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Israel's New Gas Discovery: A Diplomatic and Geopolitical Nuance or Revolution?

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The Institute for Policy and Strategy (IPS) conducts projects and research on a broad analytical scope, concentrating on identifying emerging issues and trends crucial to Israel's national policy and decision-making process, including national security and strategy; foreign policy; the Jewish people; social policy and education.

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This paper reflects the opinion of its author/s only

Commenting on the threats against Israel's natural gas discoveries by Hizbullah and Lebanese officials, "We're in a historic process. The US is replacing diplomacy with diplomacy of non-use of force, also at the expense of investors. We must see how we maintain energy development and security during this process – secure supply at reasonable prices, protected from crises." - Uzi Landau, Minister of National Infrastructure

General

The ongoing quest for energy resources from the dissolution of British and French mandates and the rise of independent Arab states through the most recent crusade for oil during the Gulf War, has not ended; in fact it has proliferated to exponential proportions. Military budgets, defense strategies and diplomatic alliances are all modified to encapsulate components that secure a stable energy supply. The most powerful, fossil fuel starved entities such as China, India, Germany and the United States are wary of the idea of placing their future transport strategy and economic stability in the hands of less than a dozen countries in the Middle East and Asia. Energy source diversification, ensuring supply and decreasing dependence on OPEC oil are all short term goals. Natural gas in the short term may be the answer. However, the geopolitics of natural gas has only become more complicated. As opposed to oil, where OECD countries are beginning to decrease their demand, natural gas demand in non-OECD and OECD is growing by about 2.9% a year nearly twice that of coal and oil. Non-OECD consumption is growing at three times as fast as OECD countries.

Demand is growing for multiple reasons: it is cleaner and inexpensive, it diversifies a country's energy source, it reduces OPEC oil dependency in the production of a country's electricity and industrialization, it can be used to power cars and is much more abundant than oil. These are only some of the benefits taken into account by a nation's energy plan.

Natural gas exporters have the relative advantage to use their resource dominance to influence diplomatic or financial quarrels in their favor. For instance, in 2006 and 2009 Russia, through state gas monopoly GAZPROM, cut natural gas supply to the Ukraine and much of Europe over a pricing battle leaving millions in the cold. During its war with Georgia, Russia doubled prices in order to pressure Georgian leaders. These are two significant examples of possible future norms.

In response, initiatives to find renewable energy alternatives are on the rise and Israel is a major partner in their development and progress. Israeli companies have designed some of the most efficient solar panels on the globe. This and the launch of the first-ever electric car network are just two examples of Israel's commitment to the future of energy diversification and conservation. Regardless of these worldwide efforts, the U.S. Department of Energy still predicts that petroleum and natural gas will continue to satisfy most of the demand for energy out to 2030. In a world of globalized politics, non-resource abundant countries will be shifted to the background while energy suppliers will be able to shape and maneuver their own diplomatic and economic futures. Accepting this fact- the question is: can the discovery of copious natural gas resources off of Israel's shores boost Israel's diplomatic and geopolitical rank?

Two Major Focal Points

In order to answer this question there are two major issues that must be addressed: first, will natural gas compete for a more important role in the future of global energy consumption, and as a result, will industrialized countries' energy strategies emphasize natural gas over oil? If in fact natural gas will play a more dominant role, then the second and more important question is to ask and analyze is how Israel can capitalize diplomatically and politically due to its new status as a potential natural gas exporter?

Background and Key Players

Natural gas constituted 47% of the Middle East's primary energy consumption in 2009. Demand is expected to rise due to the clean burning nature of this fossil fuel coupled with its flexibility in use and transport.

Israel- On December 29, 2010, Houston-based Noble Energy announced a "significant natural gas discovery" in the Leviathan offshore license area eighty miles off the northern Israeli port of Haifa. According to the company, recent measurements confirmed initial estimates for the field of 16 Tcf (trillion cubic feet) of gas, making it the world's largest deepwater gas discovery in ten years and increasing Israel's total natural gas reserves to as much as 26 Tcf. Although the discovery adds less than 0.4 percent to the world's proven gas reserves, it is a significant boost for Israel's economy -- indeed, exploiting the field and other possible finds in the Eastern Mediterranean could dramatically change the economic and diplomatic futures of Israel and its neighbors.

