

# **Investor Radar Alert: A TSXV company that has seen almost 5 times revenue growth year to year?**

Aurora Solar Technologies Inc. (TSXV: ACU) is a Canadian based global provider of inline measurement, visualization and control systems for the photovoltaic product manufacturing industry.

The Company has developed a disruptive new infrared solar cell profiling technology that allows solar cell producers to increase cell power and yield. Attaining profitability in a sector with very slim margins is the solar industry's most urgent imperative. Despite this, cell lines are running without the most basic inline measurement and control, resulting in very poor product uniformity and high scrap rates. Aurora's mission is to deliver exceptional results to the photovoltaic industry through measurement, visualization and control of critical processes during solar cell manufacturing.

Aurora provides both hardware and software solutions to reduce the time it takes to bring new lines up to speed and maximizes the yield of the highest power cells. This is critical when producing advanced cell structures. Aurora's products improve cell efficiency and eliminate downgrades.

Decima 3T™



The industry's first inline, non-contact emitter dopant measurement system

Decima Gemini™



Measures both sides of a solar cells simultaneously – for PERC or bifacial solar cells

Veritas™ Software



Provides operators with real-time visualization and control that increases cell efficiency and yield

## Auroras main products

Global environmental concerns in large emerging markets like China and India are driving governments towards clean energy solutions like solar. The price of solar modules has plummeted from US\$6/watt in 2009 to less than US\$1/watt in 2017 making clean energy cheaper than fossil fuel options. This is motivating solar cell producers to invest in Aurora's technology to improve the yield of high power cells.

This booming solar market is rapidly adopting advanced cell structures, with China intending to spend more than \$360 billion through to 2020 on renewable power sources like solar. The solar PV (photovoltaic) market is expected to double from 100 GW to 200 GW in the next three years. Global revenue from PV systems is expected to exceed \$1.2 trillion by 2024.

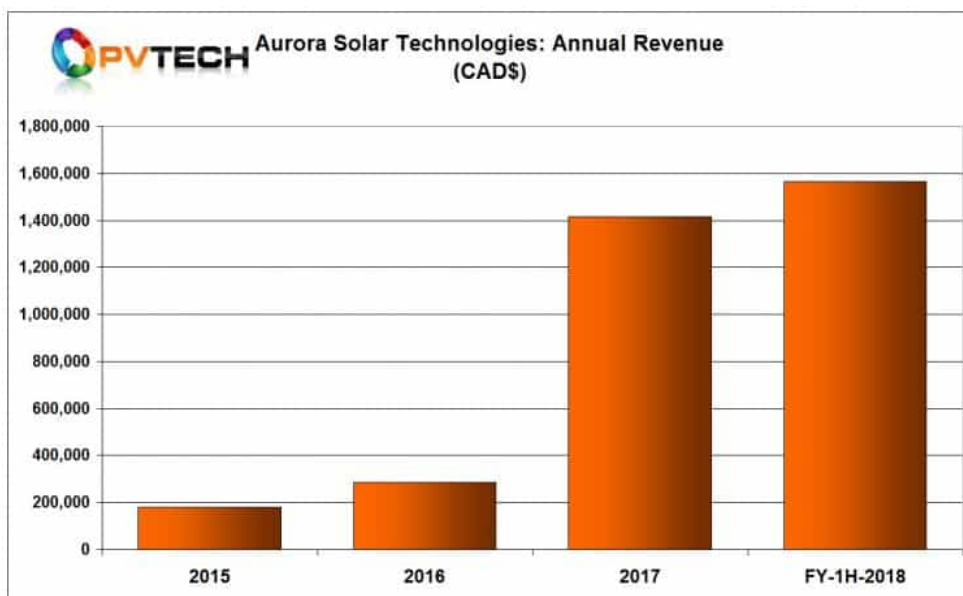
In May, 2018 a representative office in Shanghai was opened for the Asian sales team to be based. During the past two years Aurora has experienced major commercial successes in Korea, Taiwan and Singapore.

With more than 80% of global solar cell production in China, the regional producers are focused on improving efficiency and manufacturing yields. Michael Heaven, President & CEO stated: "With the advancement of solar cell design and growing complexity of the production methods, the opportunity for

Aurora's measurement and control systems have never looked brighter."

