

Cherchez la Flamme

April/May 2022

April 22, 2022

PREMISE

Considering that there can be no credible purely philanthropic reason for the U.S. to rush at great cost and at a huge risk to the rescue of one Slavic people in its fight against another Slavic people, and remembering that Western taxpayers have never welcome the notion of having their tax money squandered for the sake of some alien and distant moral principle, the real reason for the current Slavic v. Slavic charade must be elsewhere. Nor would it be reasonable to believe that the battle is fought for the sake of defending democracy in some highly unified society, since said society is far from being unified, as the eight years of civil war would suggest, and democracy is not strictly a reality there.

One reason could have been the long term availability of minerals, since there is a large imbalance between the U.S. and Russia (see graph at bottom), but, as some would say, the game is probably not worth the candle, since minerals can be easily purchased in time of peace for much less money than they cost to conquer militarily.

Another possible and more immediate reason could have something to do with the overambitious and overoptimistic gamble in which U.S. producers of liquefied natural gas (LNG) have engaged in recent years.

In the mid-2010s the Obama administration lifted the ban on exports of U.S. hydrocarbons. A number of investors caught the scent of a multi-billion dollar bonanza and rushed to build numerous LNG export facilities, particularly on the shores of the Gulf of Mexico.

Find below a few key figures to keep things in perspective. All figures are in BCMY (billion cubic meters of natural gas at atmospheric pressure, per year), except when specified otherwise.

NATURAL GAS PRODUCTION AND EXPORTS:

World natural gas production:	3,800
World natural gas movements:	940 (25% of world production)

<i>of which through pipelines:</i>	450
<i>and as LNG:</i>	490
European imports:	330
<i>of which through pipelines:</i>	215 (170 from Russia)
<i>and as LNG:</i>	115
Russian exports:	240 (6.3% of world production)
<i>of which through pipelines:</i>	200 (170 to Europe)
<i>and as LNG:</i>	40
U.S. exports:	140 (3.7% of world production)
<i>of which through pipelines:</i>	80
<i>and as LNG:</i>	60

U.S. LNG INFRASTRUCTURE:

U.S. current LNG production and exports:	60
U.S. existing LNG capacity:	110 (185% of current U.S. LNG production)
U.S. capacity under construction:	92
U.S. approved additional capacity:	260
U.S. proposed additional capacity:	88
<i>Total existing and planned/committed LNG capacity:</i>	<i>550 (920% of current U.S. LNG production)</i>
<i>Capacity share of current world natural gas exports:</i>	<i>59%</i>
<i>Capacity share of current world LNG exports:</i>	<i>112%</i>

Probable cost of existing and committed capacity:	at least \$750 billion
Capacity utilization at current export level:	10.9%
U.S. LNG production and exports required to fully utilize LNG capacity:	550
<i>Ratio of exports required to fully utilize capacity over current total exports:</i>	392%
<i>U.S. current natural gas production:</i>	915 (24% of world production)
<i>U.S. total natural gas production required to fully utilize LNG capacity:</i>	1,405 (37% of world production)
<i>U.S. increase in natural gas production required to fully utilize LNG capacity:</i>	54%
<i>U.S. known natural gas reserves:</i>	12,600 billion cubic meters (6.7% of world reserves, 14 years of current production, 9 years of increased production)
<i>U.S. pipeline gas prices, per cubic meter:</i>	
<i>April 2021:</i>	\$0.09
<i>April 2022:</i>	\$0.24
<i>Value of U.S. natural gas reserves at pipeline price:</i>	
<i>April 2021:</i>	\$1,135 billion
<i>April 2022:</i>	\$3,025 billion

The figures above appear to make profitability quite improbable, if not altogether impossible, although, thanks to the current economic bans recently imposed on Russia, natural gas prices have increased nearly three-fold in the past few months, which is welcome but not sufficient.

