Energy Security Program
Research Study

No. 1
August 2020

Mariana Liakopoulou is Research Fellow in energy security, NATO Association of Canada. She is also member of the Roster of Experts, Energy Community Secretariat. Her professional activity has spanned policy analysis, consulting and communication.

NATO ASSOCIATION OF CANADA
ASSOCIATION CANADIENNE POUR **L'OTAN**

New Dimensions of the Great Caspian Energy Game

MARIANA LIAKOPOULOU

Abstract

The global commodity market and national energy policy developments have affected US and European willingness to continue pursuit of their geopolitical and economic interests in the Caspian-region and Central Asian oil- and gas-producing states. This is a shift from the 1990s and early 2000s, when important projects were commissioned. However, these shifts in US and the EU energy policies, combined with ongoing market developments, do not imply that those Caspian-region and Central Asian states are losing their geopolitical significance.

The Energy Security Program, directed by Dr. Robert M. Cutler ‹rmc@alum.mit.edu›, is an activity of the NATO Association of Canada, Toronto, a non-profit organization having the mission to keep Canadians informed about the significance of NATO. The Energy Security Program ‹http://natoassociation.ca/category/programs/energy-security/› seeks, in addition, to inform the international policy community on energy-related issues of significance to NATO member-states.

Contents

Links to Case Study Project Maps

1. Azeri-Chirag-Deepwater Gunashli (ACG) oilfield complex https://www.eia.gov/international/analysis/country/AZE/background

2. Baku-Tbilisi-Ceyhan (BTC) oil pipeline http://www.wermac.org/misc/pipelines.html

3. Shah Deniz 2 (SD2) natural gas field http://caspianbarrel.org/az/2014/05/segodnya-sostoitsya-sdelka-o-kuple-prod/

4. Trans-Adriatic Pipeline (TAP) for natural gas https://www.tap-ag.com/the-pipeline

5. Kashagan and Khazar-Kalamkas More https://reports.shell.com/investors-handbook/2014/upstream/asia/kazakhstan.html

6. Tengiz https://www.chevron.com/projects/tengiz-expansion

List of Tables

List of Abbreviations

ACE	Azeri Central East (oilfield complex)
ACG	Azeri-Chirag-Deepwater Gunashli (oilfield complex)
AIOC	Azerbaijan International Operating Company
bbl/d	barrels per day
bcf/d	billion cubic feet per day
bcm/d	billion cubic metres per day
bcm/y	billion cubic metres per year
boe/d	barrels of oil equivalent per day
BTC	Baku-Tbilisi-Ceyhan (oil pipeline)
CACG	Central Asia-China Gas (pipeline)
CCUS	Carbon Capture, Utilisation, and Storage
CEF	Connecting Europe Facility
CMOC	Caspi Meruerty Operating Company
CNOOC	China National Offshore Oil Corporation
CNPC	China National Petroleum Corporation
CPC	Caspian Pipeline Consortium
EC	European Commission
EIA	Energy Information Administration (U.S. Department of Energy)
ERS	Energy Revolution Strategy (China)
FERC	Federal Energy Regulatory Commission (U.S.)
FGP	Future Growth and Wellhead Pressure Management Project (Kazakhstan)
FID	Final Investment Decision
GIIGNL	International Group of Liquefied Natural Gas Importers
IEA	International Energy Agency
IOC	international oil company
LNG	liquefied natural gas
MMBtu	million British thermal units
NCOC	Northern Caspian Operating Company
NOC	national oil company
OECD	Organisation for Economic Co-operation and Development
OGCI	Oil and Gas Climate Initiative
ONGC	Oil and Natural Gas Corporation (India)
OPEC	Organization of Petroleum Exporting Countries
PCI	Project of Common Interest (European Commission)
PSA	production-sharing agreement
R&D	research and development
SCP	South Caucasus Pipeline (natural gas)
SD2	Shah Deniz 2 (natural gas field)
SGC	Southern Gas Corridor
SOCAR	State Oil Company of the Azerbaijani Republic

SOFAZ	State Oil Fund of the Republic of Azerbaijan
TAP	Trans-Adriatic Pipeline (natural gas)
TAPI	Turkmenistan-Afghanistan-Pakistan-India (gas pipeline)
TCGP	Trans-Caspian Gas Pipeline
Tcm	trillion cubic meters
TCO	TengizChevrOil
TCOTS	Trans-Caspian Oil Transport System
TEN-E	Trans-European Energy Networks for Energy
TPAO	Turkish Petroleum Corporation
TTF	Title Transfer Facility (for trading natural gas, Netherlands)
WREP	Western Route Export Pipeline (Baku-Supsa oil pipeline)
WTI	West Texas Intermediate

Executive Summary

Post-Cold War literature has referred to the present-day geostrategic struggle for control over the Caspian and Central Asia as the "New Great Game". This is a reference to the "Great Game", a phrase coined by the British intelligence officer Arthur Connolly (and later adopted by Rudyard Kipling in his novel *Kim*) to designate the nineteenth-century rivalry between the British Empire and Tsarist Russia over Afghanistan and Central and South Asia.[1]

According to the analogy, after the emergence of the independent Caspian littoral states (Azerbaijan, Kazakhstan, Turkmenistan) from the splintering Soviet Union in the early 1990s, the United States and Russia were the principal competitors, while Europe and China progressively joined in. Regional players, such as Iran, Turkey and Pakistan occasionally also position themselves here. The stakes were said to be the Caspian/Central Asian region's oil and gas resources: how to produce them and how to transport them to international markets.

This study provides an overview of the influence of these geopolitical and geo-economic powers on the security of energy supply from the Caspian Sea region. It, therefore, examines how the *Great Game* of Caspian/Central Asian energy has evolved since the onset of the twenty-first century. To do this, it analyzes a set of completed, planned, and rumoured divestments in upstream and midstream projects by International Oil Companies (IOCs) historically active in the region, including the motives of the latter.

Specifically, it starts with ExxonMobil's planned divestment from Azerbaijan's Azeri-Chirag-Deepwater Gunashli (ACG) oilfield complex and Chevron's completed divestment from both ACG and the Baku-Tbilisi-Ceyhan (BTC) oil pipeline. It continues with the French company Total's divestments from Azerbaijan's Shah Deniz 2 (SD2) offshore gas project and the Trans-Adriatic Pipeline (TAP). It then discusses Total's rumoured sale of its stake in Kazakhstan's massive offshore Kashagan oil and gas field to the China National Petroleum Corporation (CNPC). The study discusses, in addition, Shell's exit from Kazakhstan's Khazar oilfield, after it relinquished its 55 percent stake in the Caspi Meruerty Operating Company (CMOC) to which Khazar's development is licensed, and the abandonment of the development of Kalamkas-More oilfield by the Northern Caspian Operating Company (NCOC) consortium. These two last-mentioned structures were to have been jointly developed, to create new gas production sites away from the Kashagan-Tengiz-Karachaganak triplet of Kazakhstan's biggest oil fields. That is why they are analyzed together. Finally, it talks about the concerns of Chevron's shareholders about the impact of the costs of expanding production from Kazakhstan's Tengiz oil field on the 36 percent decline in the company's 2019 third-quarter earnings.

On that basis, the study argues that market and policy developments affected American and European appetites for pursuit of their geopolitical and economic interests in the Caspian oil- and gas-producing states in the 2010s. That is a change from the situation in the 1990s and 2000s, when important projects were executed, such as the "Contract of the Century" on ACG, the BTC pipeline, the Shah Deniz field's production sharing agreement (PSA)

[1] Peter Hopkirk, *The Great Game: The Struggle for Empire in Central Asia* (New York, Tokyo, London: Kodansha International, 1992), 1.

and associated pipeline infrastructure for the Southern Gas Corridor (SGC). The aforementioned developments characterizing the 2010s notably include:

1) ***The US shale boom***, of which the short-cycle nature has led to the gradual withdrawal by IOCs from challenging and costly upstream projects (off-shore/deep-water fields) and associated midstream projects (subsea/long-distance pipelines), both of which types lie at the heart of Caspian energy, in search of quicker profits.
2) ***The IOCs' contribution to the energy transition,*** which represents a reality check for IOCs' strategies in respect of their Caspian Sea region ventures in the oil and gas sectors.
3) ***Energy market developments in the European Union,*** specifically its pledge for carbon neutrality by 2050 and its diplomatic commitment to import liquefied natural gas (LNG) from the United States.

U.S. LNG in 2019 relied increasingly on Europe to absorb a flood of new natural gas supply, but, starting from the second quarter of 2020, significantly reduced demand for LNG in global markets due to COVID-19 has caused prices for US LNG exports to become unprofitable. However, the US, along with other LNG producers, are expected to take advantage of Europe's ample storage and re-gasification capacity and liquid pricing hubs in the next five years, throughout which its import demand will rise by 45 bcm/y. Therefore, Caspian gas that aspires to enter Europe via the SGC is faced with a long-term zero-fossil fuel reality in the EU and with short-term competition from the US for the same end-customers.

Low commodity prices from 2014 to the present, further exacerbated by the 2020 oil price crash, is the common denominator between (1) and (2).

The study stresses that this situation paves the way for a thaw in the Caspian Sea region producers' ties with Russia, as was, for instance, shown by the recent resumption of Turkmenistan's gas exports to Russia, following a three-year suspension. The situation moreover encourages a rapprochement with China and other Asian importers. The extent of China's funding support for regional gas infrastructure projects—Line D of the Central Asia-China Gas pipeline (CACG) and the Turkmenistan-Afghanistan-Pakistan-India pipeline (TAPI)—will be determined by internal Chinese gas market developments, such as the competition between LNG from overseas and pipeline gas from neighbouring countries and the role of natural gas in China's Energy Revolution Strategy for 2030.

Whatever the result, Russia and China have the opportunity to increase their clout over the region's geographically stranded resources, in light of the diminishing Western focus on energy from the Caspian Sea region. Amongst the risk factors are possible arbitrations over price revisions (such as occurred with Turkmenistan's gas sold to Russia up until 2015) and China's upper hand in the still publicly undisclosed price-formation mechanism for its purchase for Caspian and Central Asian gas (in exchange for financing CACG's Line D and the development of stage two of Turkmenistan's giant onshore Galkynysh gas field, which feeds the CACG).

The study nevertheless concludes that shifts in the American and European energy policies, combined with ongoing market developments, do not imply that the Caspian oil- and gas-producing states are losing their geopolitical significance. Even if this were to diminish, due to the weakened attention of the *Great Game* competitors in the region, it could not happen all at once. Indeed, the possibility of more mergers, divestments, and delays in or absence of final investment decisions (FIDs) always remains on the table. The long-stalled

Trans-Caspian Oil Transport System (TCOTS) between Kazakhstan and Azerbaijan might serve as one such example.

But the timing of other FIDs, mainly the ones on the Azerbaijan-driven SGC pipeline network and associated fields, initiated well before the circumstances analyzed here came into being and now nearing completion, indicate that IOCs will maintain their presence in the region, at least insofar as gas is concerned. There are two reasons behind this.

First, the EU will continue to pursue gas supply diversification; therefore, it will push for the SGC pipelines to operate at their full capacities. The US, despite having the objective of promoting its own LNG exports, will politically endorse the EU's efforts in this regard, because one result of such diversification will be to diminish Russia's market share.

Second, consortia participating in the SGC will have to work towards filling it completely, in order to ensure a reasonable return on their investments and to reduce shipping costs for the shippers. This imperative will translate into new FIDs either on brownfield expansions (e.g. in Azerbaijan's offshore sector of the Caspian Sea) or greenfield projects (notably with regard to the Trans-Caspian Gas Pipeline, TCGP).

New Dimensions of the Great Caspian Energy Game

MARIANA LIAKOPOULOU

After the emergence of the independent Caspian littoral states (Azerbaijan, Kazakhstan, Turkmenistan) from the splintering Soviet Union in the early 1990s, the United States, replacing the British Empire, and Russia were the principal competitors in the *Great Game* of Caspian/Central Asian energy. Europe and China progressively joined in. Regional players, such as Iran, Turkey and Pakistan occasionally also position themselves here. The stakes were said to be the region's oil and gas resources: how to produce them and how to transport them to the international markets.

This study provides an overview of the influence of these geopolitical and geo-economic powers on the security of energy supply from the Caspian Sea region. It, therefore, examines how the Great Game of Caspian/Central Asian energy has evolved since the beginning of the twenty-first century. To do this, it analyzes a set of completed, planned and rumoured divestments in upstream and midstream projects by International Oil Companies (IOCs) historically active in the region, including the motives of the latter.

Section 1 looks into IOCs' withdrawal from the Caspian Sea region: in particular, ExxonMobil's planned divestment from the ACG oilfield complex and Chevron's completed divestments from both the ACG and the BTC pipeline, Total's divestment from SD2 and the TAP, Total's rumoured divestment from Kashagan, Shell's, and NCOC's respective divestments from Khazar and Kalamkas-More fields and Chevron's second thoughts about the Tengiz expansion project. It sets out the historical background to these projects so as to highlight differences between American and European energy diplomacy in the early post-Soviet years, each favouring its own IOCs in the region, and how the situation has changed today.

Section 2 categorizes the market and policy developments prompting the IOCs' withdrawal. These include the US shale revolution, IOCs' corporate adaptation to the energy transition and the EU energy market developments (EU Green Deal and diplomatic commitments for US LNG imports).

Section 3 determines that, in conditions where Western leadership in Caspian energy affairs is diminished, the non-Russian Caspian Sea oil- and gas-producing states are exposed to the influence of Russia and China. This influence may be exerted, for example, through arbitrations over price revisions (such as occurred with Turkmenistan's gas sold to Russia up until 2015) and China's upper hand in the still publicly undisclosed price-formation mechanism for its purchase for Caspian and Central Asian gas (in exchange for financing CACG's Line D and the development of stage two of Turkmenistan's giant onshore Galkynysh gas field, which feeds the CACG).

The existence of these risks does not imply that the Caspian oil- and gas-producing states are losing their geopolitical significance. Even if this were to diminish, due to the weakened attention of the Great-Game competitors in the region, it could not happen all at once. Indeed, the possibility of more mergers, divestments, and delays in or absence of final investment decisions (FIDs) always remains on the table.

But the timing of other FIDs, mainly the ones on the Azerbaijan-driven SGC pipe network and associated fields, initiated well before the circumstances analyzed here came into effect and now nearing completion, indicate that IOCs' presence in the region is going to be maintained, at least in what concerns gas. That is because the completion of the strategically important SGC is to the interest of the EU and the US, who seek to contain Russia's market dominance, as well as to the interest of the company consortia, who seek returns on their investments. The SGC finalization can lead to new greenfield and brownfield FIDs, either on fields in the Azeri sector of the Caspian or the TCGP.

1. Analysis of Cases of IOCs' Withdrawal from the Caspian

1.1. Scope of the Section

Caspian Sea is the world's largest inland body of water. According a 2013 estimate by the U.S. Energy Information Administration (EIA), still widely cited, its proved and probable reserves are 48 billion barrels (bbl) of oil and 8.3 trillion cubic metres (Tcm) of natural gas.[2] Other organizations and the Caspian Sea littoral states themselves provide different, more recent appraisals.[3]

This section analyzes a series of completed, planned, and rumoured withdrawals of IOCs from the region, including their second thoughts about the viability of certain projects, that were made public throughout 2019.

There are three main subsections. The next begins by analyzing the divestment planned by ExxonMobil of its share in Azerbaijan's ACG oilfield complex and Chevron's completed divestment from both ACG and the BTC oil pipeline. The one after that treats Total's divestments from Azerbaijan's SD2 offshore gas project and the TAP. The following subsection then discusses Total's rumoured sale of its stake in Kazakhstan's Kashagan oilfield to the Chinese company CNPC, as well as Shell's exit from Kazakhstan's Khazar oilfield and NCOC's decision not to develop the Kalamkas-More oilfield. These latter two structures are treated together, because they were to have been developed as a joint project, so as to create new gas production sites away from the Kashagan-Tengiz-Karachaganak triplet of Kazakhstan's largest oil fields. This subsection also invokes concerns by Chevron's shareholders about the impact of costs involved in Kazakhstan's Tengiz expansion project, on the 36 percent decline in the company's 2019 third-quarter earnings.

Before beginning, it is important to provide a definition of IOCs. IOCs are non-state-controlled companies that seek to maximize profit for their shareholders through oil and gas extraction and monetization on a global scale. They are also vertically integrated, meaning

[2] U.S. Department of Energy, Energy Information Administration, "Caspian Sea Region", 26 August 2013, ‹https://www.eia.gov/international/content/analysis/regions_of_interest/Caspian_Sea/caspian_sea.pdf›. All URLs cited were accessed and verified on 5 August 2020 unless otherwise noted.