The Company received its first volume order from China for multiple Decima™ Gemini systems, Veritas™ wafer and process mapping software last year. The products were successfully delivered and integrated into new high-efficiency bifacial cell production lines enabling the customer to accelerate its plant start up and begin competing in the high end of the market. Aurora has also delivered to one of the world's leading solar panel manufacturers and is also in the final stages of securing a testing arrangement with a second top 5 Chinese solar cell manufacturer.

The Company has seen almost 5 times revenue growth year to year and is on track for 3 to 4 times the revenue growth in the current fiscal year (2018).



Aurora's revenue growth.

Aurora has a market cap of C\$ 8.6m.

Given revenue from global PV systems is expected to exceed \$1.2 trillion by 2024, and 80% of all global solar cell manufactured in China, the opportunity is enormous. China also intends to expand and spend \$360 billion by the year 2020. And

not to forget in the next 3 years the solar market is expected to double from 100 GW to 200 GW. Aurora is in a prime position to take advantage of this fast growing opportunity, and should soon be on investors radar.

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## **Dr. Spencer of U308 Corp. on the vanadium redox battery market demand**

July 5, 2018 – “As China and India change their building codes so the buildings can withstand earthquakes, the amount of vanadium that goes into the rebar increases. The steel industry has been growing at about 3.8% over the last 10 years. Vanadium in that steel is growing at about 8% because they need more vanadium and it is being dictated that they have to use more vanadium in building steel. That is over 90%. There is also vanadium going into titanium alloys for the aerospace industry and that is huge. But, the most exciting component of the vanadium space is vanadium redox battery.” States Dr. Richard Spencer, CEO, President and Director of U308 Corp. (TSX: UWE | OTCQB: UWEFF), in an interview with InvestorIntel Corp. CEO Tracy Weslosky.

**Tracy Weslosky:** I do not think many of our investors out there in the InvestorIntel audience appreciate that U308 has vanadium. Why do we not start there?

**Richard Spencer:** We have a huge amount of vanadium. Vanadium would be the coproduct with uranium out of the project in Argentina and the project in Colombia. Both projects, the process that we use to extract the uranium would also extract the vanadium and a couple of other byproducts as well.

**Tracy Weslosky:** Many of us know you as a world renowned expert on uranium. Let us talk about your expertise on vanadium. For those of you that may not appreciate what a significant critical material that vanadium is, let us start there. Tell us a little bit about vanadium, the vanadium market in general please.

**Richard Spencer:** Over 90% of it is used in the steel industry, in rebar particularly. As China and India change their building codes so the buildings can withstand earthquakes, so the amount of vanadium that goes into the rebar increases. The steel industry has been growing at about 3.8% over the last 10 years. Vanadium in that steel is growing at about 8% because they need more vanadium and it is being dictated that they have to use more vanadium in building steel. That is over 90%. There is also vanadium going into titanium alloys for the aerospace industry and that is huge. But, the most exciting component of the vanadium space is vanadium redox battery. These things are the ugly duckling of the battery industry. They are not miniaturizable. They will never be in cellphones. They will never be in computers and that kind of thing. These are great big honking industrial-scale batteries. They are easily scalable. Basically they are just two tanks. They have got vanadium +4 and +5 on the plus side of the battery, a tank, and in the liquid on the other side of the battery, on the negative side, is vanadium +3 and +2. These are just liquids. They can be charged instantaneously basically, I mean, in a lithium-ion battery because there is a crystal structure in there. Each little ion has to move out of there and that wears the battery out. If that same material is in a liquid, like it is in a vanadium redox battery, there is nothing to wear down. These batteries are guaranteed for 20 years. A lithium-ion battery, as we all know from our computers, degrades after 3, 4, 5 years or however long it is...to access the complete interview, [click here](#)

