

# Syria Is Not A Strategic Priority For Washington

**WASHINGTON** – It is clear that Russia, as the key ally of president Assad of Syria, has taken a lead role in trying to set the stage for a final peace settlement regarding this tragically battered country. The recent Sochi meeting in which president Putin hosted president Rouhani of Iran and president Erdogan of Turkey seems to illustrate a resurgent Russia once again playing a key role in the Middle East.

## **America in retreat?**

In Washington, the defenders of the (frankly defunct) myth of Pax Americana sounded alarm bells. *“America is in full retreat –they admonish us– and the bad guys are filling the void. We are losing ground, while they are gaining”.*

Indeed. But here is the question. Is the American national interest really profoundly impacted by who is in control in Syria? What’s so important about Syria from Washington’s standpoint? Well, very little. Sure enough, if we look at a map of the Middle East, we can see that a firm Russian foothold into Syria, plus continuing Iranian influence there, changes the geopolitical picture.

## **Russia and Iran in the lead**

True. Still, this being the case, in what way does this geopolitical realignment affect America’s vital interests? Syria is now a semi-destroyed and completely impoverished country. Whoever will exercise influence on Damascus does not gain that much. In fact, to the extent that the Russians need to prove that they are real friends of Assad, they would have to support Damascus financially, for many years. And this may prove to be quite a burden for a Russian state not exactly swimming in wealth.

Iran's influence in Syria is a concern. However, there are several counterweights within the region to Tehran's hegemonic ambitions. From this perspective, it would be prudent for Washington to continue supporting its traditional Sunni Arab allies who are actively opposing Tehran's expansionism.

### **Middle East no longer of critical importance**

That said, even taking all this into account, the idea that Washington "*must*" regain its historic role as a key powerful player in the Middle East has no longer any strong rational justification.

Of course, until a few years ago, one could have argued that the Middle East indeed had extraordinary strategic value for Washington, because it sits on most of the oil the rest of the world desperately needs.

Well, this argument is far less compelling today, in this new era of abundant oil supplies in large measure caused by America's newly discovered technologies (fracking and horizontal drilling) that allowed US energy companies to exploit massive domestic shale oil reserves. Indeed, thanks to fracking, in just a few years America doubled its oil production. This is a real game changer.

Besides, if you add to this dramatic domestic oil production boom increased oil supplies from Canada, plus imports from Mexico, Colombia, and Venezuela, the U.S. has, or will soon have, "*hemispheric energy independence*". This means that most of the oil America will need will come from domestic sources or from imports from reliable neighboring countries, and not from the Persian Gulf.

### **Middle Eastern oil not so important**

Now, this is a major and completely benign geopolitical change! In simple language, as the U.S. no longer relies on Middle Eastern oil for its very economic viability,

controlling events in the region is no longer such a key priority.

Besides, going forward, the slow but steady emergence of electric vehicles as commercially plausible alternatives to gasoline powered cars makes the strategic importance of oil, and therefore of Middle Eastern oil and whoever owns it or controls it, progressively far less significant.

Down the line, if you take oil out of the equation, or at least if you downgrade its strategic value as the (no longer so) essential fuel for all modern industrial countries, the Middle East becomes far less important. Absent oil and the power and wealth that it brings, Taiwan is a far more significant player in the global economy than Saudi Arabia.

### **Let Syria go**

Bottom line, let's not fret about who will be in charge in Damascus. After years of civil war that caused destruction and millions of refugees, Syria is a disaster, a true basket case. Even assuming wildly optimistic scenarios, it will take years and astronomic investments to bring it back to semi normality. Let Russia worry about all this.

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## **Mass Produced Electric Cars? Sooner Than You Think**

**WASHINGTON** – The still unresolved issue that will determine if and when there will be real mass demand for Electric Vehicles, EVs, is how to design and manufacture cheaper, lighter batteries for EVs with a higher energy reservoir, and therefore capable of traveling longer distances with one

electric charge.

## **Getting there**

The optimists tell us that we are getting there. They cite significant technological innovations and dramatic cost reductions already achieved in the past few years. All true. Batteries are cheaper. EVs now can travel farther. And the optimists also tell us that new collaborative efforts now underway may help expedite additional progress in battery design and effectiveness.

## **Cheaper batteries, coming soon**

Here is a good example. *“Cheaper, more powerful electric car batteries are on the horizon.”* This headline appeared on ScienceDaily, 9 August 2016. The story is about a new joint effort linking the U.S. Department of Energy, several U.S. academic institutions and the private sector, under the leadership of a Binghamton University expert.