[3] Sergey S. Zhiltsov, Igor S. Zonn, and Aleksandr V. Semenov, "Hydrocarbon Potential of the Caspian Region", in *Oil and Gas Pipelines in the Black-Caspian Seas Region*, edited by Sergey S. Zhiltsov, Igor S. Zonn, and Andrey G. Kostianoy (Cham: Springer, 2016), 37.

that their global business operations cover the full cycle of the supply chain from exploration to production.[4]

Until the first oil crisis of the 1970s, the so-called "Seven Sisters" (Exxon, Mobil, Chevron, Gulf Oil, Texaco, British Petroleum and Shell) dominated the international oil industry. After the Second World War, the Compagnie Française des Pétroles (now Total) grew, allowing it to join this group of companies. They were all commonly labeled the "Majors".[5] IOCs used what were called "posted prices" in order to increase revenues of their vertically integrated systems. The Organization of Petroleum Exporting Countries (OPEC) was established in 1960 in a bid to keep these IOCs from cutting their posted prices, which would deprive oil-exporting countries of revenue.[6]

Today, the "Majors" (sometimes "Supermajors") are ExxonMobil, Shell, Total, BP, Chevron, Eni, and ConocoPhillips.[7] According to the International Energy Agency (IEA), they own 12 percent of oil and gas reserves, represent 15 percent of production, and account for 10 percent of estimated emissions from industry operations.[8] The establishment of National Oil Companies (NOCs) and the associated direct state involvement in the industry have challenged IOCs' domination.[9] Over the years some NOCs, notably Saudi Aramco and Sinopec, have outperformed the "Majors" in terms of revenues and output growth. Most NOCs, however, remain largely asset-based in their home countries and are considered poorly positioned to adapt to changes in global energy dynamics.[10]

1.2. The ACG Oilfield Complex and the BTC Pipeline

1.2.1. Historical Background

Original shareholders in the ACG oilfield in 1994 and the division of shares as of 2017 are shown in Table 1. In late 2018, it was reported that Chevron and ExxonMobil were planning

---

[4] Basak Beyazay-Odemis, *The Nature of the Firm in the Oil Industry: International Oil Companies in Global Business* (London–New York: Routledge, 2016), 19.

[5] Paul Stevens, *International Oil Companies: The Death of the Old Business Model* (London: Chatham House, May 2016), 4, ‹https://www.chathamhouse.org/sites/default/files/publications/research/2016-05-05-international-oil-companies-stevens.pdf›.

[6] Mary Ann Tétreault, "Gulf Arab States' Investment of Oil Revenues", in *Shifting Geo-Economic Power of the Gulf: Oil, Finance and Institutions*, edited by Matteo Legrenzi and Bessma Momani (Surrey: Ashgate, 2011), 11.

[7] Amy Myers Jaffe and Ronald Soligo, *The International Oil Companies* (Houston, Tex.: Rice University, James A. Baker III Institute for Public Policy, November 2007), 17, ‹https://www.bakerinstitute.org/media/files/Research/3e565918/NOC_IOCs_Jaffe-Soligo.pdf›.

[8] Christophe McGlade, *The Oil and Gas Industry in Energy Transitions* (Paris: International Energy Agency, January 2020), 6.

[9] Andrei V. Belyi, "Introduction", in *Beyond Market Assumptions: Oil Price as a Global Institution*, edited by Andrei V. Belyi (Cham: Springer, 2020), xvi.

[10] McGlade, *The Oil and Gas Industry in Energy Transitions*, 16.

to sell their stakes (9.57 percent and 6.8 percent, respectively) in Azerbaijan's ACG oilfield complex. Chevron's 8.9 percent interest in the BTC pipeline was also put up for sale.[11] In April 2020, Chevron officially completed the transaction of its stakes to Hungary's MOL for US$1.57 billion.[12] In May 2020, ExxonMobil relaunched its sale plans for ACG and BTC due to interest by Asian energy companies, like China National Offshore Oil Corporation (CNOOC), India's Oil and Natural Gas Corporation (ONGC) and Indonesia's Pertamina, who wish to buy cheaper, profiting from the oil price crash.[13]

***Table 1*: ACG shareholdings – 1994 & 2017 PSAs**

1994			2017		
Company	**Country**	**Ownership**	**Company**	**Country**	**Ownership**
SOCAR	Azerbaijan	20 percent	BP	UK	30.37 percent
BP	UK	17.127 percent	AzACG (SOCAR)	Azerbaijan	25 percent
Amoco	USA	17.01 percent	Chevron	USA	9.57 percent
Lukoil	Russia	10 percent	INPEX	Japan	9.31 percent
Pennzoil	USA	9.82 percent	Equinor	Norway	7.27 percent
Unocal	USA	9.52 percent	ExxonMobil	USA	6.79 percent
Statoil	Norway	8.563 percent	TPAO	Turkey	5.73 percent
McDermott International	USA	2.45 percent	ITOCHU	Japan	3.65 percent
Ramco	Scotland	2.08 percent	ONGC Videsh Ltd. (OVL)	India	2.31 percent
TPAO	Turkey	1.75 percent			
Delta-Nimir	Saudi Arabia	1.68 percent			

[11] Dmitry Zhdannikov and Ron Bousso, "Exclusive: Exxon, Chevron Seek to Exit Azerbaijan's Oil after 25 Years", Reuters, 4 December 2018, ‹https://www.reuters.com/article/us-exxon-azerbaijan-exclusive/exclusive-exxon-chevron-seek-to-exit-azerbaijans-oil-after-25-years-idUSKBN1O315D›.

[12] Chevron, "Chevron Sells Azerbaijan Assets to MOL Hungarian Oil and Gas", Chevron press release, 16 April 2020, ‹https://www.chevron.com/stories/chevron-sells-azerbaijan-assets-to-mol-hungarian-oil-and-gas›.

[13] Ron Bousso, "Exclusive: Exxon Revives Sale of Stake in Giant Azeri Oilfield", Reuters, 19 May 2020, ‹https://uk.reuters.com/article/us-exxon-m-a-azerbaijan-exclusive/exclusive-exxon-revives-sale-of-stake-in-giant-azeri-oilfield-idUKKBN22V25S›.

Located some 100 kilometres east of Baku, ACG is the largest structure in Azerbaijan's sector of the Caspian Basin and produces the country's signature medium-light and sweet crude (Azeri Light).[14] The ACG's 30-year-long PSA was concluded in 1994, in the presence of U.S. Deputy Secretary of Energy Bill White, U.K. Energy Minister Tim Eggar and other diplomats and assorted oil executives. Signatories were the State Oil Company of the Azerbaijani Republic (SOCAR) and eleven other companies from the U.S., U.K., Russia, Norway, Turkey and Saudi Arabia. The U.K.'s British Petroleum Company (as BP was then called) and the U.S.-based firm Amoco (which BP would acquire in late 1998, becoming BP Amoco) held the largest stakes after SOCAR, followed by Russia's Lukoil. Today known as the Azerbaijan International Operating Company (AIOC), the consortium is still led by BP, but such IOCs as Exxon and Chevron have replaced other original partners over the years.

Azerbaijan's President Heydar Aliyev called the deal the "Contract of the Century". He perceived energy as a tool by which to balancing against the political and military challenges from Russia and Armenia to newly independent Azerbaijan. Armenian military forces were already advancing in the Nagorno-Karabakh region, an integral part of Azerbaijan. SOCAR's Vice President for Investments and Marketing, Elshad Nassirov, recently noted how important the trust shown by the foreign contractors to Azerbaijan, was at the time: "It was not easy: that year the price of oil averaged US$12/bbl, and since Azerbaijan is landlocked, it added transportation costs and risk to reaching international oil markets."[15]

On 4 September 2017, seven years before the original PSA expired, SOCAR and its partners extended the ACG deal up until 2050. Their amended agreement promises US$40 billion more in capital investments, on top of US$33 billion already invested. It also increased SOCAR's equity share from 11.65 percent to 25 percent and granted a bonus of US$3.6 billion to the State Oil Fund of the Republic of Azerbaijan (SOFAZ) over a period of eight years. Finally, Azerbaijan's direct share in profitable oil produced from ACG now amounts to 75 percent.[16] BP and partners took the FID on ACG's subsequent development project, the Azeri Central East (ACE), on 19 April 2019, a few months before the celebration of the twenty-fifth anniversary of the Contract of the Century. The ACE project is worth US$6 billion and encompasses an offshore platform and facilities able to process 100,000 barrels per day (bbl/d). It is expected to produce 300 million barrels over its lifetime, with first oil set for 2023.[17]

---

[14] Elena Safirova, "The Mineral Industry of Azerbaijan", in U.S. Geological Survey, National Minerals Information Center, *Minerals Yearbook 2011*, vol. 3, *Area reports: International; Europe and Central Eurasia* (Washington, D.C.: U.S. Government Printing Office, 2013), 5.2, ‹https://doi.org/10.3133/70178412›.

[15] Elshad Nassirov, "Industry Perspective: Going Global", interview by Stuart Elliott, *S&P Global Platts Insight Magazine,* 2019, Special Report, *National Champions: State Oil Companies Evolve to Face the Future* (October), 34, ‹https://sp-platts.s3-ap-southeast-1.amazonaws.com/NOC_Special_Report_DIGITAL.pdf›.

[16] Mariana Liakopoulou and Efgan Nifti, *Special Brief on the Azeri-Chirag-Guneshli (ACG) Contract: US Companies Get 16 Percent Share in Azerbaijan Oil Deal* (Washington, D.C.: Caspian Policy Center, September 2017), ‹https://www.caspianpolicy.org/special-brief-on-the-azeri-chirag-guneshli-acg-contract-us-companies-get-16-percent-share-in-azerbaijan-oil-deal/›.

[17] BP, "BP and Partners Sanction $6 Billion Azeri Central East Development Offshore Azerbaijan", BP press release, 19 April 2019, ‹https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-and-partners-sanction-6-billion-dollar-azeri-central-east-development-offshore-azerbaijan.html›.

The first ACG oil, lifted from the Chirag platform in 1997, was exported via the Baku-Novorossiysk pipeline, also called the "northern route". The Azerbaijani government chose this route for early ACG exports to appease Russian interests, after having allocated a 10 percent stake in the Contract of the Century to the Russian firm Lukoil.[18] Both the preference for the Baku-Novorossiysk pipeline and the inclusion of Lukoil into the Contract of the Century were signs of the government's realization of the great deal of politics involved even in purely commercial affairs in the post-Soviet transition.

In 1999, the BP-operated Western Route Export Pipeline (WREP) entered into service, connecting the Sangachal terminal south of Baku to the Supsa terminal on Georgia's Black Sea coast. The inadequate capacity of the northern and western routes to accommodate volumes from the next phases of the ACG development triggered the construction of a main export line, running from Azerbaijan to Turkey's Ceyhan terminal, through Georgia.[19] With a throughput capacity 10 times either of the other two lines (i.e. 1 million bbl/d), the BTC pipeline delivered its first oil in 2006. The commissioning of the 1,768-kilometre project was the outcome of tough negotiations and considerable encouragement from the Clinton Administration.[20]

Shareholders in the BTC are: BP (30.1 percent), AzBTC (25 percent), Chevron (8.9 percent), Norway's Equinor (8.71 percent), the Turkish Petroleum Corporation -TPAO (6.53 percent), Italy's Eni (5 percent), France's Total (5 percent), Japan's ITOCHU (3.4 percent), and INPEX (2.5 percent) plus India's ONGC (BTC) Ltd. (2.36 percent).[21] Since the pipeline was commissioned on 4 June 2006, over three billion barrels in 4,457 tankers have left the Ceyhan terminal for distribution to world markets. Some crude volumes from Kazakhstan's Tengiz field also started to be transported through the BTC since 2006, albeit with occasional breaks. Crude oil from Turkmenistan is also transported via the pipeline

1.2.2. Analysis of Chevron's and Exxon's Divestments

Roughly one year after Chevron went public with its sale plan, Hungary's MOL Group bought its ACG and BTC stakes for US$1.57 billion. According to the company's statement,[22] the transaction strengthens MOL's position in its core region of the former Soviet areas. It is estimated that ACG will add about 20,000 bbl/d net to MOL's production in the coming

[18] James J. Coyle, *Russia's Border Wars and Frozen Conflicts* (Cham: Palgrave Macmillan, 2017), 240.

[19] Ekpen James Omonbude, *Cross-border Oil and Gas Pipelines and the Role of the Transit Country: Economics, Challenges and Solutions* (New York: Palgrave Macmillan, 2013), 61.

[20] Angela E. Stent, *The Limits of Partnership: US-Russian Relations in the 21st Century* (Princeton, N.J.: Princeton University Press, 2015), 199.

[21] BP, "Baku-Tbilisi-Ceyhan pipeline", n.d., ‹https://www.bp.com/en_az/azerbaijan/home/who-we-are/operationsprojects/pipelines/btc.html›.

[22] MOL Group, "MOL Group Agrees to Purchase a 9.57 Percent Stake in Azerbaijan's ACG Field and 8.9 Percent in the BTC Pipeline", MOL Group press release, 4 November 2019, ‹https://molgroup.info/en/investor-relations/investor-news/mol-agrees-to-purchase-a-957-stake-in-azerbaijans-acg-oil-field-and-89-in-the-btc-pipeline›.

years, also materially increasing MOL's proved and probable reserves. Exxon hopes to raise a similar amount (US$2 billion) from its ACG divestment. It is also in the process of divesting various European upstream assets, from the Romanian Neptun Deep offshore project in the Black Sea[23] to North Sea fields in Norway[24] and the UK.[25] These moves typify portfolio rationalizations by the Majors resulting from the plunge in oil prices since 2014.

The withdrawal of two U.S. companies from projects in the Caspian Sea region after 25 years is justified by their broader approach of shedding mature overseas assets in a bid to finance shale investments at home. ACG may be considered one such asset due to its looming depletion. In 2017, more than 70 percent of Azerbaijan's total oil output (about 588,000 bbl/d) came from the ACG fields, down from 630,000 bbl/d in 2016.[26] In a January 2020 statement,[27] released on the occasion of its 500 millionth metric ton of production, BP revealed that ACG's crude production indicator contracted by 8.4 percent. Specifically, production averaged 535,000 bbl/d in 2019, down from 584,000 bbl/d in 2018, and down about a third from the 823,000 bbl/d peak of 2010.

U.S. companies' bid to finance shale investments at home justifies their withdrawal from projects in the Caspian Sea region.

To make matters worse, the COVID-related demand destruction that has decimated oil prices since March 2020 led to the first-ever output cut in the amount of some 75,000–80,000 bbl/d from ACG's production, so that Azerbaijan may comply with the new OPEC-plus deal of 12 April 2020. This results in a net cut for operator BP of around 30,000 bbl/d.[28] Although lucrative foreign oil projects in the region have been so far unaffected by state production

[23] Gary McWilliams and Luiza Ilie, "Exxon Mobil Confirms May Exit Romanian Offshore Gas Project", Reuters, 8 January 2020, ‹https://www.reuters.com/article/us-romania-energy-exxon/exxon-mobil-confirms-may-exit-romanian-offshore-gas-project-idUSKBN1Z70XP›.

[24] David Sheppard, "ExxonMobil Sells Norway Assets to Var for $4.5bn", *Financial Times*, 26 September 2019, ‹https://www.ft.com/content/f03fec96-e085-11e9-b112-9624ec9edc59›.

[25] Dinesh Nair and Laura Hurst, "Exxon Is Said Poised to Kick Off U.K., Germany Disposals", Bloomberg, 23 January 2020, ‹https://www.bloomberg.com/news/articles/2020-01-22/exxon-mobil-is-said-poised-to-kick-off-u-k-germany-disposals›.

[26] U.S. Department of Energy, Energy Information Administration, "Country Analysis Executive Summary: Azerbaijan", 7 January 2019, ‹https://www.eia.gov/international/content/analysis/countries_long/Azerbaijan/azerbaijan_exe.pdf›.

[27] BP, "ACG Achieves the 500 Millionth Tonne Production Milestone", Press release, 9 January 2020, ‹https://www.bp.com/en_az/azerbaijan/home/news/press-releases/acg-achieves-the-500-millionth-tonne-production-milestone.html›.

[28] Olga Yagova and Dmitry Zhdannikov, "Azerbaijan Imposes Oil Cuts on BP-led Fields: Sources", Reuters, 23 April 2020, ‹https://www.reuters.com/article/us-global-oil-azerbaijan/azerbaijan-imposes-oil-cuts-on-bp-led-fields-sources-idUSKCN225328›.

commitments, that output cut will decrease Azeri Light shipments through BTC, although the forthcoming ACE launch is hoped to halt production declines. On top of natural depletion, the terms of the extended PSA (in particular: SOCAR's higher stake, SOFAZ's bonus and Azerbaijan's hydrocarbon profit share) also deter IOCs from extended engagement in the Caspian Sea region.

