

PART ONE
THE ENERGY REFORM AND TRANSFORMATION
OF PUBLIC LAW

THE US ENERGY REVOLUTION: ENERGY DOMINANCE IN THE NORTH AMERICAN REGION

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SUMMARY: I. *Introduction*. II. *Energy in the US presidential strategy*. III. *The National Security Strategy of the Donald Trump Administration*. IV. *Energy as the basis for economic power*. V. *The Joe Biden administration and the global energy crisis (2022)*. VI. *Conclusions*. VII. *Bibliography*.

I. INTRODUCTION

The scarcity of strategic natural resources has shaped the national security and defense policy of the United States of America (USA) since World War II.¹ Guaranteeing access to natural and mineral resources regarded as strategic has led the US government to include them as part of its strategic and defense projects since the first half of the 20th century. This goal would be embodied in its oil policy, its National Security Strategies, and its global foreign policy. Oil policy has been considered a matter of national security, basically because of the country's high dependence on foreign oil, and has contributed to setting US military policy,² because it compromises a number of aspects essential to the preservation and survival of the American way of life. For six decades, this issue has been present in determining US strategic security policy and military policy, and since 2001, it has been contemplated in the design of its energy security. Underlying this last point is US exploitation of non-conventional resources (lutite) as a response to its structural dependence on foreign oil supplies. For this reason, we maintain that the US hegemonic project seeks

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¹ Estenssoro, Fernando, "Escasez de recursos naturales y crisis ambiental como amenazas estratégicas a la seguridad de Estados Unidos. Las implicancias para América Latina en el siglo XXI", *Revista Estudios Avanzados*, Santiago de Chile, January 28, 2018, p. 170.

² Klare, Michael T., *Guerras por los recursos: el futuro escenario del conflicto global*, Barcelona, Urano, 2003, p. 28.

to reposition itself internationally using non-conventional fuels and management of technologies and investments in renewable and low-carbon energy.

The design of this international geostrategy incorporates Mexico and Canada by means of the North America project. Mexico's Energy Reform would assist in this project by maximizing the development of its energy potential, including the production of non-conventional³ and conventional fuels, as well as renewable energies. Non-conventional fuels⁴ deserve special attention as their potential was expected to be instrumental in explaining the Energy Reform (2013): to turn Mexico into a place to market surplus production from the USA (shale gas and tight oil derived from shale) as well as derivatives and petrochemical products. In 2020, this strategy would place Mexico as a producer of non-conventional fuel through the development projects of US companies. Even though Canada is part of this geostrategy, our interest centers on Mexico since the former has been widely studied and has a different structure and integration dynamics.

This paper gives priority to geopolitics⁵ as a theoretical approach by linking geography to political and geostrategic aspects⁶ of the US government. Although we also use the historical and descriptive research methods

³ Specialized literature considered following developments non-conventional: deep water exploration and production, some heavy crudes (orimulsion), Arctic oil, oil sands and shales and lutites. According to the International Energy Agency (IEA), non-conventional ones are also: liquid coal and natural gas; extra heavy oil; tar sands or bituminous sands; light tight oil and kerogen oil shale. See: Marzo, Mariano, "Petróleos no convencionales: recursos, previsiones de producción e impacto geopolítico de su desarrollo", *Informe estratégico de la fundación para la sostenibilidad energética y ambiental*, Fundación para la Sostenibilidad Energética y Ambiental, Barcelona, 2014, pp. 4-6, available at: http://www.funseam.com/phocadownload/petroleos_nc_mariano_marzo.pdf.

⁴ As for hydrocarbons, the conventional ones are those found in a porous and permeable rock from which they can flow to the surface when drilling the reservoir.

⁵ Geopolitics is the study of the effect of geography (human and physical) on international politics and international relations. It is a method of studying foreign policy to understand, explain and predict international political behavior through geographic variables. It is a science that deals with the science of spatial causality of political events and the upcoming or future effects thereof. It draws on other fields, such as history, international relations, political geography, political science, and sociology. Geopolitics focuses on political power linked to geographic space, particularly resources and land territory in correlation with diplomatic history. Academically, geopolitics analyzes history and social sciences from the perspective of geography and politics.

⁶ Academics and geopolitical theoreticians do not agree on a standard definition for geostrategy. Most definitions, however, combine strategic considerations with geopolitical factors. Geostrategy would involve comprehensive planning, allocating the means to reach national goals or secure assets of military or political import. Initially, the concept was almost exclusively tied to the military field. Today, in contrast, the term geostrategic has be-

to build the analysis, we rely on official sources of information from the USA and Mexico, as well as publications from US think tanks and news from Mexican and US media.

II. ENERGY IN THE US PRESIDENTIAL STRATEGY

In this article, we will focus on non-conventional resource development based on US Energy Agency (EIA) statistics. The US energy revolution, as it is known, refers to changes in the energy scene, which have been brought about by technological developments in the exploitation of hydrocarbons considered non-conventional.⁷ These resources were known since the early 20th century, but the technology to extract them did not yet exist. At the initiative of the US government in the early 1970s, private operators, the US Department of Energy (DOE) and the Gas Research Institute joined forces to develop technologies that would allow its exploitation. Due to these technological developments, the combined use of horizontal drilling and hydraulic fracturing made it possible to produce this fuel, which led to an increase in the national production parameters of non-conventional hydrocarbons (oil and natural gas).

With these new resources, dependence on foreign sources has gradually gone from being an issue of “national security” to a matter of energy security and has allowed the country to reach “self-sufficiency” and eventually become a net natural gas and oil exporter in 2017 and 2020, respectively (hydrocarbon exports are exceeding imports). However, this good news comes along with the adverse environmental impact involved in its exploitation in the USA.

1. *A change of paradigm?*

The USA already knew there were large amounts of resources (particularly shale) throughout its territory although its production was not eco-

come more generalized, referring to any rational series of actions aimed at achieving an end through the economic and less risky use of specific means available.

⁷ The production of non-conventional hydrocarbons differs from that of conventional fuels since the geological features of non-conventional fuels have very low levels of porosity and permeability because the fluids have a density that approaches or even exceeds that of water. Therefore, they cannot be produced, transported, or refined by conventional methods. The “difficulty” in their extraction is why, to date, the exploitation of hydrocarbons has focused almost exclusively on conventional hydrocarbons. In a conventional reservoir, hydrocarbons are stored in the pores, i.e., in the open spaces of the rock.

nomically viable. Technological developments have enabled its exploitation and changed the energy scene marked by a shortage of resources, as seen in the production decline curve of many oil and gas producing countries, which have already exceeded their peak oil. Having the technology that allows the exploitation of very large amounts of shale, now called technically recoverable resources (or prospective resources in Mexico), forms the basis for a new paradigm that purports to have overcome the shortage,⁸ which has led to new policies and actions. In the case of the USA and some other countries, this technology makes it possible to extract residual oil from the exploitation of conventional fossils, whose average recovery rate did not exceed 35%.⁹ Given this boom, it is fitting to point out that relying on “prospective or technically recoverable resources”, and not proven reserves, only guarantees about a 10% probability of converting them during production.

This change of perspective is dominated by the point of view of economists, who do not consider a production peak significant since the production curve can be replicated or extended with investments and technology. This ends up minimizing the importance of geology, as well as the decline and depletion of conventional reserves, by claiming that they are the same as non-conventional resources. The difference is enormous, above all because of the environmental and social costs, which are not internalized in the total.¹⁰

The monumental figures of non-conventional resources in trillions of barrels, quadrillions of British thermal units (BTUs), or in barrels of crude oil equivalent (BCOE) and those denominated technically recoverable, also have a political content, which is useful for promoting the adoption of fracking technology for exploration and exploitation around the world.¹¹ The U.S. Energy Information Administration (EIA) has contributed to this by magnifying its estimates. For instance, a study on the world's shale gas resources in 48 basins and 32 countries estimated an amount of 5,760 trillion cubic feet, a figure which has been used to promote investments and frack-

⁸ Maugeri, Leonardo, *Oil: The Next Revolution, The Unprecedented Upsurge of Oil Production Capacity and What It Means for the World*, Geopolitics of Energy Project, Harvard Kennedy School, June 2012, p. 16.

⁹ *Ibidem*, p. 13.

¹⁰ To illustrate the difference in resources, we can use the analogy that the rats have run out of cornflakes (conventional fuels) and have moved on to the cereal box (non-conventional fuels).

¹¹ In the USA, shale oil reserves have been overestimated by at least 100% and, between 400-500% by operators, according to actual production data presented in various states.

ing technology to thus encourage its development in other countries. In this study, Mexico was ranked 4th on the list of countries with this type of resource. It later dropped to 6th in gas and 8th in shale oil, which has not yet reached the category of proven reserves but is already required for investment projects.¹²

The USA is producing and consuming at record levels. Natural gas production has significantly increased by 50%¹³ over the past 10 years. The energy revolution is also boosting employment and the Gross National Product (GNP) by exploiting these resources. In the foreign market, it intends to turn the USA into an important gas exporter, selling it either through its pipeline or as Liquefied Natural Gas (LNG). It has placed its highest expectations on natural gas in the short- and long-term (2050). In the short-term, it expects to produce 5 mmb/d (natural gas liquids production) by 2023, which will stand at 5.5 mmb/d in 2050, under the reference scenario.¹⁴ The USA aims to become the third largest exporter by 2020 along with Qatar and Australia.