*“The White House –Science Daily wrote– recently announced the creation of the Battery500 Consortium, a multidisciplinary group led by the U.S. Department of Energy (DOE), Pacific Northwest National Laboratory (PNNL) working to reduce the cost of vehicle battery technologies. The Battery500 Consortium will receive an award of up to \$10 million per year for five years to drive progress on DOE’s goal of reducing the cost of vehicle battery technologies.”*

*“[Assuming success, this effort] will result in a significantly smaller, lighter weight, less expensive battery pack (below \$100/kWh) and more affordable electric vehicles.*

*M. Stanley Whittingham, distinguished professor of chemistry at Binghamton University, will lead his Energy Storage team in the charge.”*

*“We hope to extract as much energy as possible while, at the*

same time, producing a battery that is smaller and cheaper to produce," said Whittingham. "This consortium includes some of the brightest minds in the field, and I look forward to working with them to create lithium batteries that will power future electric vehicles more affordably."

According to the Science Daily story, other Battery500 Consortium members include:

- *Pacific Northwest National Laboratory*
- *Brookhaven National Laboratory*
- *Idaho National Laboratory*
- *SLAC National Accelerator Laboratory*
- *Stanford University*
- *University of California, San Diego*
- *University of Texas at Austin*
- *University of Washington*
- *IBM (advisory board member)*
- *Tesla Motors, Inc. (advisory board member)*

## **Breakthrough?**

Well, is this an indication that we are on the verge of a major breakthrough when it comes to the most critical component of future generation EVs? Who knows, really.

Still, if I were the CEO of a major oil company, I would feel very nervous.

Never mind OPEC and its mixed signals regarding its willingness and ability to freeze/cut production in order to stabilize global oil prices. Never mind the ongoing tensions between political rivals Saudi Arabia and Iran and their

potential impact on oil markets.

### **Oil will become obsolete**

The real scary thought is that oil may soon become obsolete. Yes, you got it right: *"Oil may soon become obsolete"*.

Of course this will not happen suddenly. And of course there will still be a significant need for many oil derived products other than gasoline for automobiles. (Think jet fuel, diesel for heavy trucks, oil for plastics and other petrochemical products, and a lot more).

Still, the fact is that on a global scale crude is used mostly to produce the gigantic rivers of oil-derived gasoline that end up in the tanks of hundreds of millions of cars powered by internal combustion engines. Tanks that need to be refilled very often with more and more gasoline.

### **End of the conventional car**

***If and when cheaper EVs powered by cost-effective new generation batteries hit the road, there will be a fairly rapid revolution. This will be the end of the conventional car powered by an internal combustion engine.***

Indeed, an electric charge is much cheaper than filling your tank with gasoline. Much cheaper batteries, assuming some companies will manage to manufacture them relatively soon, will lower the price of future electric vehicles, while increasing the distance EVs can cover with one charge.

As soon as this happens, there will be a consumers-led revolution. Millions of drivers across the world will quickly switch to EVs because they will be finally affordable, dependable, and much cheaper to operate, not to mention far cleaner than their gasoline powered counterparts. (By the way: not entirely clean. EVs run on electricity, a zero emission fuel. However, a significant percentage of electricity in the

U.S. and elsewhere is produced by burning coal and natural gas. Which is to say that if you consider the source of their fuel, although emissions free, EVs are still not entirely “clean”).

### **How soon?**

That said, the big, open question for any oil executive is: *“How much time do we have left before the whole oil sector will collapse, due to lack of demand”?*

It is very clear that this revolutionary transformation brought about by mass-produced EVs will happen. But nobody knows when: 5 years? 10 Years? 15 Years?

And here is the big problem for the oil industry. In order to properly run their businesses, oil executives must plan ahead. And these plans entail major capital investments needed now in order to reap significant gains to be realized several years down the road in terms of new oil production coming on line.

Indeed, for oil companies to stay profitable, mature wells close to exhaustion need to be replaced by fresh production. And this means investing now, sometimes on a massive scale, in order to secure continuity of future oil production. This is how the industry works. Except that now this traditional approach is no longer a sure bet.

Given developments in EV battery technologies, today oil executives know that this cycle of investments-exploitation-new investments-future exploitation will no longer work indefinitely.

### **The end of oil companies as giant players**

If and when EVs will become dominant because of technological and cost breakthroughs in batteries technology, this will signal the beginning of the end for major oil companies.

In the not so distant future, many of them will run the risk

of being caught with new expensive projects half completed that all of a sudden are no longer economically viable on account of collapsing demand for their product –oil– once coveted, and now out of fashion.

Beyond these contingencies, because of EVs almost all oil companies will have to cut production, concentrating on the cheapest crude, in order to survive in a new energy era characterized by drastically diminished demand for oil and oil products. The weakest players will not be able to make it. They will go under, or they will be bought by bigger companies.

### **Oil will still be needed**

Having said all this, will EVs amount to a final catastrophe for the oil sector? Not entirely. Let's keep all this in perspective. Even assuming state of the art, cost-effective EVs quickly replacing an enormous global fleet of gasoline powered vehicles, there will still be demand for oil.

