U.S. RESOURCE NATIONALISM:
The Impact of Energy Trade Restrictions on National Security

GEORGE DAVID BANKS
Executive Vice President
American Council for Capital Formation

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AMERICAN COUNCIL FOR CAPITAL FORMATION
www.accf.org

SUMMARY

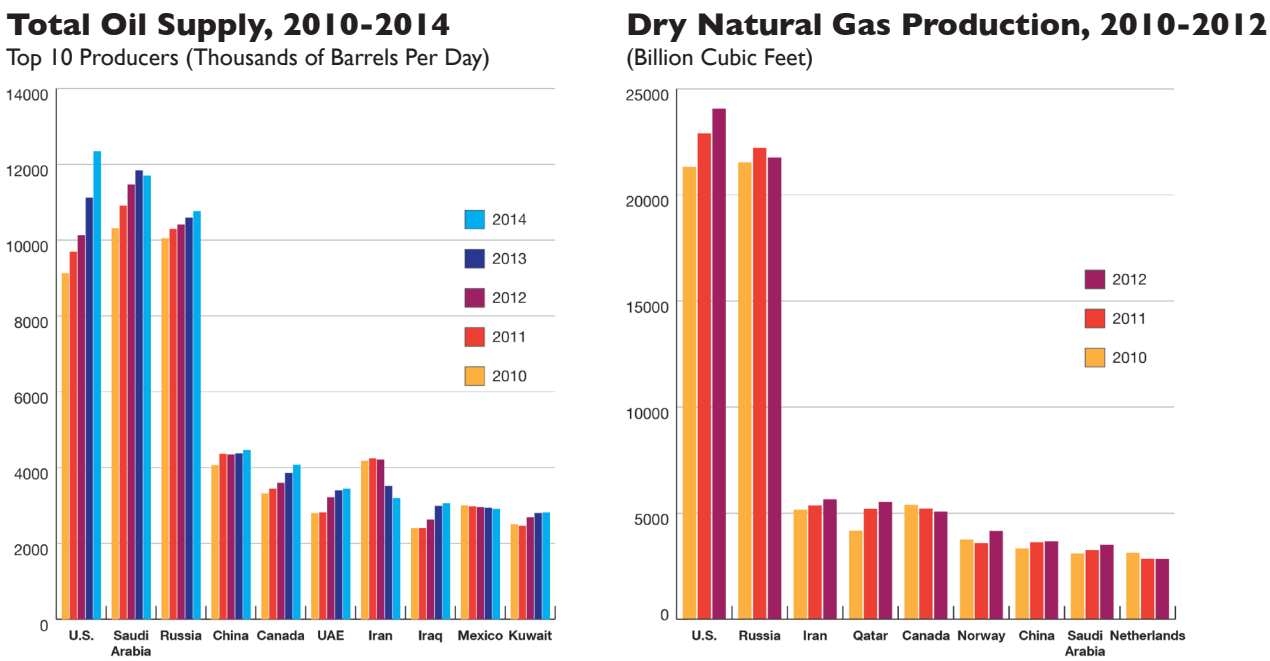
Antiquated federal laws that severely limit U.S. energy exports undermine long-term U.S. foreign policy interests by threatening the international free trade regime, obstructing development goals in the poorest countries, and failing to alleviate energy security vulnerabilities of key allies and major world economies. Maintenance of these restrictions also violates U.S. international commitments. Unfortunately, efforts to repeal or reform these laws are being heavily resisted by some U.S. entities and persons who embrace resource nationalism – the use of government intervention to control the trade of a resource in order to pursue a benefit perceived as unavailable under free trade. Opposition efforts combined with a general education gap with regard to energy markets has resulted in the uninterrupted continuance of these harmful policies. Rather than contribute to this growing global problem, the United States should reclaim its leadership role in preserving the free trade of strategic resources – which had been a bipartisan U.S. policy for decades. History teaches us that a prosperous global economy with open access to affordable and reliable energy is a safer, more stable world. Accordingly, Washington should lift those controls as soon as possible and exercise energy diplomacy to open doors and create opportunities here at home and abroad.

INTRODUCTION

The shale oil and natural gas revolution has substantially reshaped the U.S. energy landscape, allowing the United States to once again become the leading global producer of petroleum and natural gas hydrocarbons. In a recent report, the Energy Information Administration (EIA) announced that crude oil production last year showed the largest volume increase since recordkeeping began in 1900; in percentage terms, output in 2014 grew by 16.2 percent, the highest rate since 1940.[1] The growth in natural gas production has been equally as impressive with supply increasing by roughly 14 percent since 2010.[2] Moreover, the country's resource base for natural gas continues to expand with independent studies indicating that reserves now range from 1,900 to 3,600 trillion cubic feet (Tcf) – enough to feed current consumption rates in the United States for roughly a century.[3]

While the associated economic benefits from oil and gas production have been a significant factor in the U.S. economic recovery since 2007, the geo-political impacts are potentially transformative with the promise of greater energy and political security for the world. The International Energy Agency (IEA) forecasts that the United States – thanks to the shale revolution – will remain the world's leader in oil supply growth up to 2020, while Russia's oil production is expected to decline over the next five years.[4] The abundance of U.S. crude oil explains in part why OPEC's global market share fell from over 40 percent in 2008 to less than 30 percent today. Unquestionably,

Figure 1: Comparison of Top Producers, Oil and Natural Gas



Source: Data from Energy Information Administration

these recent developments create an opportunity for the United States to be a global energy powerhouse again,[5] but only if those resources are used to stabilize energy markets and to promote free trade and economic security.