The fact that the U.S. shale gas and tight oil boom has shortened the timeframe between initial drillings and delivery to the market, to days or weeks, also drives the American IOCs' reorientation towards domestic investments. This phenomenon contrasts with the longer investment cycles of months or years required for conventional and offshore/deep-water projects.[29]

The prolific Permian Basin, spanning parts of western Texas and southeastern New Mexico, is the fracking province steadily having the highest weekly rig counts, boosting competition between Exxon's and Chevron's shale businesses. It has displaced the Gulf of Mexico as the top crude producing region. With a growth strategy of 1 million barrels of oil equivalent per day (boe/d) by 2024, Exxon recorded year-on-year Permian output increases of 90 percent[30] (274,000 boe/d) and 72 percent[31] (293,000boe/d) in the second and third quarters of 2019, respectively. Chevron also attained double-digit ramp-ups of 55 percent[32] and 35 percent[33] (455,000 boe/d) for the same periods. It aims to reach 900,000 boe/d by 2023.

It remains to be seen whether the market upheaval, associated both with the fall in demand due to the COVID-19 restrictions and with the Russian-Saudi price war of March 2020, will allow analogous figures to be achieved over the next five years. IOCs have been forced to put projects on hold and to cut production drastically in U.S. shale plays. As of the time of writing, ExxonMobil plans to slash its 2020 spending by 30 percent to US$23 billion, with most of the cuts intended for drilling and fracking operations in the Permian. Even so, it said that its Permian production will increase through the end of 2021. In its turn, Chevron plans to halve its Permian spending and to pump 125,000 bbl/d less (20 percent down) in the Basin by the end of 2020. Despite unavoidable production losses, the Permian will rebound faster than other shale basis because of its better resource base. This will support IOCs plans for aggressive production ramp-ups, as prices rebuild from the historic collapse of April 2020, driven by reduced demand brought on by the global COVID-19 pandemic.

---

[29] However, technological improvements and cost cuts had brought the breakeven levels for certain conventional projects to US$30-50/bbl, before the 2020 oil price collapse.

[30] "ExxonMobil Earns $3.1 Billion in Second Quarter 2019", Business Wire, 2 August 2019, ‹https://www.businesswire.com/news/home/20190802005068/en/ExxonMobil-Earns-3.1-Billion-Quarter-2019›.

[31] Neil Hansen, "Third Quarter 2019 Results", ExxonMobil, 11 January 2019, ‹https://corporate.exxonmobil.com/-/media/Global/Files/investor-relations/quarterly-earnings/presentation-materials/2019-presentation-materials/earnings-presentation-3q.pdf›.

[32] Chevron, "2Q19 Earnings Conference Call: Edited Transcript", Chevron, 2 August 2019, ‹https://chevroncorp.gcs-web.com/static-files/93939f6e-701d-415c-bb0b-85208b1f5e4a›.

[33] Chevron, "Chevron Reports Third Quarter Net Income of $2.6 Billion", Chevron press release, 1 November 2019, ‹https://www.chevron.com/stories/chevron-reports-third-quarter-net-income-of-2-6-billion›.

1.3. Shah Deniz 2 and the TAP Pipeline

1.3.1. Historical Background

It is worthwhile to note that the IOCs' ebbing commercial interest in the Caspian was signalled earlier in the 2010s by Total's divestments from Shah Deniz Two (SD2) and the Trans-Adriatic Pipeline (TAP).

Total entered the Shah Deniz PSA with a 10 percent stake in 1996. The offshore, BP-operated field holds 1.2 Tcm of gas reserves and functions as the resource base for the SGC. The FID for its first development phase was taken in 2003, along with the FID on construction of the Baku-Tbilisi-Erzurum or South Caucasus Pipeline (SCP), the first SGC segment that runs parallel to the BTC pipeline. The first SCP gas flows to Turkey, in 2007, coincided with the discovery of a new high-pressure reservoir in a deeper structure in Shah Deniz. The FID for SD2 was announced in 2013, in tandem with shareholders' choice of the TAP over the longer and more expensive Nabucco West pipeline project as the SGC's preferred European export route, after much technical and political deliberation.[34]

In May 2014, Total sold its 10 percent share in SD2 to TPAO, the Turkish state-owned oil and gas company. At the end of the same year, TAP shareholder Fluxys increased its stake from 16 percent to 19 percent, while Spain's Enagas took a 16 percent stake in the project, both companies purchasing shares previously owned by Total (10 percent) and the German utility E.ON (9 percent).[35] About that time Norway's NOC Statoil (now Equinor) sold its 15.5 percent participating interest in the Shah Deniz PSA to the Malaysian firm Petronas.[36] By the end of 2015, Statoil had also sold its 20 percent interest in TAP to Italy's Snam.[37]

1.3.2. Analysis of Total's Divestment

The European companies' divestments did not prevent the two projects from entering into service. SD2 was successfully launched in 2018.[38] First gas was introduced into a 2-kilometre

---

[34] Mariana Liakopoulou, *The Caspian Legal Status and Riparian Producers' Outlook on the European Commission's Strategy Towards the Fourth/Southern Gas Corridor* (Paris: European Gas Hub, July 2018), ‹https://www.europeangashub.com/wp-content/uploads/2018/07/Liakopoulou_Caspian.pdf›.

[35] "Enagas Joins TAP. Fluxys Ups stake", *Offshore Energy Today*, 30 September 2014, ‹https://www.offshoreenergytoday.com/enagas-joins-tap-fluxys-ups-stake/›.

[36] Equinor, "Statoil sells 15.5 percent share in Shah Deniz to PETRONAS for USD 2.2 billion", Equinor Press release, 13 October 2014, ‹https://www.equinor.com/en/news/archive/2014/10/13/13OctShahDeniz.html›.

[37] TAP, "Snam S.p.A. to join TAP shareholding, acquiring 20 percent stake in the project from Statoil", TAP press release, 1 December 2015, ‹https://www.euro-petrole.com/snam-s-p-a-to-join-tap-shareholding-acquiring-20-stake-in-the-project-from-statoil-n-i-12316›.

[38] BP, "BP starts-up landmark Shah Deniz 2 development in Azerbaijan", BP press release, 2 July 2018, ‹https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-starts-up-landmark-shah-deniz-2-development-in-azerbaijan.html›.

section of the TAP in Greece as part of its testing phase in 2019.[39] *Therefore, the above-mentioned exits are attributable to the companies' own commercial concerns, rather than to technical issues related to the projects themselves.* Total explained that the transaction to TPAO was "in line with its active portfolio management and the focus of its investment capability on more strategic assets".[40]

Exits from SD2 and TAP are attributable to companies' commercial concerns rather than to technical project-related issues.

The deep-water Absheron gas-condensate field, offshore from Azerbaijan, was discovered in 2011 and is jointly operated with SOCAR. It may be regarded as Total's prime strategic asset in the Caspian Sea region, at least in the Azeri sector. Scheduled to have gone onstream by 2021, it entails the drilling of the deepest well in the Caspian Sea region, which is planned to be connected by pipeline to SOCAR's onshore infrastructure, the Oil Rocks communications and infrastructure hub. Often considered to be amongst the so-called "new wave" of Azerbaijani gas sources that could feed into the SGC, Absheron is hoped to ensure an Azerbaijani production plateau of 35 billion cubic metres per year (bcm/y) from 2026 onwards, combined with extra subsea compression that will enhance output from Shah Deniz.[41] In line with its strategy of actively managing its asset portfolio and of divesting US$5 billion in assets in 2019–2020, Total is pursuing divestments of several non-core assets in both its Exploration-Production and its Marketing & Services divisions, representing a global value of more than US$400 million.[42] These plans of Total will pose no obstacle to the continuation of its Azerbaijani projects, regarding which Total's Executive Director for Azerbaijan Regis Agut recently emphasized the company's commitment.[43]

With ACG having hit its maximum output level in 2010, IOCs are massively turning to Azerbaijan's gas condensate projects, like Shah Deniz and Absheron, in the hopes of offsetting their falling revenues from aging oil fields. Precisely by virtue of oil's challenging outlook, SOCAR's Deputy

---

[39] TAP, "TAP Introduces First Natural Gas into the Greek Section of the Pipeline as part of its Testing Phase", TAP press release, 26 November 2019, ‹https://www.euro-petrole.com/tap-introduces-first-natural-gas-into-the-greek-section-of-the-pipeline-as-part-of-its-testing-phase-n-i-19780›.

[40] Total, "Azerbaijan: Total sells its 10 percent interest in Shah Deniz to TPAO" Total press release, 30 May 2014, ‹https://www.total.com/media/news/press-releases/azerbaidjan-total-vend-sa-participation-de-10-dans-shah-deniz-tpao›.

[41] John Roberts, "The Southern Gas Corridor", in *The European Gas Markets: Challenges and Opportunities*, eds. Manfred Hafner and Simone Tagliapietra (Cham: Palgrave Macmillan, 2017), 326.

[42] "Total Divests of $400 Million in Exploration, Production and Distribution Assets", World Oil, 4 July 2020 ‹https://www.worldoil.com//news/2020/4/7/total-divests-of-400-million-in-exploration-production-and-distribution-assets?id=83278356›.

[43] Nargiz Ismayilova, "Total company to continue projects in Azerbaijan", *Trend*, 9 April 2020, ‹https://en.trend.az/business/energy/3220264.html›.

Head of Public Relations and Events Department, Ibrahim Ahmadov, noted a rise of 16 percent in Azerbaijan's gas production during 11 months of 2019, during which about 32 bcm were extracted.[44]

1.4. The Kashagan, Kalamkas More–Khazar, and Tengiz Fields

1.4.1. Historical Background

Kazakhstan does not have the same gas production potential as its Caspian neighbours Azerbaijan and Turkmenistan. Its upstream business is mainly driven by oil, making it particularly vulnerable to price fluctuations. Thus, the country's minister of national economy forecasts a 0.9 percent decline in GDP in 2020 because of the oil price crash and concomitant recession.[45]

A triplet of fields, often referred to as the "three whales",[46] account for the majority of Kazakhstan's recoverable reserves: the offshore Kashagan, located near the city of Atyrau; the onshore Tengiz; and the Karachaganak field, which lies close to the border with Russia. The three sites accounted for 60 percent of the total Kazakh oil output in 2018 (54 out of an overall of 90.4 million metric tons). In March 2020, a record 1.65 million bbl/d spike in loadings of CPC light crude was recorded, as production surged in Kashagan and Tengiz.[47] The CPC blend was first introduced to the market at the end of 2001 with the commissioning of the Caspian Pipeline Consortium (CPC) pipeline system, running from Kazakhstan to the Black Sea. The Kazakhstani government has reportedly ordered ExxonMobil, Chevron, Eni, Total, and Shell to cut output from Kashagan and Tengiz by 22 percent, in order to fulfill its new OPEC-plus quota of 390,000 bbl/d.[48] Just as Azerbaijan requested the BP-led consortium to reduce production from the ACG field, Kazakhstan equally targeted highly-prized projects operated by IOCs, so as to meet its commitments under the OPEC-plus agreement of April 2020.

In 2018 Kashagan, Tengiz and Karachaganak yielded 25 bcm out of the country's total commercial gas production of 36.4 bcm, accounting for 76 percent of the national gross gas

---

[44] "SOCAR Sums Up Its Activity, Unveils Plans for 2020", *AzerNews*, 8 January 2020, ‹https://www.azernews.az/oil_and_gas/160409.html›.

[45] "Kazakhstan Updates Economic Forecast for 2020 to Respond to Low Oil Prices, Coronavirus Impact", *Times of Central Asia*, 2 April 2020, ‹https://www.timesca.com/index.php/news/22315-kazakhstan-updates-economic-forecast-for-2020-to-respond-to-low-oil-prices-coronavirus-impact›.

[46] Silvana Tordo and Yahya Anouti, *Local Content in the Oil and Gas Sector: Case Studies* (Washington, D.C.: World Bank, 2013), 109.

[47] Nick Coleman, "Kazakhstan's CPC Crude Loadings Surge to Record High in March", S&P Global Platts, 2 April 2020, ‹https://www.spglobal.com/platts/en/market-insights/latest-news/oil/040220-kazakhstans-cpc-crude-loadings-surge-to-record-high-in-march›.

[48] Olga Yagova, Alla Afanasyeva, and Dmitry Zhdannikov, "Oil Majors, Governments Haggle over Sharing Pain of Deepest Cuts Yet", Reuters, 28 April 2020, ‹https://www.reuters.com/article/us-global-oil-opec-majors/oil-majors-governments-haggle-over-sharing-pain-of-deepest-cuts-yet-idUSKCN22A2DF›.

output (commercial gas plus associated gas) for that year.[49] Kazakhstan's scaling-up of commercial gas volumes is limited by the fact that more than half of its gas production is highly sulphurous "associated gas", a by-product of offshore oil operations that, by reinjection into the reservoir, stimulates further oil production. A government policy favouring the expansion of gasification of power generation, industry and the residential sector, in a bid to phase out coal represents a further limitation on scaling up production.[50]

IOCs to entered Kazakhstan in the late 1990, thanks to U.S. energy diplomacy seeking to increase supplies and diversify supply routes.

Kazakhstan's hydrocarbon industry has presented a series of non-negligible hurdles for multinational companies. In 2013, an exercise conducted by Shell and other firms with the endorsement of the Kazakh government identified five types of research and development (R&D) and technological challenges: (1) the complex geologic structure of the reservoirs, (2) high temperature and pressure, (3) petroleum and gas reserves rich in noxious hydrogen sulfide, (4) transportation issues, and (5) extreme-climate and shallow-water reservoirs.[51]

The intricate engineering and capital investments needed to address these constraints did not discourage Western IOCs from being lured into Kazakhstan, even from before the Soviet Union ceased to exist in 1991. *They were motivated by American energy diplomacy, which at that time sought to augment supplies via diversified transit routes, so as to bolster oil markets' flexibility and to attenuate OPEC's price-making power.*

In June 1990, Chevron successfully negotiated a 50 percent interest in Tengiz, one day after the US President George H.W. Bush had sat down with the Soviet President Mikhail Gorbachev.[52] After Kazakhstan declared independence in December 1991, Chevron was the first IOC to challenge Russia's strong strategic and financial foothold in Kazakhstan's energy sector.

Russia used to monopolize the routes of Kazakhstan's oil exports. Kazakhstan was obliged to export via the only existing pipeline from the Soviet era, the Atyrau-Samara pipeline, which is today controlled by Transneft.[53] In 1992, supported by the U.S. Export-Import

---

[49] KAZENERGY Association, *The National Energy Report 2019* (Astana: Kazakhstan Association of Oil, Gas and Energy Sector Organizations "Kazenergy", 2019).

[50] Ibid.

[51] Organisation for Economic Co-operation and Development, *OECD Reviews of Innovation Policy: Kazakhstan 2017* (Paris: OECD Publishing, 2017), 112.

[52] Andrew C. Inkpen, Michael H. Moffett, and Kannan Ramaswamy, *The Global Oil & Gas Industry: Stories from the Field* (Tulsa, Okla.: PennWell Corporation, 2017), 49.

[53] Sébastien Peyrouse, "Perspectives and limits on Sino-US competition: The Kazakhstan case study", in *Sino-US Energy Triangles: Resource Diplomacy under Hegemony*, edited by David Zweig and Yufan Hao (London: Routledge, 2016), 170.

Bank, the Russian government established the Caspian Pipeline Consortium (CPC) in co-operation with Kazakhstani and Omani partners. The costs of rejuvenating existing Russian infrastructure and constructing a whole new pipeline from Tengiz all the way to the Black Sea (Novorossiysk terminal) amounted to US$2.6 billion, of which ChevronTexaco and ExxonMobil covered nearly half.[54] From its commissioning in 2001 through June 30 of 2019, the 1,510-kilometre CPC pipeline system delivered 613,113,609 net metric tons of crude oil to world markets, of which 533,919,222 were produced from Kazakhstan and 79,194,387 from Russia.[55] CPC is the only pipeline crossing Russian territory that is not operated by Transneft. *The Tengiz-Novorossiysk pipeline, together with the Kazakhstan-China crude oil pipeline, gave impetus to the diversification of Kazakhstan's oil exports away from Russian-controlled infrastructures.* The latter pipeline was completed much later, in 2009, despite having been discussed since 1997, when CNPC acquired a 60.3 percent stake in the Kazakhstan oil company Aktobe Munaygas.[56]

In 1993, TengizChevrOil (TCO), a joint venture between state-owned KazMunayGas and Chevron, was created through a PSA. TCO maintains exploitation rights within the Tengiz license area until 2033. Exxon obtained a 25 percent share in TCO in 1996; in 1997 Chevron sold a 5 percent share to Lukoil.[57] The IOCs were eager to enter the region after the Soviet Union disintegrated, at a time when apprehension was mounting in the industry over a menacing peak in oil supplies[58] and new exploration opportunities were much sought after. Indicative of this interest is the fact that even Nurlan Balgimbayev, the man charged with fostering Western oil interests from the post of Kazakhstan's Prime Minister in 1997, had been trained in Chevron's U.S. headquarters in 1992–1993.[59]

As for Kashagan, one of the most expensive stand-alone oil projects in the world at some US$55 billion, its 40-year PSA was inked between the Kazakhstan government and a consortium of Western equity investors in 1997. It was expected that the field would be pumping oil by 2005,[60] but setbacks ascribed to the area's complex geology led to a delay with commercial output starting only in 2016. An operational shutdown in 2008 led to one of the PSA's several revisions: operatorship was transferred from Eni to the newly formed Northern

---

[54] White House, Office of the Press Secretary, "Caspian Pipeline Consortium Factsheet", Press release, 13 November 2001, ‹https://georgewbush-whitehouse.archives.gov/news/releases/2001/11/20011113-17.html›.