Heavy trucks and ships will continue to run on oil derived diesel fuel for many, many years. Likewise, thousands upon thousands of civilian and military airplanes will still rely on jet fuel made from crude oil. Petrochemical and plastics industries across the globe will continue to need oil derived products.

All this is true. However, assuming a fairly rapid switch to EVs, the global demand for oil, now driven largely by demand for oil derived gasoline, will collapse. All of a sudden, the global oil industry will face gigantic over capacity: too much oil and too little demand. Only the ultra lean, low-cost operators with a solid financial base will survive.

### **Good bye Exxon?**

Hard to think of a world in which Exxon Mobil will be a mid-sized company confined to producing oil for jet fuel and



diesel trucks only, since millions of cars will run on electricity, and no longer on gasoline. But we are getting there. And this may happen sooner than we think. Call it the next “oil shock”.

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## **No Deal To Cut Oil Production – Still, Russia And Saudi Arabia Are Talking**

**WASHINGTON** – Saudi Arabia and Russia are the leading world oil producers and exporters. Energy Ministers from both countries met in Qatar to discuss a possible agreement leading to production cuts. They were joined by Qatar and Venezuela.

### **No deal**

But nothing really happened. The only “agreement” reached by the two oil exporting giants, (the other two participants are not very consequential), is to freeze their production at January levels, an all time high. So this does not mean much.

Besides, the agreement is contingent on Iran and Iraq not raising their production beyond this level. And this is almost impossible. Iran wants to ramp up its production to pre-sanctions levels. This translates into *adding* another one million barrels a day beyond the 400,00 it has already added. Iraq desperately needs cash to finance its counter-insurgency efforts against ISIL in the North West of the country. So, expect no production freezes from these two key OPEC members.

### **Too much oil**

The current oil production glut, intentionally allowed by Saudi Arabia when it refused to cut production when confronted with lower prices in 2014, is hurting both Russia and Saudi Arabia. And, as noted above, the situation is about to get worse. With the lifting of international sanctions, Iran is now free to export more to Europe and elsewhere. We can expect more than 1.4 million barrels of additional Iranian oil to hit already saturated markets in the near future. For sure, this over supply will keep crude prices down. They are around \$ 30 right now, down to just 1/3 of what they used to be before this glut began.

### **Financial pain**

Saudi Arabia can tolerate the financial pain caused by the huge oil revenue loss, for now, but not indefinitely. Likewise, the Russian government has been forced to cut spending, repeatedly, while dipping into a reserve fund to cover the substantial revenue shortfall. Depressed crude prices are really bad for both countries.

While no breakthrough took place in Qatar, may be it is time for the Saudis to get a deal with Russia. The problem is that Saudi Arabia is also concerned with retaining market share. If it cuts production, it will lose some customers. And others who are not cutting may end up benefiting. (Think Iraq and Iran, among others).

### **Can they agree?**

Hence the importance of a deal with Russia, the other giant exporter. The two of them combined control 20 millions barrels of production. Still, is such a deal really possible?

In theory, yes. In practice, we would be entering uncharted territory. This has not been done before. Russia is not an OPEC member. Besides, Russia is not viewed as a friend by the Saudis. Moscow is on good terms with Iran, while it heavily supports Assad in Syria.

## **May be**

Can the two countries go beyond these major political differences, and strike a deal that would benefit both of them financially, in a major way?

As we are getting closer to what begins to look like an emergency situation caused by oil revenue collapse, a production cut agreement between Moscow and Riyadh is just possible.

The meeting in Qatar was inconclusive. Still it counts as an exploratory talk between two critical players that until today had no established venue for bilateral energy talks.

Will there be more meetings? Can the two sides get a real deal, a deal that will cut production, and therefore lift oil prices? I would not rule this out. Both Russia and Saudi Arabia badly need more cash.

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# **A Russia-Saudi Arabia Oil Production Cut Deal?**

**WASHINGTON** – Saudi Arabia and Russia are the leading world oil producers and exporters. Energy Ministers from both countries are about to meet in Qatar to discuss a possible agreement leading to production cuts.

## **Too much oil**

The current glut, intentionally allowed by Saudi Arabia when it refused to cut production when confronted with lower prices, is hurting both of them. And the situation is about to get worse. With the lifting of international sanctions, Iran

is now free to export more to Europe and elsewhere. This means even more supply (about 400,000 barrels a day) from Iran in an already over supplied market. This will keep crude prices down. They are around \$ 30 right now, less than half of what they used to be when the glut began.

### **Financial pain**

Saudi Arabia can tolerate the financial pain caused by the huge oil revenue loss, for now, but not indefinitely. Likewise, the Russian government has been forced to cut spending, repeatedly, while dipping into a reserve fund to cover for the substantial revenue shortfall. Depressed crude prices are really bad for both countries.

May be it is time for the Saudis to get a deal with Russia. The problem is that Saudi Arabia is also concerned with retaining market share. If it cuts production, it will lose some customers. And others who are not cutting may end up benefiting.

