US accuses China of cyber espionage

Tired of the constant violations and theft damaging U.S. companies, The White House has launched unprecedented criminal proceedings against the Chinese government. Yesterday, the Grand Jury of Pennsylvania explicitly denounced five Chinese military hackers, unit number 61398 of the third division of the People's Liberation Army, accused of stealing sensitive data from computers of six American companies in the field of nuclear, solar and other engineering sectors including Alcoa, U.S. Steel and Westinghouse. The charges relate to acts of "hacking" committed between 2006 and 2014 , which by some estimates have caused business damages estimated at some USD$ 400 billion a year. In particular, it seems that these hackers have used military and intelligence officials to commit their crimes. The crimes were also systematic and the US has taken advantage of the rising tensions to send the signal that "when is too much, is too much. It's time to react against these acts of cyber-espionage that have the sole purpose to illegally help Chinese industry in Beijing" said Obama, who added that the US government would no longer tolerate actions that aim to sabotage US companies or the goals of fair competition.

If China was going to challenge the WTO ruling on its export restrictions of rare earths, the US accusations will only serve to strengthen its resolve to maintain them. Indeed, Beijing has wasted little time in retaliating, calling the US accusations absurd, suspending the joint working groups confronting cyber espionage. Discussions on cybersecurity came to the fore last summer as China and the United States denounced cyber-attacks from other countries, agreeing to work together to stop it. Ironically, the US accusations were delivered just days after a visit to Washington of the Chief

of Staff of the Chinese Army, General Fang Fenghui. An American security company claimed in February 2013 that the Chinese army controlled hundreds, even thousands of hackers all over the world. Most though are based in China and the Chinese government is well aware of their activities, said Mandiant, one of the companies analyzing the U.S. government's computer security.

President Barack Obama has raised his game against China but not only in combating cyber-espionage. Indeed, the bilateral context in which the accusations were launched suggest a much deeper sense of mistrust.

China is about to overtake the United States to become the largest economy in the world according to the World Bank. The news was certainly noted in China – less so in the US and it represents a historic moment; it is no less than a shift in power from West to East, confirming the decline of the former and the inexorable rise of the latter. The World Bank may have jumped the gun a little because the statistics still show GDP in the USA to be worth more or less than twice that of China and the actual pass is not expected until 2020 at the earliest based on current growth rates. Nevertheless, even if Godzilla hit the movie screens again last weekend, the Chinese dragon is the one actually threatening Uncle Sam's smug face.

Both Chinese officials and US have feigned to ignore the World Bank numbers in a subtle game of brinksmanship where both countries have much to lose from an open confrontation in economic and geopolitical terms. Certainly, the Obama administration needs favorable news and would rather focus on statistics suggesting higher employment numbers rather than terminal decline, just a few years after a financial crisis and devastating recession, whose effects are still being felt. China, meanwhile, does not want to scare the world or raise domestic expectations as much of the population has yet to enjoy the fruits of its tremendous growth and while it rethinks aspects of the social and environmental costs of its

economic rise. Moreover, China, when GDP is seen through a pro-capita lens remains a poor country, because, at almost a billion and a half people it ranks 99th in the world in pro-capita GDP.

Then there are the growing tensions in the Pacific Rim as China and Japan are competing over economic and political influence. The US has pledged to back Japan's position in its dispute with China over the Senkaku Islands as well as returning to the Philippines, concerned with rising Chinese military power. For now, the United States and China remain more allies than they do enemies, but it is a fragile peace, threatened by the winds of trade and rising regional powers. It is no coincidence that China's growth has fueled the political tensions with Japan – as well as the Island dispute – another economic power in decline, which at one time had ambitions of regional hegemony in Asia. The United States still has the unique resources of renewal, innovation and enterprise that continues to attract immigrants from all over the world desperate to own a piece of the American dream. The United States exercises tremendous cultural, as well as political, influence in the world and China is in no position to challenge this.