[55] Caspian Pipeline Consortium, "Media Statements by CPC General Director", Caspian Pipeline Consortium press release, 3 July 2019, ‹http://www.cpc.ru/EN/press/releases/2019/Pages/20190703_2.aspx›.

[56] Chi Zhang, *The Domestic Dynamics of China's Energy Diplomacy*, Series on Contemporary China 38 (Singapore: World Scientific Publishing Co., 2016), 146.

[57] Global Investment and Business Center, *Kazakhstan: Customs, Trade Regulations and Procedures Handbook, Volume 1: Strategic and Practical Information* (Washington, D.C.: International Business Publications, 2017), 96.

[58] Peak oil alarms occasionally led to spikes in oil prices, during the period of the late 1990s-early 2000s examined here, thus serving OPEC's strategy to maintain prices at persistently high levels.

[59] Martha Brill Olcott, *Kazakhstan: Unfulfilled Promise?* (Washington, D.C.: 2010), 157.

[60] Benjamin C. Esty and Florian Bitsch, *The Kashagan Production Sharing Agreement (PSA)* (Boston: Harvard Business School Publishing, 2013), 1.

Caspian Operating Company (NCOC).[61] (See Table 2 for original shareholders in 1997 and their shares in 2013.) Kashagan reached its maximum design capacity of 380,000 bbl/d in the first half of 2019. According to Kazakhstan's Deputy Energy Minister, Makhambet Dosmukhambetov, the plan is for the field to increase output gradually, to between 420,000 bbl/d and 500,000 bbl/d under the first development phase, with the help of associated gas.[62]

Table 2: **NCOC shareholdings – 1997 & 2013 PSAs**

1997			2013		
Company	**Country**	**Ownership**	**Company**	**Country**	**Ownership**
BP	UK	9.52 percent	KazMunayGas	Kazakhstan	16.88 percent
British Gas	UK	14.28 percent	Eni	Italy	16.81 percent
Eni	Italy	14.28 percent	ExxonMobil	USA	16.81 percent
ExxonMobil	USA	14.28 percent	Shell	UK/Netherlands	16.81 percent
Kazakh government	Kazakhstan	14.28 percent	Total	France	16.81 percent
Shell	UK/Netherlands	14.28 percent	CNPC	China	8.33 percent
Statoil	Norway	4.76 percent	INPEX	Japan	7.56 percent
Total	France	14.28 percent			

1.4.2. Analysis of Total's Rumoured Divestment from Kashagan

Just as in Azerbaijan's case, IOCs keen to explore Kazakhstan's Caspian Sea shelf three decades ago, progressively became skeptical about the high costs of their hydrocarbon investments in the region, amid a slump in oil prices and concerns about weak demand coupled with a glut of supply.

In May 2019, Total was rumoured to be discussing with CNPC the sale of about one third of its 16.8 percent stake in Kashagan, valued at US$4 billion. In spite of this being officially denied by the French major, the transaction would tie in with Total's purchase of

[61] Inkpen, Moffett, and Ramaswamy, *The Global Oil & Gas Industry: Stories from the Field*, 63.

[62] Azamat Sizdikbayev, "Do 500 tysiach barelei khotiat uvelichit' proizvoditel'nost' dobychi na Kashagane" [They Want to Increase Production Capacity at Kashagan to 500 Thousand Barrels], Kazinform, 2 October 2019, ‹https://www.inform.kz/ru/do-500-tysyach-barreley-hotyat-uvelichit-proizvoditel-nost-dobychi-na-kashagane_a3571425›.

Anadarko's African assets from Occidental for US$8.8 billion.[63] [64] These acquisitions would likely lead Total to diminish higher-cost production, in search of profitability even in the event of an oil price below US$30/bbl, according to CEO Patrick Pouyanne.[65]

1.4.3. Analysis of Shell's and NCOC's Divestments from Khazar–Kalamkas More

In October 2019, Shell sold its 55 percent stake in the Khazar oilfield development project, having spent US$900 million on geological exploration and seismic works. This move does not herald Shell's departure from Kazakhstan, however, as the company also participates in the consortium of the Karachaganak field with a 29.25 percent stake. At the same time, NCOC announced that it abandons plans to develop the Kalamkas-More oilfield.[66]

Khazaar and Kalamakas offer appreciable production alternatives away from the larger Kashagan, Tengiz and Karachaganak fields.

The Khazar structure lies within the Zemchuzhina contract area in the north of the Caspian Sea. It is licensed to the Caspi Meruerty Operating Company (CMOC), whose shareholders are Shell (55 percent), KazMunayGas (25 percent), and Oman Oil (20 percent).[67] Kalamkas-More is the largest so-called "satellite" discovery to which NCOC also holds rights, the others being Aktote and Kairan.[68] These two adjacent deposits were to have been co-developed under a joint project worth US$5 billion between 2025 and 2027.

[63] Total, "Total Agrees with Occidental to Contingent Acquisition of Anadarko's Assets in Africa", Total press release, 5 May 2019, ‹ https://www.total.com/media/news/press-releases/total-agrees-occidental-contingent-acquisition-anadarkos-assets-africa›.

[64] Under their PSA, Total and Occidental completed the sale and purchase of the Mozambique and South Africa assets. However, in May 2020 Total decided not to pursue the completion of the purchase of Occidental's Ghana assets, which was conditional on the completion of the acquisition of Occidental's other assets in Algeria, in the context of the US$8.8 billion plan, given the extraordinary market environment and the lack of visibility that the group faced after Algeria blocked Occidental's deal to sell those assets.

[65] Katya Golubkova, Ron Bousso, and Shadia Nasralla, "Exclusive: Total Seeks to Reduce Stake in Giant Kashagan Oilfield – Sources", Reuters, 24 May 2019, ‹https://www.reuters.com/article/us-total-m-a-kashagan-exclusive/exclusive-total-seeks-to-reduce-stake-in-giant-kashagan-oilfield-sources-idUSKCN1SU127›.

[66] Ria Novosti, "Shell vykhodit iz proekta Khazar v Kazakhstane iz-za nizkoi rentabe'lnosti" [Shell Is Leaving the Khazar Project in Kazakhstan Due to Low Profitability], Rambler, 21 October 2019, ‹https://finance.rambler.ru/other/43024275/›.

[67] Martha Brill Olcott, "Central Asia's Oil and Gas Reserves: To Whom Do They Matter?" in *Central Asia and the Caucasus: At the Crossroads of Eurasia in the 21st Century*, edited by Werner Hermann and Johannes F. Linn (New Delhi: SAGE Publications India, 2011), 91.

[68] KAZENERGY Association, *The National Energy Report 2019*, 52.

The two are estimated to hold almost 70 million tons of oil and 9 bcm of gas, notwithstanding more optimistic official assessments from Kazakhstani authorities.[69] *However, these two would still offer appreciable production alternatives away from the "three whales", a fact that highlights the negative impact of the IOCs' withdrawals, resulting from the high capital investment needs and the low cost-effectiveness of both fields.* The deposits are still likely to appeal to other major or midsized firms because of the new subsoil use tax introduced by the Kazakhstani government two years ago to promote development of offshore and ultra-deep hydrocarbon deposits.[70] It is common for host countries, lacking expertise and so unwilling to scare energy companies away, to create more favourable tax regimes whenever oil prices decline and then ratchet taxes back up as soon as those prices rise again: this is called the "pendulum effect".[71]

1.4.4. Comments on Chevron's Skepticism about the Tengiz Expansion Project

One factors to which Chevron shareholders imputed a 36 percent decline in their 2019 third-quarter earnings was a nearly US$10 billion cost increase related to its Future Growth and Wellhead Pressure Management Project (FGP) in Kazakhstan, a third-generation expansion project aiming to increase oil production at Tengiz to around 900,000 bbl/d. The project's cost estimate has been updated to US$45.2 billion (from US$36.8 billion), with an additional US$1.3 billion in contingency.[72] *Chevron's concern over the effect of capital expenditures at Tengiz on its corporate capital spending plan, attributed to complications in the overall engineering program, manifests in the one-year delay in FGP's start-up, which has slipped to 2023.* Still, the company publicly stresses that it does remain focused on productivity across the site.

1.5. Conclusion to the First Section

Section 1 analyzed a set of American and European IOCs' divestments from demanding and expensive upstream projects (offshore/deep-water fields) and associated midstream projects (long-distance/subsea pipelines), both of which types form the core of Caspian Sea region energy development. The case studies highlight the shift, over time, in the West's (including the NATO countries') willingness to be a principal player in the "New Great Game". In contrast with the early post-Soviet years, when the U.S. and the EU were enthusiastic about

[69] "Otsenka zapasov nefti na mestorozhdeniiakh Khazar i Kalamkas-more v Kazahstane okazalas' namnogo nizhe prognozoi" [The Oil-reserve Estimate at the Khazar and Kalamkas-Sea Fields in Kazakhstan Is Much Lower than Forecast], *Neftegaz*, 14 March 2013, ‹https://neftegaz.ru/news/gas/258640-otsenka-zapasov-nefti-na-mestorozhdeniyakh-khazar-i-kalamkas-more-v-kazakhstane-okazalas-namnogo-nizh/›.

[70] Alexei Trochev, "Editor's Introduction: Kazakhstan Has Adopted the Code on Subsoil and Subsoil Use", *Statutes & Decisions* 52, no. 2 (2018): 65-67.

[71] Carole Nakhle, *The Impact of Oil Prices on Fiscal Regimes*, LCPS Policy Brief 22 (Beirut: Lebanese Centre for Policy Studies, June 2016), ‹ https://www.researchgate.net/publication/304564407_How_Oil_Prices_Impact_Fiscal_Regimes›.

[72] Chevron, "3Q[20]19 Earnings Conference Call: Edited Transcript", 1 November 2019, ‹https://chevroncorp.gcs-web.com/static-files/eaa435b7-87ea-47eb-9503-4fa72735b5c0›.

getting involved in energy projects in the region, in the 2010s they became more hesitant about this involvement. Their hesitancy may be interpreted in several ways.

The Chevron and Exxon examples demonstrate how and why IOCs might wish to focus on projects where returns on their investments come sooner. This is what happens in short-cycle shale projects. Al3qternatively, IOCs may wish to channel their capital into their most strategic mega-assets in a region, as for example Total did by leaving the SD2 and TAP projects so as to concentrate on the deep-water Absheron development.

Cost-effectiveness and a reasonable time-lag to production can keep companies tied to a project and even push them to take a new project FID, if oil prices in the meantime remain lower and more volatile. These two factors were not in play in the Khazar case (abandoned by Shell) and the Kalamkas-More case (abandoned by NCOC). The logistics and geology of these deposits make them less competitive in comparison with other, less expensive offshore alternatives in the IOCs' global investment portfolios.

Due to the extremely low oil price cycle, especially during the COVID-related recession, and the IOC's constant concern to turn a profit irrespective of the oil price level, they are more careful about where they concentrate their spending. Such considerations explain Total's rumoured exit from Kashagan following its acquisition of Anadarko's African assets from Occidental and Chevron's skepticism about the Chevron Expansion Project's impact on its declining earnings.

2. The Reasons Behind the IOCs' Withdrawal from Energy Projects in the Caspian Sea Basin

2.1. Scope of the Section

This section categorizes market and policy developments driving IOCs away from the Caspian Sea basin. It shows how Western interests are still concerned with the region, so as to countervail against influence there from Russia and from China. Based on the case studies analyzed above, we may summarize three market and policy drivers of the IOCs' behaviour. These are set out more fully in the next three subsections of the present section. They are:

The U.S. shale boom has dominated the last decade's wave of non-OPEC output. This subsection on U.S. shale explains how it is held responsible for supply gluts putting downward pressure on prices. With that background, case studies of Chevron and Exxon are presented that show how the gradual pullout of IOCs from challenging and costly upstream (offshore/deep-water fields) and associated midstream projects (long-distance/subsea pipelines), for example in the Caspian Sea basin, might be concomitant of their reorientation towards such quicker-earning investments like the "short-cycle" U.S. shale.

IOCs' effort to contribute to the energy transition undoubtedly represents a reality check on their strategies regarding Caspian Sea region oil and gas development. The cases of Total's involvement in Absheron and Kashagan shows how IOCs focus on generating the quickest possible cash flows from their conventional oil and gas projects, whether profitable deep-water or short-cycle shale. IOCs' portfolio diversification into low-carbon assets (e.g. low-carbon gases, renewables) also justifies such motivation. This diversification occurs due to investor, policy, and societal pressure to IOCs to reduce their carbon footprint and to adapt their corporate strategies to the energy transition.

Energy market developments in the EU, and first of all its pledge to go carbon-neutral by 2050 in line with the European Green Deal, imply a gradual phase-out of fossil fuels from its energy mix. In addition, the EU has committed to take advantage of U.S. LNG exports in order to contain Russia's market dominance. U.S. LNG in 2019 relied increasingly on Europe to absorb a flood of new natural gas supply, but in 2020 reduced demand for LNG in global markets has caused prices for U.S. LNG exports to become unprofitable. However, the U.S., along with other LNG producers, are expected to take advantage of Europe's ample storage and re-gasification capacity and liquid pricing hubs in the next five years, throughout which its import demand will rise by 45 bcm/y. Therefore, Caspian Sea region gas entering Europe via the SGC must compete with LNG, including from the US, by 2030 when gas will still hold an important share of the EU energy mix. In the long term, it has to play a part in the EU's policy aspiration for a total abandonment of fossil fuels.

2.2. The U.S. Shale Boom

2.2.1. The Rise of the U.S. Shale Industry and its Problems

By the beginning of the 2010s, the U.S. had overtaken Russia as the world's largest natural gas producer.[73] By 2017, it was exporting more gas than it imported, for the first time since 1957.[74] In 2018, it surpassed Saudi Arabia as the world's largest producer of crude oil.[75] In late 2019, it became a net oil exporter for the first time since records began to be kept, in 1973, selling 89,000 bbl/d more than it imported.[76] Rapid technological advancements and decreased drilling costs in hydraulic fracturing unlocked vast amounts of tight oil[77] and shale gas[78] from American shale formations, reshaping the global energy supply landscape. The rebound in the U.S. oil production from 5 million bbl/d in 2010 to over 12 million bbl/d in

[73] "US Surpasses Russia as World's Largest Natural Gas Producer", *World Oil*, 13 January 2010, ‹https://www.worldoil.com/news/2010/1/13/us-surpasses-russia-as-world-s-largest-natural-gas-producer›.

[74] U.S. Department of Energy, Energy Information Administration, "The United States Exported More Natural Gas than It Imported in 2017", 19 March 2018, ‹https://www.eia.gov/todayinenergy/detail.php?id=35392›.

[75] U.S. Department of Energy, "U.S. Becomes World's Largest Crude Oil Producer and Department of Energy Authorizes Short Term Natural Gas Exports", 13 September 2018, ‹https://www.energy.gov/articles/us-becomes-world-s-largest-crude-oil-producer-and-department-energy-authorizes-short-term›.

[76] Tsvetana Paraskova, "The U.S. Just Became A Net Oil Exporter For The First Time Ever", *Oil Price*, 5 December 2019, ‹https://oilprice.com/Energy/Crude-Oil/The-US-Just-Became-A-Net-Oil-Exporter-For-The-First-Time-Ever.html›.

[77] Tight oil is oil embedded in low-permeable shale, sandstone, and carbonate rock formations. According to the EIA, tight oil comprised 63 percent of total US crude oil production in 2019.

[78] Shale gas is natural gas produced from shale formations. According to the EIA, dry (consumer-grade) shale gas represented about 75 percent of US dry natural gas production (marketed production less extraction loss) in 2019.

2019, along with a boon to natural gas production of over 90 billion cubic feet per day (bcf/d) or 2.55 bcm/d,[79] which occurred despite low prices, holds benefits for the domestic economy and national energy security of supply.

U.S. tight oil accounts for almost two-thirds of total non-OPEC output. In late 2015, the Obama Administration lifted the ban on export of domestic oil that Congress had imposed in response to the 1973 oil embargo, allowing U.S. production to reach international markets.[80] This move undercut global prices, compelling OPEC members to team up with non-members, notably Russia, in order to decrease excess inventory and boost prices. The modest reaction of oil prices to rising tensions and unrest in key producing regions in the Middle East since the establishment of the OPEC-plus coalition, aimed to treat the oil price collapse of 2014–2016, is atypical of past market response. This is attributable in part to U.S. tight oil that created growing global supply glut. In addition, ample low-cost gas resources, especially associated gas in tight oil plays in the Permian Basin, have spawned incremental LNG export capacity. This development has promoted an upheaval in global LNG trade, with the US set to overtake Australia and Qatar to become the world's biggest supplier by 2024.