Unfortunately, antiquated laws are preventing the United States from realizing the full benefit of the shale revolution and seizing the opportunity before us. The "*1975 Energy Policy and Conservation Act*" largely prohibits crude oil exports and "*The Natural Gas Act of 1938*" restricts the free trade of natural gas – even to some of our closest allies and partners. While those laws are products of their times, their continued maintenance, increasingly backed by resource nationalism arguments, is now detrimental to U.S. national interests. Such limitations on the free trade of energy resources damage U.S. credibility, undermine the global free trade regime, and establish a dangerous precedent of protectionism and unilateralism – actions that history has proven increase the probability of conflict.

WHAT IS RESOURCE NATIONALISM?

Resource nationalism (RN) is a government policy that prohibits or limits the international trade of a country's strategic resources – energy, minerals, and potentially key technologies – to *benefit* the controlling State or a specific constituency of that State.[6] Often used to describe actions taken by non-market economies to expropriate resources for commercial gain, developed countries also embrace RN policies – usually through more subtle regulatory approaches – to pursue economic, political, or social goals that would not occur without the control. Importantly, the *intention* of the State and its constituencies to gain *specific* benefits through government control of the strategic resource is the most important condition in determining whether a policy is rooted in resource nationalism – *not the degree of control*.

Though States often justify such policies on the grounds of environmental protection or conservation (i.e., scarcity),[7] the economic motive for adopting or preserving RN policies usually relies on one or more of the below goals:

(1) To protect or promote domestic industry (usually downstream processing industries) at the expense of foreign competition;

(2) To lower costs via market distortion for a specific product for the domestic market; and

(3) To create a competitive advantage for exports.

A government with political and social motives may be tempted to adopt RN policies as well when traditional diplomacy cannot achieve the results it desires. For example, steps taken by local and state governments in the United States to block the export of coal appear to reflect the view of American environmentalists that stopping a supply source of a high emissions fuel is a productive tactic for reducing emissions. But it ignores the option of coal importers to source supply from elsewhere in the global market. Developing countries, which require coal for economic and energy security reasons, have refused to regulate consumption of that fuel for climate mitigation purposes.[8] In this case, U.S. state and local government officials are not seeking a traditional commercial advantage by controlling the resource – *they are pursuing an environmental goal in which they place value*.

Unfortunately, economists argue that the strategy itself is misguided.[9] As Larry Summers, Charles W. Eliot University Professor and President Emeritus with Harvard University and former U.S. Treasury Secretary, stated last year, "There is no environmental argument for a policy that distinguishes between oil produced in the United States for domestic consumption and oil produced in the United States for foreign consumption… the environmental consideration does not constitute for the regulation for a prohibition or limitation on the export of oil or natural gas."[10]

THE HYPOCRISY OF CERTAIN U.S. TRADE POLICIES

Despite the history of its free trade advocacy, the United States has not been immune to special interests calling to leverage domestic resources for economic or political gain vis-à-vis other nations. Recently, we have seen an increase in classic resource nationalism arguments in the Congress and elsewhere, opposing the easing or lifting of restrictions on the trade of natural gas and crude oil for commercial reasons.

(1) Liquefied Natural Gas (LNG) Exports: If a country has a free trade agreement (FTA)[11] with the United States, federal law requires export licenses to be approved without delay. For those countries without an FTA with the United States, however, export license approvals must clear additional hurdles, including economic, energy security, and domestic supply factors, producing an unduly, lengthy process.

Multiple independent studies indicate that lifting restrictions on the international trade of LNG would result in increased economic growth and job creation in the United States. ICF International, for example, concluded that LNG exports could add to the American economy between 73,100 and 452,300 jobs by 2035 and benefit almost every U.S. State either directly or indirectly.[12]

Yet, a handful of U.S. energy intensive industry, benefiting from cheap natural gas, has argued that trade restrictions are needed to maintain its competitiveness.[13] These points have been embraced by a sizeable number in Congress. In May 2014, for example, 22 Senators in a letter to President Barack Obama stressed that the United States must, "*not squander what is clearly an American competitive advantage right now for American manufacturers and for the American economy*" by permitting a more open trade of LNG.[14]

(2) Crude Oil Ban: Congress enacted the export ban after the 1973 Arab oil embargo, a time of growing dependence on crude oil imports and genuine concerns about conservation and scarcity of U.S. petroleum resources. Thanks largely to the shale revolution and improvements in fuel efficiency, however, reliance on imports as a share of total U.S. petroleum consumption has fallen drastically from roughly 60 percent in 2005 to 27 percent in 2014, according to the EIA.[15] A recent estimate from EIA predicts that import dependence will further shrink to 14 percent by 2020 (with Canada accounting for most of the remaining imports).[16]

In a study commissioned by the Brookings Institute, the National Economic Research Associates (NERA) found that eliminating the ban on crude oil exports could inject between $600 billion and $1.8 trillion into the domestic economy; moreover, national unemployment would fall on average by 200,000 over 2015-2020.[17] However, arguments abound that prohibiting crude oil exports would help maintain lower fuel prices at the pump, despite the general consensus amongst economists that U.S. gasoline prices would be lower if the ban were ended.[18]

Perhaps the more important political driver in maintaining the ban, nonetheless, is the economic benefit that a few U.S. refineries receive at the expense of foreign producers. In a June 2015 letter to President Barack Obama, Senators Ed Markey and Robert Menendez, joined by 11 other Members, echoed that point, stressing that lifting the restrictions "*could adversely affect the ability of some refineries to compete with foreign refineries.*"[19]

Some U.S. resource nationalism policies fall outside of the classic, commercial example. These approaches, driven by political and social motives, are usually much more subtle – depending on an opaque, domestic regulatory process – and are cloaked in non-economic arguments. In the case of coal exports and the trade in nuclear technology, environment and nonproliferation activists both seek unjustified control of a resource to leverage outcomes that are contrary to U.S. international obligations.