### **Can we get a deal?**

Hence the importance of a deal with Russia, the other giant exporters. The two of them combined control 20 millions barrels of production. What will be the substance of a deal? What guarantees can the two sides offer? Is such a deal really possible?

In theory, yes. In practice, we would be entering uncharted territory. This has not been done before. Russia is not an OPEC member. Besides, Russia is not viewed as a friend by the Saudis. Moscow is on good terms with Iran, while it heavily supports Assad in Syria.

### **May be**

Can the two countries go beyond these major political differences, and strike a deal that would benefit both of them

financially, in a major way?

As we are getting closer to what feels like an emergency situation, an agreement between Moscow and Riyadh is just possible. Stay tuned.

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## **US Economy and Public Finances Deteriorating – Candidates Talk About Something Else**

**WASHINGTON** – While we wait with trepidation for the outcome of the Iowa caucuses that will finally begin to shape the race for the Democratic and Republican nominations, none of the candidates really care to discuss in any detail the actual conditions of America, both its economy and public finances.

### **On shaky ground**

Let's make this simple. The US economy is on shaky ground. A lot of the rather modest (2%) economic growth that we had since the end of the 2008 recession is due to free money doled out by the Federal Reserve for an absurdly long time.

### **Energy bust**

And now, some of that growth is gone, for good. Thanks to Saudi Arabia and its all out oil production policy that depressed prices, the massive energy boom that America enjoyed until 2014 is over, killed by oil at \$ 30 a barrel. More than 100,000 high paying jobs have vanished in about a year. More losses to come as more US energy companies go bankrupt, or

have to retrench.

### **Easy credit**

And what about the good news, like higher consumer spending? Well, the stunningly large 2015 car sales were financed almost entirely via easy credit extended to practically anybody walking into any dealership. (Some analysts talk openly about "*sub-prime auto loans*"). With these kinds of credit tricks it is easy to jack up GDP figures. The problem is that you cannot keep doing this for ever. When consumers who do not earn that much (their incomes have been stagnating for decades) have used up all their credit, then what? Is it just a coincidence that Wal-Mart is planning to close a large number of stores?

True, we have had significant employment growth. But most new jobs are low paying, and many of them are only part-time. Where will the new economic growth come from? From massive new consumption driven by store clerks and janitors who make \$ 20,000 a year?

### **High dollar hurts exports**

US exports have been hit and will be hit by a deteriorating global economy (this means less demand) and by a high dollar that makes Made in the USA products more expensive. For the moment, manufacturing output is relatively steady. However, thanks to automation, this sector will not create many new jobs.

### **Jittery markets**

Are we headed towards a recession? Probably not any time soon. Still, with modest growth and declining corporate earnings, we are barely treading water. It would only take a bit of bad news (look at the Wall Street jitters anytime something strange comes out of China) to wipe out many of the newly created restaurant and hospitality jobs.

Of course, compared to weak Europe or Japan, let alone disaster zones Brazil or Russia, the US is doing much better. But this is not a robust, resilient economy built on the production of valuable goods that give America a strong competitive edge. Sure, we still have many IT giants. But there is only one Silicon Valley in America.

### **Fiscal picture getting worse**

Sadly, we have to add to this a slowly deteriorating fiscal picture. With due credit to President Obama, it is true that after years of gigantic federal deficits that added massively to the national debt, more recently US public finances have improved –a great deal. the US Federal deficit is now down to less than 3% of GDP for 2015.

However, this will not last. A combination of increased discretionary spending and the higher costs of all key entitlement programs due to an aging population will cause an increase of the Federal budget deficit beginning in 2016. According to the Congressional Budget Office, a non partisan, research and analysis public body, the US Federal deficit will go from \$ 439 billion in 2015 (2.5% of GDP) up to \$ 544 in 2016, (2.9% of GDP).

### **The rising cost of entitlements**

And any fair estimate of the increased costs of Social Security, Medicare and Medicaid –the largest Federal entitlement programs – indicates that year after year the deficit outlook will get progressively worse.

Entitlements will soon absorb 15% of GDP (now it is 13.1%). Higher deficits mean higher cost of debt service and the reduction of discretionary spending, including defense.

### **Obamacare does not pay for itself**

And there is more. The just released numbers on Obamacare

enrollment do not look good. The new people who signed up for medical insurance are mostly old and sick. The young and fit did not enroll in sufficient numbers. And this means higher costs for the system. Since most of the new, needy "patients" receive Federal subsidies to pay for their brand new medical insurance, soon enough Obamacare's extra costs will add to the deficit.

### **Not a catastrophe**

For the time being these numbers, while worrisome, do not look catastrophic. And in fact they are not. But they indicate a bad trend of higher costs and higher deficits, notwithstanding higher tax revenue. And here why this is happening. As new births keep declining, while more and more Americans get older and live longer, the cost of well-meaning social programs designed in another era, (Social Security was designed in the 1930s), at a time in which retirees were expected to collect benefits only for a few years before they died, will keep growing.