The growth in gas production has led to its being exported as LNG since February 2016, and therefore more regasification plants are being built and planned under the supervision of the US Federal Energy Regulatory Commission. More permits are required to build new liquified natural gas plants.

Despite this bonanza, not all US geologists are convinced of its enormous potential, as is the case with Arthur Berman¹⁵ and David Hughes. Others believe that the official DOE (EIA) figures are overestimated because of the methodologies with which they are calculated. The production of non-conventional fossil fuels may not be possible due to actual production

¹² Kuuskraa, Vello A. *et al.*, *EIA/ARI World Shale Gas and Shale Oil. Resource Assessment*, Prepared for U.S. Department of Energy, U.S. Energy Information Administration, EIA 2013 Energy Conference, Washington, D. C., June 17, 2013, p. 2.

¹³ Ladislav, Sara *et al.*, "U.S. Natural Gas in the Global Economy", *CSIS Center for Strategic and International Studies*, Washington, November 1, 2017, p. 1, available at: www.csis.org.

¹⁴ U.S. Energy Information Administration, *Annual Energy Outlook 2018 with Projections to 2050*, February 6, 2018, p. 43, available at: www.eia.gov/aeo.

¹⁵ Berman has published more than 20 articles and reports on shale gas plays, including the Barnett, Haynesville, Fayetteville, Marcellus, Bakken, and Eagle Ford lites. Over the past four years, he has made more than 50 presentations to energy industry boards of directors and executives, committees, financial analyst conferences, oil and gas association meetings, and engineering and geological society meetings. He worked at Amoco Corporation (now BP p.l.c.) for 20 years and has been an independent consulting geologist for 17 years. He holds an M.S. (Geology) from the Colorado School of Mines and a B.A. (History) from Amherst College, available at: <http://www.artberman.com/about-art/>.

costs and other challenges.¹⁶ Scientist David Hughes of the Post Carbon Institute in California, believes that:

Over the short term, U.S. production of both shale gas and tight oil is projected to be robust-but a thorough review of production data from the major plays indicates that this will not be sustainable in the long term. These findings have clear implications for medium and long term supply, and hence current domestic and foreign policy discussions, which generally assume decades of U.S. oil and gas abundance.¹⁷

The underlying assumptions of the resource estimates are also questioned.¹⁸ In 2000, approximately 23,000 hydraulically fractured wells produced 102,000 barrels per day (b/d) of oil in the USA, which represents less than 2% of the national total. By 2015, the number of wells that used fracking grew to an estimated 300,000 and well production to over 4.3 million b/d, which is only 50% of total US oil production. However, a substantial number of wells are required to maintain production levels, and this would require permanent expansion and high drilling rates for tight oil (shale and lutite) production wells.

According to David Hughes, virtually all the producing regions in the USA have reached their peak production, except for the Permian Basin. The Organization of Petroleum Exporting Countries (OPEC) also considers certain limits. The limit for tight oil, which is the main contribution to the oil supply outside OPEC, is estimated for 2025, when it will reach its peak production. Global tight oil production will grow by 4.8 mmb/d be-

¹⁶ Hughes, David, *Drill Baby Drill. Can Unconventional Fuels Usher in a New Era of Energy Abundance?*, Santa Rosa California, Post Carbon Institute, February 2013, p. ii.

¹⁷ Hughes, David J., *Drilling Deeper. A Reality Check on U.S. Government Forecasts for a Lasting Tight Oil & Shale Gas Boom*, Santa Rosa, California, September 17, 2015, available at: <http://www.postcarbon.org/tight-oil-reality-check/>.

¹⁸ These assumptions might not be considering the short life (of the wells) and of the fact that they used as the basis for the official estimates that some specialists find questionable. Admittedly, the EIA's track record in estimating resources and projecting production and futures prices has historically been poor. Granted, forecasting this type of thing is very difficult, especially as it relates to changes concerning economic and technological realities. But the root of fundamental aspects like the geology of these works and changes are not very clear from one year to the next. However, there are major differences between benchmark cases in the AEO2015 and AEO2014 reports. With the exception of Eagle Ford, the EIA's projections for major tight oil plays have significantly shifted upward or downward. (Summarized by the author). Hughes, David J., *Shale Gas Reality Check. Revisiting the U.S. Department of Energy play-by-play Forecast through 2040 From Annual Energy Outlook 2015*, California, Post Carbon Institute, 2015, p. 20.

tween 2016 and 2022, mostly in the USA, before declining around 2030.¹⁹ In the estimates of the most recent US Department of Energy publication, the maximum production volume will be between 7/8 mmb/d and will take place in 2040 to then begin decreasing slightly in 2050.²⁰

Even when the outlook in the USA is extremely optimistic, it should not be forgotten that this is a non-renewable resource with a production curve limited to 4 or 5 years, a fact that should be taken into account in light of the large investments in associated infrastructure.

2. *Think tank project*

The most important Washington “think tanks” are involved in designing the geopolitics of US shale,²¹ as are numerous government agencies. On the US government side, the leadership of the geostrategy is in the hands of the Global Shale Gas Initiative (GSGI), launched in April 2010, with the participation of the Department of State (DOS) which is the leading agency in promoting it internationally along with the other government partners, such as the Agency for International Development (USAID); the Department of the Interior (DOI); the US Geological Survey (USGS); the DOI Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE); the Department of Commerce; the Commercial Law Development Program (CLDP); the Environmental Protection Agency (EPA) and the Department of Energy.

In the case of the Department of Defense (DOD), leaked documents from Washington think tanks have raised security concerns regarding geographical supply and demand points for the resource, i.e., logistics while also exhibiting the evolution of proposals for early developments in shale gas. Once believed to offer a certain “leeway”, it is now accepted that these resources strengthen the economy and will serve to retain power before rival powers.

In order to encourage renewable energies, the USA promotes them by granting tax credits for investment and their production in its territory. In general, the changes in energy industries and markets are considered

¹⁹ Organization of Petroleum Exporting Countries, *2017 World Oil Outlook 2040*, Vienna, October 2017, p. 18.

²⁰ U.S. Energy Information Administration, *Annual Energy Outlook 2018 with Projections...*, *op. cit.*, p. 45.

²¹ For instance: Manning, Robert A., *The Shale Revolution and the New Geopolitics of Energy*, Washington, Atlantic Council, 2014.

transcendental factors capable of impacting US security and national interests.²²

In the scope of domestic policy, the Obama administration scored success in estimating its attaining “energy independence” by 2028, a date widely surpassed. Even in 2013 and 2014, the gap between consumption and production accounted for 37 and 32%, respectively, in terms of import dependence. This did not ensure the extent of oil autarky,²³ but as production has increased, the date of its occurrence was brought forward to 2016 and 2022, according to the 2018 Department of Energy report. The goal of narrowing the dependency gap was a political milestone in the Obama administration,²⁴ and the Trump administration later used it to estimate that the exports would surpass imports in 2022.

With regard to crude oil production in the baseline scenario, maximum total crude production (including non-conventional oil) was projected for 2020, which corresponds to the minimum level of imports for the USA.²⁵ However, these figures have also changed over time. A clear indication of the limits of the non-conventional resources is that, according to international reports, humankind will return to conventional OPEC hydrocarbon production between 2030 and 2040.

3. 2010 and 2015 National Security Strategies

National Security Strategies (NSSs) have been praised and defended by many US presidents at times of uncertainty in the international oil scenario and market. The Executive Branch is required to prepare one when requested to do so by Congress for the purpose of making government body or agency actions compatible with the guidelines set forth by the White House.

²² Pascual, Carlos, *The New Geopolitics of Energy*, New York, Columbia University (SIPA), 2015, p. 6.

²³ The change in the energy scene shows an upward trend in tight oil and shale gas production with a maximum output in 2020 set as the baseline scenario. The counterpoint of this curve corresponds to the trend of imports declining over time, reaching a minimum around 2020.

²⁴ Vargas, Rosío, “El Shale gas, un proyecto geopolítico de cobertura mundial”, *Revista Petroquímex*, Year 12, No. 78, November-December 2015, pp. 16-22.

²⁵ DOE/EIA, “U.S. Dry Shale Gas Production”, available at: http://www.eia.gov/energy_in_brief/article/shale_in_the_united_states.cfm, and “U.S: Tight Oil Production Selected Plays”, available at: http://www.eia.gov/energy_in_brief/article/shale_in_the_united_states.cfm.

On analyzing the 2010 NSS, it is possible to find elements of continuity with regard to the sections in the 2002 and 2006 strategies alluding to the pursuit of energy security, due to the importance of oil and the global situation. The 2010 and 2015 NSSs place particular emphasis on the issue of homeland security—which is also compared to national security—and on the greater importance given to the resources of diplomacy over military power.²⁶

The 2010 NSS calls for the adoption of a “more pragmatic and shared leadership” that seeks greater global stability, the strengthening of the international system, the recognition of new non-State actors on the international scene and the integration of the concepts of national security and homeland security. References to energy security in Chapter I, entitled “Overview of National Security Strategy”, state that one of the keys to integrating domestic security and national security is the need to develop “new sources of energy [that] will reduce our dependence on foreign oil”.²⁷ This mention in the first pages of the document demonstrates the importance that the energy policy merits as a matter of national security for the USA.