On the negative side, American energy independence[81] might have kept the lid on global oil prices, but it does not shield the U.S. economy from world price volatility.[82] Furthermore, the US does not have OPEC's power to instantly flood the market with spare oil capacity in case of worldwide supply disruptions triggered by unforeseen surges in oil prices, as, for example, happened in the aftermath of the drone attacks on Saudi Aramco's Abqaiq and Khurais oil-processing facilities in September 2019.[83]

[79] According to the State of the Markets report of the U.S. Department of Energy, Federal Energy Regulatory Commission (FERC), U.S. dry natural gas production increased 8.4 bcf/d (0.24 bcm/d) from 2018, averaging 92.2 bcf/d (2.61 bcm/d) in 2019. The year-over-year gain is the second-largest growth in the shale era, after the 9 bcf/d (0.25 bcm/d) gain in 2018. For more information see: U.S. Federal Energy Regulatory Commission, *State of the Markets 2019* (Washington, D.C.: FERC, March 2020), ‹https://www.ferc.gov/sites/default/files/2020-04/2019StateoftheMarketsReport.pdf›.

[80] Abhishek D. Bihani, "The Effects of Lifting the US Oil Export Ban on Market Equilibrium", *Journal of Petroleum Resources Economics*, vol. 1, no.1 (October 2018), 13.

[81] Policy motivated by President Donald Trump, according to which, thanks to the shale boom, the US can substitute domestic production for any unforeseen shortfall in imports from overseas.

[82] For instance, it does not change the fact that wholesale gasoline prices remain linked to global oil prices. Therefore, the U.S. economy cannot be considered immune from such major oil price spikes, as resulted from the drone attacks on Saudi Aramco's gas-oil separation plants at Abqaiq and Khurais in eastern Saudi Arabia, committed in September 2019. In addition, although domestically produced oil has enabled the U.S. to cut imports significantly, its coastal refiners still rely on medium/heavy crude, like that produced by Saudi Arabia and its OPEC partners, for their operations. Costly technological adjustments that would be necessary to process light/sweet American grades prohibit these refiners from turning to this domestic production.

[83] Homegrown shale is lauded for its ability to quickly ramp up and down in response to global supply and demand; this is why it is characterized as short-cycle. Nevertheless, supply disruptions emerging from a sharp global oil price spike can be dealt with only if additional supplies swiftly fill the market. Short-cycle homegrown shale does not provide an instant response to such price changes. The only additional supply that can be

At the same time, the U.S. shale industry is not immune from such global oil market developments as the 70 percent price plunge since the start of 2020 due to a price war between Saudi Arabia and Russia, and the economic fallout of the coronavirus pandemic.

Further production growth in the US shale patch faces risks of an impending slowdown, as drillers have over US$40 billion of debt maturing in 2020, and over US$200 billion during the next four years, according to Moody's.[84] The spread of COVID-19 and the delay in OPEC-plus coming to agreement on further production cuts, between March and April 2020, worsened the picture. In the throes of the market downturn, with West Texas Intermediate (WTI) futures going negative and afterwards briefly trading to barely over US$10/bbl, Rystad Energy estimates that the majority of the shrinkage of long-term energy project decisions will likely come from US shale plays.[85]

During the previous oil price war instigated by Saudi Arabia between 2014 and 2016 against US shale, sector operators were ultimately able to slash spending and to take advantage of the advancement of technology. Having learnt from that experience, they are now able to bring some of their production back online at a WTI price level of US$25-30/bbl.[86]

Until shale manages to break its current deadlock, calendar year 2020 is likely to mark the first decline in U.S. production since 2016. Reductions in domestic output, falling mostly on the shoulders of small and medium drillers, will be an unavoidable result of shrinking global demand due to COVID-associated lockdowns. U.S. crude oil production is forecast to average 11.56 million bbl/d in 2020, 0.64 million bbl/d lower than the average production of 12.2 million bbl/d noted in 2019. It is also forecast to drop to 10.6 million bbl/d by March 2021. Natural gas production is forecast to average 97.1 bcf/d (2.75 bcm/d), down by 2 percent from the average marketed natural gas production of 99.2 bcf/d (2.81 bcm/d) reached in 2019.

2.2.2. The IOCs' Role in US Shale's Survival

Slower growth does not mean zero growth. The struggling smaller independent producers are those which incited America's shale expansion in basins and local economies once

brought to the market is the spare conventional oil capacity held by the OPEC cartel, principally Saudi Arabia. That is because the drilling, completion and start-up of new shale wells can take from nine to twelve months.

[84] Ryan Dezember, "Energy Producers' New Year's Resolution: Pay the Tab for the Shale Drilling Bonanza", *Wall Street Journal*, 1 January 2020, ‹https://www.wsj.com/articles/energy-producers-new-years-resolution-pay-the-tab-for-the-shale-drilling-bonanza-11577880001›.

[85] Gaurav Sharma, "Coronavirus Downturn Will Wipe Out 6.3% Of Global Oil Supply By 2030", *Forbes*, 24 April 2020, ‹https://www.forbes.com/sites/gauravsharma/2020/04/24/coronavirus-downturn-will-wipe-out-63-of-global-oil-supply-by-2030/#63d008a94854 ›.

[86] As unconventional production can be brought back faster whenever prices come back, thanks to its short-cycle nature, the US shale stands a chance of continuing to function and grow. Oil in US shale fields can flow in about three months from the time a rig is deployed. Also, the maturation of industrial digital technologies, like software automation and artificial intelligence, that can enhance efficiency in the energy sector could work in shale's favor. Digitalization and automation of rigs allow crews to get the machines back to maximum efficiency in 1-2 months, about half the time it took before the 2014–2016 oil price war.

thought to be moribund. They now have to come up with big spending cuts to make ends meet. Due to the repercussions of the recent oil price collapse, half of the largest 60 independent US producers will need liquidity in order to avert bankruptcy.[87] *This is where the much deeper pockets of IOCs come to fill in the gap. Chevron's and Exxon's (completed and planned) exits from the ACG and BTC projects reflect the U.S.-based IOCs' tendency to part with non-core global assets, to decrease spending in order to sustain their international mega-projects, and to increase production, in Texas, New Mexico, and elsewhere at home.* According to Berislav Gaso, executive vice-president for upstream affairs at the Hungary's MOL, IOCs' withdrawals from the Caspian open up opportunities for midsized firms, like his, that cannot afford to do shale or be active in the U.S., Latin America, Asia or Australia, to take up projects in their geographical vicinities.

Chevron's and Exxon's exits from ACG and BTC reflect a desire to part with non-core global assets, decrease spending on international mega-projects, and increase production at home.

Hence, MOL views its ACG deal with Chevron as a "large step for a company of our size", which, despite the long exposure duration, offers "longevity, reserve replacement, long-term plateau production, a world-class operator and a very low-cost break-even in a very low oil price environment", as well as necessary "cash flows from upstream in order to finance the energy transition".[88] The IOCs' role in the energy transition as an inhibitor to the continuation of their investment in fossil fuel projects will be discussed in the next section.

2.3. IOCs and the Energy Transition

As highlighted above, IOCs divest from projects forming the core of Caspian energy—both from the demanding and expensive upstream projects (offshore/deep-water fields) and also from the associated midstream projects (long-distance/subsea pipelines) —because the low oil price cycle brings company shareholders to demand financial discipline, heftier returns and withdrawal from projects having marginal economics. *Such divestments also result from investor, policy, and societal calls to IOCs to reduce their carbon footprint and to adapt their corporate strategies to the energy transition.* The Majors' 2020 capital spending in 2020 will be half that of 2014, mainly due to the recent oil price crash. These steep cuts will hit committed investment in the upstream sector, with the exception of "advantaged" onshore and offshore oil assets—

[87] Jessica Resnick-Ault and David French, "Bankruptcy Looms over U.S. Energy Industry, from Oil Fields to Pipelines", Reuters, 23 April 2020, https://www.reuters.com/article/us-global-oil-usa-restructuring/bankruptcy-looms-over-u-s-energy-industry-from-oil-fields-to-pipelines-idUSKCN2250FQ›.

[88] Berislav Gaso, "Mol Buys Time with ACG Deal", interview by Peter Ramsay, *Petroleum Economist*, 18 December 2019, ‹https://www.petroleum-economist.com/articles/upstream/exploration-production/2019/mol-buys-time-with-acg-deal›.

low-cost, long-life and yielding low carbon-intensive barrels—and niche LNG. They also reflect improved efficiency: each invested dollar goes a lot further today, to the building of a solid corporate profile in the new era of energy transition.

As a sign of their commitment, IOCs and large NOCs have been working out ways to reduce greenhouse gas emissions and to develop technologies designed to climate change. BP, Chevron, CNPC, Eni, Equinor, ExxonMobil, Occidental Petroleum, Pemex, Petrobras, Repsol, Saudi Aramco, Shell, and Total support the voluntary Oil and Gas Climate Initiative (OGCI), through which a US$1 billion fund has been set up to finance investments into reducing methane leakage and CO2 emissions, as well as into carbon capture, utilization, and storage (CCUS) projects.[89] The OGCI members have pledged to reduce the carbon intensity of their operations to between 20 and 21 kilograms of carbon dioxide per barrel of crude equivalent by 2025, a reduction of as much as 13 percent from 2017 levels.[90] However, the target is not an absolute measurement, so the group in theory could still increase emissions so long as the carbon intensity per barrel declines.

Meanwhile, BP, ConocoPhillips, ExxonMobil, Shell, and Total are members of a wide coalition, convened by the Climate Leadership Council, targeting a 50 percent cut in CO2 emissions in the US by 2035.[91] In addition, the CEOs of ten large oil and gas companies, including ExxonMobil, BP, Shell, Total, Chevron, and Eni, recently co-signed a joint statement calling for an "economically meaningful" carbon pricing, after a meeting organized by the Vatican.[92]

IOCs focus on oil and gas projects that help them generate the quickest cash-flows in the short and medium term while tentatively diversifying into low-carbon assets.

The destruction in worldwide energy demand brought about by the COVID-19 pandemic has accelerated Big Oil's shift towards clean energy. This is especially the case for European IOCs, which, unlike their US counterparts, are affected by the policy objectives of the EU Green Deal, lying at the heart of the post-pandemic European recovery plan. Between February and May 2020, BP, Eni, Shell, and Total all pledged to go carbon-neutral by 2050.

[89] David Koranyi, *Navigating the Energy Transition: International Oil Company Diversification Strategies.* (Washington, D.C.: Atlantic Council, January 2019), ‹https://www.atlanticcouncil.org/wp-content/uploads/2019/09/Navigating_the_Energy_Transition.pdf›.

[90] Oil and Gas Climate Initiative, "OGCI Sets Carbon Intensity Target", OGCI, 16 July 2020, ‹https://oilandgasclimateinitiative.com/carbon-intensity-target-pr/›.

[91] Climate Leadership Council, "The Four Pillars of Our Carbon Dividends Plan (Updated September 2019)", Climate Leadership Council, September 2019, ‹https://clcouncil.org/our-plan/›.

[92] Nicole Winfield and Frank Jordans, "Major Oil Companies Commit to Carbon Pricing at Vatican", Associated Press, 14 June 2019, ‹https://apnews.com/3460d18f3d414f65b9a70575a3080832›.

IOCs cannot give up core fossil fuel-based business models and technologies at once. That would certainly not be acceptable in a world where almost 60 percent of energy use is still covered by oil and gas.[93] IOCs wishing to lead in implementing the Paris Agreement targets seek to invest in technologies, especially low-carbon ones, that can to generate higher returns. Such investments could be targeted at improving efficiency of existing fossil fuel operations, as well as at renewable energies.[94] *Thus, IOCs focus on those fossil fuel projects that help them to generate the quickest possible cash flows in the short- to medium-term, while tentatively diversifying into low-carbon assets (e.g. low-carbon gases, renewables).* This is likely to weaken IOCs' incentives to invest in developing new oil and gas fields in the Caspian Sea region.

2.4. EU Energy Market Developments

2.4.1. Caspian Energy in the Reality of the EU Green Deal

The ambitious new environmental policy of the European Commission (EC) seeks to induce IOCs to move toward clean energy technologies. The EC has set out the policy axes of its Green Deal. Its priorities seek to define conditions for the energy transition, provide predictability for investors, and ensure an irreversible state of carbon neutrality by 2050.

In this effort, the EU will count on natural gas as an affordable bridge fuel that can replace coal and provide a backup to the growing and increasingly intermittent renewables, and also furnish a long-term low carbon solution if converted to blue hydrogen, via carbon capture and storage.[95] By 2030, EU natural gas consumption is going to remain stable at its current level of over 400 bcm/y, but gas entering the system by 2050 will mostly be decarbonized or renewable.[96] Under these circumstances, the EU remains dependent on natural gas imports in the medium term and has to pursue its supply diversification in order to safeguard the energy security of its Member-States.

---

[93] One aspect of IOCs' carbon neutrality plan is the attempt to take advantage of technology in order to reduce indirect greenhouse gas (GHG) emissions from their ongoing oil and gas operations along the whole supply chain, from production to consumption. This is particularly important for methane emissions, whether accidental or intended. IOCs will thus need to restructure their business into new divisions, dispensing with the traditional upstream/downstream division. Another aspect is the prioritization of their focus into non-fossil fuel sectors, such as power generation and distribution, biofuels, hydrogen and electric-vehicle charging.

[94] Rob West and Bassam Fattouh, *The Energy Transition and Oil Companies Hard Choices*, Energy Insight: 50 (Oxford: Oxford Institute for Energy Studies, July 2019), ‹https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/07/The-Energy-Transition-and-Oil-Companies-Hard-Choices-Energy-Insight-51.pdf›.

[95] Mariana Liakopoulou, "Security of Supply in the Decarbonization Era: Assessing an Emerging External Gas Policy Paradigm for the EU", *Natural Gas World*, 28 November 2019, ‹https://www.naturalgasworld.com/eu-decarbonization-security-of-supply-gas-policy-74708›.

[96] Mariana Liakopoulou, "The New European Commission and the Future Role of Gas in Europe", *Energy Security* (blog), NATO Association of Canada, 7 November 2019, ‹http://natoassociation.ca/the-new-european-commission-and-the-future-role-of-gas-in-europe/›.

Envisioning Evidently, the envisioning of the carbon-neutral EU economy of 2050 does not side with the long-term natural gas export strategies of the Bloc's main suppliers, including the Caspian ones. Even the latest EU-Central Asia Strategy, adopted by the Council in 2019, for the first time puts the theme of "Euro-Asia connectivity" in the context of sustainability, the environment and climate change, in the sense that, instead of being exclusively engrossed in the region's hydrocarbon business, the EU could supplementarily use its know-how to promote legislation and investments fostering the penetration of renewables in Central Asia.[97]

However, up until 2030, the EU is poised to spur competition in its single gas market by diversifying suppliers and by connecting to new cross-border import infrastructures. The Caspian-related SGC, and a web of branches to be constructed to the north of TAP, assist in the accomplishment of the EU goals towards minimizing dependence on a single dominant supplier, reducing the scope for political uses of energy and diffusing the common market rules to Southeastern European and Central and Eastern European non-member transit countries, in order to anchor them in the EU and (prospectively) NATO.[98] *Taking this into account, and despite Western IOCs' skepticism, it is apparent that, on the geopolitical and geo-economic level, Caspian Sea hydrocarbons have not lost their significance for the EU.* It is useful to recall that TAP, the SGC's European segment, is in the process of reaching its plateau level of 10 bcm/y (1 bcm of which will be contracted by Greece, 1 bcm by Bulgaria, and 8 bcm by Italy and adjacent markets), once it completes its test run. TAP's throughput will likely be expanded to 20 bcm/y, with the addition of two extra compressor stations, based on the positive outcome of its first-round market test.[99]

2.4.2. The U.S.-Caspian Competition for EU Market Share

But oil- and gas-producing states in the Caspian Sea region are not the only ones to contribute to the EU's plans for diversification of energy supply. It is no wonder that the first ever U.S. LNG tanker sent there was received at Lithuania's "Independence" terminal in 2017.[100] The U.S., having become a key energy exporter, now vies for its own share of the EU market, with a particular view to limiting Russia's leverage over Central and Eastern Europe and the

[97] Andreas Marazis and Federico Ohle, *The New EU Strategy on Central Asia: Putting Renewable Energy on the Map* (Brussels: European Neighbourhood Council, June 2019), ‹http://www.encouncil.org/wp-content/uploads/2019/06/ENC_Analysis_The-New-EU-Strategy-on-Central-Asia-Putting-Renewable-Energy-on-the-Map.pdf›.

