



# ENERPO NEWSLETTER

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An Israeli power station is overdue for retirement, but Israel's nuclear policy and deterrence in the region make the choice to shut down difficult. Henrik Vorloeper shows us the options ahead. [Read More](#)



## Energy News Blog

### Get Into the Swing

–Lina Nagell

Saudi Arabia has functioned as a global swing producer in the oil market since the 1970s, before abandoning its role in 2014. Among changing market conditions, some observers still latch on to the idea of a global swing producer. While some believe in the resurrection of the old system, either with a new (read non-OPEC) consortium of producers as a swing producer, some observers point to the U.S. as a potential swing producer. Others believe the world is heading towards a new reality in the oil market, where new technology will make the market more adjustable to changes in demand and supply, changing the power of the stacks of market share held by major producing nations. I will take on the former view, and line up some of the major issues related to a future global swing producer(s).

#### First things first

What is a swing producer? There are different and contesting definitions as to what a swing producer is. [Investopedia](#) states is to be: “one (producer) who quickly, easily and, most importantly, cheaply increases and decreases oil production to meet shifting global demand patterns.”

As mentioned by John D. Morecroft in his article [Modelling the Oil Producers](#), a swing producer operates in two modes: (1) normal swing mode or (2) punitive mode. While the actions of the swing producer in a normal swing mode consists of setting a production rate that is “equal to the swing quota, unless the oil price deviates from the intended market price”, the actions of a swing producer in punitive mode consists of re-establishing its position in the market, as a result of lost market share, by increasing production and as a result “punish” other producers in the market. At the basis of these functions of a swing producer, is the assumption that the swing producer can indeed work as one production-regulating entity.

From history we know the troubles within OPEC, specifically related to the incentives of free riding, to work as one swing producer. Saudi Arabia has in practise been the swing producer in the oil market since the 1970s. By stepping into punitive mode in 2014, the Saudis have up their role as regulator, leaving the market unmanaged, according to Morecroft.

But is this really the case? Is what determines a swing producer the realistic ability to influence the price, or the

actual actions to do so? This would be determined by the ability of Saudi Arabia to reclaim its role as a swing producer.

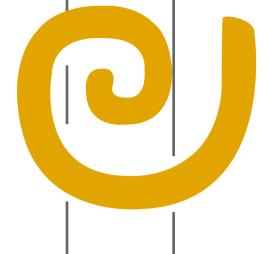
#### Saudi Arabia: getting back into the swing

With market conditions changing, being unpredictable, and with the rise of new oil exporters on the scene, there is definitely an argument to be made for a potential difficulty in OPEC, with Saudi Arabia at its helm, regaining its status as swing producer. There is, however, no denying the facts. If Saudi Arabia wished to influence the price, [being](#) the largest exporter of petroleum in the world, there should be nothing standing in the kingdom's way, in the short run – resulting in a loss of market share, and possibly credibility in the market, by Saudi Arabia.

Saudi Arabia is caught in a rough spot. While production costs of oil are some of the lowest in the world, the regime's non-democratic character and social contract makes the country reliant on a high oil price. This need brings many observers to doubt the longevity of the production increases started in 2014. Recent developments, such as the meeting in [Doha](#) between Russia and Saudi Arabia, and the importance put on Iran's participation in potential production costs, can be a sign that Saudi Arabia is not interested in going back to a leading role as a swing producer, but more interested in sharing the responsibility of price controls with other major producers. It is important to note that this is an interest based in strategy of retaining market share, not an inability to influence oil prices by production regulation.



Taladoro Shale oil rig, Nestor Galina, flickr.com CC BY 2.0



## U.S. as a swing producer

While OPEC has historically had access to spare capacity as a tool of easily responding to changes in the market (albeit with some exceptions), the U.S. situation is vastly different. It is true that the U.S. shale revolution has brought with it technology which decreases the time lags usually associated with the oil market, but U.S. drillers' ability to increase flexibility and decrease this adjustment period is imperative to any swing producing role the U.S. might ever take on.