Likewise, it validates the focus on developing resources other than fossil fuels by highlighting the priority of “transform[ing] the way that we use” and the need for “diversifying supplies, investing in innovation and deploying clean energy technologies”.²⁸

As a net importer, the USA seeks security and the free flow of energy resources on a global scale. The justification for this policy is closely related to reducing the country’s vulnerability to possible interruptions in the supply of energy resources, especially oil, as it constitutes a situation that “will continue to undermine [US] security and prosperity”.²⁹

Considering regions and countries, the role that the NSS accords to the Middle East in terms of ensuring secure access to energy in this region is central, albeit not as much for the USA as for the global market.

As far as the Western hemisphere is concerned, the role the 2010 NSS gives to the Americas is important to achieving the energy security objectives. To this end, the USA would leverage geographic proximity, market integration and energy interdependence in its implementation.

²⁶ Arteaga, Félix, *La estrategia de seguridad nacional del presidente Obama*, Real Instituto Elcano, 2010, available at: http://www.realinstitutoelcano.org/wps/portal/riecano_es/contenido?WCM_GLOBAL_CONTEXT=/elcano/elcano_es/zonas_es/eeuu-dialogo+trasatlantico/ari104-2010.

²⁷ The White House, *National Security Strategy*, Washington, The White House, 2010, p. 2, available at: <http://nssarchive.us/NSSR/2010.pdf>.

²⁸ *Ibidem*, p. 10.

²⁹ *Ibidem*, p. 30.

Moving towards a new industrial revolution focused on developing clean energy is offered as a solution throughout the document, thus showing President Obama's intention to use renewable energy to solve the problem of energy dependence by increasing investment in renewable energy research and development. This would serve the dual purpose of positioning the USA as an international leader while at the same time contributing to a reduction in fossil fuel consumption, demonstrating a different approach to achieve this goal than historically has been the case.

The self-perception that the country has improved its global leadership was embodied in the NSS prepared by the White House and published in February 2015,³⁰ a document in which the USA acknowledges its "indispensable leadership" on a global level. This new position comes from the validation of an energy potential that has made the USA the world leader in oil and gas production. The NSS asserts that the country's resources have no limits thanks to technology, and the latter is seen as a tool to change borders. With this boost, energy security is therefore redrawn under a global and long-term perspective; it is not limited to non-conventional resources since it also incorporates renewable energies and, in general, low-carbon fuels, as seen in the NSS:

Greater energy security and independence within the Americas is central to these efforts. We will also stay engaged with global suppliers and our partners to reduce the potential for energy-related conflict in places like the Arctic and Asia. Our energy security will be further enhanced by living up to commitments made in the Rome Declaration and through our all-of-the-above energy strategy for a low-carbon world. We will continue to develop American fossil resources while becoming a more efficient country that develops cleaner, alternative fuels and vehicles. We are demonstrating that America can and will lead the global economy while reducing our emissions.³¹

The 2015 NSS is a document that follows practically the same structure as the previous one (2010) with the same sections on security, prosperity, values, and international order. The introduction points to the relationship between arresting climate change and enhancing US energy security. The breaking point can be seen in the reference to US production, championing

³⁰ The White House, "National Security Strategy", *op. cit.*, June 2015, available at: <http://www.ehnewoherald.com/noticias/estados-unidos/article9474065.html>; http://fride.org/descarga/PB194_The_2015_US_National_Security_Strategy.pdf, and https://www.whitehouse.gov/sites/default/files/docs/2015_national_security_strategy.pdf.

³¹ *Ibidem*, p. 16.

the status the USA has gained in the international oil market where it boasts being the “world leader in oil and gas production”.³²

The NSS includes the collective needs of the USA, its allies, and its trading partners, which responds to an expanded approach to energy security, with a view to ensuring secure and reliable access to energy resources on a global scale. It is a common strategy among its allies to defend the free flow of energy and to encourage and reinforce cooperation and market expansion. This enhanced understanding of energy security is a strategy of energy consuming countries, especially those that are part of the International Energy Agency (IEA).

The 2015 NSS emphasizes the impact the so-called US “energy revolution” has had, insofar as it has already led the country to position itself prominently in the international oil market, given its levels of production and demand. This situation had led to a change of focus in the country’s oil policy, by shifting the discourse of “American exceptionalism” to the energy sector.

4. *The Regional Strategy: North America*

As the abundance of non-conventional fossil fuels grows, the concept of energy security for the region changes, according to Carlos Pascual:³³ the US relies on North American supply. In the US strategy, the integration of the North American region is meant to ensure regional energy security by incorporating its neighbors. However, its approach to regional energy security is biased in that it draws on only three components of energy security: availability, reliability, and low economic cost. This definition overlooks the environmental factor for which renewable energies are intended to compensate. The argument is that with this “revolution” we are moving towards a more sustainable planet.

Given the devastating effects of fracking production, we believe that there is no such compensation. It is clear, however, that it ignores all of the non-internalized environmental effects³⁴ and costs nor does it question the greater

³² The White House, “National Security Strategy”, Washington D. C., The White House, 2015, p. 16, available at: <http://nssarchive.us/wp-content/uploads/2015/02/2015.pdf>.

³³ Pascual, Carlos, *The New Geopolitics...*, *op. cit.*, p. 6. Mr. Carlos Pascual is a former US Ambassador to Mexico. He was also in charge of international energy affairs during Hillary Clinton’s tenure at the State Department. He is currently Vice President of the IHS-CERA consulting firm with offices in Mexico City, available at: https://www.energypolicy.columbia.edu/sites/default/files/The%20New%20Geopolitics%20of%20Energy_September%202015.pdf.

³⁴ For more about these properties and effects, see: Vargas, Rosío, *El papel de México en la integración y la seguridad energética de Norteamérica*, Mexico, CISAN-UNAM, 2014, *in extenso*.

amount of energy needed to obtain a barrel of non-conventional oil and gas (energy return on investment or EROI), or other social effects related to rights of way and property rights of indigenous communities.

In the case of Mexico, energy security is not ensured with fracking either because it does not yet have proven reserves, but only prospective resources. Even so, the production of non-conventional fuels in Mexico would start in 2020. According to the DOE, “[a]fter 2020, U.S. [natural gas] pipeline exports to Mexico gradually decrease, reflecting the initiation of new oil and natural gas production projects in Mexico and the increased use of renewables for electricity generation”.³⁵ This will legitimize the benefits of the energy reform that will attribute the restitution of collapsed levels of production and reserves to foreign investment.

Official information from Mexico does not correspond to estimates made by the DOE in the USA. The official Mexican statement endorses the use of fracking to the extent of stating that “Mexico has gas that PEMEX will not exploit,” at least not in the short-term, but its production has not yet arrived, and resources have not progressed towards the criterion of proven reserve. However, it should be noted that since 2015, production with fracking has already been underway in Sierra Norte de Puebla (233 wells in operation), not necessarily for lutite, but for marginal wells. There are 47 wells in Coahuila, 182 in Nuevo Leon, 13 in Tabasco, 100 in Tamaulipas and 349 in Veracruz. San Luis Potosi has 20 municipalities with concessions, from where water is expected to come to feed the Monterrey VI aqueduct that would then be used for fracking. The companies that drill with this technique are Halliburton, B. J. Service, Sowell Schlumberger, Baker Hughes and Diavaz. Exploitation could be higher, if we consider the one carried out in Chicontepec under the “Tertiary Gulf Project” where 1,323 drillings were carried out as multidirectional drilling, which is actually fracking.³⁶

In the short term, the predominant trend for Mexico is to import natural gas (88% of its national consumption in 2018), refined products (77.3% of gasoline for national consumption), and petrochemicals (70% for national consumption), as well as even “buying” 100,000 barrels of oil (light petroleum products from fracking). Consequently, we are heading towards a structural dependence on fuels, especially natural gas, because of its prevalence.

³⁵ U.S., DOE, EIA, *Annual Energy Outlook 2016, Early Release: Annotated Summary of Two Cases*, May 17, 2016, p. 55, available at: www.eia.gov.

³⁶ Olvera, Al-Dabi, “A México se le divide como un pastel. Las amenazas de fracking de empresas de EE. UU.”, R. T., July 9, 2016, available at: <https://actualidad.rt.com/actualidad/212699-mexico-fracking-gas-petroleo-eeuu#V4Gf3eq6FIM.gmail>.

5. *The participation of Canada and Mexico*

The energy revolution has also influenced the design of regional power originating in “North America”. In this case, the region’s participation lies in developing the resource potential that will make it the next big energy player in the world.

Here, the proposal is based on the fact that North America has the potential to surpass the Middle East as the world’s energy supplier. It consists of making the North American region a major global energy player by maximizing the oil production of US’s neighboring countries to achieve the production goal of 90 trillion BTUs by 2017.³⁷ Canada would participate with 6 mmb/d and Mexico would be able to revert its declining production trend through the Energy Reform, with which it could reach a production platform of 3.7 mmb/d by 2040.³⁸ This clearly shows the role the Energy Reform will play in achieving the great US project, where although the aim is productive, it goes hand in hand with financial and commercial objectives through oil contracts to be awarded.³⁹ By doing this, North America will gain global pre-eminence as an energy player, allowing the USA to challenge and compete with rival powers of the likes of China and Russia.

US government spokespersons are looking to maximize the benefits of the non-conventional resource boom by encouraging officials to devote time to finding ways to further integrate the energy markets of the three countries. Lifting the ban on US oil exports could help both Canada and Mexico by contributing to the approval for building the infrastructure for cross-border energy transportation. Mexico “benefits” from the same en-

³⁷ DOE/EIA, *Total Energy Supply, Disposition and Price Summary, Reference Case (2011.2040)*, Washington, EIA, 2011, p. 8.