(1) Coal Export Review Process: There is no explicit U.S. restriction on coal exports, though environmental impact reviews are required at the federal, state, and local government levels before moving forward with the siting and construction of export terminal facilities, which are required to serve foreign customers. Because of climate change concerns, a number of environmental groups have aggressively opposed planned terminals and have lobbied state and local regulators to raise the bar for approval. Most controversial is the decision by Washington State and local officials to consider the climate change impacts of the consumption of U.S. coal in China and elsewhere.[20]

Drafters of the United Nations Framework Convention on Climate Change (UNFCCC) – to which 195 nations belong – were acutely aware of the potential for such a unilateral climate-related restriction on trade. Thus, the UNFCCC explicitly calls for an "open international economic system that would lead to…development in all Parties" – language that strongly suggests that a unilateral ban on the export of any fossil fuel is inconsistent with U.S. obligations under the Convention.[21] Accordingly, it is ironic that environmental groups – who are viewed as the champions of strengthening the UNFCCC – are taking steps that actually undermine the international consensus reflected in the Framework.

(2) Trade in Civil Nuclear Technology: While it is crucial for Washington to maintain controls on the trade of U.S. nuclear technology to prevent proliferation, those concerns should not be used to block unjustifiably the development of foreign civil nuclear programs. Commercial nuclear energy should play a critical global role in promoting energy security, climate mitigation, and pollution control. A number of nonproliferation and environmental activists, however, oppose the expansion and even the continued use of civilian nuclear power *anywhere in the world*, including in the United States.

> Much of the opposition[22] from nonproliferation groups centers on enrichment of uranium for commercial purposes – a right that Parties enjoy with conditions under the Non-Proliferation Treaty (NPT). While many people hold genuine concerns that a commercial enrichment program, without adequate safeguards, could be used to develop nuclear weapons-grade material, the vast majority of Parties to the NPT view the right to produce nuclear fuel for civilian purposes as inherent.[23] Some notable nonproliferation activists recognize that point;[24] accordingly, they advocate that the United States should leverage the commercial position of its industry *to force* countries to surrender those rights.[25] Thus activists, with some support from the federal government,[26] have pushed aggressively for U.S. nuclear cooperation agreements (i.e., 123 Agreements) to include a legally binding commitment by the partner country not to develop uranium enrichment and reprocessing – commonly referred to as the "gold standard."[27]

At the same time, Washington has pursued legal action in the WTO *against* resource nationalism policies that are similar in motive to its own restrictions on LNG and crude oil exports. In two separate cases, the WTO sided with the United States and its partners against China's export duties and quota on exports of raw materials and rare earth minerals.[28] In the latter case, Beijing claimed that its policies conserved limited resources and addressed environmental concerns regarding mining. Comparable to the arguments often used by some in the United States to justify restrictions on energy exports,[29] Chinese officials made an economic case, independent of the official WTO position, that duties and quotas on Chinese resources would attract investment and create jobs domestically.[30] In the end, the WTO panel determined that Beijing could not invoke its conservation policies when domestic use of those resources was unrestricted. The panel further emphasized that WTO members should not unjustifiably discriminate against foreign consumers of resources.[31]

The importance of aggressive enforcement of WTO obligations cannot be exaggerated. Left unchecked and unguarded, the global system, which will face increasing demand for access to natural resources as the developing world industrializes and seeks to improve standards of living, is likely to witness a growing number of countries seeking to capture a competitive advantage through resource nationalism. As a recent example, Indonesia, the world's largest copper, nickel, and aluminum producer, implemented legislation last year to ban the export of raw materials to promote investment in domestic processing and job creation.[32] Multiple, independent reports and studies have pointed to the threat of this growing narrative.[33]

Certainly, the preservation of U.S. energy trade restrictions bolsters arguments in other countries to adopt or maintain resource nationalism policies. Moreover, there is no question that U.S. controls complicate the ability of Washington to pursue related WTO actions against other Parties. In this sense, the existence of those U.S. restrictions would not negate the WTO obligations of other Parties. However, from a political perspective, the United States could be deterred from bringing such action when it knows that other countries might retaliate. It is hard to see how the United States would successfully defend its current resource nationalism policies, if a serious challenge were brought forth.[34]

In a potential WTO challenge against the United States, the General Agreement on Tariffs and Trade (GATT), Article XI – which largely governed the Panel's decision in *Rare Earth* – would weigh heavily:

> "No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any produce destined for the territory of any other contracting party."[35]

There is no question that U.S. policies on LNG and crude oil impose restrictions on the amount of those resources that domestic producers can export, subsequent to production. However, exceptions that the United States might use as a defense under GATT Article XX[36] would likely be rejected by the WTO – including any argument that restrictions on LNG and crude oil "conserve an exhaustible natural resource." There are no domestic restrictions on consumption and production of natural gas. And although Corporate Average Fuel Economy (CAFÉ) was originally designed to improve U.S. energy security, it has been transformed in recent years into a climate mitigation program. In any case, even if Washington were to argue successfully that current domestic policies are designed primarily to conserve U.S. petroleum resources, the nearly blanket export ban on crude oil goes too far.