The main argument against the U.S. operating as a global swing producer is the inability of the U.S. producers to act as a unified production-regulator of oil production. There is in fact no evidence, which might suggest that the U.S. oil industry is able to work in a coordinated manner, which is the key to actually functioning as a global swing producer. Even if U.S. drillers were to overcome the obstacle of response times to market changes, the underlying free rider problem amongst many small players in the U.S. market, would have to be overcome for the U.S. to function as a swing producer.

## What is Wrong with Russian Gas?

–Glenda Pavon-Suriel

In the September, 2015 Foreign Affairs article [Europe's Low Energy: The Promise and Perils of the Energy Union](#), Petr Polak argues that the primary aim of the European Commission's Energy Union is to ensure European gas supplies while avoiding supplies by the Russian gas exporter Gazprom. According to Polak, if European nations worked together to create a unified energy union, it "would force Russia to play nicer". Polak also states that in 2014, the European Commission suggested an Energy Union as a way to negotiate better gas terms with Russia and ultimately limit European gas imports from Russia. This was due to the EC finding that Gazprom "had abused its position as the sole supplier in [various countries]". At that time, according to Polak, countries such as Germany, Gazprom's largest customer, and Hungary opposed the idea of the Union because those two countries had been able to negotiate good terms with Gazprom. These concerns delayed the Energy Union for a year, until finally in early 2015 energy security was determined to be the highest priority. Polak goes on to state that there is "reason for scepticism" for his next point, which is that energy security in Europe would increase and Russia's dominance would decline in the months following his article.

I think, some of these statements are problematic; there are also significant issues with the alternatives Polak suggests for how Europe would diversify its energy imports in the

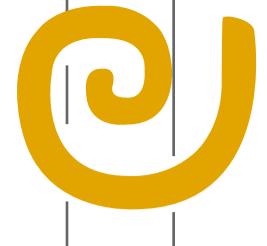
short and medium term. The primary concern for the European Energy Union, which is a policy area for the European Commission, is **secure, affordable, and climate friendly energy**. None of those are different or exclusive, when dealing with Russian gas, compared to any other source of gas.

The article thus provides an opportunity to clarify some common misunderstandings of the European energy strategy, which has frequently fueled concerns over Russia's ability to use its market dominance and its apparently detrimental foreign political intentions to the EU. This is for one, a critical review of the Foreign Affairs article, but also a general critique towards the concept of the Energy Union and its political load.

**Politics versus business:** There must be a clear divide between Gazprom's role as a political tool for the Kremlin's political objectives and the ability of Gazprom to exploit its market power as a monopoly, which is based on pure economic incentives.

**Market organization:** The EU has put in place, via the Third Energy Package, an appropriate concept to counter any monopolistic position, or Gazprom by default. A larger, more diversified energy market would increase competition amongst suppliers and thereby ensure more supply alternatives for the consumers, arguably lower prices, and increase the security of supply. The Third Energy Package sets the rules for Gazprom's future appearance on the European gas market, but the purpose is not to exclude Russian gas from Europe, instead it is designed to encourage cost efficiency – thus, Russia, being one of the lower cost suppliers to the market and having supply infrastructure in place, could actually benefit from these new regulations. The concept proposed in the article is in some ways contradictory to the strategy of liberalization as well as the strategy of efficiency, as it aims to exclude Russia as a supplier and encourages diversification of supply away from Russia.

For example, Polak suggests LNG imports from countries like Iran and modifications to the European pipeline system as alternatives and ways to diversify European gas supply. LNG is typically more expensive than pipeline gas for various reasons. LNG needs to be liquefied at the source and then regasified at the destination, facilities to do so as well as to store and transport LNG are incredibly expensive. With a temperature of -162 degrees Celsius and under high pressure, LNG can only be transported and stored in special cryogenic tankers and facilities. All of these factors contribute to the fact that LNG is economical only in the high price market environment. Further, when considering



the long-term investments for LNG, continued low prices will likely discourage significant investments because at current prices, capital costs would not be recoverable. However, perhaps most importantly, with Russia's proximity to Gazprom customers it is unlikely that LNG imports, particularly from a distance like that of Iran, could beat Russian pipeline gas in terms of supply costs. Polak also does not consider the length of time and amount of investment needed to see a pipeline project to completion. His suggestions to reevaluate the Trans Adriatic and Nabucco pipelines are unreasonable, especially considering one of his earlier statements that Europe would be able to diversify its gas away from Russia in the "months ahead".