³⁸ DOE/EIA, *International Energy Outlook*, Washington, September 2014, p. 17.

³⁹ According to the Department of Energy, the four new contract models differ from the former entitlement system and differ from each other in their fee and royalty structures. Service contracts are similar to the ones introduced as part of the 2008 energy reform. Under this arrangement, all crude produced is delivered by producers to the State in exchange for cash paid by the Mexican Petroleum Fund. License agreements, on the other hand, allow private producers to take the crude at the wellhead and arrange for it after paying the State. The profit-sharing and production-sharing contracts, as well as licenses, will effectively allow producers to book reserves and reflect the potential value of the oil in their accounts, a particularly attractive incentive for investment in Mexico’s energy sector. It is expected that the different types of contracts will be applied according to the degree of risk associated with specific projects. DOE/EIA, *International...*, *op. cit.*, p. 16.

ergy privileges and arrangements agreements as Canada within the context of the North American Free Trade Agreement (NAFTA).⁴⁰

It intends to go beyond what was agreed upon in NAFTA by capitalizing on investment opportunities availed from non-conventional oil and gas resources, as a result of Mexico's energy reform.⁴¹ It is understood that opening the upstream sector in Mexico will have significant implications in the USA.⁴² Thus, it is possible to see the link between Mexico's contribution to the regional energy supply and the Energy Reform.

Businesspeople see business opportunities in the extensive infrastructure that will have to be built on implementing the energy reform: pipelines, collection and processing infrastructure, export capacity, power generation, and meeting industrial and fuel transportation demands, among others. It is also expected that Mexico will become a shale gas producer by 2020. So, in the context of North America, the strategy would mean a geographical shift of production to maintain production levels,⁴³ which could then go to US refineries. This shows that the model of productive integration Mexico has followed with the US oil industry would not only not change but would tend to intensify while relinquishing its role as an operator in the national oil industry.

More than a couple of years after the energy reform was passed, substantial changes have been made in energy policy design, its institutions and the regulatory framework that will regulate the Mexican market. Along with this, the country is opening to US companies that use fracking, which means that there are winners and losers. In the USA, banks and fracking projects themselves are closely related to financial speculation associated with land. Wall Street spurred the frenzy of shale gas drilling, which led to prices lower than the cost of production and reaped huge profits from the resulting mergers and acquisitions. In Mexico, the winners are the financial consor-

⁴⁰ O'Sullivan, Meghan, "North American Energy Remakes the Geopolitical Landscape: Understanding and Advancing the Phenomenon", *Geopolitics of Energy Project*, Harvard University, Working Paper, May 31, 2014, p. 13.

⁴¹ Medlock III, Kenneth B., "The Land of Opportunity? Policy, Constraints, and Energy Security in North America", Working Paper at the James A. Baker III Institute for Public Policy, Rice University, Texas, June 2, 2014. p. 5.

⁴² *Ibidem*, p. 6.

⁴³ Current projections anticipate that US crude oil will level off and begin to decline around 2020, after rising by 800,000 barrels per day each year until 2016. AEO, Early Release Overview, EIA, 2014, p. 9; at "U.S. will Meet Energy Needs by 2020: Citi Researcher, Ben Geman, "Exxon Chief", cited by O'Sullivan, Meghan, *op. cit.*, p. 2, available at: <https://www.goldmansachs.com/insights/pages/north-american-energy-summit/reports/mos-north-america-energy-remakes-the-geopolitical-landscape.pdf>.

tium affiliated with US shale gas producers and the building of the massive Los Ramones pipeline to import gas to central Mexico (IENOVA and Sempra Energy), Black Rock financial company, to whom Mexican Petroleum (PEMEX) sold pipelines, as well as Texas producers and service companies that use fracking, such as Halliburton, which has been in Mexico for years.

The benefit for society as a whole is questionable. The companies that will be operating with fracking in Mexico are from the USA, so their multiplier effects will benefit other industries in the USA. Even if new jobs were to be created in Mexico, this would far from compensate for the environmental devastation, water waste and social costs associated with this type of production. Holistic analyses that consider winners and possible losers in its implementation are necessary.

III. THE NATIONAL SECURITY STRATEGY OF THE DONALD TRUMP ADMINISTRATION⁴⁴

In this new context, not only is energy considered part of security in the 2017 NSS, but it is used as an element of power insofar as the USA is recognized as an important oil player. Under the slogan of “America First”,⁴⁵ the USA is militarizing its energy policy⁴⁶ in its struggle against “rival” actors.

Under the Trump administration, the US national security strategy⁴⁷ has been unveiled in three different unclassified documents, at three different times and at different levels of detail:

- A National Security Strategy issued by the White House.
- A National Defense Strategy issued by the Department of Defense.
- The US defense budget requested from Congress for the 2019 fiscal year.

On this occasion, the White House NSS is a 68-page report that aims to pave the way for the USA to continue being the leader in world affairs.

⁴⁴ The White House, “National Security Strategy of the United States of America”, Washington D. C., The White House, December 2017, available at: <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf>.

⁴⁵ Vargas, Rosío, “«América primero»: La construcción de una potencia energética mundial”, *Revista Petroquímex*, Year 14, No. 89, September-October 2017, pp. 58-64.

⁴⁶ Vakhshouri, Sara, “The America First Energy Plan. Renewing the Confidence of American Energy Producers”, Washington, The Atlantic Council, August 17, 2017, p. 1.

⁴⁷ Cordesman, Anthony H., *U.S. National Security Strategy and the MENA Region*, Working Draft, Washington, CSIS, March 29, 2018, p. 1.

There are some differences compared to the Obama administration's NSSs that can be summarized in three important aspects:

1. The economy is considered an issue of national security in this version. The economic perspective is woven throughout the strategy, where trade has national security status. The NSS reports the existence of significant US trade imbalances with other countries and the economic aggression of countries like China and warns of the serious threat posed by this. It reiterates China's abusive business practices such as the theft of intellectual property from US companies. It clearly states that the USA will ensure that trade is "fair and reciprocal" and will not allow violations, abuses, or economic attacks. Furthermore, it promises changes to the rules governing the way foreign countries invest in the USA. It also addresses how to better protect R&D centers, such as universities, in order to safeguard US intellectual property.
2. It places "unprecedented" emphasis on national security where the issue of energy is one of the elements in deploying its competitiveness strategy. The document draws attention to China and Russia as two countries that challenge US power, influence and interests by attempting to erode its security and prosperity. It describes these powers as "rival actors". It particularly disqualifies Russian behavior around the world, including alleged violations of Ukrainian and Georgian sovereignty, as well as Russia's "attempt to undermine the legitimacy of democracies". According to the NSS, Russia uses information operations as part of its cyber efforts to influence public opinion across the globe, but the document also stresses the importance of cybersecurity.

Other threats come from "rogue regimes" like North Korea and Iran, as well as other less specific ones like terrorism. North Korea's nuclear weapons and ballistic missile activities have become the most pressing national security concern for the Trump administration. The "America First" strategy does not mean isolationism.

One issue that the 2017 NSS downplays is that of climate change. Its approach broke with the previous administration's assessment in the sense that climate change poses a threat to US national security. Instead, it refers to the low importance the administration gives to environmental issues in a section focused on the energy dominance, which includes the use of US domestic energy resources, including fossil fuels like coal, natural gas and oil. The decision to not recog-

nize climate change as a threat has materialized in the US president's action earlier this year to withdraw the USA from the Paris climate agreements, despite international criticism. Similarly, he has repealed a series of national environmental regulations and has deregulated others to push oil projects forward.⁴⁸

3. The NSS seems to be a response to the above concerns: protecting the homeland, the American way of life and the enforcement of immigration laws, which is why it reiterates the call for building a wall along the Mexican border.

In the NSS, President Trump shows his proclivity to interpreting the world under a “principled realism” in an “ever competitive world” where the issue of how to move objectives forward becomes important. He makes it very clear that his competitiveness strategy, “America First” goes beyond a campaign slogan to become a guiding force for international engagement in crafting US foreign policy. Homeland security is one of his principal concerns in terms of border security and missile defense. Mexico should react to the change of direction —not just discourse— of US policy towards Mexico and the world.

The NSS proposes that US allies and partners build up their power and assume a fair share of the responsibility to protect themselves against “common threats”. As in past NSSs (2010 and 2015), partners and allies are deemed important for the country's global expansion.

Following the same tone of the NSS,⁴⁹ the central challenge of the defense strategy is the revival of long-term strategic competition against Russia and China.⁵⁰ The Department of Defense and the Pentagon that outlined the 2018 National Defense Strategy, based on an assessment of a global security that takes place in a chaotic and competitive scenario, with a power structure and dynamics that are increasingly more challenging for US National Security. Faced with a technological panorama in which the USA believes its traditional strength is diminishing, it sees itself at a disadvantage because of its internal conflict which could constitute a high level

⁴⁸ Ashley Parker y Coral Davenport, “Donald Trump's Energy Plan: More Fossil Fuels and Fewer Rules”, *The New York Times*, available at: <https://www.nytimes.com/2016>.

⁴⁹ The 2017 NSS was a precursor to other laws also related to defense, such as the National Defense Strategy, the Nuclear Posture Review, the National Biodefense Strategy and the Ballistic Missile Defense Review, all of which have been published throughout 2018.