[98] Mariana Liakopoulou, "Beyond the Southern Gas Corridor: A Regional Infrastructure Perspective", *Energy Security* (blog), NATO Association of Canada, 13 February 2019, ‹http://natoassociation.ca/beyond-the-southern-gas-corridor-a-regional-infrastructure-perspective/›.

[99] "Initial TAP Market Test Justifies Capacity Boost to 20 bcm", *energypress*, 22 October 2019, ‹https://energypress.eu/tap-first-round-market-test-justifies-plan-for-capacity-boost-to-20-bcm/›.

[100] Georgi Gotev, "Washington Congratulates Lithuania for Receiving First LNG Shipment from US", *Euractiv*, 24 August 2017, ‹https://www.euractiv.com/section/energy/news/washington-congratulates-lithuania-for-receiving-first-lng-shipment-from-us/›.

Balkans. *U.S. LNG and Azerbaijani pipeline supplies*[101] *are small in proportion to the overall European demand, but they have in common a noteworthy symbolic weight.* This will also be the case for other prospective Caspian supplies to the SGC that could come from Turkmenistan and Kazakhstan. The proposed subsea Trans-Caspian Gas Pipeline (TCGP) will be connected to the East-West Pipeline at the Turkmen shore and could also branch the thief out to another 600-kilometre onshore pipeline connecting Tengiz field to Turkmenbashi seaport.

U.S. LNG and Azerbaijani pipeline supplies are small in proportion to European demand, but their symbolic weight is significant.

December 2019 saw the highest-ever monthly volume of LNG trade between the EU and the U.S. (3.2 bcm, estimated at EUR0.5 billion).[102] In the fourth quarter of 2019, the U.S. became the EU's leading LNG supplier, providing 25 percent of total imports, ahead of Qatar (23 percent), Russia (19 percent) and Nigeria (11 percent). Europe accounted for 48 percent of all U.S. LNG exports during that period, the highest since 2016. During the same period, 81 LNG cargoes arrived from the US unloading more than 7.5 bcm of LNG (in re-gasified form) in Europe, amounting to an estimated EUR1.4 billion. In 2019 as a whole, US LNG exports in the EU reached 17.2 bcm (in re-gasified form), representing 184 cargoes with an estimated value of EUR2.6 billion. Competition between the U.S. and Russia in LNG supply to the EU increased. Except for November and December 2019, Russia exported more LNG to the EU than the U.S. in each month of 2019 (294 cargoes with an amount of 21.5 bcm and an estimated value of EUR3.3 billion). This implies that Russia tried to maintain its influence on the European gas market, complementing its pipeline business with growing LNG supply.[103]

However, this situation seems to be changing as of 2020. Gazprom's share in Europe's gas market fell by 5 percent to 35 percent, mainly because of the growth in LNG supplies from the US.[104] According to the IEA,[105] European LNG imports increased by above 20

[101] Competition between U.S. LNG and Caspian LNG supplies could also be created if Georgia develops its own liquefaction terminal via which resulting LNG could be shipped to markets such as Ukraine, Romania and Moldova. However, this is a mid-term prospect, subject to the development of new Azeri, Turkmen and Kazakhstani fields and the availability of uncontracted supply from them.

[102] European Commission, *EU-US LNG Trade* ([Brussels]: European Commission, January 2020), ‹https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf›.

[103] European Commission, Directorate-General for Energy, Unit A.4, Market Observatory for Energy, *Quarterly Report on European Gas Markets*, vol. 12, no. 4 (Fourth Quarter, 2019): 20, ‹https://ec.europa.eu/energy/sites/ener/files/quarterly_report_on_european_gas_markets_q4_2019_final.pdf›.

[104] "Prognoz MEA: Spros na gaz v mire upadet na 4%!; Pechal' vlastei RF" [IEA Forecast: World Demand for Gas Will Fall by 4 Percent!; The Russian Authorities' Grief], *Neftegaz*, last modified 10 June 2020, ‹https://neftegaz.ru/news/finance/553313-spros-na-gaz-v-mire-upadet-na-rekordnye-4-a-vosstanovlenie-budet-postepennym/›.

[105] Jean-Baptiste Dubreuil, *Gas 2020* (Paris: IEA, June 2020), 24.

percent year-on-year over the first five months of 2020 to 60 bcm, thanks to Europe's ample re-gasification capacity and flexible pipeline supply sources. The US accounted for over 25 percent of these imports, overtaking both Qatar and Russia. It should be noted that combined U.S. LNG and cross-border exports of natural gas averaged 12.5 bcf/d (0.35 bcm/d) in 2019, an increase of 2.6bcf/d (0.074 bcm/d) from 2018.[106] According to the EIA,[107] the U.S. has been the largest LNG supplier to Europe since November 2019, and in February 2020 LNG imports from the U.S. reached a new record high at 5.1 bcf/d (0.14 bcm/d), equivalent to nearly twice Europe's second-largest supplier, Qatar. Overall, Europe has become a more attractive option for U.S. shippers than their core Asian customers. The reason is that Europe largely acts as a swing buyer, due to low global LNG prices and tighter margins that have more or less overwritten the Asian premium.[108] The alignment of European and Asian prices is responsible for the abundant LNG supply to Europe in 2019 and, consequently, for high storage fillings.

U.S. President Donald Trump has expressed concerns about European dependence on Russian gas imports. In his 2018 joint statement with then-EC President Jean-Claude Juncker, he stressed both parties' firmness in getting more U.S. LNG to Europe, in exchange for American leniency regarding punitive tariffs on European automobile exports.[109] In September 2019, the U.S. Energy Secretary Rick Perry signed an agreement with Polish and Ukrainian government representatives, designed to improve the infrastructure and security of U.S. natural gas supply to Poland and Ukraine.[110] The first U.S. LNG cargo destined for Ukraine arrived at the Polish port of Świnoujście soon after.[111] At about the same time, that President

[106] U.S. Department of Energy, Federal Energy Regulatory Commission, *State of the Markets 2019*., 2, ‹https://www.ferc.gov/sites/default/files/2020-04/2019StateoftheMarketsReport.pdf›.

[107] U.S. Department of Energy, Energy Information Administration, "European Natural Gas Storage Inventories Are at Record-high Levels at the End of winter", 24 March 2020, ‹https://www.eia.gov/todayinenergy/detail.php?id=43235›.

[108] Asia traditionally pays more for LNG due to its limited connectivity to pipeline supplies. LNG producers around the world have come to rely on this "Asian premium" to help justify the high capital costs of liquifying and shipping natural gas. For instance, in the winter of 2017–18, the East Asian premium over the price levels of Europe's by far most liquid gas hub, the Dutch Title Transfer Facility (TTF), exceeded the amount of $4.50/MMBtu (million British thermal units). Consequently, the bulk of LNG, including U.S. LNG, went to Asia and European LNG terminals were largely underutilized. The global oversupply of LNG that started to flood the market from late 2018 has sent spot Asian prices into all-time lows. After this collapse of the "Asian premium", as of the fourth quarter of 2018, Europe saw a surge of LNG imports as a market of last resort. Since then, European hubs became the key marginal clearing mechanism for the LNG market and the main driver of LNG spot prices until the fourth quarter of 2019.

[109] European Commission, "Joint U.S.-EU Statement following President Juncker's Visit to the White House", Press release, 25 July 2018, ‹https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_18_4687›.

[110] "Poland, US, Ukraine seal deal on gas supplies security", Tass, 31 August 2019, ‹https://tass.com/world/1075884›.

[111] Alexander Bor, "US LNG Cargo Lands in Poland for Redelivery via Pipeline to Ukraine", S&P Global Platts, 20 November 2019, ‹https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/112019-us-lng-cargo-lands-in-poland-for-redelivery-via-pipeline-to-ukraine ›.

Trump discussed more LNG exports with Bulgarian Prime Minister Boyko Borissov at the White House.[112]

In 2019 U.S. LNG found Europe to be an ideal destination, absorbing a flood of new natural gas supply. This situation has changed, starting from the second quarter of 2020. Demand for LNG in global markets has significantly decreased due to COVID-19, causing prices for U.S. LNG exports to become unprofitable. U.S. LNG exports are highly price-sensitive, which means that their economic viability is negatively impacted by low natural gas and LNG spot prices in both Europe and Asia. Earlier in the summer of 2020 European prices dropped below Louisiana's Henry Hub (the benchmark for U.S. gas futures), making U.S. LNG uneconomic to ship to Europe. However, despite battered worldwide demand, European gas imports will increase by more than 10 percent in the next five years, due to reduced production in Northwestern Europe. This means that pipeline and LNG suppliers including from the US, can bring in an extra 45 bcm/y during that period.[113] The latter are expected to take advantage of Europe's balancing role in the global LNG market, as it offers spare regasification capacity, ample storage space and liquid pricing hubs.

If both the US's export approach and its IOCs' stance on their Caspian business are factored in, it can be deduced that the US-Caspian energy relations have transitioned from a stage of robust alliance, right after the collapse of the Soviet rule, to a stage of vigorous competition for market share in Europe.

2.5. Conclusions to the Second Section

Section 2 categorized the market and policy developments prompting IOCs' detachment from the Caspian. It began by treating the US shale boom. This subsection discussed the unprecedented rise of the US shale industry throughout the 2010s and the difficulties independent drillers face with oil prices falling into a negative territory, as COVID eviscerates demand. It argues that the much heavier pockets of IOCs will help the industry survive. IOCs are attracted to shale because of its short-cycle nature. They can turn the switch on and off relatively quickly based on the level of global prices and make an immediate profit. It is thus preferred by certain IOCs, like Chevron and ExxonMobil, versus more complex and costly mega-projects, like the Caspian ones, where profits take years to come.

It then turned to investor, policy and societal calls to IOCs to reduce their carbon footprint and to adapt their corporate strategies to the energy transition. In order to respond, under this pressure, IOCs focus only on those fossil fuel projects that generate the quickest possible earnings, while tentatively diversifying into low-carbon assets. This represents a reality check for Caspian energy projects, where the time-lag to production and investment returns generally extends to years.

The common denominator of the first two developments is the extreme oil price volatility observed since 2014 and topped by the 2020 oil price crash.

---

[112] Todd Prince, "Trump To Promote LNG Exports, Higher Defense Spending In Meeting With Bulgarian Leader", Radio Free Europe/Radio Liberty, 22 November 2019, https://www.rferl.org/a/trump-to-promote-lng-exports-higher-defense-spending-in-meeting-with-bulgarian-leader/30287334.html›.

[113] Jean-Baptiste Dubreuil, *Gas 2020*, 57.

The third development has to do with the EU energy market policy. The EU Green Deal creates a gloomy outlook for gas exports to the EU, including Caspian ones, towards the envisioned decarbonized economy of 2050. However, in the short term, on the geopolitical and geo-economic level, Caspian Sea hydrocarbons do not lose their momentousness for the EU. However, they will have to compete with US LNG because of their common traits: small supply volumes in relation with the overall European demand but with a noteworthy symbolic weight for the EU's gas diversification. Therefore, the US-Caspian energy relations have transitioned from a stage of robust alliance, right after the collapse of the Soviet rule, to a stage of vigorous competition for market share in Europe.

3. Keeping the Caspian Energy Game Going

3.1. Scope of the Section

This section explains the importance for the West to keep the energy game up in the Caspian and Central Asia and what the West (including the NATO countries) has to gain from the geopolitical significance of Caspian energy. It looks into the new geopolitics of Caspian oil and gas, in view of the shifting balances of interests of the world powers competing in the "New Great Game" of Caspian/Central Asia energy. It argues that in the absence of Western leadership in Caspian Sea region energy projects, the way is paved for a thaw in Caspian producers' ties with Russia and China. It discusses the risks of this one-sided influence.

The section concludes that the shifts in U.S. and EU energy policies, combined with ongoing market developments, do not imply that the Caspian Sea region oil- and gas-producing states are losing or will lose their geopolitical significance. This is because the EU's continuing gas diversification efforts through the SGC and the need for returns on the SGC-related investments by participating consortia will lead to new FIDs on brownfield or greenfield production sites in the Caspian Sea basin, helping to fill the pipelines completely.

3.2. A Caspian Rapprochement with Russia and China

Without Western leadership in Caspian Sea energy ventures, a thaw in ties by the region's producers with Russia is foreseeable. Indicatively, after a three-year suspension, Gazprom resumed gas imports from Turkmengaz in 2019, on the basis of a five-year contract providing for supplies of 5.5 bcm/y.[114]

In addition, a rapprochement with China and other Asian importers will come further into evidence, to the degree that the West loses interest in the Caspian Sea countries as a geopolitical and geo-economic region. The share of China's crude oil imports from the former Soviet states (including the Caspian Sea region and Central Asia) is far from the Middle Eastern imports from China. In 2015 Middle Eastern producers accounted for 51 percent of

[114] Anastasia Teterevleva and Olzhas Auyezov, "Russia's Gazprom Signs 5-year Contract with Turkmenistan for Natural Gas", Reuters, 3 July 2019, ‹https://af.reuters.com/article/commoditiesNews/idAFR4N24200Y›.

China's crude imports, whereas former Soviet territories represented only 14 percent.[115] Kazakhstan has now decided to concentrate on oil exports to China, at the expense of Europe, which will be made possible after it completes the reverse-flow section of the Kenkiyak-Atyrau pipeline, part of the Kazakhstan-China pipeline. Plans to reverse the pipeline that used to ship crude in westerly direction were announced in the summer of 2019. According to Kazakhstan's Deputy Energy Minister Aset Magaulov,[116] this decision will increase Kazakh oil exports to China from 1 to 6-7 million tons per year, starting from late 2020. In 2017, Kazakhstan exported 39.7 million tons of oil to the EU-28, which represents 7 percent of total imports for that year.[117]

The environmental case for natural gas is stronger in Asia, notably China, where governments even pay a premium for gas imports.

Kazakhstan's, Turkmenistan's, and Uzbekistan's gas exports to China in 2019 were 6.5 bcm, 31.6 bcm, and 4.9 bcm respectively, out of total Chinese gas consumption of 307.3 bcm.[118] *Unlike the EU, where the post-2030 outlook for natural gas remains the big imponderable amidst the implementation of decarbonization policies, the environmental case for natural gas is stronger in Asia, predominantly China, where air pollution prods governments to switch from coal to gas and even to pay a premium for their gas imports.*

PetroChina expects China's natural gas consumption to rise to 330 bcm in 2020, almost half of which will be imported.[119] The given figure falls within the range of 270-330 bcm projected for 2020 by many independent and industry observers of the Chinese market.[120]

[115] Zhijie Zhang and Wanli Xing, "Overseas Oil Cooperation between China and India Based on Crude Oil Trade Flow Analysis", *IOP Conference Series: Earth and Environmental Science*, vol. 153, no. 3 (2018): 032046, ‹https://doi.org/10.1088/1755-1315/153/3/032046/pdf›.

[116] Aset Magaulov, "Interv'iu: Kazakhstan razvernet eksport 6 mln t nefti s zapada na vostok", [Interview: Kazakhstan Will Expand Export of 6 Million Tons of Oil from West to East], interview by Alla Afanas'eva, Reuters, 3 July 2019, ‹https://ru.reuters.com/article/businessNews/idRUKCN1TY22E-ORUBS›.

[117] European Commission, Eurostat, "Oil and Petroleum Products: A Statistical Overview", June 2020, ‹https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Oil_and_petroleum_products_-_a_statistical_overview&oldid=448293›.

[118] BP, *BP Statistical Review of World Energy 2020* (London: BP, June 2020), ‹https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf›, 36.

[119] "China Expected to Consume More Natural Gas in 2020", Xinhua, 18 January 2020, ‹http://www.xinhuanet.com/english/2020-01/18/c_138715501.htm›.

[120] Keun-Wook Paik, "The Role of Sino-Russia Gas Cooperation in China's Natural Gas Expansion", in *Handbook of Energy Politics*, edited by Jennifer I. Considine and Keun-Wook Paik (Cheltenham: Edward Edgar Publishing, 2018), 140.

Nonetheless, as China is the first country where the coronavirus pandemic manifested, the country's gas demand is estimated to have fallen by 10 bcm in the first quarter of 2020.