### **Candidates do not talk about any of this**

Given the above, it is obvious that entitlements reform should be on top of any serious candidate's list of policy priorities. But it is not. Sure, some of them have presented fiscal reform plans. But they are mostly attention grabbing tax cuts ideas. They fear that any serious talk of real reform amounting to benefits cuts for millions of Americans would amount to political suicide.

So, here is the thing. This elections year should be an opportunity to focus on the real issues affecting America: a fragile economy and deteriorating public finances due to entitlement programs no longer in line with current and future demographic trends.

### **No serious talk about policy**



But no, the candidates do not talk about any of this. This year we have had a mixture of political theater, lunatic plans to redistribute wealth, populism and empty grandstanding. Between the crazy ideas pushed by socialist Bernie Sanders and Trump's bravado, mixed with his endless recitations of his good poll numbers, there is no room for seriously talking about anything.

### **A bizarre President or a weak one**

As I said, Thank God America is not in a serious crisis. But we see a once vigorous society that is slowly deteriorating, while those who want to run the Republic peddle fantasies to people who just want to be duped. My hope is that this unusual political season that started as vaudeville will finally get serious. But I would not count on it.

Sadly, we will end up either with a bizarre president (Trump, Cruz or Sanders), or with a weak one (Clinton) who will do nothing to change course.

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## **THE US Shale Industry Survived Oil Prices Collapse**

**WASHINGTON** – When oil prices suddenly collapsed, going from \$ 100 per barrel to \$ 50 or less, the almost universal prognostication was that the US shale oil industry was dead. Shale oil is difficult to extract and therefore a lot more expensive than “conventional oil”. Given the very low margins, shale oil can be profitable only if crude prices stay above \$ 70 or 80 a barrel.

## **Kill shale producers**

As we know, oil prices collapsed because Saudi Arabia and OPEC decided not to cut production in order to stabilize prices after the world experienced a supply glut thanks to US shale oil coming on line on a massive scale.

Many observers believed at the time that Saudi Arabia allowed the price free fall because it hoped to kill most US high cost shale producers. With oil at \$ 60 or lower per barrel a majority of US producers would simply have to shut down. With global crude prices that low, US shale oil producers could no longer generate any profits, because of their high cost and low margin operations.

Well, the predicted US shale oil industry collapse did not happen. And this is mostly because the impossible actually happened. Many US producers learned new ways to cut costs, in a major way –and very fast.

## **Dramatic cost cutting**

This sounds impossible. Oil production is a complicated, cumbersome and expensive process. Shale oil production even more so. You spend a lot of money acquiring drilling rights, spend more money drilling a lot. If you are lucky, you find some oil. After that, you have to set up expensive, capital intensive operations.

All this is based on the expectation that after you start producing you will generate a reasonable profit. But this expectation rests on the assumption that crude prices will stay within a certain range. If prices collapse, you are in a bind. Below a certain point, you cannot recover your initial investment in the drilling operation, and you start losing money. Therefore, you shut down, or you go bankrupt, or both.

## **Learning curve**

But these generally accepted parameters no longer apply. At least not to all shale oil producers. And here is why. Believe it or not, the fact that shale oil wells production cycles are shorter than production cycles from conventional wells has become an opportunity for many industry practitioners to adopt new cost saving technologies that made the next shale well cheaper and more productive.

It would appear that more drilling resulted in more experimentation and eventually in higher productivity and better margins. At least in some instances, producers indicate that they have higher margins now, with oil at \$ 65 than what they had when oil was at \$ 95.

Let's be careful. This does not apply to all. There are thousands of shale oil producers in the US, some of them quite small. Some small companies carry a lot of debt. Their business model is based on high prices. Therefore they will not survive. But many others can and will.

### **Will shale oil survive?**

The issue of shale oil long term staying power is far from settled. How far can producers go in their efforts to cut costs via the adoption of improved drilling technologies? How much more shale oil is out there? In other words, is American shale a real game changer, or is it just an interesting but temporary phenomenon?

We still do not know that. That said, Saudi Arabia's low prices policy may have unpleasant repercussions for the oil kingdom. There is no question that the Saudis can still make a good profit with oil prices at \$ 60 or even less, because their extraction costs are very low.

### **Will low oil prices hurt Saudi Arabia?**

But Saudi Arabia desperately needs a huge oil revenue to keep the country going. Simply stated, beyond oil there is

practically nothing else in Saudi Arabia. Oil revenue finances almost everything. A long season of diminished revenue may cause significant cash flow problems. And cash flow problems may turn into political issues in an autocratic country in which loyalty is bought in large measure with subsidies and other forms of public largesse.