In regard to export hurdles for coal, GATT Article XI applies to all restrictive measures, including steps taken by state and local governments, regardless of legal status.[37] While those controls do not have a protectionist motive (i.e., are not a disguised restriction on international trade), their legality under WTO rules is questionable because they still result in unjustified discrimination.[38] Advocates for hindering U.S. coal exports might argue that those controls are justified because U.S. environmental regulation restricts the domestic consumption of coal for the protection of human health. However, EPA

regulation does not limit directly coal consumption – it links the use of coal to the availability of pollution-control technologies. Accordingly, U.S. local and state measures to block coal exports – regardless of the availability of pollution-control technologies or the environmental protection regime in countries impacted by such a scheme – are likely to violate U.S. WTO obligations.[39]

Some advocates for U.S. controls might also argue that economic security interests provide justification for invoking GATT Article XXI, which addresses security exceptions. While that GATT section would probably allow for unjustified restrictions on nuclear trade to go unchallenged, it is unlikely to be used successfully to defend a trade discrimination measure based purely on economic security.[40] Experts agree widely that GATT Article XXI's main purpose is to provide flexibility for Parties when there are *political* or *military* interests at stake. Unquestionably, allowing such a broad meaning of "security" would set a precedent that would risk undermining the free trade regime.

THE NEGATIVE IMPACT OF ENERGY TRADE CONTROLS ON U.S. ALLIES IN EAST ASIA

Besides the almost certain violation of international commitments, U.S. resource nationalism harms the economic and energy security of some of our most important allies by denying or limiting direct access to U.S. resources and by reducing global supplies, which results in higher prices.[41]

While senior U.S. officials frequently express grave concern about East European energy dependence on Russia and ponder steps to remedy that situation,[42] very little attention is paid to U.S. allies in East Asia, which are far more vulnerable to potential energy supply disruptions. Japan, South Korea, and Taiwan – all of which suffer from a lack of strategic resources – are each over 90 percent dependent on energy imports (See Tables 1 and 2).[43]

As Japan and Taiwan are islands and South Korea's only land border is with North Korea, none enjoy the security provided by friendly countries that can directly export electricity or other strategic resources via land routes. This degree of insecurity and geographic isolation stands in stark contrast to the relative safety provided by Western Europe to Poland and its East European neighbors. Consequently, security of supply for U.S. allies in East Asia depends almost entirely on trade and open sea lanes, protected largely by the U.S. Navy. This exposure shapes public opinion in those effected countries, as well as their official diplomacy and relations with key energy suppliers, including Iran and Russia.

Of course, opening up the U.S. export gates for energy would not negate all of the vulnerabilities facing those countries, but it would provide reassurance through additional market supply that would reduce the impacts of energy-related supply shocks and improve global economic security, especially given the region's importance to international trade.[45] In the case of Japan, it would help alleviate economic pressure resulting from continued delay in the restart of the country's fleet of nuclear reactors – shut down because of the Fukushima disaster. The

Table 1.

Energy Vulnerability

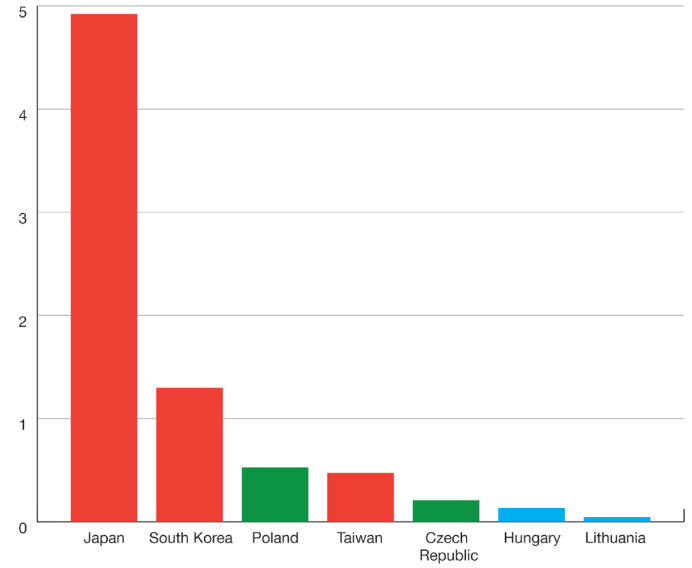
of Select U.S. Allies[44]

Country	Energy Imports *(% of Total Primary Consumption)*
Estonia	22%
Romania	26%
Czech Republic	27%
Poland	28%
Bulgaria	47%
Latvia	57%
Hungary	61%
Lithuania	63%
Slovakia	65%
Japan	91%
South Korea	97%
Taiwan	98%

Table 2.

Select U.S. Allies, 2013 GDP

(in trillion US$) Color coded to indicate level of energy insecurity, per Table 1