**EC's direct influence on contracts:** One of Polak's main arguments is that Energy Union would allow the European Commission to directly influence Gazprom's contracts. In a statement Polak urges that Germany supports a decentralized market system, but if the European Commission influences, directly or indirectly, supply contracts with Gazprom, this is the very opposite of such a decentralized system but an increase in governmental regulation and centralization. He does go on to imply that the EC would influence supply contracts through increased transparency and subjecting them to EC approval, but as he states, this is not direct influence, and the EC cannot demand contractual changes "by requesting shorter term contracts."

The contracts between Gazprom and the receiving country were agreed upon by both parties. Moreover, the length of such gas contracts not only varies, but has historical, economic, as well as political reasons for their terms. The European energy strategy thusly does not address a major issue of the European gas market to come in the future, which is the change in the current gas pricing system and

the subsequent risk of investment of future supply. While a liberalized market guarantees fair prices for consumers, suppliers face the risk of unsecure future supply and thus cash flow for exploration projects for new fields. Keeping in mind that Russian gas is the most viable source in economic terms, there is an economic rationale why Gazprom tries to increase its interconnection with Europe's largest gas consumers. For example, the South Stream pipeline (cancelled in 2014) would connect Russian gas with Italy and the rest of Southern Europe, and the proposed Nord Stream pipeline extension would connect Russian gas with Germany and Western Europe.

Polak's lack of technical accuracy aside, the tone of the article is incredibly angled and biased; his concluding sentences are that "Russia is facing multiple threats. Now is the time to band together to exploit its weaknesses for the sake of Europe's collective long term benefit". Why is there a need for European countries to exploit the weaknesses of a "hurting" country and corporation that they receive reliable energy from? Russia has supplied gas to Europe without interruption since the 1970s. The majority of EU gas imports are via pipeline gas, and as Europe's largest provider- the relationship between Russia's Gazprom and EU countries can be seen as nothing short of symbiotic.

## Venezuela: From Oil-Rich to Desperate

-Michael Roh

When it rains it pours. In Venezuela's case, when it doesn't rain, the country with over [60% of its domestic electricity produced by hydropower](#), inevitably suffers. But the country that once experienced great fortune with its oil riches has already been suffering. With or without the rain, poor economic policy, along with poor energy policy, brings Venezuela to its current crisis. The drought is a convenient scapegoat.

Venezuela, a member of the Organization for Petroleum Exporting Countries (OPEC) has, as other oil-rich countries do, depended on oil revenues to sustain its state-run economy, with [oil accounting for a staggering 95% of its export earnings](#). The country is a prime example of the resource curse, and why the state should refrain from politicizing oil companies. Former President Hugo Chávez and his successor, Nicolas Maduro, demonstrated just how disastrous for the economy excessive state meddling can be. The state-run Petróleos de Venezuela, S.A. (PDVSA), is one of the largest oil companies in the world, and suffered under



Construction of pipeline, by Cominf.org, CC BY-SA 3.0,

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governmental overstep. [Chávez used oil exports as a foreign policy tool](#), selling oil at a discount to Venezuela's allies (members of the Petrocaribe Alliance and the Bolivarian Alliance of the Americas), while using its oil revenues to pay off debts to China. Furthermore, PDVSA was used to fund ambitious economic policies to provide social services to the poor. Any good that Chávez [achieved in his efforts to redistribute wealth](#) (a drop in the poverty level from 50% to 30% from 1998 to 2012) were effectively negated under Maduro, with a 2015 study finding that 76% of the population lives in poverty. All the while, the manufacturing sector and agricultural sector have suffered due to the prioritization of the oil sector and overregulation.

