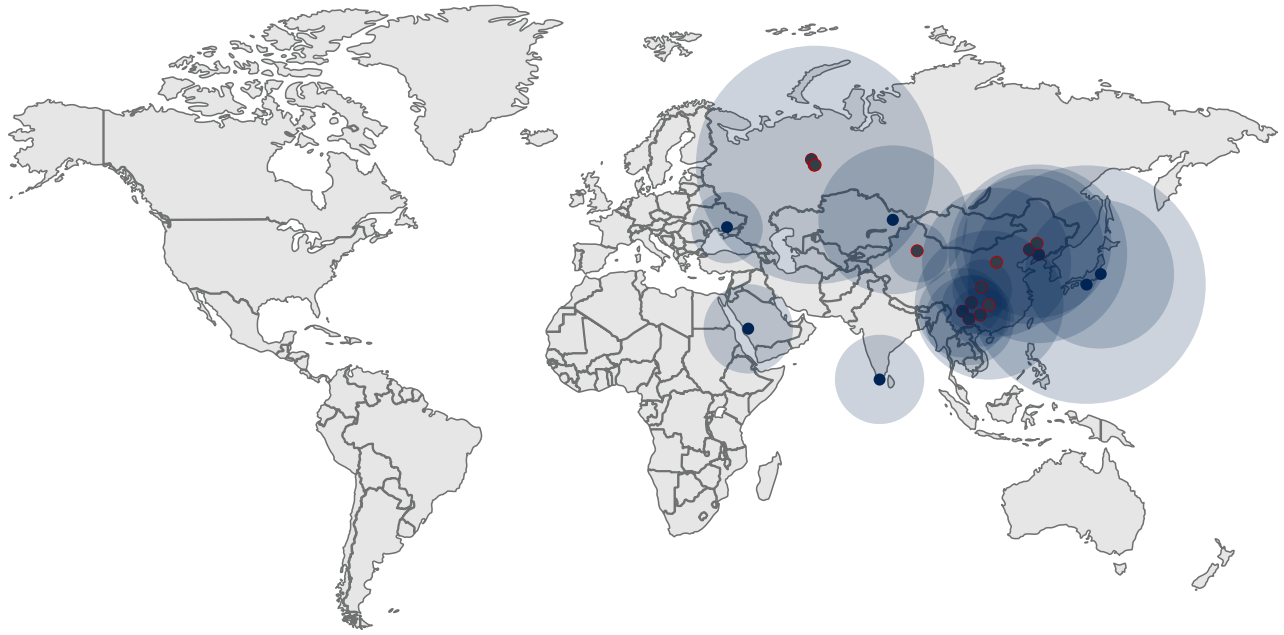
~70% of global titanium production is controlled by China and Russia, and demands careful supply chain risk analysis and traceability

Global titanium sponge capacity[1]

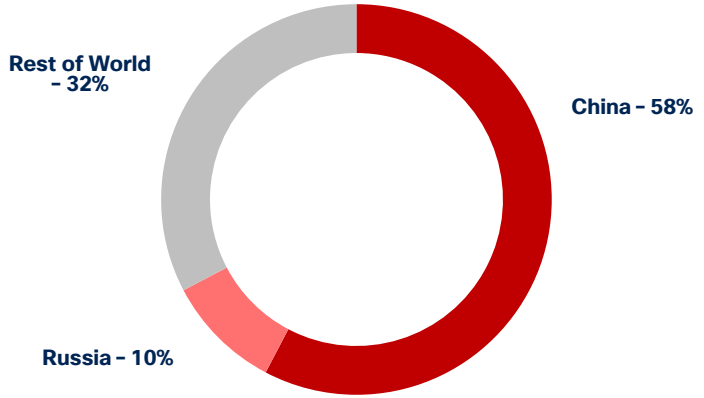
The U.S. is ~100% import reliant on titanium sponge for its aerospace and defense industry, which is the primary driver of U.S. titanium metal demand

Average annual U.S. titanium sponge imports from 2015 to 2022 was ~22,000 metric tons per year, the majority of which is sourced from Japan

Russia and China dominate global titanium sponge production with ~70% of market share