In the end, a policy that supports low oil prices forced the US shale oil industry to adjust very rapidly. Can the Saudi state adjust just as rapidly? I wouldn't bet on it.

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## **Oil Is King, For Now**

**WASHINGTON** – In an interview with FORTUNE magazine, Chevron CEO John Watson argued that, whatever the oil prices wild fluctuations, carbon based fuels are here to stay. Contrary to dire predictions about producers having reached “peak oil” and consequent crude shortages, accompanied by price increases, *“those who follow the energy business in think tanks will tell you that right now about 80% of our energy is coming from fossil fuels”*, argued Watson. *“And if you go out 20 years, about 80% of our energy is going to be coming from fossil fuels”*, he concluded.

### **The age of oil is far from over**

Indeed, there is plenty of oil and gas around the world. Even assuming growing energy demand in emerging markets, it is going to take a long time before we experience significant price increases due to tightening supplies. Translation: the renewable energy golden era may still come, but it is not here yet.

Right now the case for renewable energy is mostly based on the

desire to abandon fossil fuels on account of their likely impact on global warming and climate change. Most governments buy the renewable energy argument backed by many scientists. Therefore, they mandate the use of renewable energy, not because it makes any economic sense, but because it is the best way to stop global warming.

However, there is a steep price to be paid for being virtuous. Subsidies for renewable energy have to be budgeted. They cost money. In the meantime, all observers agree that even heroic efforts aimed at adopting renewable energy on a much larger scale would produce minimal effects on global world temperatures. Therefore, the case for renewables, (we are talking about currently available technologies), based on their ability to lower world temperatures across the globe, is inherently weak.

### **The US shale oil boom**

In the US we are experiencing an oil renaissance. However, as Watson point out in the above referenced FORTUNE interview, shale oil wells have a relatively short life span. You have to keep drilling in order to maintain the same level of production.

All this is expensive. Therefore some wonder, with cause, how long this US shale oil boom can last. Is there a lot more shale oil out there? Will energy companies come up with improved drilling techniques that will increase well productivity? There are promising signs indicating that all technologies related to "fracking" are getting better, very rapidly.

Still, whatever the long-term prospects of US oil production, (total US oil reserves are estimated to be at 44 billions of barrels, not a very high number), just in the Western Hemisphere there are other oil producers with enormous reserves.

## **Plenty of oil in the Western Hemisphere**

We know that Venezuela is in a sorry state because of its silly populist regime that has mismanaged everything, starting with oil production. But at some point this may change. And Venezuela has the largest proven oil reserves in the world: 298 billions of barrels. This is more than number two Saudi Arabia, (266 billions of barrels). It is not inconceivable that at some future date Venezuela will get better political leaders who will be able to reorganize its energy industry, something that will have to include foreign investors who will bring in new technologies and know how.

And, if we go north, there is Canada, number three in the world, (after Saudi Arabia at number 2), with proven reserves at 174 billions of barrels. Add Mexico (10 billions of barrels), and Brazil (13 billions) to the mix and you have a lot of oil, and this is just in the Western Hemisphere.

## **Oil price changes**

Oil prices are volatile. Right now we are experiencing very low prices because OPEC members, (led by Saudi Arabia), contrary to their established policies, decided not to curb production when faced with lower prices due to added global supply, (much of it coming from US shale oil). This OPEC policy, of course, may change. And so, assuming reduced supply, at some point prices will go up again, although we do not know by how much, and for how long.

However, in order to make a solid economic case for non oil-based energy for transportation, (electric vehicles, fuel cells, and more), oil prices would have to go up, and stay up, for a very long time.

## **The moment of renewable energy will come**

Sure enough, in a few years someone will come up with a new form of clean, zero emission energy that will cost less than

gasoline.

As a former Saudi Oil Minister said long ago: *“The stone age did not end because we run out of stones”*. Yes, stones were abandoned when humans figured out how to make better utensils and weapons using bronze and then iron.

*Which is to say that oil is king –for now.* That is until something better comes along. Renewable energy had a “politically mandated” false start.

But we can expect that its day will come.

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## **Russia Is Still Europe’s Main Energy Supplier**

**WASHINGTON** – Despite the economic sanctions caused by its military intervention in Ukraine and the horrible impact of collapsed oil prices on a weak Russian economy, Putin’s Russia is still the largest energy supplier to Europe. This ability to affect the supply of a most basic commodity is Russia’s major political advantage vis-a-vis Europe. Think about it, even the Kiev government, openly at war with Russia-funded rebels in the East, has to negotiate deals about gas supplies from Russia, its enemy.

### **No alternatives**

The problem is that at least in the short or medium term not much can be done to change this situation. And the Europeans

are certainly not helping themselves very much.

Theoretically, some alternatives could be explored. There are glimmers of a possibility to create new natural gas supplies in some European countries that have deposits of shale gas. But a combination of bad policy choices and outright Russian meddling are preventing any further exploration of these opportunities.