⁵⁰ U.S. Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge*, 2018, available at: <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

of vulnerability compared to its enemies. In this strategy, it is clear that the USA's main concern is national security for reasons of competitiveness against its rivals. Terrorism does not hold first place. Therefore, one of its defense objectives is to dissuade its adversaries from attacking its vital interests. These objectives are reflected in the Department of Defense budget⁵¹ (Key Budget Changes in FY2019), sent by President Trump to Congress for the 2019 fiscal year amounting to \$716 billion dollars for national security, of which \$686 billion dollars of which are for the Department of Defense. This request includes energy projects.

*Trump's foreign policy:*⁵² *Energy dominance*

As noted, under the Trump administration the “energy revolution” is a cornerstone in upholding the single-powered scheme against rival powers. In the December 2017 NSS, the USA proposes prosperity based on preserving its leadership in research and technology while protecting its economy and embracing energy dominance, freeing up an abundance of domestic energy resources to stimulate the economy.

It takes advantage of the power that oil resources give to it to strengthen its position in the international arena. Thus, the strategy of maximum extraction of hydrocarbons becomes part of the struggle for world domination. Maximizing production is an important pillar of the national security policy given that, for the first time in generations, the USA is an energy-dominant nation. Its energy dominance stems from its status as a producer, consumer and innovation leader that also boasts a resilient and secure infrastructure⁵³ and a diversified energy sector.

One of the key pillars of the proposal is the North American energy system, with cross-border energy trade and investment as part of building competitive industries for the USA, in an effort to maximize energy production in the region and thus reinforce its energy security. The pro-

⁵¹ U.S. Department of Defense, *U.S. Strategy and the MENA Region: Excerpts from the U.S. Department of Defense FY2019 Budget Overview*, Revised February 13, 2018, available at: <http://comptroller.defense.gov/budget-materials>.

⁵² In his book “The Great Chessboard”, Zbigniew Brzezinski sought to define the master plans of North American foreign policy that would allow the USA to continue to act as the only great global arbiter of international relations. Secondly, he wanted to convince the great American nation of how essential it is for the USA to retain its position as the only great dominant world power for world peace. At present, his proposal is to strengthen relations with Russia and China to work towards global stability.

⁵³ The White House, “National Security Strategy...”, *cit.*, 2017, p. 22.

posal goes beyond achieving energy independence to become an export power. Therefore, it is important remove any regulations and obstacles that prevent the increased production of non-conventional hydrocarbons and coal.⁵⁴ This policy also explains the Trump administration's retraction on environmental matters from policies and actions taken by his predecessor. Environmental commitments would be seen as obstacles to production maximization.

Despite having withdrawn from the Paris Agreement, the USA is attempting to continue shaping the world energy system by deeming it indispensable to counter an energy agenda that undermines its economic interests and energy security. It is therefore backtracking on its environmental commitments. The science underpinning environmental impacts has been reduced to fake science. It is based on denialist positions on the repercussions of polluting emissions and their effect on climate change. In general, climate denial opposes any stance that hinders energy projects in the USA.

Energy security is envisioned as expanding and diversifying energy sources, routes and supplies within the USA, as well as outside, through access to reliable and affordable energy and cutting-edge technology to continue to lead using "innovative and efficient" energy technologies.⁵⁵ As with the previous NSSs, it fails to meet the objective of an expanded energy security, which would allow allies and partners the possibility of supply and thus gain greater economic gains for the USA and a competitive advantage for its industries.

The limitations of a policy that seeks to become an export power are found both internally, to cover its own requirements, and externally, because it does not have adequate infrastructure to dominate international markets even though it can be seen as an expanding capacity.

Therefore, this strategy looks for support in the North American region in an attempt not only to gain markets for its oil and gas production, but also to secure energy resources from Mexico and Canada. To this end, a process of in-depth integration has been devised to create the capacity to

⁵⁴ In 2015, the Obama administration announced that it would allow oil and gas extraction off the Atlantic Coast, but the US Department of the Interior (DOI) overturned those plans in 2016. Now headed by former Republican representative Ryan Zinke, the department announced that it would open large tracts of federal areas to oil and gas extraction, including the coasts of Florida and California. The DOI's new five-year plan for continental shelf drilling is one of the largest expansions of drilling in years and includes areas that have been off limits for years, such as the Arctic wildlife refuge.

⁵⁵ *Ibidem*, p. 23.

satisfy domestic demand, guarantee energy security, and increase regional competitiveness in order to become an export power.⁵⁶

It is in North America where it will succeed in ensuring its energy security by strengthening integration with Canada and Mexico. Consequently, the North America project is in line with their strategic interests and energy dominance is plausible from a regional perspective. This is where the Trump administration's energy dominance strategy, Mexico's energy reform (2013) and the renegotiation of NAFTA are intertwined with the North American project.

In doing so, the United States would seek to use energy exports as an instrument to exert influence on recipient countries and compete for markets controlled by nations deemed hostile to its interests in the world such as Russia. The North American energy surplus would be used not only to balance the markets, but also to uphold the system of international alliances under its leadership; in other words, it would use energy as a geopolitical weapon. This geopolitical advantage would encourage foreign friends and partners to increasingly rely on the USA for their requirements, rather than buying from adversaries like Russia, Venezuela and/or Iran. Moreover, it enables the USA to offer its services "as a provider of energy resources, technologies and services around the world" under the pretense of helping its allies and partners become more "resilient". The Energy Dominance strategy is important in the Trump administration's assertion of power to consolidate its international supremacy, where hydrocarbons play a key role in bolstering US power, military strength, and geopolitical power.

The militarization of the energy policy will be pivotal to the national security policy with which the USA will compete with "rival" powers like China and Russia, according to NSS 2017. The "hard" part of this policy goes through the convergence of transnational oil and gas interests, their relationship with the Deep State and the industrial military complex in whose interest it is to perpetuate and stoke conflicts, as part of the business of selling weapons. The CIA, the Pentagon, the National Security Agency, and private companies, such as Booz Allen Hamilton, are all part of this web of interests.⁵⁷

In this context, the attempt to return to the Monroe Doctrine is worrisome, starting with former Secretary of State Rex Tillerson's tour of Latin

⁵⁶ Vargas, Rosío, "Dominio energético global estadounidense", *Revista Petroquímex*, ed. 91, February 27, 2018, p. 57, available at: <https://petroquimex.com/dominio-energetico-global-estadounidense/>.

⁵⁷ Fazio, Carlos, "Tillerson: la militarización y el petróleo", *La Jornada*, February 26, 2018, available at: <http://www.jornada.unam.mx/2018/02/12/opinion/021a1pol>.

American countries in an attempt to reinforce the alignment of their regional and local military forces, so as to enforce national security programs under the figure of public policy legislation —as in the case of Mexico’s internal security law— aimed at protecting the liberal transnational regime, as well as stimulating “regime change” policies and sanctions to countries not to its liking, as is the case of Venezuela. In the latter case, its importance for US dominance is not only related to the lack of submission to the hegemony of Washington and other Western countries, but also to the existence of vast oil reserves (almost 300,000 mmb of conventional oil), its strategic minerals, its biodiversity and other resources deemed important by the major powers.

Historically, the US oil industry has been studied as part of its national security, because of its strategic dependence on foreign oil and the need to ensure access to these resources. However, the turnaround that the USA has taken by becoming an energy power has not changed the strategic perspective under which it is analyzed. Furthermore, President Trump promises to use the power afforded by such resources to militarize the energy policy as part of his global geopolitics in an effort to sustain the single-powered scheme for world dominance.

IV. ENERGY AS THE BASIS FOR ECONOMIC POWER

1. *The price of oil and government budgets*⁵⁸

The power that the production of non-conventional fuels gives the USA lies in the capacity this trade has to alter the balance of the world market, fundamentally, because of its possibility of influencing the international oil market through the world supply and international energy prices.

The supply of non-conventional fossil fuels became the most novel single factor in the international oil market in 2014, as it was the cause behind the plunge in prices (2014 and 2015). Although in the international price market (IPM) the OPEC (30 mmb/d) is a prominent player, new participants (USA) have had major involvement through their new production by contributing to the total supply with 9.3 mmb/d —with, as mentioned above, 4.3 mmb/d coming from tight oil— and the rest from conventional oil, an amount that together and facing a drop in demand has led to the collapse of oil prices we are experiencing today. A 73% drop from the June

⁵⁸ An exchange of notes with Carlos Mendoza Potellá on this subject.

2014 price of the Mexican basket (its lowest level was \$18.90 d/b) makes it one of the biggest losers among producers.

With the IPM situation affecting many US oil companies and Arab nations, the OPEC and other non-OPEC countries signed an agreement in late 2016 to reduce oil extraction by 1.8 billion barrels per day, which was to last until the end of 2018.⁵⁹ With this, the OPEC expected to balance the market despite the sustained increase in the production of the USA, a country that has been able to overcome the crisis through its improved efficiency and its relationship with the financial sector.

In the IPM, the large production of non-conventional fossil fuels made it possible to use “energy as a political weapon” to advance US interests, along with those of its European allies in the G7. This has happened by flooding the IPM, bringing prices down, trying to weaken the finances and, in general, the economy of countries that are highly dependent on oil revenues (Russia, Venezuela, Iran, Iraq and Mexico). The USA has acknowledged this to be a goal during the Reagan administration.