If the riches of the Leviathan field are confirmed, production could begin by 2016. In that scenario, Israel could eventually become a net natural gas exporter. Using natural gas from its own fields would save Israel \$4 billion in imports annually while

its exports would boost gross national product. Further research in the Levant Basin, according to the U.S. Geological Survey, estimates that there could even be upwards of "50 to 100 Tcf of gas in Israel's territorial waters" putting Israel somewhere between Egypt and Indonesia, and that's a conservative estimate, made by Pindyck Professor at MIT's Sloan School of Management. Possible customers could span Europe to two of the largest growing natural gas consumers- India and China by way of LNG. Only further drilling and testing however, will determine if the potential is mild or astronomical.

Russia- As one of the top three major players in global energy and with the largest proven natural gas reserve standing at 1,680 Tcf, Russia has regained a majority of its diplomatic power that it lost after the Cold War. It provides nearly 25% of all gas to Europe; Germany alone receives 39 % of its natural gas from Russia.

Europe Beholden-

If economics alone were to determine gas exports, more than half of the total European demand after 2020 would be provided by Russian suppliers. Already, policy makers in the European Union are debating the ramifications of depending on Russia for about one-quarter of its supply

According to German newspaper, *Deutsche Welle*, "Although the EU wants to diversify its energy supplies, its reliance on Russian gas is likely to become further entrenched with the building of two multi-billion euro gas pipelines, which will bypass Ukraine."

Non-OECD Countries- Natural gas consumption in non-OECD countries grows approximately three times as fast as consumption in OECD countries, with increases averaging 1.9 %per year for non-OECD countries and 0.6% per year for OECD countries from 2007 to 2035. As a result, non-OECD countries account for 78%of the total world increment in natural gas consumption over the projection period, and the non-OECD share of total world natural gas consumption increases from 50% in 2007 to 59%in 2035.

India- India's natural gas appetite has grown from .6tcf in 1995 to between 1.2-1.6tcf estimates for 2015 and will have to import one third of its projected needs. As part of India's future energy plan heads of state have been meeting with energy ministers from many power producing nations such as China, Iran, Central Asian Republics and Russia in order to form diplomatic, stable ties.

With hundreds of millions of its citizens facing energy poverty, India urgently needs reliable natural gas suppliers. One option is to join the Iran-Pakistan Pipeline - a project aimed at connecting

Pakistan to Iran's South Pars field by 2014. Should India decide to extend the pipeline, it will become beholden to Iranian gas for decades to come, to the detriment of Western efforts to weaken Iran economically. India is searching out future partners to help sustain its energy demands. Israel will have the capability, using LNG, to fulfill those needs and deter Iranian entanglement (explained in detail below).

Turkey-Turkey is the land bridge connecting pipelines of natural gas from Iran, Iraq, the Caucasus and Central Asia to European markets. Their role as a transporter holds great economic benefits for the country. Israel now threatens this transport monopoly.

Egypt-

In relation to Israel and the Middle East, Egypt is an important exporter. It has reserves of 58.5tcf and Egyptian pipeline exports travel through the Arab Gas Pipeline (AGP) that provides gas to Lebanon, Jordan, Israel and Syria with further additions being considered. LNG exporters go to Europe, Japan, India and South Korea. Israel will become a competitor with Egypt when it begins to export to Europe.

Due to this fact- a twenty year import gas deal was signed with Egypt even after the discovery of Tamar and Leviathan. The main reasons are to maintain economic relations with Egypt and because of unreliable estimates of when Tamar and Leviathan will become active.

Iran-Iran's natural gas reserves stand at 1,045 Tcf, second only to Russia. However, they are highly undeveloped and only produce 4.1tcf a year. Nevertheless, Iran is expected to double its production to nearly 8tcf by 2015 further tightening their grip on global energy.

USA-The USA currently consumes 22tcf per year, one fifth of the world's total consumption of 108tcf. In addition to being the world's largest natural gas consumer the USA plays a larger diplomatic role.