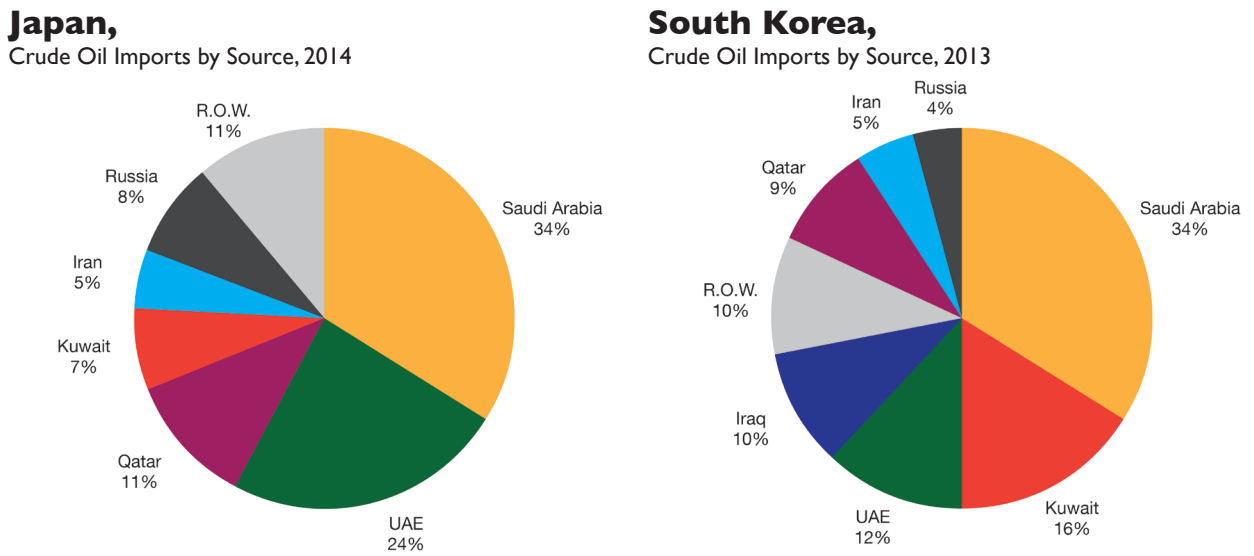


loss of nuclear power, which met 27 percent of the country's electricity needs, caused a massive fuel switch to imported natural gas, crude oil, fuel oil, and coal, leading to higher debt levels and electricity prices for consumers, as well as a trade deficit for the first time in thirty years.[46] Even South Korea, which has an FTA with the United States and can thus import U.S. LNG under existing U.S. law, would benefit from the increased insulation that greater amounts of LNG on the world market would provide.

Over the mid-term, an increase in supply diversity would also bring about greater political and diplomatic flexibility in Japan and South Korea, probably to the benefit of the United States. Undeniably, Washington will find it more and more difficult to lobby Tokyo or Seoul to join sanctions efforts against a supplier of a major strategic resource – particularly if those two countries do not have other trade options.[47] In this regard, playing the role of a global energy powerhouse with an open trade policy should bolster U.S. influence and the effectiveness of its diplomacy.

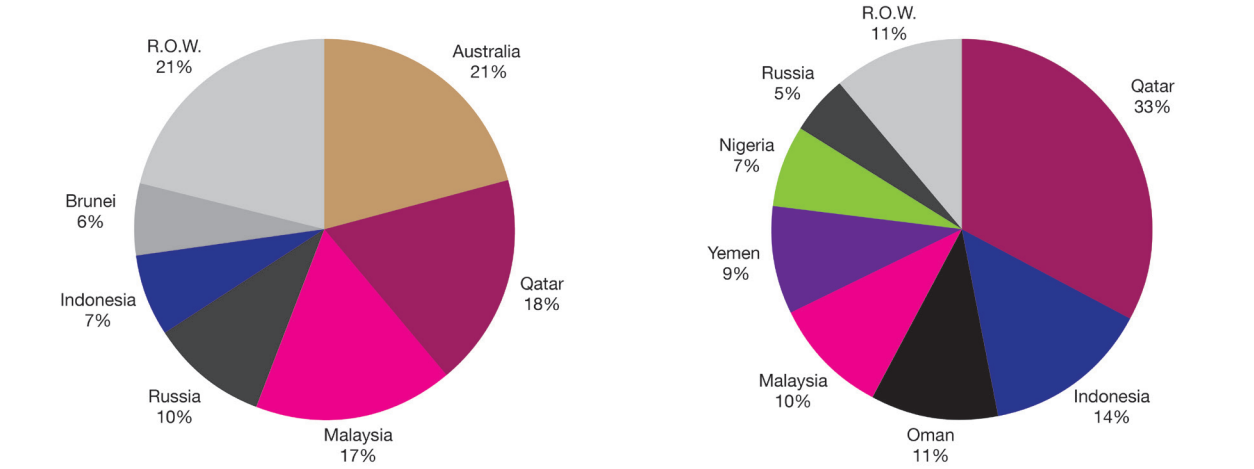
Over the past few decades, Japan, South Korea, and Taiwan have taken significant steps to reduce their energy import dependency, especially for power generation needs (e.g., via programs promoting fuel diversification, efficiency gains, and nuclear plant deployment). For example, South Korea, which has become a premier global supplier of nuclear technology, now relies on civil nuclear power to produce roughly one third

Figure 2: Comparison, Crude Oil Sources for Japan and South Korea



Sources: For Japan (first eleven months of 2014), Japan Ministry of Finance and Global Trade Information Services. For South Korea, Global Trade Atlas and Korea Customs & Trade Development Institution

Figure 3: Comparison, LNG Sources for Japan and South Korea



Sources: Energy Information Administration and PFC Energy.

of its electricity with new capacity planned by 2035.[48] Japan's ability to move past the Fukushima accident and restart its civil nuclear program is vital to continued efforts to achieve greater self-sufficiency, as is Taiwan's ability to overcome opposition to its new nuclear deployment.

Besides lifting its own energy trade restrictions, the United States should provide assistance wherever needed and appropriate to improve the region's energy independence, particularly in regard to nuclear power, which offers the best opportunity for reduced import dependency.[49] Accordingly, U.S. nuclear trade policy should not impose unjustified controls that hinder the development of civil nuclear programs in the region – specifically, those designed to strengthen energy security and sustainability of nuclear energy, including the start of safe, commercial nuclear fuel programs that would aid in diversifying global supply and prevent the development of monopolies.[50]

TIME FOR U.S. LEADERSHIP

Recent events in the Middle East, North Africa, and Ukraine remind us that we are living in a dangerous world, one fraught with peril. A large percentage of the world's oil and natural gas reserves rest in areas of conflict and political instability. The abundance of energy that the shale revolution has provided to the United States – and eventually to other parts of the world with further technological development, based in no small part on American ingenuity and expertise – offers greater insulation against supply shocks emanating from countries often hostile to Western interests. While there is temptation to keep those resources here for short-term commercial gain for some special interests, providing open access is necessary to maximize the benefits for the majority of Americans, as well as promote domestic investment in the further development of U.S. energy resources.