The country has taken extreme measures to cope with its dire economic situation, shortages in food and medicine, and massive inflation. Meanwhile, the lack of domestic energy supplies is forcing the government to take even more extreme measures to limit energy consumption, [cutting work weeks to two days, setting clocks a half hour](#) ahead to reduce early evening electricity consumption, and [introducing power cuts](#) for four hours a day.

The blame can be traced to poor economic policy, which created a flood of black market U.S. dollars, resulting in [triple-digit inflation](#) and a dramatic decrease in production, prompting Venezuela to take desperate measures. Venezuela manipulated its currency exchange, resulting in a dramatic difference between

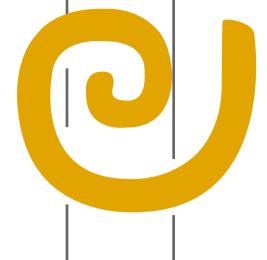
the government's imposed rate for everyday goods and the black market rate. Inevitably, many Venezuelan importers were incentivized to profit from the subsidies, by selling the dollars they received on the black market, rather than selling goods. Currently the official exchange rate is 10 bolivars to US\$ 1, but the black market exchange rate is at roughly 1115 bolivars to \$1. All the while, Maduro (who has only accelerated the economic crisis) [boasts that the government has increased the minimum wage to \\$13.50/month](#) in response to the massive inflation. But Maduro must be held accountable for worsening Chavez's naïve approach of dictating prices. This is the root of Venezuela's problems. Shortages in supplies of essentials like food and [medicine](#) could have been prevented if the market, the interplay of supply and demand, was allowed to determine prices. This is how you help the poor, not by arbitrarily dictating prices.

Of course, the [severe drought](#) brought on by El Nino is severely limiting electricity production in a country that relies heavily on hydroelectric dams for its domestic electricity consumption. [Low oil prices \(hovering around \\$40 per barrel\)](#) have only added fuel to the fire. These problems existed long before the oil price dropped or the drought. The economic crisis is not a result of the energy crisis.

Energy security for Venezuela may take on a new meaning, beyond what it means for producer states (security of demand). Venezuela is confronting this reality, and [the people are outraged with Maduro](#). Regionally, countries that depend on Venezuela for their energy imports [could use this opportunity to diversify their supply sources](#) and energy mix, perhaps switch to alternative fuels, even cleaner fuels. The region cannot depend on Venezuela for stable supply, if these countries wish for growth and investment. Venezuela's current crisis may have a silver lining, as in an opportunity for neighbors who are import-dependent on Venezuelan oil to rethink their energy import strategy. It also serves as a reminder to policymakers that overregulation, disregard for the markets, and poor management of the energy sector, is a recipe for economic disaster, and everything else that comes with it, i.e. [violent dissent and violent crackdown on dissent](#).



Tear gas being used against opposition protesters in Altamira, Caracas, 2016, by Andrés E. Azpúrua - Own work, CC BY-SA 3.0,



## Israel: How Nuclear Energy Can Affect National Security

– *Henrik Vorloeper*

There are 1,537 reasons why Israel could finally admit the possession of nuclear weapons and put an end to the allegory of the “world’s worst kept secret.” 1,537 is the number of flaws that has been found in Israel’s nuclear reactor in [Dimona](#), which is a nuclear research center and reprocessing plant where, according to the common belief, Israel produces plutonium, which is necessary for nuclear warheads. The problem with Dimona is that the reactor was built by France, which happened to have pro-Israeli government in the early 1960s. However, the problem is that the reactor has a life-time of no more than 40 years – this number has already passed – and the technical detail that the reactor itself cannot be replaced, thus the flaws not being fixed. Subsequently, the reactor needs to be disabled.

The only question is; when?