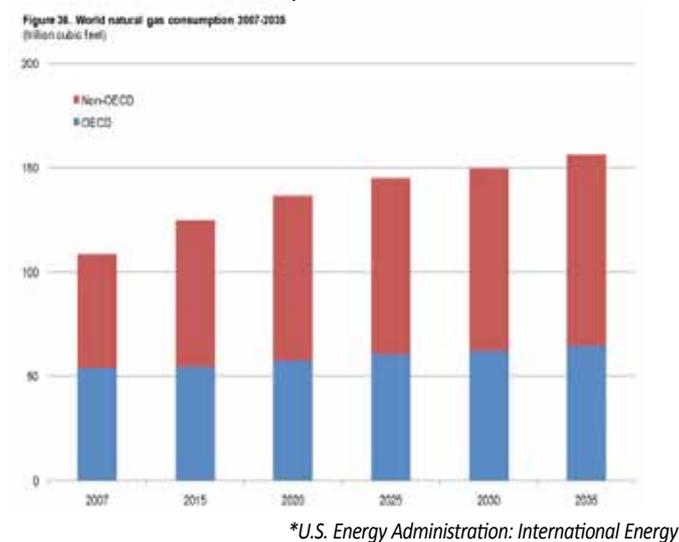
Michael Klare of *The Nation* reported that "White House Officials, who resent restoration of Russia's great-power status and fear that its growing control over the distribution of gas in Eurasia will undercut America's influence". Furthermore, with Iranian development scheduled to double its production to China, India and Europe, U.S. and U.N. sanctions will soon be meaningless. A more in depth look into Israel's new geopolitical ability to assist the USA and its allies is addressed below.

Energy Consumers Moving Away from Oil and Towards Natural Gas

"Over the next four decades, world demand for gas is expected to double, surpassing coal as the world's number two energy source and potentially overtaking oil's share in many large industrialized economies."- The Program on Energy and Sustainable Development (PESD) at Stanford University

Can Israel benefit from being a natural gas producer? For this to be true natural gas must be able to compete for a more important role in the future of global industrialization, and countries must have developed energy plans which attempt to increase the usage of natural gas over oil.

World Natural Gas Consumption 2007-2035



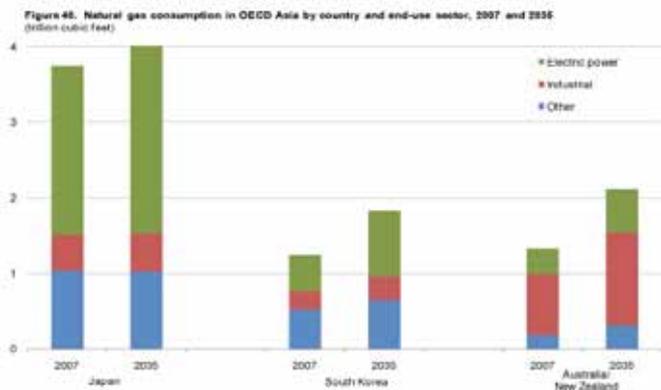
Outlook 2010

The U.S. Energy Administration predicts a 44% rise in natural gas consumption within 20 years.

A sampling of countries taken by the U.S. Energy Information Administration corroborates our theory that natural gas will serve as the main fuel for power plants and the industrial sector replacing most energy producing resources such as coal. Japan has already switched to an all natural gas and nuclear power plan.

South Korea is the world's second-largest importer of liquefied natural gas (LNG) and coal. In terms of expense, coal-derived energy is cheaper than natural gas, although it carries a far heavier carbon weight. While natural gas is slightly more expensive South Korea has announced future development of natural gas-fired power plants and a decrease in coal-fired plants.

Natural gas consumption in OECD Asia, 2007-2035



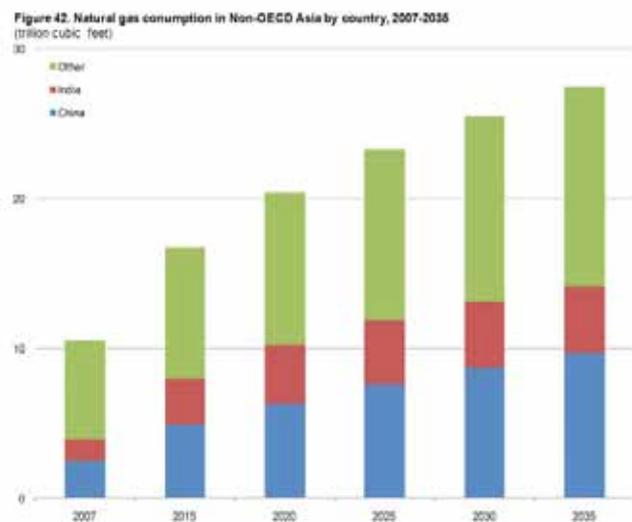
*U.S. Energy Administration: International Energy Outlook 2010