Some people, particularly environmentalists, will claim that the United States should not export fossil energy because of climate mitigation concerns. While climate change is a problem that the world needs to address, cutting off U.S. exports of fossil fuels is not the answer. In fact, pursuing such an action only reduces the amount of affordable and reliable energy available to global markets for economic development and poverty eradication efforts, increasing the scarcity of energy resources and worsening related competition between nation states.

Undeniably, the amount of industrialization that is needed over the next generation for development and job creation in the developing world is staggering and breathtaking. Given increased globalization, the success of those countries is crucial to U.S. economic and political security. Consequently, rather than restrict energy trade, the United States needs to take a leadership role in protecting the free trade of all strategic resources to further global economic growth and stability. As part of this effort, the federal government should move swiftly to destroy those barriers, repealing or amending antiquated laws that have no place in the new U.S. energy landscape of the 21st century. In the meantime, the White House should use its prerogative under existing law to lift crude oil restrictions as much as possible, speed up the decision making process for LNG export approvals, and remind States that while they should protect the environment and human health, they cannot undermine existing U.S. treaty obligations in doing so.

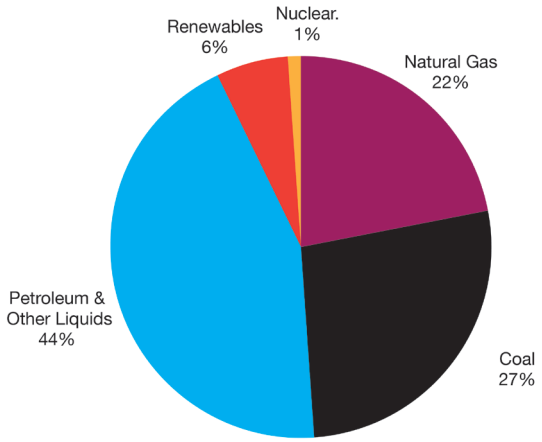
At the same time, policymakers in Washington need to understand that the burden of current U.S. law and regulation incents some entities to seek advantages offered by U.S. controls on energy exports. Accordingly, broader regulatory reform is an important consideration.

The success of China and other developing economies will continue to drive the domestic desire for increased regulation and government intervention to preserve comparative advantages and protect certain U.S. industries. Such action, however, would only result in inefficiencies that undermine U.S. competitiveness over the long run. U.S. economic prowess depends largely on policies that promote innovation, investment, capital formation, and a well-balanced regulatory system – not measures that actually undermine free trade and global security.

APPENDIX A:

Japan,[51]

Total Energy Consumption, 2013

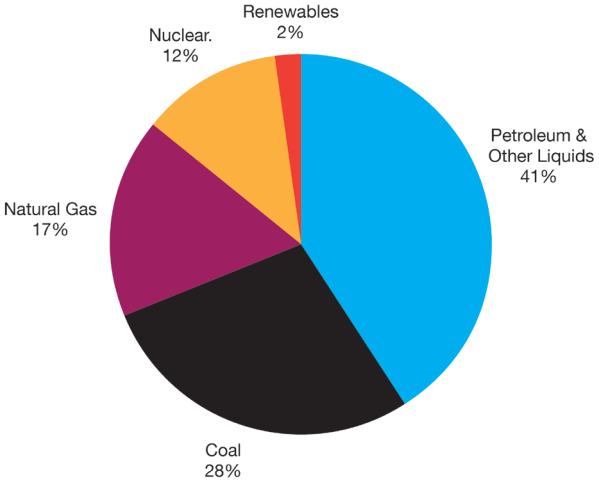


Japan Key Points

- Domestic energy resources account for less than 9 percent of primary energy use.
- 1st largest importer of LNG.
- 2nd largest importer of coal.
- 3rd largest net importer of oil.

South Korea,[52]

Primary Energy Consumption,

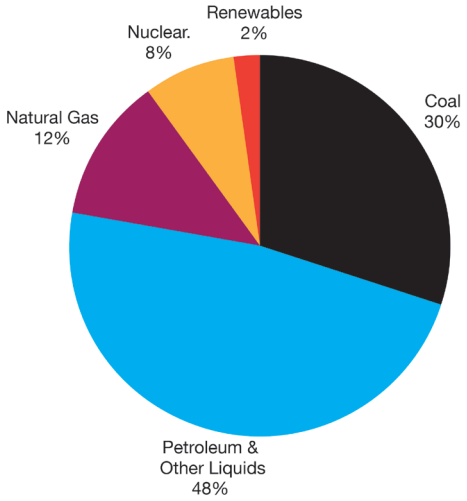


South Korea Key Points

- Domestic energy resources account for about 3 percent of primary energy use.
- 2nd largest importer of LNG.
- 4th largest importer of coal.
- 5th largest net importer of oil.

Taiwan,[53]

Total Energy Consumption, 2012



Taiwan Key Points

- Domestic production accounts for 2 percent of primary energy consumption.
- 85% of its crude oil originates from the Persian Gulf.
- 5th largest LNG importer.

ENDNOTE

1 See http://www.eia.gov/todayinenergy/detail.cfm?id=20572.

2 In terms of dry natural gas. See http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=3&pid=26&aid=1.

3 Studies by Potential Gas Committee, Energy Information Administration, and National Petroleum Council. The United States currently consumes nearly 27 TcF annually.