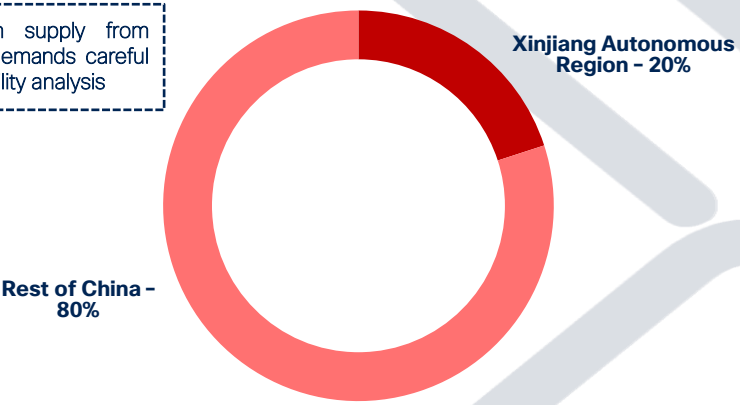


Global 2022 titanium sponge production[2] %



Chinese 2022 titanium sponge production by location[3] %

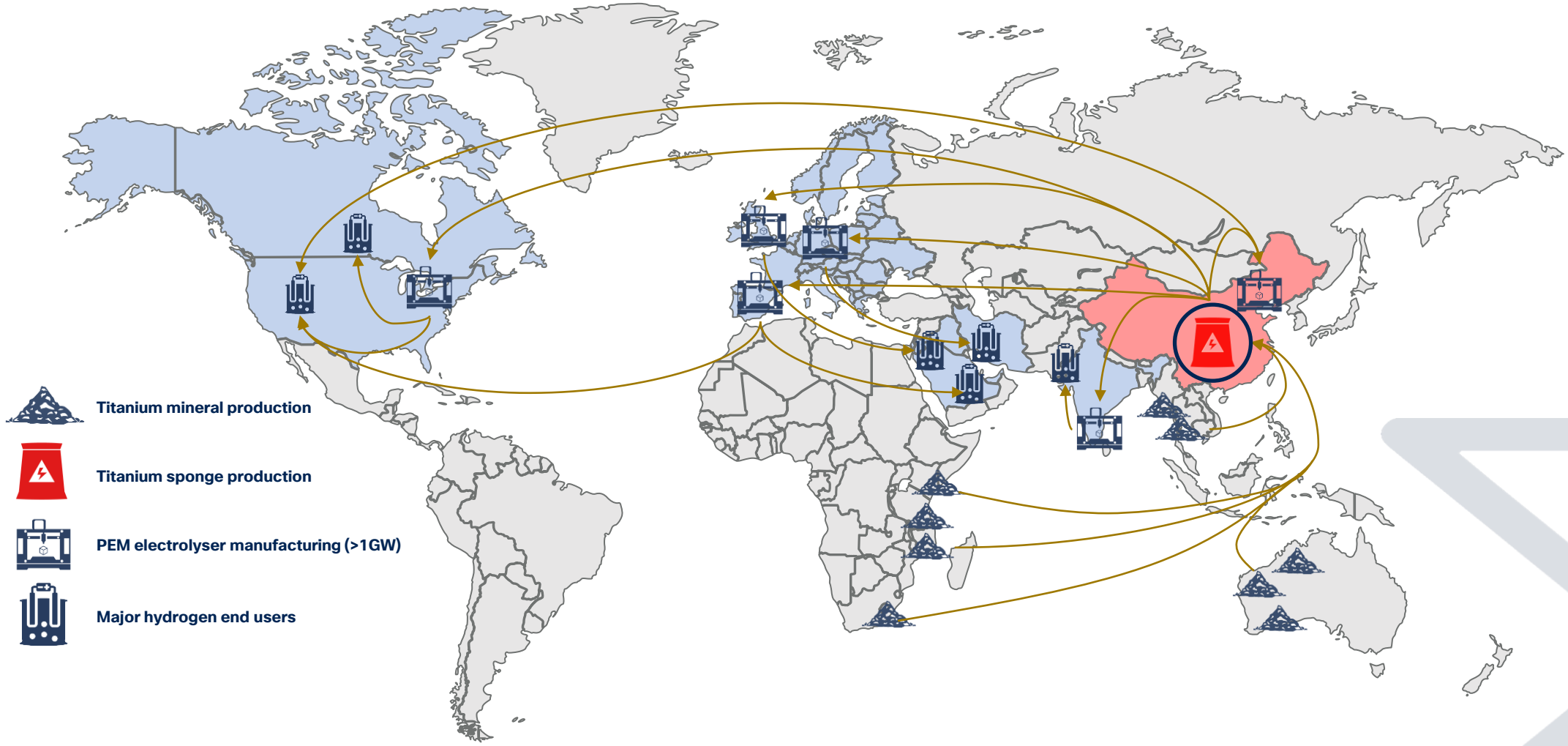
Titanium supply from China demands careful traceability analysis



1. Source: Roskill. Locations shown are approximate. Excludes facilities with less than 5,000tpa capacity.
2. Source: U.S. Geological Survey.
3. Source: U.S. Geological Survey and Xiangrun New Material Technology Co., Ltd.

The current 30,000+ mile titanium global supply chain

Unsustainable supply chain that is high carbon, high cost and high risk



IperionX offers a potential pathway to produce lower cost 100% recycled titanium metal for the green hydrogen market in the U.S. – driving down the carbon intensity, reducing geopolitical and supply chain risks and creating a circular supply chain

Sources: Bloomberg BEF, IEA Global Hydrogen Review (2022), Global Trade Tracker. Note: Locations shown are approximate. Listed titanium mineral producers, titanium sponge production centers, PEM electrolyzer manufacturing locations, and major hydrogen end users are not exhaustive.

Titanium for the green hydrogen market

Affordable, lower cost and sustainable titanium is required for a successful green hydrogen market

- Green hydrogen production is forecast to expand by over **1,000x by 2030** – and is underpinned by record government subsidies[1]
- The global titanium demand from green hydrogen alone has the potential to exceed the entire current global titanium sponge market by 2050 under IperionX's upside demand scenario estimates[1]
- Titanium for green hydrogen is currently sourced over long distances from high carbon, risky supply chains with traceability issues
- To make the hydrogen economy more affordable and sustainable – the U.S. needs to re-shore low carbon titanium production and close the loop of the supply chain by recycling titanium metal
- Titanium production from recycling provides a responsible, lower cost and ethical supply for the green hydrogen market. ESG and consumer expectations demand a low carbon, circular titanium supply chain – and as with EV's, recycling will become mandatory and will require minimum recycled content within a decade
- **We believe that IperionX is the solution for lower cost, sustainable titanium for the green hydrogen market**

1. Refer to details on slides 4, 6 and 9.

IPERIONX

A sustainable, affordable and circular titanium supply chain for the U.S.

Further information contact:
info@iperionx.com