Largest Natural Gas Consumers by 2035-

Currently India and China lead the growth in natural gas demand in non-OECD Asia. Consumption will nearly double in the projection between 2010 and 2035 to 12% in India and 6% in China, adding a combined 10.2 Tcf of natural gas consumption. That is equivalent to half of all of OECD European gas consumption. In Non-OECD Asia- natural gas consumption will increase by a total of 6.7 Tcf from 2007 to 2035. A staggering increase in demand.

China's central government is promoting natural gas as a preferred energy source. It has set an ambitious target of increasing the share of natural gas in its overall energy mix to 10% by 2020

Natural Gas Consumption by Non-OECD Countries, 2007-2035



*U.S. Energy Administration: International Energy Outlook

2010

Israel's Opportunity

The world's natural gas producers will need to increase supplies by almost 50 Tcf between 2007 and 2035. OECD production grows by only 0.4 percent per year, from 40 Tcf to 45 Tcf. OECD production is plateauing just as demand is exponentially growing. Israel's opportunity to capitalize economically and diplomatically is now.

The trend is now hitting America whose goal is to be completely free of OPEC oil by the end of the decade. One initiative is the *Pickens Plan* formulated by billionaire T. Boone Pickens of BP Capital Management whose goal is to start utilizing natural gas as the source of fuel for all U.S. vehicles.

Research has shown beyond a doubt that the future importance of natural gas is extremely important. Governments, including Israel, must shift their strategy to seriously incorporate natural gas futures. Natural gas will be one of central fuels powering industrialization, electricity and even automobiles (*Pickens Plan*).

Geopolitical Implications for Israel

Israel's Leviathan gas field (approx. 16 tcf)—should Israel develop it without bureaucratic obstacles—will make Israel a natural gas energy exporter by 2016 in a region of unstable regimes and monopolized prices (Russia). If further gas fields are found to triple or even quadruple this estimate Israel, assuming current stable conditions and trends, will be a natural gas exporter out to 50 years. It has the chance to reach out to energy starved nations with a stable, reliable source of fuel.

The Journal of Energy Security wrote that "The increased use of natural gas will lead Middle Eastern nations to cooperate in order to develop secure energy markets. Constructive diplomatic exchange in the Middle East will continue to increase due to improved regional energy security, achieved in part through trans-regional pipelines. This diplomatic exchange will significantly contribute to regional integration in the Middle East. Such integration will graduate progressively from energy security to economic cooperation. Strong economic cooperation will encourage political rapprochement ... These domestic markets will cooperate to secure downstream European markets for the export of Middle Eastern natural gas."

Critics such as Brenda Shaffer, a professor of political science at Haifa University, who assert that Israel's gas field is either not large enough or is seated in a danger zone have not analyzed the entire picture.

Future scenarios of the Leviathan gas field-

Europe

- Provide 1tcf a year to Europe and reduce its reliance on Russian gas by 23%
- Improve relations with Greece and Cyprus as an intricate system of LNG facilities and underwater pipelines would be require cooperation between the three partners in order to provide greater Europe with a steady flow of natural gas
 - Cyprus will cease using expensive and polluting fuel oil and diesel to generate electricity.
 - Greece will benefit by replacing oil-fired with lower cost gas-fired power plants on the islands, and it will generate perhaps \$100 million per year in gas transit fees by using its national gas grid to transport gas to the Balkans and the EU. Furthermore, the prospect of closer energy-related commercial ties between Greece and Israel will draw support from the US, a development that may help Greece overcome its debilitating fiscal and economic crisis.
- 31% of Italy's vehicles now run on natural gas. Israeli proximity and a direct line to Greece are preferable to Russia's pipelines through the Black Sea and Turkey
- Shipping gas either by way of LNG or pipeline through Greece could directly assist Germany whose natural gas demand is rising sharply and who will depend on 50% Russian gas.