4 Lawler, Alex, "U.S. Oil Output 'Party" to Last to 2020: IEA," Reuters, February 10, 2015 at http://www.reuters.com/article/2015/02/10/us-iea-oil-idUSKBN0LE02O20150210.

5 U.S. energy insecurity has been an issue of substantial political importance since the Arab Oil Embargo of 1973. In the first half of the twentieth century, however, the United States was by far the most important producer of oil. As a point of reference, U.S. oil production during World War II accounted for roughly two thirds of total global supply and played a crucial role in the victory over the Axis Powers.

6 Resource nationalism is a form of mercantilism – the economic philosophy of early modern Europe, before the contributions of Adam Smith and the wide acceptance of the benefits of free trade. Mercantilism, which viewed trade as a zero sum game, drove colonization and the creation of trade monopolies. Governments across Europe regulated resources, including human capital, to promote industry and manufacturing in order to gain a competitive advantage vis-à-vis foreign rivals. These practices are largely blamed for major conflicts in the 17th and 18th centuries.

7 According to the OECD, empirical evidence suggests that such policies typically do not lead to a decrease in production or efforts to restrain domestic consumption, revealing what is likely the controlling State's true commercial motive. In the case of the United States, the Congress is much more transparent in describing its motives than the executive branch, which usually falls back on legal justifications carved out in international agreements.

8 Environmental groups often use local environmental impacts as justification for blocking coal export efforts, but global climate mitigation is the actual reason. For more information, see the Sierra Club's "Stopping Coal Exports" webpage at http://content.sierraclub.org/environmentallaw/category/stopping-coal-exports.

9 "Crude Oil Exports: Economic and Geopolitical Impacts," ACCF Center for Policy Research Special Report, May 2015.

10 See more comments by Larry Summers on September 9, 2014 at a Brookings event titled, "Changing Markets: The Future of U.S. Energy Security and Oil Export Policy" at http://www.brookings.edu/events/2014/09/09-us-energy-security-oil-export-policy

11 The United States currently has free trade agreements with Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Singapore, and South Korea.

12 See http://www.api.org/~/media/Files/Policy/LNG-Exports/API-LNG-Export-Report-by-ICF.pdf. For additional studies, see Act on LNG Exports – A Project of the American Council for Capital Formation at http://actonlng.org/.

13 See http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=c969eddb-d0b5-4405-9316-c1bfd4d8d482. Industry opponents of the free trade of LNG fail to recognize publicly the implications for their sectors if other countries, using similar arguments, impose restrictions on the import of their products and services.

14 See http://www.stabenow.senate.gov/?p=press_release&id=1338.

15 See http://www.eia.gov/tools/faqs/faq.cfm?id=32&t=6.

16 "U.S. Crude Oil Output to Soar till 2020 Despite Price Rout: EIA," Reuters, April 14, 2015 at http://www.reuters.com/article/2015/04/15/us-usa-oil-outlook-idUSKBN0N51YD20150415.

17 See http://www.brookings.edu/research/reports/2014/09/09-8-facts-about-us-crude-oil-production.

18 Because gasoline is traded globally, the price of gasoline in the United States is largely determined by the world price of gasoline – not by the domestic price of crude. An increase in the global supply of crude oil resulting from a lifting of the U.S. export ban would lower world prices for crude, which in turn would reduce the cost of gasoline. See https://unlockcrudeexports.org/wp-content/uploads/2014/10/Crude-Oil-Fact-Sheet-v7.pdf and http://www.eia.gov/todayinenergy/detail.cfm?id=18651.

19 See http://www.markey.senate.gov/news/press-releases/senators-to-president-obama-lifting-crude-oil-export-ban-could-harm-consumers-businesses-national-security.

20 See Wilhelm, Steve. "Coal terminal foes hail decision to consider climate change impact," Puget Sound Business Journal, July 31, 2013 at http://www.bizjournals.com/seattle/news/2013/07/31/coal-export-eis-to-consider-climate.html?page=all.

21 Article 3 of the UNFCCC further states that "Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade." See http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

22 Environmental opponents of nuclear power often point to safety and waste concerns. This paper does not examine those arguments because they do not provide the justification for resource nationalism policies related to nuclear trade controls.

23 While the NPT does not explicitly grant countries the right to enrichment, Article IV says, "Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production, and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty." See http://www.state.gov/t/isn/trty/16281.htm. Thus, as long as countries remain non-weapons states and comply with International Atomic Energy Agency safeguards, the plain reading of the NPT implies that countries have some right to enrich. See then Chairman Bob Menendez's remarks at the Senate Committee Hearing on 123 Agreements on January 30, 2014, pushing back on the assertion of a witness that the NPT does not give countries the right to enrich, at minute 44:35, located at http://www.foreign.senate.gov/hearings/section-123-civilian-nuclear-cooperation-agreements.

24 See http://www.npolicy.org/.

25 Many market experts argue that the United States no longer has a dominant position in the trade of nuclear technology. Thus, unreasonable U.S. controls or demands would simply result in a further decline in related U.S. exports and influence as potential partners turn to other nuclear suppliers, such as France or Russia. See http://atomicinsights.com/wp-content/uploads/Hamre-letter-to-WH.pdf for related arguments from former U.S. national security officials.

26 The Obama Administration's position of using a case-by-case approach to negotiating 123 Agreements is practical, given the fact that each potential foreign partner has different national circumstances, levels of development, political and security concerns, and economic arguments for pursuing commercial nuclear power and fuel programs. Further, some countries belong to multiple export control and nonproliferation regimes and others are already nuclear weapons states – factors that should all be considered.

