The crucial energy balance, for US and the world

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WHEN President Richard Nixon proclaimed in the early 1970's that he wanted to secure national energy independence, the United States imported a quarter of its oil. By the decade's end, after an Arab oil embargo and the Iranian Revolution, domestic production was in decline, Americans were importing half their petroleum needs at 15 times the price, and it was widely believed that the country was running out of natural gas.

Energy shocks contributed to a lethal combination of stagnant economic growth and inflation, and every US president since Nixon likewise has proclaimed energy independence as a goal. But few people took those promises seriously.

Today, energy experts no longer scoff. By the end of this decade, according to the US Energy Information Administration, nearly half of the crude oil that America consumes will be produced at home, while 82% will come from the US side of the Atlantic. Philip Verleger, a respected energy analyst, argues that, by 2023, the 50th anniversary of Nixon's "Project Independence," the US will be energy independent in the sense that it will export more energy than it imports.

Verleger argues that energy independence "could make this the New American Century by creating an economic environment where the United States enjoys access to energy supplies at much lower cost than other parts of the world." Already, Europeans and Asians pay 4-6 times more for their natural gas than Americans do.

What happened? The technology of horizontal drilling and hydraulic fracturing, by which shale and other tight rock formations at great depths are bombarded with water and chemicals, has released major new supplies of both natural gas and oil. America's shale-gas industry grew by 45% annually from 2005 to 2010, and the share of shale gas in America's overall gas production grew from 4% to 24%.

The US is estimated to have enough gas to sustain its current rate of production for more than a century. While many other countries also have considerable shale-gas potential, problems abound, including water scarcity in China, investment security in Argentina, and environmental restrictions in several European countries.

The American economy will benefit in myriad ways from its change in energy supply. Hundreds of thousands of jobs are already being created, some in remote, previously stagnating regions. This additional economic activity will boost overall GDP growth, yielding significant new fiscal revenues. In addition, the lower energy-import bill will cause America's trade deficit to narrow and

its balance-of-payments position to improve. Some US industries, such as chemicals and plastics, will gain a significant comparative advantage in production costs.

Indeed, the International Energy Agency estimates that the additional precautions needed to ensure shale-gas wells' environmental safety including careful attention to seismic conditions, properly sealed shafts, and appropriate waste-water management add only about 7% to the cost.

With respect to climate change, however, the effects of greater reliance on shale gas are mixed. Because natural-gas combustion produces fewer greenhouse gases than other hydrocarbons, such as coal or oil, it can be a bridge to a less carbon-intensive future. But the low price of gas will impede the development of renewable energy sources unless accompanied by subsidies or carbon taxes.

At this stage, one can only speculate about the geopolitical effects. Clearly, the strengthening of the US economy would enhance American economic power a scenario that runs counter to the current fashion of portraying the US as being in decline.

But one should not jump to conclusions. A balance of energy imports and exports is only a first approximation of independence. As I argue in my book The Future of Power, global interdependence involves both sensitivity and vulnerability. The US may be less vulnerable in the long run if it imports less energy, but oil is a fungible commodity, and the US economy will remain sensitive to shocks from sudden changes in world prices.

In other words, a revolution in Saudi Arabia or a blockade of the Strait of Hormuz could still inflict damage on the US and its allies. So, even if America had no other interests in the Middle East, such as Israel or nuclear non-proliferation, a balance of energy imports and exports would be unlikely to free the US from military expenditures which some experts estimate run to $50 billion per year to protect oil routes in the region.

At the same time, America's bargaining position in world politics should be enhanced. Power arises from asymmetries in interdependence. You and I may depend on each other, but if I depend on you less than you do on me, my bargaining power is increased.

For decades, the US and Saudi Arabia have had a balance of asymmetries in which we depended on them as the swing producer of oil, and they depended on us for ultimate military security. Now the bargains will be struck on somewhat better terms from America's point of view.

Likewise, Russia has enjoyed leverage over Europe and its small neighbors through its control of natural gas supplies and pipelines. As North America becomes self-sufficient in gas, more from various other regions will be freed up to provide alternative sources for Europe, thereby diminishing Russia's leverage.

In East Asia, which has become the focus of US foreign policy, China will find itself increasingly dependent on Middle Eastern oil. American efforts to persuade China to play a greater role in regional security arrangements may be strengthened, and China's awareness of the vulnerability

of its supply routes to US naval disruption in the unlikely event of conflict could also have a subtle effect on each side's bargaining power.

A balance of energy imports and exports does not produce pure independence, but it does alter the power relations involved in energy interdependence. Nixon got that right.

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