The French government, in its wisdom, banned fracking, the technology necessary to exploit the shale gas deposits that France seems to have. Bulgaria, apparently because of political pressures from Moscow, also banned fracking. Therefore, no Bulgarian gas that may compete with Russian supplies.

### **The UK tries fracking**

Only the United Kingdom seems to be willing to go ahead and exploit what may be considerable domestic shale gas deposits. But in Great Britain the problem is a vociferous environmental movement strongly opposed to carbon energy in general, and therefore also to shale gas exploration.



### **Some gas will come through Turkey**

Well, there is a bright note in this rather disappointing scenario. As reported last year by the Turkish newspaper Hurriyet Daily News, (*Turkey, Azerbaijan break ground for Trans-Anatolian Gas Pipeline*), at least Turkey is doing something to create alternative gas supplies to Europe. The Ankara government, working with its counterparts in Azerbaijan and Georgia, launched the South Caucasus pipeline, the first component of a longer pipeline that will carry natural gas from Azerbaijan on the Caspian Sea all the way to the Mediterranean, via Turkey. The Turkish component of this large project is called TANAP, or Trans-Anatolian Gas Pipeline.



## **Diversified energy supplies**

Along with the existing Baku-Tbilisi-Ceyhan (BTC) oil pipeline that carries Caspian oil to the Turkish southern port of Ceyhan via Georgia, this new project now underway will create some energy supplies diversification for Europe. It is something. But unfortunately not enough. Energy poor Europe still has to buy most of its oil and gas from Russia.

## **US gas to Europe?**

In the future, America may be able to export some of its abundant natural gas to Western Europe. But this will take a long time. And it will not be in quantities large enough to replace Russian gas supplies. In any event, at the moment there are not enough Liquefied Natural Gas (LNG) terminals in the US and in Europe that could handle large volumes. Building these terminals is quite expensive and it takes years to complete them.

## **Russia wins**

At the end of the day, as odd as this may seem, this beat up Russia, run by oligarchs and kleptocrats, with the ruble falling, and billions of dollars leaving the country, still wins.

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# New Technologies Will Make Carbon-Based Energy Obsolete

**WASHINGTON** – The NYT recently had a front page (scary) story on global warming, accompanied by a frightening map that shows a super heated planet. There we have it: 2014 is the hottest year on record. The world map published along with the story, in which blue areas represent cold spots while hot regions appear as bright red, is mostly red or very red. And yes, looking at a graph published below the map, it is obvious that world temperatures have gone up in the last few years. The uptick registered in 2014 is not incredible; but it is noticeable.

## **Global warming is here**

Well, there you have it. We do have global warming. It would be foolish to deny the evidence. The next question is whether this is all about the increased amounts of greenhouse gases released into the atmosphere on account of our vastly increased consumption of carbon based fuels. The environmentalists of course claim that there is no other plausible explanation. Others dispute the cause and effect connection, or at the very least its significance.

## **It is all true**

Let us assume that the environmentalist are right. Let us assume that increased world temperatures, with all the disruptions that they provoke and will provoke, are entirely man-made. Let us stipulate that the cause of this phenomenon is the large-scale consumption of carbon-based energy: coal, natural gas and oil. Yes, it is indeed so.

Then what? Well, then nothing. Yes, of course, UN

specialized agencies issue warnings and reports. There are world summits. There are proclamations, broad commitments to keep emissions within certain limits and to gradually reduce them.

But, guess what, after all that, nothing changes.

### **China and India are not on board**

And why not? It is very simple. The natural disasters that will be caused by a warmer atmosphere are still mostly in the future. But China and India's political leaders are committed to deliver economic development –today. It is as simple as that.

Call this attitude stupid, myopic, unenlightened, or whatever you want, but no emerging country is going to forego economic development today, (for which they require old-fashioned, dirty coal and oil), for the sake of a cooler planet tomorrow.

And we know very well that without the combined 3.5 billion Indians and Chinese on board (almost 50% of humanity) whatever Europe, North America and Japan will do to reduce their emissions would not make a lot of difference.

### **Changes in America make no difference**

This is the reality. The notion that, upon reading the NYT scary story, we Americans decide to pitch in by commuting to work using bicycles and by installing solar panels on our roofs, so that we will counter this ominous global warming trend, is ridiculous. Sure, we can do all of this. And may be there is some good in doing it. But forget about our fossil fuels consumption reductions having any measurable impact on global temperatures.

As I said, most emerging countries are committed to economic development for which they require conventional energy

sources. They consider everything else a distraction.

### **How do we get out of this?**

Given all this, how do we get out of this worrisome predicament? As I said, the idea of limiting carbon energy consumption may sound nice, but it is unworkable.

Therefore, our best bet is the development of new, cost-effective, scalable non carbon energy. Of course we already have some of this, (wind farms, solar panels, and electric cars). But the problem is that for the moment what we have is not really better and cheaper than the old-fashioned, dirty stuff.