27 U.S. nuclear trade is governed by Section 123 of the Atomic Energy Act, which generally requires the successful negotiation of a 123 Agreement before U.S. nuclear equipment or materials can be exported. 123 Agreements are the principal U.S. foreign policy means for gaining assurances that U.S. nuclear technology and materials will be used for peaceful purposes.

28 See http://europa.eu/rapid/press-release_MEMO-14-236_en.htm.

29 Interestingly, Senator Debbie Stabenow "applauded" the U.S. WTO victory over China only a few months after leading the Senate letter on LNG to the President, which called for the preservation of the U.S. competitive advantage flowing from LNG trade restrictions. See http://www.stabenow.senate.gov/?p=press_release&id=1463.

30 See http://www.theguardian.com/world/2015/jan/05/china-scraps-quotas-rare-earth-wto-complaint and http://www.reuters.com/article/2014/04/17/us-china-wto-rareearths-idUSBREA3G08F20140417.

31 See https://www.wto.org/english/news_e/news14_e/431_432_433r_e.htm.

32 Rusmana, Yoga. "Constitutional Court in Indonesia Upholds Ore Shipment Ban," Bloomberg Business, December 3, 2014 at http://www.bloomberg.com/news/articles/2014-12-03/constitutional-court-in-indonesia-upholds-mineral-ore-export-ban.

33 For greater insight on the growing number of countries adopting export restrictions, see https://www.wto.org/english/res_e/publications_e/wtr10_forum_e/wtr10_oecd_e.htm, http://www.ictsd.org/downloads/2012/06/export-restrictions1.pdf, and http://www.oecd.org/tad/benefitlib/export-restrictions-raw-materials.htm. For a policy discussion on the benefits of export controls for developing countries, see Karapinar, Baris. "Export Restrictions on Natural Resources: Policy Options and Opportunities for Africa, World Trade Institute, University of Bern, Switzerland at http://www.wti.org/fileadmin/user_upload/nccr-trade.ch/news/TRAPCA%20Paper%20(Submitted1711)_BK.pdf.

34 Of course, any sitting President might calculate that a WTO loss would provide political cover to lift U.S. controls or to force Congress to act.

35 See https://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf.

36 See https://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf.

37 See Girouard, Robert, "Water Export Restrictions: A Case Study of WTO Dispute Settlement Strategies and Outcomes," 15 Geo. Int'l Envtl. L. Rev. 247, 257 (2003).

38 See https://www.wto.org/english/tratop_e/envir_e/envt_rules_intro_e.htm.

39 For a more detailed discussion, see "LNG and Coal: Unreasonable Delays in Approving Exports Likely Violate International Treaty Obligations," November 2013 at http://www.nam.org/Issues/Energy/LNG-and-Coal-Report-NOV-2013/LNG-COAL-Report.pdf and Palmer, Doug. "US ban on LNG exports would violate WTO rules – experts," Reuters, Jan 31, 2013 at http://www.reuters.com/article/2013/01/31/usa-trade-lng-idUSL1N0AZMTU20130131.

40 Broome, Stephen. "Conflicting Obligations for Oil Exporting Nations?: Satisfying Membership Requirements of Both OPEC and the WTO," 38 The Geo. Wash. Int'l L. Rev. (2006). For a more detailed discussion, see http://www.citba.org/pdf%20files/Vance%202006%202nd.pdf.

41 Ironically, protectionism also does not help the very industries that are seeking protection. If input cost is preserved at prices below those seen on the global market, "protected" industries will likely fail to remain internationally competitive; demand for the U.S. resource will be overly inflated relative to cost, and the supply will suffer from lack of investment, creating an unsustainable situation at the same time the manufacturers or users of the resource grow less competitive.

42 "In Response to Russian Aggression, Key Central European Nations Plead for U.S. Natural Gas Exports," Speaker Boehner's Press Office, March 8, 2014 at http://www.speaker.gov/press-release/response-russian-aggression-key-central-european-nations-plead-us-natural-gas-exports.

43 Japan was 80 percent dependent on energy imports before the Fukushima disaster in 2011.

44 European Commission data at http://ec.europa.eu/economy_finance/publications/occasional_paper/2013/pdf/ocp145_en.pdf; Energy Information Administration (EIA) pages for Japan and South Korea; see Brookings paper at http://www.brookings.edu/research/opinions/2013/09/12-taiwan-energy-security-liao for Taiwan data.

45 South Korea, alone, has a GDP ($1.3 trillion in 2013) roughly equivalent to the combined GDP of the East European members of the European Union.

46 See Japan page at http://www.eia.gov/countries/cab.cfm?fips=ja.

47 There is a growing feeling in Japan that economic sanctions against countries like Iran would only benefit China at the end of the day. See Smith, Sheila. "Japan's Dilemma over Iran Sanctions," The Atlantic, February 1, 2012 at http://www.theatlantic.com/international/archive/2012/02/japans-dilemma-over-iran-sanctions/252337/.

48 See http://www.world-nuclear.org/info/Country-Profiles/Countries-O-S/South-Korea/.

49 A direct co-benefit to the United States of a reduction in the energy import dependence of its allies is the reduced demands on the U.S. Navy in its military planning for the protection of sea lanes.

50 Given the fact that the United States no longer enriches uranium with U.S. technology for commercial purposes, greater competition in the commercial nuclear space should be an important U.S. objective. Nuclear power provided 19 percent of U.S. electricity in 2014, according to EIA.

51 Sources: EIA International Energy Statistics and BP Statistical Review of World Energy, 2014

52 Source: Energy Information Administration

53 Sources: Energy Statistics Handbook, 2012, BOE, MOEA