Nuclear energy is China's weapon of choice to fight pollution

Westinghouse Electric is poised to win more contracts in China for the construction of eight new third-generation AP1000 nuclear reactors. This represents the first major

nuclear energy program since the 2011 Fukushima disaster in Japan. China needs to reduce its dependence on coal in order to reduce air pollution, which has reached intolerable levels. If left unaddressed, the government risks considerable social and political unrest given the growing concerns for cleaner air coming from China's growing middle class. The eight reactors are estimated to cost USD$ 24 billion. It is noteworthy, in the context of China's sovereignty dispute with Japan over the Senkaku/Diaoyou islands that the US based Westinghouse is actually controlled by Japan's Toshiba. The eight new reactors will be built on four sites including Sanmen in coastal Zhejiang province, and Haiyang in the northern province of Shandong, where four AP1000 reactors are already under construction. CNNC and the China General Nuclear Power Group are also negotiating the construction of four additional reactors to be built in the Liaoning and Guangdong provinces. These projects have already received the green light from the government.

China already has 20 nuclear reactors in operation and 28 under construction. The China National Nuclear Corporation (CNNC) is expected to start building 20 additional reactors over the next six years in order to achieve 88 gigawatts (GW) of power by the end of the decade; now, China generates 15.69 GW according to the latest official figures – the longer term goal is 200 GW China's nuclear program attracts many foreign OEMs and suppliers such as Westinghouse and France's Alstom SA and Areva SA. Alstom said it expects to provide the lion's share of the steam turbines that will be used in conjunction with China's new reactors. China is the country with the highest growth in the field of atomic energy. Despite Fukushima, the nuclear market in China has enormous growth potential because China's nuclear industry is still at an embryonic stage. Electricity production from nuclear power plants accounts for less than 2% of demand; in a global context, it is still far behind other countries as far as installed capacity is concerned.

The Chinese government plans to sustain this sector's growth with a high level of security that fully meets the standards of the International Atomic Energy Association. Since the effort to curb pollution has become a key component of efforts to improve the economy – and to abandon coal – nuclear energy has become an essential element in the country's energy mix. Last March, Chinese Premier Li Keqiang pledged to make greater efforts to change the way energy is produced and consumed" by the development of nuclear energy and renewable deployment of smart grid electrical transmission and promoting low carbon green technologies.

China's growing appetite for nuclear energy will also fuel the market for uranium and Canada may have a big role to play in addressing that demand. Canada is one of China's main sources for natural uranium and Chinese officials, addressing the 13th International Nuclear Energy Industry exhibition in Beijing, stated they intend to promote bilateral cooperation in nuclear energy. This suggests China will be increasing its uranium purchases from Canadian miners. One of the reasons for this privileged relationship is that Canada's Candu Energy Inc. nuclear is cooperating with the China Nuclear Energy Industry Corporation to develop a new Candu reactor tip which can run on recycled uranium or thorium as an alternative fuel. Canada is the world's second largest producer of natural uranium.

China has clearly chosen the nuclear route to help reduce emissions. In the West, this solution has not been getting the currency it deserves even if it is one of the most practical solutions to address climate change. The Intergovernmental Panel on Climate Change (IPCC) itself has all but confirmed that nuclear energy is among the most efficient – by that read free of carbon emissions – energy sources. Nuclear power and wind turbines, in fact, generate 12 grams of CO2/ kWh, which means that nuclear energy is even 'cleaner' than hydro and solar, which produce, 24 and 28 grams of CO2 /kWh respectively. Fossil fuels, using CO2 sequestration (something

of a technology pipe dream) are always believed to achieve between 160 and 220 grams/KWh. The bigger surprise is that the IPCC report holds nuclear energy as the safest! Perhaps, the energy strangle that Russia holds over Europe with its control of vast gas resources shall force EU governments to reconsider their current nuclear energy reduction schemes (i.e. Germany) in order to score major geopolitical points with Moscow.