CNPC's *Energy Outlook 2050*, released August 2019, predicts China's gas demand to rise to 610 bcm/y by 2035 and to 690 bcm/y by 2050.[121] According to the IEA's *World Energy Outlook 2019*, China's natural-gas demand will double over the next two decades, to 370 bcm, more than the rest of "Developing Asia" combined. Net Chinese imports of natural gas from all sources are forecast to increase from 122 bcm in 2018 to 353 bcm by 2040. LNG will dominate the growth in global gas trade, with Chinese LNG exports rising close to 200 bcm/y by 2040, compared with 73.5 bcm in 2018, the IEA estimates. It also mentions that China's dependence on natural gas imports will grow from 44 percent in 2018 to over 50 percent in 2035.[122] According to the annual report of the International Group of Liquefied Natural Gas Importers (GIIGNL), in 2019 China experienced continued growth of LNG imports, although at a slower pace (+14 percent compared with +38 percent in 2018), but remains the second largest LNG importer globally, with 61.7million tons or a 17.4 percent market share.[123]

Caspian and Central Asian states may to a certain extent satisfy China's gas import requirements through the Central Asia-China Gas Pipeline (CAGP), with its 55 bcm/y capacity and with its planned expansion to 85 bcm/y, upon construction of so-called "Line D" from Turkmenistan via Kyrgyzstan, Tajikistan and Uzbekistan to China.[124] *However, if the downward slide in global oil prices continues into the near future, China might rely more on LNG imports thanks to the lower oil-indexed and spot prices. This could have a negative impact on China's contribution to the development of more expensive pipeline projects, like Line D and the Power of Siberia 2 gas pipeline from Russia (Altai route). Lower global oil prices could thus potentially reduce the share of Russia and Caspian/Central Asian producers in Chinese gas imports.*

The future of gas imports/exports in China is contingent upon the short- and medium-term competition between LNG from overseas on the one hand and, on the other hand, pipeline gas from Caspian/Central Asia and Russia. The latter's Power of Siberia pipeline is expected to have ramped up to its 38 bcm/y plateau by 2025, under a 30-year sales and purchase agreement between CNPC and Gazprom.[125] The future of gas in China is also

---

[121] "China's Oil Demand to Peak by 2030: CNPC", Argus Media, 29 August 2019, ‹https://www.argusmedia.com/en/news/1967517-chinas-oil-demand-to-peak-by-2030-cnpc›.

[122] International Energy Agency, "World Energy Outlook 2019", (Paris: IEA, November 2019), ‹https://www.iea.org/reports/world-energy-outlook-2019›.

[123] International Group of Liquefied Natural Gas Importers, *GIIGNL Annual Report 2020* (Neuilly-sur-Seine: GIIGNL, April 2020), ‹https://giignl.org/sites/default/files/PUBLIC_AREA/Publications/giignl_-_2020_annual_report_-_04082020.pdf›, 6.

[124] Due to the economic distress caused by COVID-19, in March Kazakhstan stated that China decreased its purchases of Kazakh gas by about 20-25 percent, as the main buyer PetroChina declared force majeure. Furthermore, Lukoil attributed reductions in output from its gas projects in Uzbekistan during the first quarter of 2020 to China's falling gas demand. Data about Turkmen gas exports to China are not available as of the time of writing. In early May, these Central Asian countries set up a coordinating committee to discuss a proportional reduction in gas supplies to China between the three of them.

[125] Gazprom, "Power of Siberia", Gazprom fact sheet, n.d., ‹https://www.gazprom.com/projects/power-of-siberia/›.

contingent on the implementation of China's Energy Revolution Strategy (ERS) for 2030, which dictates that the share of natural gas should represent 15 percent of the national energy mix, and non-fossil fuels 20 percent. *These different elements will determine China's disposition to keep financing cross-border gas infrastructure projects from Central Asia, such as Line D of CACG and the Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline.* The US$10 billion TAPI is a project that aims at diversifying Turkmenistan's gas exports away from China, but Beijing is reportedly dubious whether to build a spur from Pakistan's territory to India.[126] Infrastructure developments, such as the TAPI, will also have a positive impact on the overall liberalization of the Asian gas markets (in particular of India and Pakistan).

However things develop, Russia and China cannot compete for Caspian/ Central Asian resources without risks for the states holding these resources. In the case of Russia, one such risk involves possible new arbitrations over price revisions, as occurred with the Turkmen gas sold to Russia up until 2015.[127] Another risk has to do with the fact that China will remain influential in setting the (still undisclosed) purchase price for Caspian and Central Asian gas via CACG. Bargaining over this will take into account China's funding of Line D of CACG and the second development stage of its resource base, the supergiant Galkynysh gas field in eastern Turkmenistan.

3.3. The Continuing Geopolitical Significance of Caspian Region Energy for the West

The risks just mentioned point out why the West cannot afford not to keep investing in the Caspian. Caspian Sea states can take advantage of energy exports to Europe and of Western IOCs' involvement in upstream and midstream projects, in order to avoid monopolistic influence by Russia and China on their energy exports. The West, including the NATO countries, cannot ignore the geopolitical and geo-economic value of the region, even if conditions somewhat diminish their attention to it.

The possibility of more mergers, divestments and delays in or absence of FIDs always remains on the table. The long-stalled Trans Caspian Oil Transport System from Kazakhstan and Azerbaijan to the Mediterranean or the Black Sea is one example, especially since oil projects could be altogether excluded from the European Commission's Lists of Projects of Common Interest (PCI), in light of the upcoming revision of the 2013 Trans European Networks for Energy (TEN-E) regulation provided for by the Green Deal. Taking all four PCI lists published to this day into account, only seven oil projects have obtained the PCI status. Meanwhile, oil infrastructure projects have been excluded from funding under the Connecting Europe Facility (CEF), a multi-annual funding program set up to finance improvements in Europe's transport, energy, and digital networks. To be eligible for financial support under the CEF, projects must be included in the PCI list. *But considerations for other FIDs, mainly on*

[126] Drazen Jorgic, "China interested in joining TAPI pipeline project - Pakistan official", Reuters, 8 August 2018, ‹https://www.reuters.com/article/pakistan-china-tapi/china-interested-in-joining-tapi-pipeline-project-pakistan-official-idUSL5N1UY1GR›.

[127] "'Gazprom' podal isk k 'Turkmengazu' v Stokgol'mskii arbitrazh" [Gazprom filed a claim against Turkmengaz in Stockholm Arbitration], *Forbes*, 24 July 2015, ‹https://www.forbes.ru/news/295069-gazprom-podal-isk-k-turkmengazu-v-stokgolmskii-arbitrazh›.

the SGC pipe network and associated fields, were undertaken well before the circumstances analyzed in this study came to pass. There are two reasons why the IOCs' presence in the region will hold strong, at least insofar as gas is concerned.

Mergers, divestments, or delays are possible, but considerations for FIDs on the SGC and associated fields were undertaken long ago.

First, the EU will continue to insist on diversifying its sources of gas supply, so it will push for the SGC pipes to operate at their full capacities. The U.S., while promoting its own LNG exports, will endorse the EU politically in this regard, in order to diminish Russia's market share in Europe. Second, in order for the consortia participating in this large-scale project to ensure a reasonable return on their investments and to bring costs down for the shippers, they too will have to work towards fully filling the SGC. This need will translate into new FIDs either on brownfield expansions or greenfield projects. In the upstream sector, such FIDs have to do with the next wave of Azeri gas, either from fields whose development is due in late 2020-early 2021, like Absheron and Karabakh, and fields already sending gas to Azerbaijan's gas transmission system, like Umid, as well as from ill-studied structures, like Shafag-Asiman, Babek, and the Shallow Water Absheron Peninsula (SWAP) contract area, that could all possibly contribute to SGC.[128] In the area of transportation, the weight is placed on the proposed subsea Trans Caspian Gas Pipeline (TCGP), that will open up the prospect for Turkmen gas supplies into the SGC. TCGP is helped in the right direction by its status as a PCI project and by the extended EU-Caspian contacts in the context of the SGC Advisory Council.[129]

3.4. Conclusions to the Third Section

This section examined the potential for a rapprochement of the non-Russian Caspian Sea and Central Asian states with Russia and China, in light of Western IOCs' relative withdrawal from the region.

Gazprom's renewal of its supply deal with Turkmengaz after a four-year hiatus is one sign of such a potential rapprochement. As for China, the case for natural gas use for environmental reasons is stronger than for the EU, since air pollution there prods the

[128] Vitaliy Baylarbayov [Vitalii Bailarbaev], "TANAP polnost'iu gotov k postavkam azerbaidzhanskogo gaza v Evropu" [TANAP Is Fully Ready to Supply Azerbaijani Gas to Europe], interview by Azad Hasanli, *CBC TV Azerbaijan*, 2 December 2019, ‹https://youtu.be/qbSRGejH4Lo›.

[129] For further information, see: Robert M. Cutler, *The Trans-Caspian Is a Pipeline for a Geopolitical Commission* (Toronto: NATO Association of Canada, March 2020), ‹http://natoassociation.ca/wp-content/uploads/2020/04/Trans-Caspian-Pipeline-Geopolitical-Commission-ESPPP01.pdf ; Matthew Bryza, Robert M. Cutler and Giorgi Vashakmadze, "US Foreign Policy and Euro-Caspian Energy Security: The Time Is Now To Build the Trans-Caspian Pipeline", *EnergySource* (blog), Atlantic Council, 12 June 2020, ‹https://www.atlanticcouncil.org/blogs/energysource/us-foreign-policy-and-euro-caspian-energy-security-the-time-is-now-to-build-the-trans-caspian-pipeline/›.

governments to switch from coal to gas and to even pay a premium for their gas imports. Caspian and Central Asian states could to a certain extent alleviate these import needs through Line D of CAGP and TAPI.

If oil prices remain near today's lows, however, China could lose interest in gas imports from the Caspian Sea region (and their associated infrastructure). It would then instead rely on much cheaper LNG. China's interest in gas imports from the Caspian Sea region will also depend on the progress of decarbonization policies for the whole region.

The prospect of increasing Russian and Chinese influence on the development of Caspian and Central Asia energy resources comes with risks to the involved states holding these resources. In the case of Russia, one such risk involves possible new arbitrations over price revisions, as occurred with the Turkmen gas sold to Russia up until 2015. Another risk has to do with the fact that China will remain influential in setting the (still undisclosed) purchase price for Caspian and Central Asian gas via CACG. Bargaining over this will take into account China's funding of Line D of CACG and the second development stage of its resource base, the supergiant Galkynysh gas field in eastern Turkmenistan.

These risks point out why the West, including the NATO countries, need to maintain their interest in Caspian Sea region energy. Caspian and Central Asian oil- and gas-producing states can draw advantage from energy exports to Europe and from Western IOCs' involvement in upstream and midstream projects. This balancing will ensure that their energy supplies are not monopolized by Russia and China. FIDs on the SGC pipeline network and associated fields, taken well before developments discussed here began to manifest, indicate that Western IOCs' presence in the region will remain strong, at least insofar as gas is concerned, because the EU and the project consortia will seek to complete this strategically important project.

4. Final Conclusions

This study has examined planned, completed, rumoured, and contemplated divestments by IOCs from their core and non-core assets in the Caspian Sea region. It analyzed these projects in particular:

- Chevron's completed sale of its ACG and BTC stakes to MOL.
- Exxon's planned exit from ACG.
- Total's divestments from SD2 and TAP.
- Shell's relinquishment of its stake in the Khazar oilfield and the abandonment of Kalamkas-More oilfield by the NCOC consortium.
- Total's rumoured sale of one-third of its Kashagan stake, following on its acquisition of Anadarko's African assets from Occidental.
- Chevron's shareholders' concerns about the impact of the Tengiz expansion's costs on their declining quarterly earnings.

The study examined the distinct conditions surrounding each project case. Chevron and Exxon wanted to focus on projects where their capital expenditures are recovered faster, notably their short-cycle shale projects in their home country. Total's exit from SD2 and TAP, in order to concentrate on the deep-water Absheron, unveils the IOCs' tendency to channel their capital into their most strategic mega-assets in a particular region.

In a market environment of lower and more volatile oil prices, cost-effectiveness and a reasonable time-lag to production can keep companies tied to a project or motivate them to take a new project FID. These two conditions were not satisfied in the cases of Khazar and Kalamkas-More structures that Shell and NCOC, respectively, abandoned, as the logistics and geology of these deposits made them less competitive in comparison with other, less expensive offshore alternatives in IOCs' global investment portfolios.

Finally, due to the extremely low oil price cycle amid the COVID-related recession, IOCs are more wary of where they concentrate their spending, so as to guarantee better profits. This motive explains Total's rumoured exit from Kashagan, following its acquisition of Anadarko's African assets from Occidental, as well as Chevron's skepticism over the impact of the Tengiz Expansion Project on its declining earnings.

Soon after the dissolution of the Soviet Union, IOCs were keen to grasp upstream and midstream project opportunities. The Western/NATO powers representing those IOCs (though not so much the Europeans as the Americans, and later the British, in the first instance) wanted to assert themselves in the newly open strategic region. One of their motives was to contain Russia's (and later China's) influence in the region. They also wanted to boost oil markets' flexibility through developing alternative sources and transit routes. They were thus attempting to put an end to the widespread "peak oil" scenarios, that gained popularity in the 1990s and were occasionally exploited by OPEC to drive up oil prices.

Today, that earlier keenness of IOCs and Western/NATO governments to invest in the heart of the Eurasia is tempered by three principal developments. These are:

(1) The tendency by IOCs to focus on *the short-cycle and quicker-earning US shale* and to part with their geologically complex and costly offshore assets in the Caspian Sea region.
(2) The IOCs' withdrawal from projects having marginal economics (deep-water fields and long-distance/subsea pipelines) in order to generate the quickest-possible returns, also due to investor, policy, and societal calls to promote financing of *the energy transition*.
(3) The *EU's 2050 decarbonization policies* that create a gloomy outlook for gas imports in general.

Still, the SGC will serve the EU gas supply diversification goals, at a minimum up until 2030, when natural gas will still hold a role in the energy mix. Moreover, *the EU's diplomatic commitment to import U.S. LNG* will stir competition between the U.S. and Azerbaijan (as well as other prospective SGC suppliers such as Turkmenistan) for market share in Southeastern and Central and Eastern Europe, where their initially limited, but highly symbolic supplies will enter. This new state of play is opposed to the robust US-Caspian energy alliance of the post-Soviet era, when Western/NATO powers were willing to become competitors in the *New Great Game* involving the Caspian and Central Asian energy resources.

A protracted low oil-price environment is the common denominator of shareholders' calls for IOCs' greater capital discipline and heftier returns, as set out in (1) and (2).

This study equally points how any lack of Western/NATO leadership in Caspian Sea energy ventures will promote a rapprochement of states in the region with Russia and China. Gazprom resumed gas imports from Turkmengaz after a four-year hiatus. At the same time, Beijing's pre-COVID rise in gas demand, in line with government plans for a big switch from coal to gas, created room for Central Asian supplies. However, a protracted period of extremely low oil prices could lead China to rely more on cheap LNG, rather than pipeline gas, and to abstain from investing in expensive pipeline projects, like CACG's Line D, TAPI, and Power of Siberia 2. Such a potential development would reduce the market share of Russia and Caspian/Central Asian exporters in China. Furthermore, China's interest in Caspian gas imports will also depend on the progression of decarbonization policies, like the Energy Revolution Strategy for 2030.

Should Russia and China increase their influence on the development of Caspian and Central Asia energy resources, the involved states holding these resources will face risks. In the case of Russia, one such risk relates to possible new arbitrations over price revisions, as occurred with the Turkmen gas sold to Russia up until 2015. Another risk has to do with the fact that China will remain influential in setting the (still undisclosed) purchase price for Caspian and Central Asian gas via CACG. Bargaining over this will take into account China's funding of Line D of CACG and the second development stage of its resource base, the supergiant Galkynysh gas field in eastern Turkmenistan. The present research study thus identifies the need for the West, including the NATO countries, to stay in the Caspian/Central Asia energy "game". Caspian and Central Asian oil- and gas- producing states will thus have the opportunity to export their energy resources to Europe and to have more Western IOCs' investing in their upstream and midstream projects. This balancing will ensure that their energy supplies are not monopolized by Russia and China. To this end, they have to take advantage of the momentum of the SGC's FIDs.

These FIDs are connected with projects that were initiated before the market and policy circumstances discussed in this study came into effect and are now nearing completion, like the TAP pipeline. They are deemed critical for the EU's gas supply diversification, which requires for the SGC pipes to operate at their full capacities. Despite the promotion of its own LNG exports, the US will politically endorse the EU in this regard, as one scope of diversification is to eat into Russia's market share. Finally, SGC's economics are interrelated with more FIDs, be it on the new wave of Azerbaijani gas or the TCGP, which will buttress future IOC presence in the region. The utilization of SGC to its maximum capacity through investment into new fields and additional infrastructure will help the consortia participating in this large-scale project to ensure a reasonable return on their investments and will reduce shipping costs.

In conclusion, in the rerun of the first "Great Game"—the nineteenth century imperial rivalry between the British Empire and Tsarist Russia—powerful Western players sought dominant energy-sector positions in the heart of Eurasia, which the Soviet collapse in 1991 had left in a power vacuum. Almost three decades later, developments such as the shale revolution and the emergence of the U.S. as a key energy exporter, the EU's decarbonization policies, and the end of the high-price oil cycle have diminished these players' interest in Caspian/Central Asian energy investments. Despite these challenges, this study deduces that the region and its energy resources are not going to lose their geopolitical significance for the

EU and the NATO. The future of the SGC, including the commissioning of TAP in October 2020 and the deployment of new associated resource bases and infrastructure, will be the driving force that will keep the region in the geopolitical map of energy, to the benefit of the EU's and NATO's energy security.