Oded Eran the Director of the Institute for National Security Studies (INSS) has said that- "... supporters of export to Europe will argue that Israel's economic, cultural and scientific future is anchored in Europe. The natural gas exports should be directed there so they can be leveraged to build a balanced, deep and more established relationship with the European Union."

Asia

- India (Israel's "best friend" according to a recent Indian poll, topping the USA by a 2% margin), currently must agree to the Iran-Pakistan pipeline in order to feed its exponentially growing gas appetite. Israel has the ability to tanker LNG to India in order to help diversify its supply. Israel and India already collaborate on space exploration; an energy alliance would further cement their relationship.
- China, Japan, South Korea - are willing to pay

handsome ransoms for liquefied gas. Currently ties with Japan and China are weak and on the fringe. Assisting them with their starving gas needs could spark a new diplomatic relationship as it did for Russia and China.

- A possible side customer in this direction would be Georgia. For its own self-interest, Georgia needs to cease its reliance on Russian energy.
- In Turkey, a significant percentage of Turkey's electorate remains opposed to Erdogan's policies, and there's an election slated for June. New leadership could lead to renewed relations with Turkey and could be revived through economic cooperation. Israel could utilize Turkey's vast network of pipelines to access Eastern Europe bringing greater profits to Israel and Turkey.

United States of America

The U.S. has a vested interest in weaning its allies off energy partnerships which conflict with its values and ensuring energy supply for itself and its trade partners. With overall demand for energy increasing by 50% and global specific demand for natural gas increasing by 44% the Persian Gulf and Russia will continue to be the epicenter of world energy. This is the reason why two, U.S. super carriers and one French carrier sit in the Arabian Sea. Israel's gas find, while only placing it in the bottom of the top 25 gas producers, geographically sits in the quintessential location in order to provide safe natural gas to many of the United States' strategic partners.

- A continued energy alliance with Egypt. Using existing LNG facilities to export could strengthen ties and further strengthen western alliances.
- Supplementing Russian gas to Europe
- Providing options for India and Japan to wean themselves off of Iranian pipelines
- Delaying a swell in new Iranian profits which will slow their monetary fuel towards their nuclear ambitions and terroristic activities-
 - China is slated to develop Iranian gas fields which allow Iran to avoid international sanctions placed on it by the UN Security Council.

Can New Energy Ties bring about Rapprochement for Israel?

Historic Precedence

The European Coal and Steel Community and the Treaty of Rome (1957) eventually resulting in what we call the European Union effectively ended all wars in Europe. The ECSC was first proposed by French foreign minister Robert Schuman on 9 May 1950 as

a way to prevent further war between France and Germany. It began with an economic and resource based initiative.

Modern Opportunities

There has been significant bilateral rapprochement between nations participating in the Arab Gas Pipeline project, namely between Syria and Lebanon, Syria and Turkey and Israel and its neighbors. In the case of Israeli regional integration, its increasing dependence on natural gas as a power generator has given added incentive to Israel to cooperate with its neighbors, mainly Egypt. The natural gas flowing from Arish, Egypt to Ashkelon, Israel has helped ease tensions between Egypt and Israel. One example stems from Egyptian parliamentary resistance to exporting energy to Israel. Service was interrupted in 2008, but because the investments were already made and the physical infrastructure was ready to be utilized, Egypt's highest administration court overturned this ban, citing good business practices, and the export of natural gas to Israel was resumed in the same year amidst sharp opposition from the parliament. - Mary E. Stonaker is a professional with the Middle East Institute, National University of Singapore and publishes for the Journal of Energy Security

Upkeep and renewed relations in the specific Middle East could result with nations such as Turkey, Egypt and Jordan.

Future Scenarios, Concerns and Questions

Compared to other energy suppliers Israel walks a regional fine line. Terrorism, bureaucracy and financing are some of the hurdles which must be analyzed before a full plan can be adopted. Critics like Professor Shaffer, her critique mentioned above, have exposed possible weaknesses which can halt progress and delay benefits for American allies and the Israeli people.

Government Interference

Israeli red tape and entanglement could slow the project down financially and bureaucratically. For instance it took the Israeli government nearly ¼ of a year to determine tax rates. The Sheshinski committee recommended increasing the state's share of revenue from oil and gas finds to between 52% and 62% from 30%. This percentage does match other projects worldwide but the arguments and time spent has already caused introductory schisms between the private companies and federal government.