If U.S. LNG producers were to at least mitigate the dreadful financial consequences of their overoptimistic market evaluations, they would need to find very rapidly some serious outlet for at least part of their unrealistic expectations, and, since consumption

could not increase sufficiently and quickly enough, their salvation could only be found in grabbing instantly a large existing market from some competitor, for instance Russia. Substituting for the entirety of Russian deliveries to Europe would increase U.S. LNG deliveries from 60 to 230 BCMY, although still short of the 550 planned capacity. Substituting for the entire worldwide Russian deliveries would bring the number to 300, still short but better, especially if LNG producers manage to keep prices at the current level or possibly higher.

Grabbing from the Russians their existing gas market is not simply a surprise and unexpected opportunity for U.S. LNG producers and their financial sponsors. Rather, it seems to be an absolute and urgent vital and even existential necessity for them, which only a total economic war against Russia could have provided. This is not to say that they could have had the power to incite this war on purpose, but their fierce decade-long opposition to the Russian land and marine pipelines hints that the current events may not be only accidental, and that it took several years of harsh provocations before they finally succeeded in having the Russians willingly do their bidding.

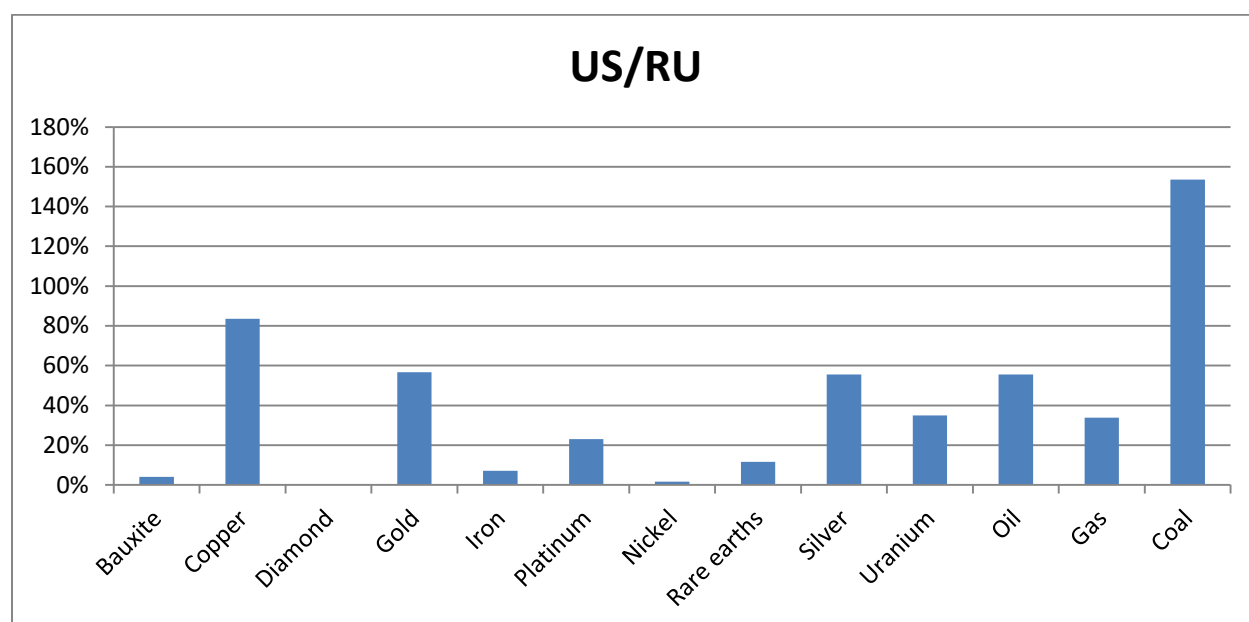
Meanwhile, time is urgently of the essence, since even at the 300 rate U.S. reserves would be depleted within 11 years. Also, since it takes a couple of years to build new LNG terminals in Europe, ideally LNG producers would see a benefit in the current Slavic v. Slavic feud dragging on for at least a few years, although the common people are not certain to profit much in the process.