The drop in the international price also affects hydrocarbon producers in developed countries and their companies, especially US tight oil producers since its production cost was high. Therefore, some independent producers left the market, but in general, most have survived owing to advantages and strengths, such as: an extensive resource base, support for technological innovation, investment environment, easy access to capital, and an enabling infrastructure, which has allowed them to weather the crisis of falling prices.⁶⁰ Moreover, they are convinced that the price will rise at some point. Their sense of abundance and the business opportunities that new production represents has led the US Congress to remove the ban on oil exports that had existed since the 1970s, imposed in the wake of the oil crises. This was done under the legal framework of H.R. 2029, the Consolidated Appropriations Act of 2016, also known as the Omnibus Appropriations Bill, which on December 18, 2015, the Obama administration repealed the 40-year-old security ban on exports of crude oil produced in the USA.⁶¹

⁵⁹ Reuters, “OPEP analiza prolongar aún más el acuerdo”, *El Economista*, December 13, 2017, available at: <https://www.eleconomista.com.mx/mercados/OPEP-analiza-prolongar-aun-mas-acuerdo-20171213-0109.html>.

⁶⁰ Donilon E., Thomas, “Remarks at the Center on Global Energy Policy School of International and Public Affairs”, Columbia University, January 21, 2015, available at: https://energypolicy.columbia.edu/sites/default/files/Remarks%20by%20Thomas%20Donilon_Columbia%20Center%20on%20Global%20Energy%20Policy_1.21.15.pdf.

⁶¹ Ban on U.S., Crude Oil Exports Repealed Energy Update December 2015, available at: <http://www.bakerbotts.com/ideas/publications/2015/12/ban-on-us-crude-oil-exports-repealed>; Spector,

The industry lobbied and made exports a “priority” by getting the bans that had been in place since 1975 removed. With this, the industry has already exported more than 150 million barrels of crude oil. While natural gas raises the highest expectations since the country, like Russia, Iran, and Saudi Arabia, is among those with the world’s largest gas reserves, in the case of the USA, it is non-conventional natural gas.

As can be seen, the success of the US production that began in 2008 contributed to the plunge in prices in June 2014, and its impact will continue to be felt insofar as US production reaches its goal,⁶² when the advantages as an exporter under the current Republican administration become more apparent given conditions, such as the following ones:

- Shale productivity is gaining between 3% and 10% per year from key plays, according to Goldman Sachs.
- Due to improvements in efficiency, they have managed to cut production costs, so that the breakeven US oil price has gone from \$85 d/b to \$40-60 d/b.⁶³
- The USA is not subject to any agency, alliance or organization that limits its national production, in light of its anti-monopoly law (Sherman Antitrust Act) which prevents US companies from entering into price regulation agreements. This will allow them to continue producing shale oil, seizing the financing opportunities in their country. Financial companies encourage, enable and reward short-term production growth despite the marginal economy of the project.
- On the other hand, most of the producers in the rest of the world, united in an organization that is seen as a cartel, have historically tried to defend the international price of hydrocarbons through the OPEC. On this occasion (2014) and also emphasizing its par-

Julian, “What the New Spending Bill Means for American Energy Consumption”, from the Atlantic CityLab, December 18, 2015, available at: <http://www.citylab.com/politics/2015/12/omnibus-spending-bill-congress-2016-budget-energy-oil-renewable/421254/>, and Bush, Jeb, “Making the Domestic Energy Boom Work for America and Its Allies”, October 2, 2015, available at: <http://www.nationalreview.com/article/425008/making-domestic-energy-boom-work-america-and-its-allies-jeb-bush>.

⁶² World Economic Forum, “The New Energy Equation”, 2018, available at: <https://www.youtube.com/watch?v=9ALs7jMAYKY>.

⁶³ Kuuskraa, Vello, *Evolution of U.S. “Tight Oil” Development and Its Applicability to Other Global Plays*, Prepared for the short term Outlook for U.S. Tight Oil production, Center for Strategic and International Studies CSIS Energy & National Security Program, Washington D. C., February 27, 2018, p. 7.

ticipation in the market, the US Congress set up a commission to investigate anticompetitive practices in the OPEC.⁶⁴ The countries in this organization have the advantage of having lower production costs than those for oil and gas, but their fiscal dependence on oil revenues (fiscal breakeven price) makes them vulnerable when oil prices collapse. Furthermore, the USA has imposed sanctions on some of these countries (Venezuela), making their situation even more difficult in the face of a declining market price. Turning the USA into an export power is undoubtedly influencing international oil prices, by driving them down. In this sense, companies' business logic does not necessarily coincide with the strategy for energy dominance.

In this case, we are interested in the concept of fiscal breakeven price, which indicates as of what price the government budgets of countries highly dependent on oil trade revenues are affected. The global impact of oil and gas production is being felt through the increase in supply and the subsequent slump the international price of oil, which has affected major producers like Russia, Venezuela, Mexico, Iran, Ecuador, and others. To a lesser extent, it has affected Saudi Arabia and other Gulf producers —countries with high oil revenues— because of their large monetary reserves and low population density.

Although a high energy price is usually a cause for concern in terms of its impact on inflation and the economic growth, particularly for importers, it offers producers a better margin for fiscal management and influence over those with sovereign wealth funds. What really harms producing countries is a drop in international oil prices. In this case, producers experience serious financial problems, which vary from country to country, although in general these problems are lined to their production cost structure and the proportion of oil revenue in their government budget. As their income decreases, a series of tax adjustments are introduced to align spending. Consequently, investments in the oil industry are suspended or delayed.

Lower incomes mean that public companies in particular receive a smaller budget, thus delaying investment and laying off workers. In the case of private companies, the urgency arises from the need to have income and profits for the shareholders.

⁶⁴ *U.S. tight (shale) oil producers, which had steadily increased production since 2008 and contributed to a period of oversupply. H.R. 545 would establish a commission to investigate anti-competitive actions taken by OPEC (the bill had been previously introduced as H.R. 4559 in the 114th Congress).*

When debt levels rise, a strategy of acquisitions and mergers is implemented, even among transnationals. This has occurred with independent companies (shale gas and tight oil producers) which have been absorbed by the large US oil transnationals. A downturn in price can lead to important restructuring in the energy market which, due to the size of the companies, usually leads to a greater concentration of capital and technology.

A low oil price restricts long-term investments that guarantee the production of new barrels of oil in the future and even has the potential of driving high-cost producers out of the market. Hence, market balances can be narrowed per share.⁶⁵

The OPEC shift from a strategy of production cuts to one of defending market positions as of November 2014 responds to this differential in the cost structure, in which Saudi Arabia can extract a barrel of oil for \$9.9 d/b, Kuwait for \$8.50 d/b, Iraq for \$10.70 d/b, United Arab Emirates for \$12.30 d/b, Iran for \$12.60 d/b, Russia for \$17.20 d/b, Argelia for \$20.40 d/b, Venezuela for \$23.50 d/b, Libya for \$23.80 d/b, Kazakhstan for \$27.60 d/b and Mexico for \$29.1 d/b.⁶⁶

Competition among producers depends on its production cost structure and, therefore, the OPEC expects the price can recover by *natural selection* and not by cut-back intervention, i.e., the market balance by cutting production from higher-cost competitors. The ones with marginal cost are those from the USA, so they would be expected to be the first to break out. However, the USA is also the largest consumer worldwide and thus the effects of a price drop are twofold. Other beneficiaries include the United Kingdom and other European countries where the price of gasoline and other refined products, such as natural gas, is falling, thereby benefitting the economy in general with a substantial improvement in its competitiveness. A drop in oil prices contributes to the energy security of consuming countries by improving their market situation for additional purchases and filling their inventories, as well as making it possible for them to reduce their financial imbalances in their balance of payments.

As a result of the collapse of prices, investments in exploration have been dramatically scaled down since late 2014.⁶⁷

⁶⁵ CNN Money, “Petróleo: el costo de producir un barril”, *CNN en español*, January 5, 2016, available at: <http://cnnespanol.cnn.com/2016/01/05/petroleo-el-costo-de-producir-un-barril/>.

⁶⁶ *Idem*.

⁶⁷ BBC, “Los países en los que es más barato y más caro producir petróleo”, *BBC Economía*, January 20, 2016, available at: http://www.bbc.com/mundo/noticias/2016/01/160119_economia_paises_mas_caro_mas_barato_petroleo_lf.

This implies a risk of a shortage in coming years since, in order to keep production at the pace of demand, the International Energy Agency (IEA) estimates that investments of the order of \$900 billion per year are needed by 2030 (IEA, 2014). According to the Wood Mackenzie consulting firm, a study published in January 2016 on the 68 megaprojects that have been deferred found that “the United States, along with Canada, Angola, Kazakhstan, Nigeria and Norway are the nations with the most deferred production”.⁶⁸

While the economies of most countries are making budget cuts and facing stagnation with austerity policies, investments to cover the demand will unlikely be allocated to projects as long as the price remains low, both for increased hydrocarbon production and for renewable energies.

As can be seen, there is a contradiction between the expectations of the main importers who want low prices in the short term, and the need for long-term investment considering the time it takes between the exploration project and the actual commercial delivery of the first barrels of oil.

It is important to note that the financial intermediaries influence price formation, which affects the volatility and uncertainty of oil prices. A high energy price is the result not only of the policies of producing States, but also of the speculative interests of Wall Street and the City of London, that use *privileged information to magnify the risks and even exacerbate price collapses, thereby obtaining financial returns based on these expectations*. Additionally, international oil companies and some governments participate in the activities of the derivatives markets and obtain additional returns. The financial sector’s constant intervention in the oil market undermines one of the principles of orthodox economic theory: *free price system mechanism*.