### **Invest in R&D**

*Instead of imposing the large-scale adoption of these still imperfect alternatives, governments should lead the way by investing more and more in new research. We should see a proliferation of prizes, challenges and competitions that will stimulate scientists and inventors across the globe to refine existing renewable energy technologies, or to come up with something totally new and different. We really do not know what may be possible.*

However, in principle it must be possible to invent something more efficient, cheaper and cleaner than a coal-fired, electric power generation plant. Likewise, It must be possible to come up with something that will effectively replace the internal combustion engine –a really old technology– to power cars and trucks.

### **There is no better alternative**

Quite frankly, I see no better alternatives. The idea that politicians are going to guide future economic development by mandating which and how much energy we shall use is grotesque. This will never work.

China and India, the really big present and future carbon energy users, will never accept mandates. And you can bet that all those who will sign up for any voluntary reductions will figure out creative ways for cheating.

As I noted above, there is a way out of this. Coal, natural gas and oil will become instantly obsolete the minute in which we invent something better. Therefore, as we recognize the urgency, let's focus on this goal.

### **Fund smart people**

*And the best way to advance in our quest for clean, affordable energy is to give large incentives to gifted people and credible research institutions, public and private, so that they will come up with real innovation, sooner rather than later.*

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## **Low Oil Prices Are Good For America**

**WASHINGTON** – Oil prices keep going down, and down. We are now around \$ 50 a barrel, or even lower. On balance, this should be good news for America, still a major net energy importer. Yes, we know that the US has made news by increasing its domestic oil production by 4 million barrels a day in just a few years, an astonishing accomplishment. Right now, US energy companies have to face this headwind of low prices that cut into their current and projected profits. Many of them will not make it. But the rest of the US economy will benefit.

## **Energy sector will suffer**

Let's put these recent developments in context. Clearly low crude prices are hurting the large and now expanded US energy sector, from energy companies to the vast universe of oil services companies and various manufacturers that produce the equipment necessary for oil exploration, drilling, transportation, storage, distribution, and what not.

It is also clear that the industry outlook has changed, dramatically so. The US shale oil sector looked very attractive with oil at \$ 100 or \$ 90 a barrel. However, If we are forecasting oil at \$ 50 for the indefinite future, all of a sudden this business looks pretty awful.

In fact, we can safely predict that many smaller and financially weaker US energy companies will go out of business pretty soon, because their production costs are too high. Expect bankruptcies and consolidation in the US energy sector, while investors may as well forget about high profits. Energy stocks are way down, and there is no hope for a speedy recovery.

## **Oil producing states to be hit hard**

Obviously this oil sector recession will hit hard the states that benefited the most from the recent energy boom. Think of North Dakota or Texas. Expect cascading negative effects, from collapsing real estate prices to empty shopping malls, or restaurants closing down in oil boom cities.

That said, while parts of America will suffer, and the US energy sector and all its suppliers and vendors will have to retrench, substantially lower oil prices is unequivocally good news for the broader US economy.

## **America as a whole will benefit**

Notwithstanding the incredible domestic production surge,

America still imports about 50% of the oil it consumes. Lower oil prices benefit our balance of trade. Billions of dollars stay at home. Besides, today the average American is paying a lot less for gasoline, and this relief at the pump translates into the equivalent of a tax cut, or a wage increase.

### **When will this end?**

That said, how long is this low oil prices season going to last? This is very difficult to say. Energy markets do not behave like other markets. Right now it seems that Saudi Arabia –the world’s largest exporter– has no intention to cut production, because it is focused on retaining market share. Therefore the Kingdom is willing to sacrifice profits in order to keep all its customers.

### **Saudi Arabia controls this game**

The question is for how long? Well, here the topic shifts from economics to politics. Saudi Arabia can still make money selling oil even with prices at or below \$ 50 a barrel. But the country’s budget is based on a much higher oil revenue. The Saudi Government has already announced that it will run a budget deficit on account of lower oil revenue.

In the near term, this is not a problem. Saudi Arabia has a very large financial cushion, estimated at around \$ 750 billion dollars. Therefore it can afford to endure the pain of lower oil prices for quite a long time –years not months. But not for ever.

So, the question is for how long? Are the Saudis willing to deplete their cash reserves in the hope of seeing their financially weaker competitors go belly up much sooner? It is clear that unless there is going to be a massive demand increase, oil prices will recover only when supply will be cut. If no one is willing to turn the taps off, then we shall have to wait for the weakest producers to be driven out of business.

## **Will the US shale oil sector survive?**

Back to America, this totally new situation is clearly a major hurdle for the relatively young shale oil sector. This low prices "stress test" will show if shale oil is truly viable, or if it was just a niche market made possible by very high oil prices.

We have to see if the US energy companies have the ability to lower their costs and stay in business, even when faced with dramatically lower profits.