Incidentally, after the depletion of its natural gas fields the U.S., but also Europe, will need to source their natural gas from the three largest known deposits in the world: Russia (37,400 billion cubic meters), Iran (32,100 billion cubic meters), and Qatar (24,700 billion cubic meters).

Some irony.

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A comparison of mineral and fossil fuel resources



The U.S. is at a steep disadvantage when compared to Russia for everything except coal, although here the West has shot itself in the foot by almost banning the use of coal, officially because it is bad for your health (but unofficially because it competes with natural gas and nuclear energy).

April 23, 2022

More:

The serious issue for the U.S. appears to be the huge LNG capacity she has built and continues building, which should amount to more than five times the current LNG production of the current largest exporters, Australia and Qatar. There are only two sizeable potential LNG import markets on the planet, Asia (**350 BCMY**), and Europe (**330 BCMY** if Russian pipelines to Europe are shut down). Since Qatar, Australia, Russia, Africa, and a few other Asian nations already export a little over **320** to Asia (and the U.S. less than **30**), short of having China and India ban Russian imports the market expansion for the U.S. can only be in Europe and can only be as a substitution for Russian pipeline gas and LNG, which would cap U.S. LNG exports to **230**, about **40%** of planned capacity. What will they do with the extra **60%** capacity?

I have maintained for the past ten years that the LNG craze in the U.S. was a bubble, be it first about imports before the export ban was lifted and then about exports. It is evidently an explosive bubble.

Either they grab Russia's market and eventually experience serious financial woes at a huge cost to consumers, or they can't grab it and they close shop. And we thought the Enron debacle was of astronomical proportions.

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April 25, 2022

How greed and commercial miscalculation can lead to war

1. Starting around 2005 a craze broke out in the U.S. about LNG imports and the construction of regasification terminals all along the shores.
2. Until 2016 U.S. natural gas consumption exceeded production.
3. After around 2014, U.S. natural gas production increased steeply, thanks to new discoveries and new technologies.
4. Mid-2010s: the ban on U.S. exports was lifted.
5. Around the same time, import facilities morphed into export terminals as a substitute for the stillborn import regasification plants.
6. In 2020, U.S. production exceeds consumption by about 85 BCMY.
7. However, the U.S. exports 140 BCMY, 80 through pipelines to Mexico and Canada, and 60 as LNG. The U.S. imports about 55 net from Canada through pipelines.
8. In other words, U.S. LNG exports are mostly related to natural gas from Canada, 5 BCMY being natural gas produced in the U.S.
9. Canadian production has been more or less steady since around 1995 at about 160 BCMY, with a peak of 180 between 2000 and 2006
10. Therefore, not much excess production can be expected from Canada in the near future
11. Since the purely U.S. net LNG export availability is 5 BCMY only, and Canadian availability is only 55, the rationale is not clear regarding the building of a 550 BCMY capacity, particularly when considering that global world LNG production

amounts to 490, while pipeline exports total 750, some in both directions as with Canada.