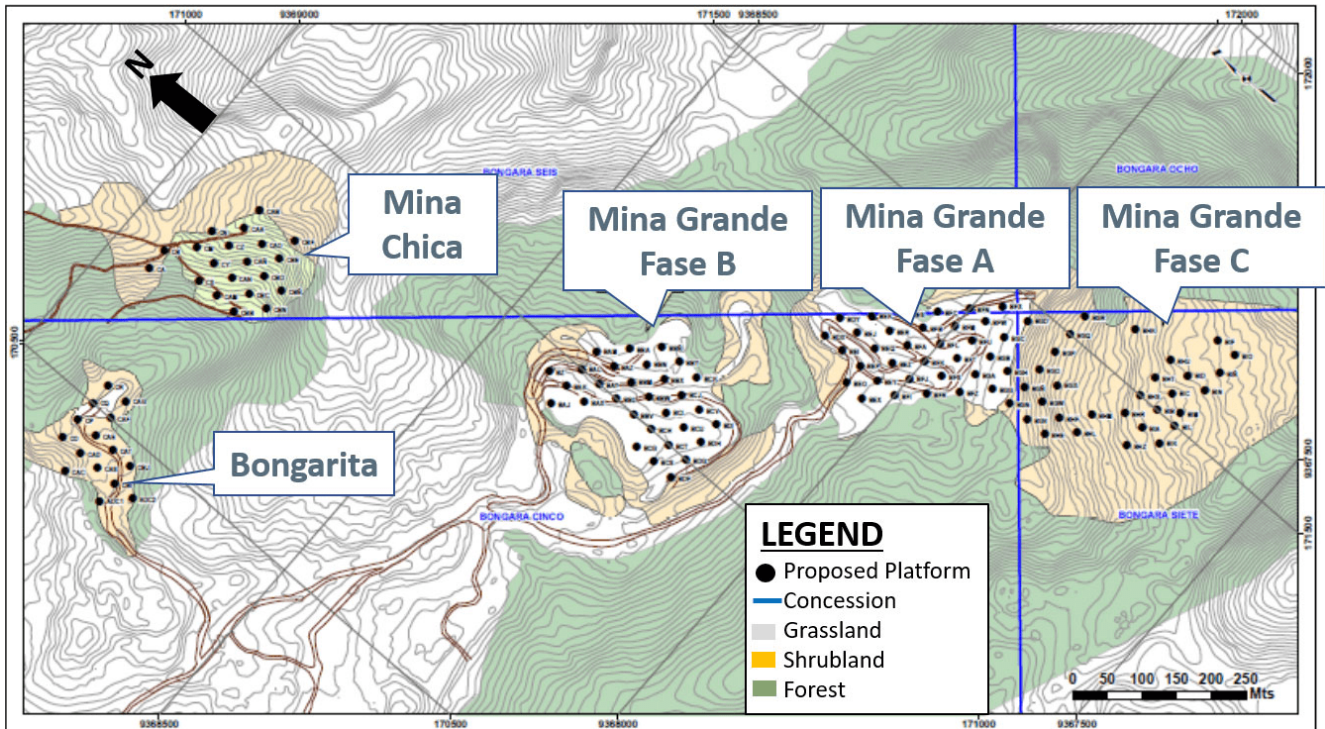
**Disclaimer:** U308 Corp. is an advertorial member of

# Zinc One Targets Renewed Zinc Market

As much as one must never try to predict either end of a market trend, some juniors have a knack for it. Last month, the London Metal Exchange recorded a 10-year high of US\$3,308 per metric ton of zinc (US\$1.50 per pound), while stockpiles on both the LME and SHFE have slumped to some of their lowest levels since the financial crisis.

Just recently Zinc One Resources Inc. (TSXV: Z) (“Zinc One”) received approval from the Peruvian Ministry of Energy and Mines (MEM) to install 130 drill platforms at their high-grade Bongorá zinc deposit. The market requires new supply, and at times such as these, it’s first come first served.

Drilling is expected to commence this month and continue throughout the rainy season in order to define a compliant resource by 2Q18. The planned program now includes holes for previously excluded areas of Mina Chica, Bongarita and south eastern Mina Grande which previous sampling suggested were high-grade.



The mine gave up 358 metric tonnes of ore per day, from which a simple kiln treatment produced up to 70% zinc. Historic results can only offer so much confidence, but more recent surface channel samples included one result of 47.73% zinc over 8.1 metres, another yielded 25.65% zinc over 19.7 metres from a dolomite breccia, and 32.50% zinc over a 3.8-metre depth was found in an exploration pit. The go-ahead for the drill project is still important to properly delineate the resource and potentially expand it, but they don't come much more proven than Bongará.

The company obtained the prospective Bongará site via the acquisition of Forrester Metals back in June, secured along with a \$10 million private placement that was to fund exploration and development costs. The project was originally discovered in 1974 and briefly open-pit mined between 2007 and 2008, but only 37 acres were dug before the mine failed in late 2008 due to collapsing zinc prices.

The permits newly include areas in the southern extension of Mina Grande as well as the Bongarita and Mina Chica. This gives the technical team more increased confidence in the probability of being able to outline a resource at least as

good as the historical one. Zinc One has already hired Energold Drilling Corp., who, at the time of writing, are busy erecting the drilling camp. Quick movement on this project is essential if Zinc One are going to catch peak pricing and enjoy the benefits before the inevitable oversupply pushes prices back down.