Israel never claimed to have acquired nuclear weapons, and its statements on intentions to become a nuclear weapon state have always been ambiguous. Israel did not sign the Non-Proliferation Treaty (NPT), which would prohibit the production of nuclear weapons. This is part of the state’s strategy of **nuclear ambiguity**, in which nuclear deterrence is created without running the risk of international pressure to disarm the country of its nuclear capabilities. The issue is that as Dimona comes close to the end of its lifetime, and Israeli capacities to build a new reactor for the same purpose remains limited, Israel’s ability to maintain its potential to produce nuclear warheads comes under threat. The number of nuclear warheads the country keeps in its stockpiles is unknown, but it can be believed that there are enough to maintain nuclear deterrence. However, the strategy of nuclear ambiguity is equally based on Israel’s capacity to produce.

What are Israel’s options?

1. Were Israel to join NPT, it would be able to acquire the technology and assistance it needs to replace the Dimona reactor with a new one, but it would at the same time have to disclose its nuclear capabilities to the international audience. [Arab league](#) nations stated in 2008 that they would drop out of NPT if Israel would admit having nuclear weapons and not allow the destruction of its arsenal. This step would open the door for an arms race in the Middle East with potential consequences for the global security structure.

2. If Israel would continue operations of the Dimona reactor, it could cause security risks for the region in form of a [nuclear-fallout](#). In regards to nuclear reactor security, Israel has voluntarily accepted to adhere to IAEA’s security standards. However, the risk of a political decision to withdraw from these commitments appears to become more likely as closer the reactor reaches its limits of security standards, especially since the issue has deeper implications for Israel’s nuclear deterrence. The bigger problem is that the problem of the aging Dimona reactor is not solved, but only postponed.

3. Israel could cease the operability of Dimona for security concerns. With this decision, the state would surrender some of its capabilities to project nuclear deterrence in the Middle East and thus alter the regional security balance to the disadvantage of Israel. It is difficult to estimate how far this could destabilize the region, since Israel would retain its existing nuclear arsenal as [nuclear deterrence](#). However, the country likely would have to change its strategy of ambiguity and more open to its capabilities, which in turn could provoke a harder international position against Israel.

It’s clear that the choice is between bad options and worse options.



A billet of highly enriched uranium metal, Public Domain



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## The Week in Review

### Political Instability Helps Reduce Glut in Supply

Bloomberg news reported on April 28th that, in lieu of effective collusion between the World's largest producer states, political instability in Africa and South America would do for world oil markets what Saudi Arabia and Russia could not: help redress the disequilibrium between supply and demand. FARC Guerillas in Columbia, sabotage in the Niger Delta, and a collapsed state in Libya have led to significant decreases in daily production as well as in exports for all three countries. The Bloomberg article went on to predict that continuing volatility, in conjunction with less drilling in the United States and Venezuela, could reduce the amount of daily over-supply by over 80% by the second half of 2016.

[Cheong, S. \(2016\), Guerrillas and Rebels Do for Oil Market What Producers Couldn't. April 28, 2016](#)

### Chinese Loans to Africa: Not as Large as It May Seem

The issue of Chinese credits to African countries is debated frenetically. The Economist newspaper devotes a short article to the question: do these loans prop up dictators or do they spur development? But actually, "China lends much less to Africa than is commonly reported. The researchers at the China-Africa Research Initiative (CARI), based at Johns Hopkins University, found that only 56% of the loans actually materialized".

[The Economist \(2016\), Chinese Loans to Africa: Credit Limit. April 30.](#)

### ExxonMobil Posts Meager Profits

The world's largest publicly traded oil company, Exxon, reported its smallest quarterly profit of the new millennium amidst slumping prices and slowing demand globally. Understandably, weak earnings have tarnished Exxon's impeccable credit credentials while also calling into question company's leadership strategy. ExxonMobil placed costly bets on unconventional projects as well as production in the Russian Arctic. Still, investors are not to worry as the quarterly payout to stockholders is actually going to increase to the tune of US\$ 3.1 billion in aggregate increase in June.