12. The U.S. could of course export as much as 550 BCMY of LNG, but that would mean importing a similar quantity from elsewhere, an option that would be surely of great benefit to LNG traders but probably not as much to consumers
13. Since the 1990s Russia has been exporting about 175 BCMY but started increasing exports in 2017 to the current 240, thanks mostly to the opening of new pipelines across the Black Sea and along the Baltic, and LNG production in the Siberian Far East.
14. Since Asia receives 92.5% of its LNG from Australia, Qatar, Russia, Africa, South America, and also Asia itself, there is not much room to wiggle for the U.S. in Asia past its 7.5% share of Asian imports, but to try to grab Russia's 6.5% share through political sanctions, for want of other legitimate means to eliminate a competitor.
15. U.S. LNG producers must have realized in the mid-2010s that but for convincing the world not to import Russia's 240 BCMY, Qatar's 100, and Australia's 100, they would soon get into serious financial difficulties without a doubt.
16. After having ruled out putting the latter two out of business as highly impractical, U.S. producers realized that their only possible salvation was through convincing importers in Asia and in Europe not to buy natural gas from Russia, the rationale being that addiction to expensive American LNG is much healthier for your health than addiction to cheaper pipeline gas from Russia (which they tell you with a straight face).
17. U.S. producers started harboring a quite understandable distaste and resentment for a large competitor who, in addition, unexpectedly built large new means of delivery to all points of Europe, East and West, thus displaying some nerve, especially considering that the competitor is nothing but Ruskies and recent Commies.
18. In an ideal free market, producers of goods compete on price and quality. When those two pillars of fair trade are not in favor of a national producer, he cries foul and endeavors to rally his government to his side by erecting trade barriers that are entrusted to Customs. The reasons invoked may be child labor, forced labor, slave labor, dumping, disregard for the environment, wages that are deemed too low, working conditions, name it. Such reasons are founded primarily on the quite natural, although perhaps somewhat immature, contention that the competitor and the country to which he belongs are Evil.
19. It would be a stretch of imagination to assume that a coordinated conspiracy was organized (which would require the kind of intelligence, coordination, and secrecy that only exist in 90 minutes fiction movies). In general the repeated badmouthing

of a competitor through all channels is enough to convince buyers and governments alike to shut out the evil competitor.

20. Vladimir Putin was therefore naturally accused of being diabolically evil, to the point that he has been frequently equaled to Messrs. Stalin and Hitler, although no actual comparative and unquestionable list of his exactions has been produced. See the attached table that attempts to quantify and compare his misdeeds with those of some 50 international state men over the course of History.
21. The incessant badmouthing succeeded, to the point that a seriously expansionist drive against Russia was undertaken in Eastern Europe, in an effort which could possibly be seen by impartial observers as imperial.
22. After 8 years of a bloody civil war just across her western border, and assured that what may appear to Russia as a hostile Transatlantic Empire would soon extend its eastern boundaries to a mere 240 miles from Moscow, Russia invaded her immediate western neighbour, and her international trade was as a consequence instantly frozen, or so the Transatlantic Empire attempted.
23. Et voilà! Not necessarily a Grand Concerted Oil & Gas Conspiracy, but rather the cacophonous long winded collusion of petty commercialism and overambitious expectations of an industry that tried to bite off more than it could chew and did not conduct sufficient due diligence before raising billions of dollars from unsuspecting investors, the whole charade being ultimately to the detriment of western consumers (notwithstanding all the deadly victims in Eastern Europe).
24. As they say, eventually what goes around comes around, although we can't wait to admire the creative sleights of hand that will be undoubtedly devised in order to justify the whole embarrassment.
25. Some may be tempted to assert that the whole military saga was engineered for the benefit of the U.S. defense industry, although a more sober analysis would suggest that if gas prices reach the levels seen a decade ago, an assumption that is not so far-fetched given the elimination of the largest supplier of an indispensable international commodity, the value of the U.S. natural gas reserves will equal 33 years of the total U.S. defense industry's defense revenue, or more than a century of the Chinese, and nearly four centuries of the Russian.

Nations have been known to fight to death for far less than that. Plus, military conflicts are necessarily limited in time, whereas the demands of cooking and electricity are not.

May 4, 2022

The benefit seems to be mostly in the ethereal brains of some LNG developers, though.

They're building a 550 BCMY LNG export capacity, and produce 925 of raw gas, of which, after trade with Canada and Mexico they only export 5 net. Gross LNG exports are currently 60, 55 of it from Canada.

To export 550 they would need to increase raw gas production somehow from 925 to 1,470, a 60% increase. That's if domestic and Mexican consumption does not decrease.

Meanwhile, consumption by electrical power plants is 330, while industrial/commercial is 375, and residential is 130. By reverting to coal fired power plants they could free about 200 but would still need to increase production to 1,270, thus decreasing the reserve over production ratio from 14 years to 10 (9 if they can't switch to coal).

Some relief could come from increased Canadian production, but Canada does not have very large reserves, at only one sixth of the U.S.'.

Something's gotta give.

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