2. *The USA: An LNG Export Player*

The exploitation of non-conventional resources gives the USA the possibility of becoming a major exporter of LNG worldwide, modifying trade routes and displacing competitors from their markets and controlling regional trade as well as infrastructure.

The countries with trade agreements with the USA would benefit from LNG exports, but this extends to others. Mexico is being considered for the construction of LNG plants to re-export gas to other countries, especially

⁶⁸ Fajardo, Luis, “Los megaproyectos que se esfumaron por la crisis del petróleo”, *BBC Mundo*, January 15, 2016, available at: http://www.bbc.com/mundo/noticias/2016/01/160114_economia_proyectos_cancelados_petroleo_lf

Asian countries. Its potential poses a challenge to other major gas exporters like Russia and Qatar with whom the USA competes for the tremendous revenues earned from LNG production and trade. This is a very good business.

The competition for markets is currently centered in the European Union (EU), historically supplied by Russian gas (38%), which the USA seeks to supplant under the alleged objective of reducing its dependence on the Russians. This has materialized in recent sanctions (July 25, 2017) by the US Congress against Russia, Iran, and North Korea. These sanctions will prevent President Donald Trump from altering them without the approval of the US Congress since they constitute a bill. Although the sanctions are directed against Russia, its trade will actually be little affected because of its negligible importance. This is not the case for the EU and its companies, whose commercial invoicing is high, which means that they will be the ones to be truly affected, particularly Germany. Thus, its ministry of foreign affairs had declared that “We will not tolerate the imposition of US sanctions on European companies”.⁶⁹ Their displeasure has to do with the fact that the sanctions call into question the construction of the Nord Stream 2 gas pipeline that would deliver Russian gas to Germany and other EU countries. This would cancel seven more projects with the substantial participation of Russian companies (33%), such as Gazprom, Gazprom Neft, Surgeneft gaz, Rosneft and Lukoi, as well as private companies from Western countries like Shell, BP, ENI, and others from the EU.⁷⁰

Competition in the global LNG market has also affected Qatar, the world’s leading exporter of LNG. Its importance (77 MMTA)⁷¹ has been declining as the USA and Australia increase their production and their markets expand throughout the world. This expansion represented a surplus capacity of 32 MMTA in 2017 while major producers are expected to double total LNG trading capacity by 50% by 2020. In this context, Qatar is at a disadvantage, given the relative power of the other participants. The competition for markets partially explains diplomatic crisis in Qatar (June 28, 2017), between this country and the rest of the countries in the region led by Saudi Arabia. The incident was completely unexpected, but it can be

⁶⁹ Bensch, Fabrizio, “Alemania. No toleraremos la imposición de sanciones de EEUU a empresas europeas”, *Reuters*, July 28, 2017, available at: <https://actualidad.rt.com/actualidad/245536-sigmar-gabriel-sanciones-eeuu>.

⁷⁰ Duch, Juan Pablo, “Sanciones de EU abren nueva etapa de conflicto con Rusia”, *La Jornada*, July 27, 2017, p. 24.

⁷¹ MMTA = million tons per annum.

explained by the competing energy projects,⁷² such as the Saudi Arabia-Jordan and Israel oil pipeline, as well as another oil pipeline owned by Qatar-Iran-Syria and Turkey, all of which are competing for gas markets.

Compared to its competitors, Qatar holds an advantage in its production costs (it has the lowest in the world) and its trade routes. Its deliver cost is similar to the break-even price of Russia (\$5.20 MMBtu).⁷³ Here lies the competition for the USA, which can cover its marginal cost, but not the long-term break-even cost.⁷⁴ In the future, the competition for costs will be very important because it means diminishing the participation of Qatar and other producers in the world market.

3. *Mexico's northern border*

The energy reform facilitates the transfer of infrastructure and assets of private companies, strategic partnerships between PEMEX and transnationals, and public-private projects that have found a place along Mexico's northern border.

Pipeline interconnection occurs at the border between US, Canadian and Mexican companies. Pemex has ceded 70% of the natural gas marketing contracts to private companies.⁷⁵ CFE⁷⁶ will tender 26 gas pipelines, whereby the private sector will retain 60% of the country's installed gas pipeline capacity. By dismantling productive capacities and encouraging the transfer of State Productive Enterprise (EPE) assets, transnational trade has been left in the hands of private corporations, mainly foreign ones, as is the case of the Energy Transfer Partners gas company. Among its subsidiaries is the Mexican Energy Partners, one of whose shareholders is Carlos Slim's Carso Energy company.

⁷² Jalife-Rahme, Alfredo, "Bajo la lupa. Qatar epicentro de dos guerras: petróleo vs gas y, *remnibi vs dólar*", *La Jornada*, June 28, 2017, available at: <http://www.jornada.unam.mx/2017/06/28/opinion/014o1pol#texto>.

⁷³ MMBtu= Million Btus (British thermal units).

⁷⁴ Rogers, Howard, *Qatar Lifts Its LNG Moratorium*, Oxford Institute for Energy Studies, April 2017, available at: <https://www.oxfordenergy.org/wp-content/uploads/2017/04/Qatar-Lifts-its-LNG-Moratorium.pdf>.

⁷⁵ At a later date, the CRE will announce when the other two tenders will be held to allocate the remaining 50% of PEMEX's commercialization capacity. The Federal Electricity Commission (DFE) will retain 40% of the capacity in the system for its industrial activities.

⁷⁶ Furthermore, it will transfer the transmission lines to the private sector through the FIBRA-E financial mechanism.

These projects connect Mexico (through its pipelines) to US gas pipelines. This position is important from a geopolitical point of view because it is strategic and critical infrastructure, and the CFE will be completely dependent on gas supplies from the USA from 2017 onwards.

Foreign companies will build the Comanche and Trans-Pecos, Waha-Presidio and Comanche Trail Pipeline with the operational involvement of Energy Partners. They will also transport natural gas from Texas to Encino, Chihuahua, where the CFE facilities with distribution points in Samalayuca are located.⁷⁷

The Mexican subsidiary will oversee bringing the natural gas near San Isidro, Chihuahua, and will be the supplier of the Texas gas to the rest of the country (central, northern, and western regions through the Waha-Presidio and Waha-San Elizario gas pipelines).

The delicate issue is not only the imports of a fuel as important as natural gas, the dependence of a State public company (CFE) on imported gas to generate electricity, and the rest of the country's reliance on imports made by primarily foreign private corporations, but also the infrastructure and the level of dependence on imported fuel. No less important is the Trump administration's hostility toward Mexico as a factor that heightens Mexico's energy security risks in the face of potential embargoes, blackmail, or retaliation. International experience has shown that risks do not arise from threats to pipeline infrastructure, but from economic disagreements and diplomatic and foreign policy conflicts between countries.⁷⁸

Other transnational projects are converging along the border, such as renewable energies to generate electricity for the State of California and, on the Texas side, there are electricity imports.

We also import 77.3% of our domestic gasoline, also from the USA. Moreover, as of 2018, we will create further dependency with the purchase of 50,000 b/d of oil for 3 years.

On the Gulf of Mexico side, the exploitation system prevailing in the USA extends to cross-border fields and to the Perdido Fold Belt area near US oil pipelines. Possible "shared" resources could be the underground aquifers on the northern border for shale exploitation on the Mexican side.

The obvious risks are related to energy security because of the foreign dependence on fuels that are so important for the national industry, because

⁷⁷ Carrasco Araizaga, Jorge, "Trump y Slim, más cercanos de lo que parece", *Proceso*, No. 2100, January 29, 2017, pp. 27-29.

⁷⁸ We can mention the case of Ukraine and the construction of the South Stream gas pipeline that had to be replaced by TurkStream after Bulgaria refused to accept the former from going through its territory.

of the costs their purchase will imply considering a possible devaluation in the exchange rate, the IEPS (tax) and the profitability pursued by the actors involved in the business that will affect the final user prices of fuel.

Less evident will be the greater control and/or militarization of Mexico's northern border, given the number of US projects there. As entire cities and towns along Mexico's northern border are emptied, the interest in controlling territories and resources in this region becomes apparent.

V. THE JOE BIDEN ADMINISTRATION AND THE GLOBAL ENERGY CRISIS (2022)

President Joe Biden began with a green agenda and a banner of the fight against climate change in order to recover and strengthen his international leadership. As his administration has passed, although the objective of giving priority to renewable energies continues to be important in the design of energy policy, the energy transition is showing difficulties in advancing, not only due to the difficulties of the energy system, in general, but by the global energy crisis that has resulted from the imposition of Western sanctions on Russia that has resulted in increases in energy prices throughout the world, thereby impacting the general increase in prices, so not only will it not move to fossil fuels in the US energy mix, rather everything points to their increase in the coming years. The foregoing does not mean that the importance of intermittent renewable energies is reduced, since its growth rate will continue to be the highest of all forms of energy, but fossil fuels from fracking production will continue to be the majority in absolute terms.

When Joe Biden became president of the US, the United States had become the largest oil producer in the world, which today reaches 12MMb/d (August 7, 2022)⁷⁹ and a net exporter of hydrocarbons. The energy transformation of the United States has had far-reaching implications for the country itself and for the world due to its geostrategy linked to its foreign policy. The US began exporting crude oil again for the first time in four decades, and in volume even greater than the peak of production in 1970. It now exports more crude than five of the OPEC member countries and its future production will be the most important of the non-OPEC countries, together with that of Canada under the concept of North America.

