THE NEW GEOPOLITICS OF OIL

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The oil industry has undergone a remarkable transformation in a few short years. A decade ago, many energy analysts were forecasting the imminent arrival of "peak oil." Today, oil is cheaper and more abundant than ever before, due in large part to North America's shale boom. Yet the economic and geopolitical consequences of the oil industry's transformation remain poorly understood. How should US policymakers respond to the shale revolution? Congress's decision, in December 2015, to lift its four-decade ban on US oil exports was an important first step. What opportunities and potential pitfalls lie ahead? Please join renowned energy-policy expert and Manhattan Institute senior fellow Mark Mills for a discussion of these questions and more.

Some have called the oil price collapse the biggest wealth transfer in modern history. Oligarchs, monarchs and kleptocrats in the world's major oil-exporting nations are scrambling to adjust. They have been deprived of trillions of dollars.

But given the proximate reason for the price collapse, what we are also witnessing is the biggest transfer in geopolitical power since the fall of the Berlin Wall.

The primary reason for the fall from heights north of \$100 a barrel? It was the unexpected and unplanned rise of shale oil. In the history of the oil industry, there has never been so much petroleum added to world supply so quickly. And it has rocked world markets.

That it happened in the United States is particularly disruptive. A near doubling of American oil production in a half-dozen years is a clear repudiation of four decades of Malthusian nonsense about the end of oil here, or anywhere.

It is also an utter reversal of America's geopolitical posture as a supplicant state, to one with potential for lasting influence.

We are witnessing today the emergence of a new third era of petroleum geopolitics. It is an era in which -- to repeat, given just how remarkable this fact is -- America becomes a player not a patsy. It means that U.S. policymakers and strategists now have the ability to restore 'soft' power as a vital option in America's arsenal, as an alternative to the costs and risks of over-dependence on 'hard' power.

This is happening at a critical time. Consider what's going on in the world where petroleum and geopolitics intertwine. For example, since sanctions were lifted <u>Iran</u> has been moving at a furious pace to use oil to re-entangle its economy with the world. Re-imposing sanctions, regardless of any future provocations, will be more difficult.

Iranian negotiators are being very creative, using barter-type <u>deals</u> to bundle oil supplies with investments into foreign refineries in nations from Brazil to India. Iran also just signed a 10-year \$600 billion oil agreement with China. And their oil wealth, now unfrozen, is also being deployed. They have <u>purchased</u> 118 aircraft from Airbus for \$25 billion—that fleet, by the way, will <u>consume</u> about \$20 billion of oil over its operating life.

The geopolitical significance of all this is obvious. And it extends far beyond Iran. Oil is weaponized through the "gray" warfare of influence, intimidation and entanglements.

Russia, by way of another example, recently signed \$30 billion worth of oil and gas deals with China. Russian firms also have promised to invest \$18 billion in Venezuela's oil fields, having sold them \$3

billion in arms in recent years. Russia is playing the great chess game of geopolitics. It is worth noting in this regard that Russia now has a major military base in Syria, it's first such facility in a half-century.

Meanwhile, as has been widely reported, <u>ISIS</u> has a sophisticated operation around captured oil fields that generates \$600 million a year; money used to destabilize the Middle East and beyond. And at the other pole, <u>Israel</u>, historically devoid of resources in the oil-soaked Middle East, is calculating the strategic impact of its newly confirmed massive shale oil resources in the Golan Heights.

We could spend an hour on a long list of examples like these. The key point is that geopolitical tensions pivot around oil precisely because oil is so critical. Wishful thinking aside, and silly phrases like "addiction to oil" don't erase the reality.

Oil's centrality is the reason that the 1973 Arab oil embargo – the geopolitical event that set the stage for 40 years of American energy policy -- shocked both the United States and the world. But consider where we are today.

One-third of the world's GDP was involved in trade in 1973; it's over 60 percent now. And more than 90 percent of goods traded travel on the sea lanes – with most of that traffic funneled through a handful of chokepoints where risks of disruption are amplified. Since 1973, maritime shipping has increased over 300 percent; global air travel has risen 700 percent. And automobile use has increased too, by 300 percent since 1973.

Oil fuels 95 percent of all the transport of all goods and people.

But the reality of oil's centrality has generated a preoccupation, in America and Europe at least, not with finding more oil, but with finding petroleum alternatives. Regardless of vigorous exhortations for "moon shots" and hundreds of billions of dollars spent on subsidies, there are still no alternatives to oil at the price and scale the world needs.

This state of affairs deserves a brief digression. There are serious social and geopolitical consequences that arise from believing fictions, or aspirational goals, that ignore the physics of energy associated with oil.

Start with <u>biofuels</u> – and set aside the high economic and environmental costs including prodigious water use. Consider just the simple fact that with 40 percent of America's corn harvest now distilled into ethanol, farmers still supply under 5 percent of domestic, never mind global, transportation. Even if every single kernel were used to fuel cars, it wouldn't move the meter. Energy realists, especially oil exporters around the world, know this.

Then there are windmills, a popular alternative energy technology and indeed the cheapest of the lot. A barrel-equivalent of energy produced from a wind turbine costs three times as much as an actual barrel of shale oil. Now add to this the 20,000 pounds of Tesla-type batteries needed to store a *single* barrel's worth of wind-electricity to make it useful for transportation. Even if you expect batteries to become twice as good—which is not on any production roadmap—that still won't move the meter.