I'd say they have a few years to get this project up and running, but they seem to have it covered. The company recently sold a Peruvian silver project to focus all attention on Bongará as a result of its outstanding potential given current market trends that favour technology and industry related sectors. Zinc demand is on the rise largely because the metal is increasingly finding itself in the technology and health sectors, as well as its conventional niches in brass making, as well as galvanizing and alloying steel.

More recently, it has been taken up by agriculture; the governments of China, India and Pakistan are adding zinc to fertilizer as a matter of policy since it is crucial to plant development, particularly in heavily-farmed areas. In addition, mine-closures have pushed zinc production to the point that long-held stockpiles are rapidly diminishing, resulting in the bullish price trend that began in late Spring and doesn't seem to be stopping anytime soon. Zinc One represents an opportunity to make a large margin on peak zinc pricing for a bargain price; shares have already jumped somewhat over the last eighteen months, but get them while they're still CAD\$0.44 and enjoy the next few years.

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# Stainless steel scrap market briefing

Demand and scrap prices have mirrored the nickel market. Following a near-full recovery to \$9,600/tonne in May as the nickel deficit widened to 11,200 tonnes, but this demand has not been sustained. Once more at the end of September, nickel prices have stagnated at around the \$10,430/tonne mark.

Following the increase in commodity prices (chrome and nickel), stainless steel scrap availability improved and consumption of this raw material remained at good levels throughout the third quarter. Although stainless steel producers were able to increase their profitability, the stainless scrap processing industry still lacks sufficient margin for their product and services. This situation could further deteriorate as nickel prices have start to fall. The fourth quarter is therefore expected to be more challenging for those active in the recycling of stainless steel.

Notwithstanding the volatile nickel market, stainless steel scrap prices have actually remained relatively stable over the last quarter. 304 and 316 stainless steel scrap is trading at \$1,090-1,140 (2Q16: \$1,030-1,080/tonne) and \$1,450-1,500/tonne (2Q16: \$1,450-1,500/tonne).

Chrome scrap prices are trading at \$230-270.tonne for the 409 material, unchanged from the periovus quarter and \$310-350/tonne for 430 materials (2Q16: \$320-360/tonne).

That being said, the restocking phase at traders' yards has now come to an end and these volumes are now in need of consumers in order for prices to be sustainable.

According to the Ministry of Finance in Japan, Japan imported 9,933 tonnes of stainless steel scrap in June, representing an increase of 11.3% m.o.m. The import average price was

¥120,939/tonne, up 0.1% m.o.m. Shipments from Korea, Taiwan and Thailand increased the strongest at the expense of shipments from the US and China which registered a m.o.m decline.



Source: Core Consultants' Third Quarter Ferrochrome Report

Chinese stainless steel scrap has remained unchanged from the second quarter at RMB3,550/tonne (\$546/tonne) for 201 material; RMB7,000/tonne (\$1,076/tonne) for 304 grade, RMB10,200/tonne (\$1,569/tonne) for 316 grade and RMB2,750/tonne (\$423/tonne) for 430 series.

India remains the most positive scrap market in Asia. For the four months ending July 31 this year, the country imported 205,000 tonnes of 304 and 316 scrap. The Indian market is also paying the highest price for scrap in Asia, bettering the offers of other leading markets including South Korea and Taiwan. Part of the driving force behind India's buying activity is that scrap is available on credit terms and many of the second and third tier mills prefer this to imports. However, Indian stainless steel scrap purchases may slow as the stainless steel mills are struggling to sell finished good and there appears to be significant overcapacity in the stainless steel market. As such Indian mills were reducing their purchased scrap volumes throughout the third quarter well before nickel prices fell below \$10,000/tonne.

In Russia, export duties were lowered in September in accordance with the WTO agreement and as such stainless steel scrap export duties were expected to be dropped from 7.5% to 5%, which would benefit scrap exporters. As such shipments during August were reduced in anticipation of these changes and exporters are now expected to resume supply during the fourth quarter.