⁷⁹ U.S.DOE/EIA, Weekly U.S. Field of Production of Crude Oil, available at: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=WCRFPS2&f=W>.

At the beginning of his administration, President Biden (January 20, 2021), announced his commitment to achieve what he considered true energy independence: reduce oil consumption and production. Among his first actions was the cancellation of the Keystone XL pipeline and his moratorium on all new oil and gas drilling in the US.

Among his energy policy proposals, Biden announced big goals to increase energy efficiency and reduce costs for consumers. The Department of Energy opened applications for more than \$3 billion in new Bipartisan Infrastructure Law, ten times the historic funding levels of the Weatherization Assistance Program, for energy efficiency and electrification improvements in thousands of homes.⁸⁰

In addition, he issued a directive authorizing the use of the Defense Production Act (DPA) to secure US production of critical materials to support clean energy production and reduce its dependence on minerals and materials from China and other countries. Specifically, the DPA will be allowed to support the production and processing of minerals and materials used for high-capacity batteries, such as lithium, nickel, cobalt, graphite, and manganese, and will be implemented by the Department of Defense.⁸¹

Another of the proposals in energy matters is the Inflation Reduction Act approved by Congress⁸² in the first days of August of the current year, it has the support of the administration and groups that favor policies against climate change, however, other powerful groups have opposed it due to factors such as the following: 1) the US has reduced the growth of its Gross Domestic Product (GDP) in the last two quarters and is experiencing unprecedented inflation (rate growth of 9.1%); 2) there is a global energy crisis that tests the energy security of the US. Energy costs have increased by 40% in the last 12 months creating economic tension: 3) the economic groups want a reform for the hydrocarbon industry and consider that this is the one that has not happened. These include the American Petroleum Institute (API), American Exploration & Production Council, American Fuel & Petrochemical Manufacturers, Energy Workforce & Technology Council, Independent Petroleum Association of America, Permian Basin Petroleum Association, Plumbing-Heating-Cooling Contractors-National Association

⁸⁰ The White House, "FACT SHEET: President Biden's Plan to Respond to Putin's Price Hike at the Pump, March 31, 2022, available at: <https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/31/fact-sheet-president-bidens-plan-to-respond-to-putins-price-hike-at-the-pump/>.

⁸¹ *Idem*.

⁸² On August 12, 2022, it was approved in the House of Representatives and passed to the Executive.

and the James Madison Institute, as well as the Industrial Association of Arkansas, West Virginia, Florida, Missouri, California, Illinois, Colorado, Florida, Iowa, Georgia, Kansas, Louisiana, Alabama, Michigan, Minnesota, New Mexico, North Carolina, North Dakota, Ohio, Pennsylvania, Wyoming, South Dakota, and Texas.

However, it is not only these interest groups that are pushing for a reform in favor of fossil fuels, the energy crisis itself related to the cancellation of Russian production in Western markets that has impacted prices upwards as well, just as it forms the difficulties for further progress in favor of renewable energies and, the goal of zero emissions (of greenhouse gases GHG), is being the opportunity to seriously reconsider energy strategies in light of the ravages that this crisis is causing.

This is reflected in the paths to increase the supply of hydrocarbons. The Department of Energy estimates a production volume of 12.7MMb/d for the year 2023,⁸³ a figure that although it does not reach the production peak of February 2020 with 12.9MMb/d, it is close to it. Proponents of the benefits of hydraulic fracturing consider that, given the flexibility of its production and the learning curve, there is no difficulty in recreating the boom. In addition to increasing the domestic production of oil and natural gas, the US strategy is to try to encourage an increase in supply in other latitudes and that is why President Biden visited Saudi Arabia and met with other oil producers (Venezuela and Iran) in order to arrange an increase in production. Given that the increase was only 100,000b/d, the US president put up for sale 1 million barrels a day from its strategic reserve for six months with the aim of reducing the international price of oil. It was clear that it will not be easy to increase the global supply of hydrocarbons, although as a producer of natural gas and in its form of liquefied natural gas (LNG), rising prices benefit it.

Unlike the European Union where several countries are already returning to implement various energy alternatives, even already rejected, such as coal, natural gas and nuclear energy, in the US the official narrative continues to favor the option of renewable energies and the strategy to deal with climate change in a vis-a-vis hydrocarbons, as it walks in favor of once again increasing the production of fossil fuels by increasing the tenders for exploration and exploitation activities on federal lands, without ceasing to favor hydraulic fracturing, especially for its most important strategic project

⁸³ U.S. DOE/EIA, Short Term Energy Outlook, August 9, 2022, available at: <https://www.eia.gov/outlooks/steo/>.

in the future: LNG, where the US has positioned itself in 2022 as the main exporter worldwide, displacing its rivals Australia and Qatar.

VI. CONCLUSIONS

Since the increase in its supply of hydrocarbons, the USA has an economic power capable of influencing the evolution of the prices in the international oil market and regional gas markets, which along with its financial power implies the possibility of amassing enormous profits and influencing the economic future of other hydrocarbon producing countries.

With the possibility of having a worldwide coverage for LNG gas exports, the USA can obtain significant economic gains. The changes are just beginning and promise to be many on the international scene.

As the USA discovers its potential, it has modified its geopolitical project and with it, pushed the strategy of the world energy balance in its favor. Looking to the world at large with its “America First” competitiveness strategy, President Trump’s administration intends to maximize energy production to compete with rival powers under the proposed Energy Dominance.

At the regional level, this is coupled with the creation of a North American energy bloc with Canada and Mexico to support energy integration and thus energy security in the USA by: I) accelerating the development of untapped energy resources; II) diversifying the energy supply, and III) supporting the growth of national energy industries.

The Mexican energy reform gives the USA the opportunity to gain access to Mexican energy industries and market to later expand its business to the rest of Latin America.

For the USA, Mexico becomes a productive space for the businesses emerging from the energy revolution, particularly from the transfer of PEMEX and CFE infrastructure and assets to energy corporations; from energy projects that include all sources of energy; with the granting of exploitation rights that allow them to take over Mexican oil reserves; with the opening of the million-dollar gasoline market in Mexico; with the public-private projects to develop renewable energies, and above all, as an importer of fuels derived from production that are on the rise from the use of fracking technology. The energy integration of North America creates a link between Mexico and the USA as an energy power.

While the USA has a strategic outlook, Mexico holds a predominantly commercial approach to energy reform, even in the instance of critical infrastructure that involves physical integration to the US gas pipelines that

supply natural gas to CFE. This integration will make us the main clients of the large refineries being built in the USA (11 on the Gulf Coast). This will mean more imports with few possibilities of building refineries in Mexico. It is quite clear that integration does not serve the Mexican economy and society, but only the economic groups that benefit from bilateral energy trade. Mexico binds itself as a dependent country and importer of practically all the types of energy produced in the USA, except for cross-border electricity.

It is also possible to see oil reserves, assets and critical infrastructure used by transnationals and financial speculation funds like Black Rock seeking short-term gains and financial speculation.⁸⁴ This stimulates the possibilities of financialization insofar as financial capital companies are involved in production processes and own assets and resources in Mexico.

The unfair-competition argument in this case has been useful for the gradual dismantlement of Pemex and CFE on losing their strategic activities, a situation that has also led to dependence on foreign fuel supplies dominated by a logic of short-term gain. The lack of long-term planning in Mexico is partly attributable to the fact that its oil and electricity industry has largely been stripped of its strategic nature and the energy sector has been commoditized. This has an impact on energy security and sovereignty in terms of policy design and the loss of eminent dominance with territorial implications.

The market is created for the purpose of avoiding monopolies. Nonetheless, limiting the monopolistic traits of several of these activities by partitioning them and thus introducing competition is a constrained construct and marginal investments in several of these activities may be expected from foreigners and domestic private parties. In fragmenting the industry, the possibility of cutting costs through economies of scale and vertical integration is lost for a real industry-wide competition. That is why transnational corporations do not give it up.

The Trump administration in fact establishes a corporate military regime which will deepen the structural and asymmetrical dependence in terms of energy integration with Mexico, as well as greater US production subordination through the implementation of Energy Dominance. This will bring significant risks to Mexico's energy security and the obliteration of

⁸⁴ The power of Black Rock ranges from controlling the majority of shares in the Pearson Group (dominating *The Economist* and *The Financial Times*) to large investments in mega-banks and oil companies in the USA and Britain, such as: Exxon-Mobil, Chevron, J.P. Morgan Chase, Wells Fargo/Wachovia, Shell, Apple, Google, and Microsoft. Just as importantly, Black Rock was a lobbyist for the 2013 Energy Reform.

national and energy sovereignty while the costs of market implementation will fall on Mexican society.

The expansion of US energy business into Mexico, the construction of hemispheric security, and the militarization of energy policy will lead to Mexico's further alignment with Washington's objectives. A different fate awaits us only by gaining an awareness of what is happening.

Although it is politically consistent and convenient for President Biden to continue with the banner of renewable energy and climate change, the energy transition is revealing its limits, not only because there are no technological conditions to displace fossil fuels yet, but because high international oil prices and a regionally insufficient supply (EU), lead the US to expand its role as provider and guarantor of the energy security of its allies as a producer of fossil hydrocarbons, in order to replace fuels displaced from Russia in the international market, lower the price of oil while taking advantage of the opportunity to place its LNG production on international markets. Strategy where you can find contradictory effects and limitations in your leadership to achieve success.

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