

“The human race is challenged more than ever before to demonstrate our mastery, not over nature but of ourselves.”

—Rachel Carson—

Oil Shock and Revolution: Reshaping Indonesia’s Fortunes and International Position

Last October we celebrated, or mourned—depending on the amount of oil you had—the fortieth anniversary of the 1973 oil embargo that brought the world economy literally down to their knees. The Arab members of the Organization of the Petroleum Exporting Countries (OPEC), led by Saudi Arabia, cut oil production and shipments to the United States and other countries that supported Israel in the Yom Kippur War. Oil prices quadrupled from around US\$3 a barrel to \$12 a barrel by the time the embargo was lifted six months later in March 1974.

“The oil crisis set off an upheaval in global politics and the world economy.” wrote renowned energy expert Daniel Yergin in the Wall Street Journal. After the shock, it was widely perceived that the era of cheap and plentiful oil is over and the world has to live in an age of limitations. The sudden realization of the vulnerability of countries to the wild fluctuations in oil prices has brought profound global changes. Throughout it all, the adjustments reshaped the fortunes and international position of Indonesia. Here is a look at the differences between Indonesia in 1973 and the present day:

From exporter of oil to importer of oil. Four decades ago Indonesia produced more than a million barrels of oil per day. Sixty percent of Indonesia’s exports were oil, and oil revenue contributed about 70% to the state budget. The windfall from the sharp increase in oil price during that period spurred high economic growth into the early 1980s. But this boon also led to some unfortunate excesses: rampant corruption, political repression, and fuel subsidies that distorted price and handicapped Indonesia’s finances. Now the situation has been reversed. The high economic growth rate and the artificially cheap price of fuel in Indonesia for the past forty years have pushed up domestic demand for oil much higher to 1,5 million barrels a day in 2012. On the other hand, Indonesia’s oil production has been falling from the heights of the 1970s, to its present production of about 850 thousand barrels a day. To relieve the pressure on its finances, Indonesia is slowly weaning itself away from fossil-fuel subsidies—an unpopular and politically tough move for any president to make. But the 1970s daydream of Indonesia rich in oil must wake to the realities of the 2010s: due to falling production, since 2004 Indonesia is a net-importer of oil and in 2008 it pulled out of OPEC. What this means is that to meet its domestic demand, Indonesia is dependent on imported oil, especially from the Middle East.

Shale oil and gas revolution is a game changer. For many years, geologists have found huge quantities of shale oil and gas locked in shale-rock formations underneath the earth’s surface. But they were too expensive and technically too difficult to extract. After many decades, technology has finally caught up. Bryan Walsh wrote in Time magazine that two innovations made it economical to pump oil and gas out of the formations. Pioneering companies drill vertically down into the shale and horizontally through the rock while forcing millions of liters of water mixed with chemicals at high pressure to fracture the rock. This technique, known as “fracking” unlocks the trapped oil and gas from the rock structures.

From an “age of limitations” since the 1970s, the plentiful unconventional resource of shale oil and gas is transforming the world’s energy industry, economy, geopolitics, and the environment. A Wall Street Journal report predicted that this year, the U.S. will overtake Russia as the world’s largest producer of oil

and gas. The same study reported that U.S. imports of natural gas and oil fell 32% and 15% respectively over the last five years. A PricewaterhouseCoopers analysis found that the potential production from shale oil can reach up to 14 million barrels of oil per day by 2035, or about 12% of the total oil supply in the world. PwC also estimates that by 2035 prices of oil will fall by around 25% to 40% or between \$83 and \$100 per barrel in real terms. The technology to produce shale oil and gas is already spreading globally, including to Indonesia. As a result, many countries will become more energy independent and we may see the erosion of OPEC's influence. In the long term, this would provide greater energy security at lower cost for Indonesia and other countries: both from its own drilling as well as importing oil from multiple suppliers. The energy self-sufficiency of the U.S. and to a lesser extent of Indonesia and other countries as well as the likelihood of Iranian oil and gas fields becoming online for the world's market—the latter may in the future be possible due to the recently thawing of U.S.-Iran relations—will increase the global oil spare capacity, introduce changes in the geopolitical order and amplify risk of upheaval in oil-export dependent countries.

Cheap fossil fuels discourage climate agenda. The 1973 oil embargo “saved the planet” wrote Michael L. Ross in the *Foreign Affairs Journal*, and it “gave the rest of the world a head start against climate change.” After the oil crisis, countries dependent on oil-imports rushed to invest in alternative energy and improvements in energy efficiency. Since 1975 automobile and airplane fuel efficiency standards in the United States, and elsewhere doubled. Automobile can now go as far as 27 miles per gallon, and this is set to double again in the coming decade. Automobile and airplane efficiency standards in the U.S. matter to Indonesia and the rest of the world. The burgeoning Indonesian commercial airliners use hundreds of Boeing airplanes built in the U.S.A.: each meeting the high fuel efficiency standards of the U.S. What's more, because of the sheer size of the automotive market in the U.S., especially in California, environmental standards imposed on U.S. cars are thus adopted in Indonesia and in many other countries; and in the process it becomes the de facto world's standards. Moreover, as a result of alternative energy push since the mid 1970s, alternatives such as solar, wind, and bio-fuel are increasingly represented in the energy mix of many countries.

Despite those improvements, the argument of “high oil prices and the shortage of fossil-fuel” to push for a climate plan no longer gains traction because of the impact of shale oil and gas. Breaking free of fossil-based fuel is one of the primary objectives of the elusive global climate treaty. Countries around the world had high hopes that voluntary unilateral actions by a number of countries may nudge the process forward for a truly worldwide solution. Indonesia is one such country that under the leadership of President Susilo Bambang Yudhoyono has embarked voluntarily to cut carbon emissions, protect and sustainably manage its forests resources and coral reefs. However, cheaper fossil fuel is changing the equation. “The same innovations that have resurrected oil and gas production in the U.S. have extended the age of fossil fuels, making it that much more difficult to break free of them.” wrote Bryan Walsh.

As we enter this new age of plentiful energy, it is worth to again listen to the voice of Rachel Carson, the author of *Silent Spring*, a book published more than 50 years ago that became the primary source of environmental consciousness. She said: “The human race is challenged more than ever before to demonstrate our mastery, not over nature but of ourselves.”

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