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# InvestorIntel Report: China's new metals splurge?; Lithium forecast; Gold stock profits

✘ If the Fitch rating agency is right, China will need to consume mountains of metals – copper, zinc, iron, as well as all the technology metals – for the next 14 years. Fitch is predicting that China will need to build new housing stock of 800 million square metres *every year* through to 2030. As the Nikkei news service adds, that is roughly equivalent to the housing space of Singapore *15 times over* for more than the next decade. (Apologies for the italics, but the sheer enormity of this forecast demands them.)

Where is the zircon going to come from for the tiles and wash basins? What about all that copper wiring? How much stainless steel, and therefore nickel, will all this require? Those buildings will all need steel containing manganese and niobium as well as iron ore (not to mention graphene). The digital electronics will need everything from tantalum to rare earths, from tin to lithium and graphite.

This is not the first time we have heard of the potential of China's housing demand. Four years ago the international consulting firm McKinsey & Co predicted that China could every year add floor space totalling 2.5 times the entire residential and commercial square footage of Chicago (and India could add floor space equivalent to Chicago's annually).

At this stage, two caveats: one is that China has made some serious mistakes in this business with plenty of evidence that there has been horrendous over-building in the wrong places

and the country is covered with ghost apartment buildings, all complete except for people living there; two, from all accounts, China's banking system is tapped out. The country is swimming in debt and one has to ask whether the capital for all this proposed building can be found.

But setting those worries aside for the moment, Fitch does suggest that something will have to be done to house China's population in modern-style accommodation. Its analysts expect some 12 billion square metres of old housing stock will be torn down, and many Chinese will be looking to upgrade their housing. Add on urbanisation and first-time home buyers and you have the demand factor.

Many residential buildings erected before the mid-1990s have fewer than six storeys and they mostly were built without elevators. Many more built after 1989 are expected to fall into disrepair by 2030.

### **Lithium price forecast**

Lithium hopefuls (at least the hard-rock ones) have a five-year window of opportunity, according to a Melbourne, Australia, brokerage.

Beer & Co, in reviewing one Australian company's lithium plans, comments that its projections show "prices will fall in about 5 years, when supply from the plethora of early stage projects that have been announced during 2016 come to maturity". It expects the spodumene concentrate price to remain at about \$650/tonne for an extended period. It is assuming prices for 6% LiO<sub>2</sub> spodumene concentrates will, in about the second half of 2022, begin falling and ,by 2024, plateau at around \$475/tonne (by which time, presumably, production costs will have risen considerably).

That five-year window expectation is based on the assumption that lithium demand continues to be strong (and also presumably assumes that not too many other hard-rock lithium

projects get up before 2022).

### **Gold is where the money is**

At least if you bought gold stocks in the past year.

In a note titled *Fast and Furious*, Morgan Stanley says that its basket of gold stocks has risen in value by 240% over the past 30 months. Reports are that Morgan Stanley makes the point that, based on trading prices, investors are willing to pay prices that assume a much higher gold price; for example, Randgold Resources (traded on the London Stock Exchange and Nasdaq) has been trading at a level that assumes a gold price of \$2,350/oz – that's more than \$1,000/oz ahead of where gold is now (especially after the body blow the yellow metal took on Friday after the latest – and better than expected – U.S. jobs report).

Gold stocks in Australia certainly seem to be the glamour attraction. At last week's Diggers & Dealers meet in Kalgoorlie, 29 of the 43 companies giving presentations were either mining or looking for the yellow metal.

Sydney-based Warwick Grigor of Far East Capital appears here in my posts more than most analysts but that's because, one, he has been one of Australia's longest-serving observers of the mining scene and, two, because he spends a good deal of his time at resource conferences both at home and abroad. He has his fingers on the pulse of the industry.

He made this point after Diggers & Dealers: gold is the best commodity for a junior company. It is the least demanding technically; it is the easiest commodity to sell. There is no risk that any one gold mine, or even group of gold mines, will flood the market and drive down the gold price.

"There can be dozens of companies running around taking advantage of booms in individual commodities such as graphite, lithium, rare earths, uranium or any other exotic metal

without any real likelihood that there will be more than a handful that make it into production, but with gold the conversion rate is usually much higher,” he noted at the weekend.

What is happening here in Australia – and I assume it to be the case in North America – is that many old gold projects are being picked up again. Advances in technology make it possible to find and extract gold that has been missed or beyond the capability of previous operators. For example, I read a report just last week about a company that has taken up a project in Western Australia that was first discovered in 1892, mined on and off over the next decade and with a number of companies working over the ground in the years since. One of Australia’s more successful mid-tier gold producers worked this deposit for several years until 2010 with good production results. Now the new company that has picked up the lease says there’s still plenty of gold left in deeper zones.