For example, Egypt's government has damaged its own gas sector by subsidizing gas powered electricity. The low cost ran up demand to the point where blackouts occurred. **Israel must create a friendly business environment and facilitate solutions**

to routine impediments in order to achieve maximum and timely benefits.

Terrorism and Iran

Open water drilling rigs, shipping fraters and hundreds of employees would be exposed to Hezbollah rockets, some 50km away. With the assistance of Iranian Revolutionary Guards commanders, Hezbollah operates a submarine unit and a navy commando unit that operates Chinese-manufactured speed boats, capable of destroying Israeli targets.

Israel Defense Forces Chief of Staff Lt. Gen. Gabi Ashkenazi stated that Iranian Shehab rockets could hit Israeli rigs within 10-12 minutes. **Clearly the Israel navy will play a future role in any decision. Some in the government propose an Iron Dome Missile Defense system. Also, a joint international force of operating parties might deter international terror actors from harming neutral forces. However, a serious overview by the National Security Council of Israel must deeply analyze and propose possible solutions and scenarios of readiness.**

Cost

With new taxes levied against the private companies of Delek Drilling, Ratio Oil Exploration 1992 LP and Noble Energy costs will be extremely high as deep water pipelines running nearly 150 miles must be constructed. LNG conversion facilities, tankers, etc.. Just the export infrastructure is estimated at \$10 billion. However by starting with CNG, Israel can begin monetizing its offshore reserves within 24 months, generating more than \$1 billion per year in net profits from the sale of 200 Bcf/year. The second phase of shipping 700 Bcf per year of LNG will generate an additional \$4 billion or more in annual net profits.

Israeli governmental facilitation and even financial assistance to expedite production is recommended if Israel wants to start seeing economic profit for its citizens and diplomatic benefits.

Maritime Borders

Both the Leviathan and Tamar fields fall within Israel's exclusive economic zone (EEZ), as do other license areas even more distant from its coast. Strict adherence to UN Convention on the Law of the Sea is taken into consideration and demarcations have been signed with Cyprus but problems have already arisen.

In the Palestinian arena, another gas field was discovered in 2000 off the coast of Gaza. Under former prime minister Ariel Sharon, however, Israel insisted that any gas in the sea off Gaza had to come ashore on Israeli territory, pending a full peace agreement.

Turkey has placed additional pressure on the Cyprus government by declaring the island's maritime agreement with Israel null and void. Ankara objects to any such agreement being signed until a solution is reached regarding future division of the island.

Hezbollah promises to defend any Lebanese maritime border and resources which it believes is being stolen by Israel from the Lebanese people. Lebanon is in the process of appealing for the borders to be redrawn and this conflict could serve as a small spark that could legitimize a new war with Israel by Hezbollah.

Recruiting the United Nations to officially demarcate the sea borders could resolve this conflict.

Transportation

In order to ship LNG to India, China, Japan or South Korea Israel must ship its gas to Eilat, process it into LNG and then traverse the southern Red Sea, Gulf of Aden and then Arabian Sea around the banks of Yemen and Sudan. While U.S. and European carriers guard the waters this is a major risk as terrorism anti-west sentiment has spiked in Yemen. **These ships would require escorts and emergency back-up plans in case of attack. Again the National Security Council must review this option.**

Immediate Domestic Benefits

The entire production will significantly impact the entire nation. Jobs for hundreds of engineers and workers will be created to build sea-to-land gas lines and a 500 kilometer network for domestic distribution. The gas will boost Israel's economic growth, it will lower Israel's energy costs by \$1 billion annually and it will be environmentally friendlier than coal.

Questions for discussion

1. How does Israel safely extract and transport gas internationally, in light of terror threats?
2. What are the geopolitical impacts are there on existing relationships?
3. Can there be a positive geopolitical impact with unfriendly states such as Egypt, Turkey or others?
4. How can Israel avoid normal bureaucratic delays and facilitate the private companies of Delek and Noble Gas to effectively start pumping and distributing?
5. Is it preferable to adopt a diplomatic strategy versus an economic strategy which will lead future decisions in order to foster better relations globally?
6. Will this new discovery also be able to assist American allies thereby positively impacting American strategy abroad? Should this idea of "American benefit" factor into future strategy?

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