Here's the big picture number to keep in mind: The world uses <u>four million</u> barrels of oil every hour of every day. To put that number into a relevant economic context: it would take about \$100 trillion worth of wind turbines and batteries, never mind new transmission lines, to produce that much energy.

Here's another big picture reality, in this case about demand: There are 10 trillion <u>ground-miles</u> and three trillion <u>passenger</u>-air-miles traveled annually in the world. As emerging markets grow, both forms of travel will double in coming decades. There is simply no credible prospect for supplying the world's transportation needs without more, not less, oil than used today.

Until recently the go-to sources to meet rising demand were the monarchies and oligarchies dominated by the OPEC nations and Russia. But America has upset the apple cart. We have the entirely unexpected emergence of a shale industry that produced three-fourths of all new global oil supply in the past half-dozen years.

This week Saudi Arabia's oil minister implicitly acknowledged in a speech in Houston that we have entered a new third era of petroleum geopolitics.

A century ago in the first oil era, the United States was the world's uncontested petroleum powerhouse and dominant exporter: back then, only a small number of <u>private</u> firms produced half of the world's oil. In 1939, for instance, the U.S. supplied 80 percent of <u>Japan's</u> oil.

The event that signaled the end of that first era was the 1973 Arab oil embargo. In the second oil era that followed, America became increasingly import-dependent, its geopolitical petroleum power neutered. It is understandable that for the past four decades U.S. policy has been fixated on achieving "energy independence" through conservation and the pursuit of petroleum alternatives. That mindset is not only wrong now, it's counterproductive.

In geopolitics one thinks strategically. You can bet they are in Moscow and Tehran. Here's what they know: The geophysical resources of U.S. shale are Saudi-scale. Shale technology keeps getting better. Last year alone the costs to operate a shale rig were down 40% and productivity—output per rig—was up nearly 50%.

And there is another feature of the shale industry, one that is perhaps most worrisome to petroleum potentates accustomed to collaborating with or influencing a small club of mega-companies, most of them nation-state entities: Shale technology was invented and deployed by, and is still operated by, thousands of American businesses financed by a multitude of investors in the world's biggest and most liquid capital market. This is not an ecosystem amenable to any kind of closed-door price setting, market collaboration or coercion.

Of course given today's prices, financial stress is roiling the U.S. shale sector. Perhaps as much as one third of the companies are at financial risk. But this is not a hopeful sign for the petroleum potentates. It's the opposite. There are hundreds of billions of dollars of private capital poised to scoop up distressed assets in what 'vultures' see as the buying opportunity of a generation. The non-democracies watching America's shale sector would do well to keep in mind an aphorism from economist Allan Meltzer: capitalism without failure is like religion without sin.

The biggest IPO so far in 2016 was SPAC formed by Mark Papa – who, one should note, was the founder of EOG, one of America's leading shale companies. The SPAC is an empty shell corporation which raised a war chest to hunt for oil deals. It was over-subscribed and raised \$450 million. Oil & gas companies themselves have raised over \$6 billion already this year and \$18 billion last year in new stock offerings. All of this is going on despite the ruinously low prices.

What do all those investors believe? Clearly they are banking on the fact that oil is a cyclical commodity. Prices will inevitably rise as demand keeps growing and global investments in supply continue to slow.

They believe – correctly – that we're one modest price bump away from unleashing a shale 2.0 boom in America. A second shale gusher will put a lid on just how high prices can rise in the future.

The inevitable rapid re-supply of shale oil is game-changing. But it still has not been incorporated into America's geopolitical posture. Policymakers need to shed the old subservient mindset. At the end of 2015 Congress lifted the ban on crude exports, a seminal event, but only a first step. More reform is needed to facilitate private investment in export infrastructure. Pipes and ports are not configured to maximize our ability to export.

And reform is need to help accelerate – not impede -- the deployment of radically better shale technologies that can drive production costs even lower. Both types of reform would enhance America's competitive edge in a low-price world.

And where are the trade missions to our allies to forge new comprehensive long-term frameworks to supply them with oil from America, arguably the most reliable supplier on the planet?

Of course any move by Congress to help, instead of impede, America's oil industry will encounter the claim that it's just helping Big Oil. This tired old invective needs to be put to rest once and for all. The phrase originates from a 1952 Federal Trade Commission investigation into the small number of huge private companies that dominated world oil trade. That was then, the first era. It is long over.

But Big Oil *does* exist today -- in the form of roughly two dozen nation-state oil companies that control more than 70 percent of the globe's conventional oil reserves, from Saudi Aramco and Iran's National Oil Company, to Russia's Gazprom and PetroChina, to name only a few. The huge nation-state oil firms control access to far more oil—ten to 100 times more—than even the largest private oil firms.

So the reality is that the thousands of America's far smaller shale entrepreneurs and businesses are the ones competing against Big Oil, foreign Big Oil.

America now has a generational opportunity. We can not only ensure the global wealth transfer is permanent; we can do so while restoring 'soft' power to America's arsenal. Soft power has, throughout history, been a critical alternative to the costs and risks of over-dependence on 'hard' power. Rarely have policymakers been presented with such a clear opportunity for a win-win on the geopolitical landscape.

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