### **Resources sector still firing**

July was a good month for the Australian mining crowd. Over the trading days of that month, 104 resources companies saw their share prices rise by more than 50% (normally the monthly average of late has been between 60 and 70 companies; the only comparable month was April when 102 companies saw that degree of share price gain).

Brisbane-based number cruncher Austex Mining tells us that Morgan Stanley and Grigor are reading the tea leaves correctly when it comes to the rising sentiment for gold stocks.

“There were 17 Companies with a ‘Significant Rise’ in both July and April, their gains following the announcement of new resource projects,” says Austex. “Six were gold projects and four lithium in July, as against 10 lithium and only two gold projects in April. *This difference reflects the change in market sentiment over the past three months from lithium to*

*gold as the glamour commodity". (Again, italics justified.)*

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# **India fuels the issue of resource security as the Chinese restrict rare earths and tungsten exports**

*India discovers the strategic price of an inadequate critical materials supply – a lesson for the US*

✘ The development of countries like China, Brazil, India, Turkey, Mexico, or Indonesia has generated a shift in the global economic map thanks to the rise of so called "South-South" cooperation. The formation of the BRICS (Brazil, Russia, India, China and South Africa) is perhaps the most startling example of this phenomenon. Of course, Europe and the United States remain pillars of global technology, trade and finance but they face much greater competition, especially when it comes to resources, than was the case in the 1950's or 60s. In fact, over the past two decades the rise of the BRICS and similar powers has substantially and permanently changed the map of the supply and demand for raw materials. China, in particular, accounted for over 50% of the increase in global consumption of industrial metals between 2002 and 2005.

Beyond this overall increase in demand, changes in technology have given cause for rare earths (essential for the advancement of many 'green' technologies) to be especially vulnerable to geopolitical whims and strategies. Tantalum is widely used in the electronics industry. Such minerals, given their uneven geographical distribution, difficulty of

extraction and processing or the concentration of their production chain, represent a challenge for rising and existing economic powers alike. This has fueled the issue of resource security: the growing demand for unprocessed metals and the consequent difficulties in access to raw materials will generate an ever more complex international struggle over the exploration, extraction, processing of raw materials.

Millions of jobs depend on access to raw materials and there has been an increase in demand for minerals and metals, accompanied by significant difficulties in the supply of certain raw materials, such as price volatility and market distortions – i.e. China's rare earth export restrictions. Countries and companies have invested billions in research to promote technological innovation in the value chain of raw materials through a wide range of initiatives such as new concepts and technologies for exploration efficient in terms of costs and identifying alternatives for critical raw materials even as research will help to improve processing and waste management technology to make mining and recovering critical materials more socially and environmentally acceptable. However, in the face of growing demand, supply is becoming problematic due to the concentration of supply in very few countries: China, Russia, the Democratic Republic of Congo and Brazil; add to this the low 'substitutability' and rudimentary recycling technology and it is not hard to see why the European Commission in 2010 identified 14 raw materials as having strategic importance. **They are antimony, beryllium, cobalt, fluorspar, gallium, germanium, graphite, indium, magnesium, niobium, platinum group metals, rare earths, tantalum and tungsten – in short known as 'moly' products.** Such is the context in which China has decided to continue applying export duties on several such materials including rare earths and tungsten, even though it had been expected to lift them on January 1 of this year to comply with the World Trade Organization (WTO) ruling deeming that export controls on such critical materials (including REE's, molybdenum and



tungsten) were illegal. China has until 1 May 2015 to comply and its decision to uphold them is borne out of geo-strategic concerns.

On December 31, it was reported that China would restrict rare earth and tungsten supplies to India, presumably to contrast the rise of India's military industrial complex. Indeed, molybdenum products are essential in the manufacturing of stealth radar evading technology, in targeting mechanisms and temperature resistant magnets and materials used in jet engines and aerofoil components in manned aircraft and increasingly in unmanned drone aircraft, which are playing an ever more important role in special operations. Missiles use samarium-cobalt (Sm-Co) magnets as do the ion plasma propulsion engines of future spacecraft. Neodymium-iron-boron magnets are able to withstand extremely high temperatures and are used in special munitions. Cerium and other REE are used to produce phosphors in lighting, radars and night vision equipment; even the 'humble' smart-phone can become an invaluable piece of defense equipment, facilitating communication. While not a rare metal in the chemical sense, rhenium is a highly temperature resistant element that is needed to produce the Joint Strike Fighter (JSF) aircraft to be supplied to the US and many of its NATO partners.