[Carroll, J.; Nussbaum, A. \(2016\), Exxon posts smallest profit since 1999 amid global oil slump. April 29.](#)

### Statoil Halts Production After Accident

Following the crash of a CHC helicopter outside of Bergen, Norway, Statoil has halted production at its Gulfaks B field. The company took decision to focus on its emergency response and the personal safety in the region. Thirteen people are presumed dead, including one Statoil employee and two helicopter pilots. All similar traffic helicopters have been temporarily grounded, as Statoil investigates the causes of the tragedy and mourns the victims.

[OIG Editors \(2016\), Statoil Halts Output at Gulfaks B after Helicopter Crash. April 29.](#)



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## Singapore: New Terminal Under Construction

*Singapore, situated in the heart of the world's fastest growing region, is seeking to become an energy hub in South East Asia. Construction of a giant new terminal has begun in order to replace aging port infrastructure and to increase capacity in the next few decades. The Tuas Terminal is a centerpiece of Singapore's ambitious next generation port vision and is indicative of the significant role the country sees itself playing in the future of the global energy trade.*

[EnergyAsia \(2016\), Singapore: Construction begins on giant container port terminal. April 29.](#)

## China Goes Nuclear

*China is actively developing its nuclear sector: in the past weeks, there were two tracks of news from this country. Firstly, the Chinese reactor passed review by the IAEA. The CAP1400 reactor is designed in China; it was initially developed from the Westinghouse original by SNPTC with consulting input from the Toshiba-owned company. The CAP1400 has successfully passed the IAEA's Generic Reactor Safety Review. The review looks at the completely- or partially-developed safety cases of new reactor designs that are not yet in the licensing stage. World Nuclear News report that as a result of the review, more than 1000 work orders were drawn up. Secondly, China also plans to build nuclear reactors that will take to the sea to provide power in remote locations – these reactors will be on shipyards, mounted on large sea-going barges.*

[World Nuclear News \(2016\), Large-scale Chinese reactor design passes IAEA safety review. May 5.](#)

[Roulstone T. \(2016\), Fukushima at sea? China wants a fleet of floating nuclear power plants. CNN, April 20.](#)

## Renewables: Quick Guide for Policy Makers

*After the COP 21 Conference and the resulting agreement, governments of both developed and developing countries are very motivated to designing and implementing policy instruments that would enhance the role of renewable energy sources. Jan Frederik Braun and Nicole de Paula in their article for the EnergyPost provide a quick guide to effective policymaking for renewable energy and explain why they are optimistic about the future.*

[Braun, J.F., and De Paula, N. \(2016\), How to Scale up Renewables in Ten Steps: A Quick Guide for Policymakers. EnergyPost, April 30.](#)

## Gas Flaring Meter Introduced

*Gas flaring has two negative effects – it wastes energy and contributes to greenhouse effect. The Norwegian company Fluenta, who has headquarters in the UK, has announced the launch of a new project to measure gas flaring. Company has produced a meter with enhanced transducers that will allow it to accurately measure flare gas across a broader spectrum of environments. The meter uses ultrasonic measurement and management technology. The meter will allow companies that flare to manage and ultimately reduce their emissions.*

[EnergyGlobal \(2016\), Fluenta Releases Gas Flaring Meter. April 29.](#)

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## **Energy Transition: Historical Perspective**

*What does the ‘transition from current energy system’ mean? European Energy Review publishes an abstract / introductory version of the article by Benjamin Sovacool, first published in the March edition of Energy Research & Social Science. The article explains what energy transition is, and focuses on the time dimension of this process.*

[Sovacool B. \(2016\), How Long Will It Take? Conceptualizing the Temporal Dynamics of Energy Transitions. European Energy Review, April 20.](#)

[Sovacool B. \(2016\), How long will it take? Conceptualizing the temporal dynamics of energy transitions. Energy Research & Social Science, Volume 13, March 2016. Pp 202–215.](#)



Hydro-electric Power Station, Bearreraig Bay, Rob FarrowCC BY-SA 2.0



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