The REE industry has become extremely lopsided in China's favor and many countries, India increasingly so, need to invest more in securing dependable supplies of critical metals. India, for the time being, lacks the technological capability or the right rare earth ores to avoid reliance on raw material imports; just as the US and Japan were caught off guard in 2010, when China restricted exports of critical minerals, India too has been drawn to the need to develop buffer reserves. India has been especially keen to develop its aerospace technology sector – as has China in recent years – but it lacks the materials to develop the advanced alloys needed to make aerospace frames and engines alike. It is not

enough that titanium, tungsten and chromium (among others) are hard to find in India (essential to produce high-stress components from special bearings to turbine and compressor blades), modern aerospace technology is experimenting with materials able to withstand extreme temperatures and stress such as ceramic composites and borides and zirconium for the leading edges of wings.

Rare earths today represent what titanium and tungsten were in the 1930's and 40's and it is essential that reliable supplies of these essential materials be available. One of the most important development initiatives launched by Indian Prime Minister Narendra Modi is known as "Make in India". A shortage of critical materials for the defense and high technology sectors will severely limit the impact of the campaign according to Avinash Chander, Scientific Adviser to the Defense Minister and Director-General of the Defense Research and Development Organization. India has sought Japanese help in improving extraction and processing. India does have some rare earth production capability; it is minimal when compared to China, but the partially State owned 'Indian Rare Earths Ltd' sells some ore material such as monazite and a few value added products for magnets. Japan has already made investments in India. A subsidiary of Toyota Tsusho called Toyotsu Rare Earths India Pvt. Ltd. is based in Vishakapatnam, in the state of Andhra Pradesh, and is involved in the production of some rare earth elements. The company operates a base in which it is produced monazite sand, rare earth element, and is responsible for the preparation of rare earths such as neodymium, lanthanum and cerium; receives the supply of monazite sand from Indian Rare Earths Ltd (IRE), which falls within the jurisdiction of the Department of Atomic Energy.

Recently, IRE has requested authorization to extract rare earths from the sand along a coastal stretch of approximately 2500 hectares in Brahmagiri (Puri district). Japan is said to have contributed at least a half billion dollars for the

development of alternative sources of rare earths in India, which wants to attract Japanese investment.

Both India and Japan understand that the rare earth industry offers trade, strategic and diplomatic advantages. At the same time, ensure regular supply of rare earths will be a process that will take a long time. If you invest today in various projects, then it may take about five years to double or triple production. Over the years, many countries in the world had stopped investing in the extraction of rare earths because, from a financial standpoint, it was more feasible to import from China. However, this had led China to develop a monopoly in this area. For countries like India there is much to learn from the experience of the rare earths. It is important to understand that with regard to critical materials and essential minerals, planning is vital. India has learned the hard way that dependence on other countries – especially other competing economic and military powers such as China – should be minimal with respect to strategic materials required in the energy, aerospace, nuclear power and in defense sectors. In addition, there is a constant need to monitor trends in progress in areas such as semiconductors, silicon technology, production of microcircuits, thin films, nanotechnology, and so on. The presence or absence of strategic materials are two factors that have an impact in the short and long term on the economy of the country, as well as on military preparedness. The United States may be caught equally unprepared in this matter and India's lessons apply to it as well.

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# InvestorIntel decrypts the market trend of some key commodities: agbusiness, uranium and gold

## Agbusiness:

It is not only the growing world population's hunger that is driving the prices of wheat, corn, soybeans and other agricultural products and the OECD expects for years with rising agricultural prices. The main role affecting prices is played by soy, sugar, corn and wheat. Modern food production would not be sustainable without the use of mineral derived fertilizers from potash to phosphate, given the quantities that are needed. Potash helps the soil retain water, while making crops more flavorful and resistant to disease. It is estimated that more than a third of the world's current food production would not be possible; as the world population expands, therefore, potash will become even more important in order to match food production with demand. Economic growth in China and India and a resulting change in the diet toward more meat (meaning more animal feed) and carbohydrates have led to a sharp increase in potash. The fertilizer producer K+S is recovering from the slump in the market in 2013 faster than expected.

Potash prices have recovered faster than the most optimistic expectations (and InvestorIntel was decidedly in the bullish camp). PotashCorp, (NYSE: POT) one of the world's largest potash producers expects worldwide demand for the mineral to remain at least as high in 2015 as in the previous years, while K+S (DE: SDF) in Germany, which almost collapsed in the wake of shockwaves of Russia's Uralkali's pullout from the BPC consortium with Belarusian state concern Belaruskaly in July

2013, has announced a 16% increase in operating profit last week with shares rising over 6% in Frankfurt trading. Farmers' demand for potash is strong.

Agricultural commodities include a wide variety of inter-related products ranging from the food we eat to the products needed to facilitate their production from fertilizers such as potash, nitrogen and phosphate and even land. Indeed, the growing global contest between urban sprawl and agricultural land risks lowering rather than raising living standards for different populations, causing damage to habitats and entire ecosystems. Yet, the world's population continues to grow and land productivity has become a crucial issue, given the ever increasing demand for food. Changing dietary habits in developing countries, where people are consuming more meat, and the rising popularity of bio-fuels and distribution of biofuels require more land devoted to agriculture and far greater efficiency to maximize yields and the quality of harvests. Biofuel production has started to impinge on the production of food for the poor: 40% of the corn produced in the US, 50% of the sugar beet grown in Brazil and 80% of the sunflower produced in Europe are used by the biofuels sector.

Food security is the key to our future. In 2050, there will be nine billion people inhabiting the earth and the problem of how to ensure safe and healthy food to a growing world population is one of the greatest challenges for the coming years. While this problem has generated a worldwide debate over the search for solutions from how to deal with basic food needs, fighting hunger even as the public and private sectors must to work in harmony to ensure better economic, social and environmental agricultural development models, there are tremendous opportunities. Agricultural products have become ever more expensive and there are excellent opportunities for investors. Milk is more expensive – now everyone knows how much agricultural commodities are on the rise.

## **Uranium & Nuclear Energy**

Japan's decision to restart two nuclear reactors has woken up uranium prices from their slumber. On November 6, uranium enjoyed a 4.5% increase in spot prices, the largest daily increase since the Fukushima disaster of 2011, which had condemned all Japanese plants to be shut down, adding a setback to the global nuclear industry. Kagoshima Prefecture signaled a green light to restart two reactors at Sendai while Russia has agreed to build two new reactors in Bushehr, Iran. And Australia is preparing to sell nuclear fuel to India. For several days, sales of uranium concentrate have increased on the spot market and there has been a rush to buy, especially in the USA, fueled by an effort to avoid delays in resupply lest prices rise further. Fears of a global uranium surplus have proven premature and the price per pound of uranium concentrate is not likely to relapse. It is now worth USD\$ 39, 50% more than before the summer on the spot market, USD\$ 45 on the market long term. Uranium mining companies have benefited from the spot price increases from Canada to Australia and even in France where Areva stock has also improved after a reporting season of problems driven by bad results this year. Uranium producers decreased their production by 11% while there has been a lower availability of recycled uranium fuel supply.

## **Gold, Base & Precious Metals**

Global consumption of gold has declined slightly in the third quarter 2014, with a decline of 2%, which nevertheless masks regional disparities, according to the recently issue of the World Gold Council (WGC) quarterly report. Notably, while demand has dropped in China – many believe that personal purchases of gold ingots and jewelry has sharply declined due to the zeal of fiscal authorities controlling illicit earnings and corruption – it has increased in India. Together, India and China are the major gold consumers in the world. India's demand increase is the product of a strong appetite for jewelry (+ 60%) despite of the introduction of restrictive

measures on the import of gold in the country. There is also an optimism in India that has been missing from the main economic outlook of the past few years; in India, people think that economic growth will improve, which has encouraged to spend a little more.”

Chinese demand is still acceptable and it remains key pillar of global demand for gold, and it seems that India and China switch their position as world's largest gold consumers from time to time. It was in 2014 that China became the world's largest consumer of gold from, overtaking India only to relinquish the rank now. Central banks, for their part remained net buyers of gold for the 15th consecutive quarter. Russia has continued to boost its reserves during the last quarter by 55 tons, reaching a total of close to 1,150 tons at the end of September. Moreover, there are signs of a bullish – or at least a least bearish one – inversion of the recent down trend for gold and even silver. Last Friday both precious metals proved to be resilient in the face of another increase in the US Dollar, suggesting a longer term rebound, which could see gold quickly resuming a price in the order of USD\$ 1,200/oz. or higher as early as this week.