References[130]

Baylarbayov, Vitaliy [Vitalii Bailarbaev]. "TANAP polnost'iu gotov k postavkam azerbaidzhan–skogo gaza v Evropu" [TANAP Is Fully Ready to Supply Azerbaijani Gas to Europe]. Interview by Azad Hasanli, *CBC TV Azerbaijan*, 2 December 2019. ‹https://youtu.be/qbSRGejH4Lo›.

Belyi, Andrei V. "Introduction". In *Beyond Market Assumptions: Oil Price as a Global Institution*, ed. Andrei V. Belyi, xv-xxviii. Cham: Springer, 2020.

Beyazay-Odemis, Basak. *The Nature of the Firm in the Oil Industry: International Oil Companies in Global Business*. London–New York: Routledge, 2016.

Bihani, Abhishek D. "The Effects of Lifting the US Oil Export Ban on Market Equilibrium". *Journal of Petroleum Resources Economics* 1, no.1 (October 2018): 13–19.

Bor, Alexander. "Us LNG Cargo Lands in Poland for Redelivery via Pipeline to Ukraine". S&P Global Platts, 20 November 2019. ‹https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/112019-us-lng-cargo-lands-in-poland-for-redelivery-via-pipeline-to-ukraine›.

Bousso, Ron. "Exclusive: Exxon Revives Sale of Stake in Giant Azeri Oilfield". Reuters, 19 May 2020. ‹https://uk.reuters.com/article/us-exxon-m-a-azerbaijan-exclusive/exclusive-exxon-revives-sale-of-stake-in-giant-azeri-oilfield-idUKKBN22V25S›.

BP. "ACG Achieves the 500 Millionth Tonne Production Milestone". BP press release, 9 January 2020. ‹https://www.bp.com/en_az/azerbaijan/home/news/press-releases/acg-achieves-the-500-millionth-tonne-production-milestone.html›.

______. "Baku-Tbilisi-Ceyhan pipeline". BP information sheet, n.d. ‹https://www.bp.com/en_az/azerbaijan/home/who-we-are/operationsprojects/pipelines/btc.html›.

______. "BP and Partners Sanction $6 Billion Azeri Central East Development Offshore Azerbaijan". BP press release, 19 April 2019.‹https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-and-partners-sanction-6-billion-dollar-azeri-central-east-development-offshore-azerbaijan.html›.

[130] All URLs were valid as of 7 August 2020 unless otherwise noted.

______. "BP Starts-up Landmark Shah Deniz 2 Development in Azerbaijan". BP press release, 2 July 2018. ‹https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-starts-up-landmark-shah-deniz-2-development-in-azerbaijan.html›.

______. *BP Statistical Review of World Energy 2020*. London: BP, June 2020. ‹https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf›.

Bryza, Matthew, Cutler, Robert M., and Vashakmadze, Giorgi. "US Foreign Policy and Euro-Caspian Energy Security: The Time Is Now to Build the Trans-Caspian Pipeline". *EnergySource* (blog), Atlantic Council, 12 June 2020. ‹https://www.atlanticcouncil.org/blogs/energysource/us-foreign-policy-and-euro-caspian-energy-security-the-time-is-now-to-build-the-trans-caspian-pipeline/›.

Caspian Pipeline Consortium. "Media Statements by CPC General Director". CPC press release, 3 July 2019. ‹http://www.cpc.ru/EN/press/releases/2019/Pages/20190703_2.aspx›.

Chevron. "2Q[20]19 Earnings Conference Call: Edited Transcript". Chevron, 2 August 2019. ‹https://chevroncorp.gcs-web.com/static-files/93939f6e-701d-415c-bb0b-85208b1f5e4a›.

______. "3Q[20]19 Earnings Conference Call: Edited Transcript". Chevron, 1 November 2019. ‹https://chevroncorp.gcs-web.com/static-files/eaa435b7-87ea-47eb-9503-4fa72735b5c0›.

______. "Chevron Reports Third Quarter Net Income of $2.6 Billion". Chevron press release, 1 November 2019. ‹https://www.chevron.com/stories/chevron-reports-third-quarter-net-income-of-2-6-billion›.

______. "Chevron sells Azerbaijan assets to MOL Hungarian Oil and Gas". Chevron press release, 16 April 2020. ‹https://www.chevron.com/stories/chevron-sells-azerbaijan-assets-to-mol-hungarian-oil-and-gas›.

"China Expected to Consume More Natural Gas in 2020". Xinhua, 18 January 2020. ‹http://www.xinhuanet.com/english/2020-01/18/c_138715501.htm›.

"China's Oil Demand to Peak by 2030: CNPC" Argus Media. 29 August 2019. ‹https://www.argusmedia.com/en/news/1967517-chinas-oil-demand-to-peak-by-2030-cnpc›.

Climate Leadership Council. "The Four Pillars of our Carbon Dividends Plan (Updated September 2019)". Climate Leadership Council, September 2019. ‹https://clcouncil.org/our-plan/›.

Coleman, Nick. "Kazakhstan's CPC crude loadings surge to record high in March". S&P Global Platts, 2 April 2020. ‹https://www.spglobal.com/platts/en/market-insights/latest-news/oil/040220-kazakhstans-cpc-crude-loadings-surge-to-record-high-in-march›.

Coyle, James J. *Russia's Border Wars and Frozen Conflicts*. Cham: Palgrave Macmillan, 2017.

Cutler, Robert M. *The Trans-Caspian Is a Pipeline for a Geopolitical Commission*. Energy Security Program Policy Paper 1. Toronto: NATO Association of Canada, March 2020. ‹http://natoassociation.ca/wp-content/uploads/2020/04/Trans-Caspian-Pipeline-Geopolitical-Commission-ESPPP01.pdf›.

Dezember, Ryan. "Energy Producers' New Year's Resolution: Pay the Tab for the Shale Drilling Bonanza". *Wall Street Journal*, 1 January 2020. ‹https://www.wsj.com/articles/energy-producers-new-years-resolution-pay-the-tab-for-the-shale-drilling-bonanza-11577880001›.

Dubreuil, Jean-Baptiste. *Gas 2020*. Paris: International Energy Agency, June 2020.

"Enagas Joins TAP. Fluxys Ups stake". *Offshore Energy Today*, 30 September 2014. ‹https://www.offshoreenergytoday.com/enagas-joins-tap-fluxys-ups-stake/›.

Equinor. "Statoil sells 15.5 percent share in Shah Deniz to PETRONAS for USD 2.2 billion". Equinor press release, 13 October 2014.‹https://www.equinor.com/en/news/archive/2014/10/13/13OctShahDeniz.html›.

Esty, Benjamin C., and Bitsch, Florian. "The Kashagan Production Sharing Agreement (PSA)". Boston, Mass.: Harvard Business School, 2013.

European Commission. *EU-US LNG Trade.* Brussels: European Commission, January 2020. ‹https://ec.europa.eu/energy/sites/ener/files/eu-us_lng_trade_folder.pdf›.

______. "Joint U.S.-EU Statement following President Juncker's visit to the White House". European Commission press release, 25 July 2018. ‹https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_18_4687›.

______, Directorate-General for Energy, Unit A.4, Market Observatory for Energy. *Quarterly Report on European Gas Markets* 12, no. 4 (Fourth quarter, 2019). ‹https://ec.europa.eu/energy/sites/ener/files/quarterly_report_on_european_gas_markets_q4_2019_final.pdf›.

______, Eurostat. "Oil and petroleum products - a statistical overview". June 2020. ‹https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Oil_and_petroleum_products_-_a_statistical_overview&oldid=448293›.

"ExxonMobil Earns $3.1 Billion in Second Quarter 2019". Business Wire, 2 August 2019. ‹https://www.businesswire.com/news/home/20190802005068/en/ExxonMobil-Earns-3.1-Billion-Quarter-2019›.

Gaso, Berislav. "MOL Buys Time with ACG Deal". Interview by Peter Ramsay, *Petroleum Economist*, 8 December 2019. ‹https://www.petroleum-economist.com/articles/upstream/exploration-production/2019/mol-buys-time-with-acg-deal›.

Gazprom. "Power of Siberia". Gazprom information sheet, n.d. ‹https://www.gazprom.com/projects/power-of-siberia/›.

"Gazprom podal isk k Turkmengazu v Stokgol'mskii arbitrazh" [Gazprom Filed a Claim Against Turkmengaz in Stockholm Arbitration]. *Forbes*, 24 July 2015. ‹https://www.forbes.ru/news/295069-gazprom-podal-isk-k-turkmengazu-v-stokgolmskii-arbitrazh›.

Global Investment and Business Center. *Kazakhstan: Customs, Trade Regulations and Procedures Handbook*. Vol. 1, *Strategic and Practical Information*. Washington D.C.: International Business Publications, 2017.

Golubkova, Katya; Bousso, Ron; and Nasralla, Shadia. "Exclusive: Total Seeks to Reduce Stake in Giant Kashagan Oilfield – Sources". Reuters, 24 May 2019. ‹https://www.reuters.com/article/us-total-m-a-kashagan-exclusive/exclusive-total-seeks-to-reduce-stake-in-giant-kashagan-oilfield-sources-idUSKCN1SU127›.

Gotev, Georgi. "Washington Congratulates Lithuania for Receiving First LNG Shipment from US". Euractiv, 24 August 2017. ‹https://www.euractiv.com/section/energy/news/washington-congratulates-lithuania-for-receiving-first-lng-shipment-from-us/›.

Hansen, Neil. "Third Quarter 2019 Results". ExxonMobil, 11 January 2019. ‹https://corporate.exxonmobil.com/-/media/Global/Files/investor-relations/quarterly-earnings/presentation-materials/2019-presentation-materials/earnings-presentation-3q.pdf›.

Hopkirk, Peter. *The Great Game: The Struggle for Empire in Central Asia*. New York–Tokyo –London: Kodansha International, 1992.

"Initial TAP Market Test Justifies Capacity Boost to 20 bcm". energypress [*sic*], 22 October 2019. ‹https://energypress.eu/tap-first-round-market-test-justifies-plan-for-capacity-boost-to-20-bcm/›.

Inkpen, Andrew C.; Moffett, Michael H.; and Ramaswamy, Kannan. *The Global Oil & Gas Industry: Stories from the Field.* Tulsa, Okla.: PennWell Corporation, 2017.

International Energy Agency. *World Energy Outlook 2019*. Paris: IEA, November 2019. ‹https://www.iea.org/reports/world-energy-outlook-2019›.

International Group of Liquefied Natural Gas Importers. *GIIGNL Annual Report 2020*. Neuilly-sur-Seine: GIIGNL, April 2020. ‹https://giignl.org/sites/default/files/PUBLIC_AREA/Publications/giignl_-_2020_annual_report_-_04082020.pdf›.

Ismayilova, Nargiz. "Total Company to Continue Projects in Azerbaijan". Trend, 9 April 2020. https://en.trend.az/business/energy/3220264.html

Jorgic, Drazen. "China Interested in Joining TAPI Pipeline Project [According to] Pakistan Official". Reuters, 8 August 2018. ‹https://www.reuters.com/article/pakistan-china-tapi/china-interested-in-joining-tapi-pipeline-project-pakistan-official-idUSL5N1UY1GR›.

"Kazakhstan Updates Economic Forecast for 2020 to Respond to Low Oil Prices, Coronavirus Impact". *Times of Central Asia*, 2 April 2020. ‹https://www.timesca.com/index.php/news/22315-kazakhstan-updates-economic-forecast-for-2020-to-respond-to-low-oil-prices-coronavirus-impact›.

KAZENERGY Association. *The National Energy Report 2019*. Astana: Kazakhstan Association of Oil, Gas and Energy Sector Organizations "Kazenergy", 2019.

Koranyi, David. *Navigating the Energy Transition: International Oil Company Diversification Strategies*. Washington, D.C.: Atlantic Council, January 2019. ‹https://www.atlanticcouncil.org/wp-content/uploads/2019/09/Navigating_the_Energy_Transition.pdf›.

Liakopoulou, Mariana. "Beyond the Southern Gas Corridor: A Regional Infrastructure Perspective". *Energy Security* (blog), NATO Association of Canada. 13 February 2019.

‹http://natoassociation.ca/beyond-the-southern-gas-corridor-a-regional-infrastructure-perspective/›.

______. *The Caspian Legal Status and Riparian Producers' Outlook on the European Commission's Strategy Towards the Fourth/Southern Gas Corridor*. Paris: European Gas Hub, July 2018. ‹https://www.europeangashub.com/wp-content/uploads/2018/07/Liakopoulou_Caspian.pdf›.

______. "The New European Commission and the Future Role of Gas in Europe". *Energy Security* (blog), NATO Association of Canada. 7 November 2019. ‹http://natoassociation.ca/the-new-european-commission-and-the-future-role-of-gas-in-europe/›.

______. "Security of Supply in the Decarbonization Era: Assessing an Emerging External Gas Policy Paradigm for the EU". *Natural Gas World*. 28 November 2019. ‹https://www.naturalgasworld.com/eu-decarbonization-security-of-supply-gas-policy-74708›.

______, and Nifti, Efgan. *Special Brief on the Azeri-Chirag-Guneshli (ACG) Contract: US Companies Get 16 Percent Share in Azerbaijan Oil Deal*. Washington, D.C.: Caspian Policy Center, September 2017. ‹https://www.caspianpolicy.org/special-brief-on-the-azeri-chirag-guneshli-acg-contract-us-companies-get-16-percent-share-in-azerbaijan-oil-deal/›.

Magaulov, Aset. "Interv'iu: Kazakhstan razvernet eksport 6 mln t nefti s zapada na vostok" [Interview: Kazakhstan Will Expand Export of 6 Million Tons of Oil from West to East]. Interview by Alla Afanas'eva, Reuters, 3 July 2019. ‹https://ru.reuters.com/article/businessNews/idRUKCN1TY22E-ORUBS›.

Marazis, Andreas, and Ohle, Federico. *The New EU Strategy on Central Asia: Putting Renewable Energy on the Map*. Brussels: European Neighbourhood Council, June 2019. ‹http://www.encouncil.org/wp-content/uploads/2019/06/ENC_Analysis_The-New-EU-Strategy-on-Central-Asia-Putting-Renewable-Energy-on-the-Map.pdf›.

McGlade, Christopher. *The Oil and Gas Industry in Energy Transitions*. Paris: International Energy Agency, January 2020.

McWilliams, Gary, and Ilie, Luiza. "Exxon Mobil Confirms May Exit Romanian Offshore Gas Project". Reuters, 8 January 2020. ‹https://www.reuters.com/article/us-romania-energy-exxon/exxon-mobil-confirms-may-exit-romanian-offshore-gas-project-idUSKBN1Z70XP›.

MOL GROUP. "MOL Group Agrees to Purchase a 9.57 percent Stake in Azerbaijan's ACG Field and 8.9 per-cent in the BTC Pipeline". MOL Group press release, 4 November 2019. ‹https://molgroup.info/en/media-centre/press-releases/mol-group-agrees-to-purchase-a-957-stake-in-azerbaijans-acg-field-and-89-in-the-btc-pipeline›.

Myers Jaffe, Amy, and Soligo, Ronald. *The International Oil Companies*. Houston, Tex.: Rice University, The James A. Baker III Institute for Public Policy, November 2007. ‹https://www.bakerinstitute.org/media/files/Research/3e565918/NOC_IOCs_Jaffe-Soligo.pdf›.

Nair, Dinesh, and Hurst, Laura. "Exxon Is Said Poised to Kick Off U.K., Germany Disposals". Bloomberg, 23 January 2020. ‹https://www.bloomberg.com/news/articles/2020-01-22/exxon-mobil-is-said-poised-to-kick-off-u-k-germany-disposals›.

Nakhle, Carole. *The Impact of Oil Prices on Fiscal Regimes*. LCPS Policy Brief 22. Beirut: Lebanese Centre for Policy Studies, June 2016. ‹https://www.researchgate.net/publication/304564407_How_Oil_Prices_Impact_Fiscal_Regimes›.

Nassirov, Elshad. "Industry Perspective: Going Global". Interview by Stuart Elliot, *S&P Global Platts Insight Magazine*, 2019, Special Report, *National Champions: State Oil Companies Evolve to Face the Future*, (October): 34-36. ‹https://sp-platts.s3-ap-southeast-1.amazonaws.com/NOC_Special_Report_DIGITAL.pdf›.

Oil and Gas Climate Initiative. "OGCI Sets Carbon Intensity Target". Oil and Gas Climate Initiative, 16 July 2020. ‹https://oilandgasclimateinitiative.com/carbon-intensity-target-pr/›.

Olcott, Martha Brill. *Kazakhstan: Unfulfilled Promise?* Washington D.C.: Carnegie Endowment for International Peace, 2010.

______. "Central Asia's Oil and Gas Reserves: To Whom Do They Matter?" In *Central Asia and the Caucasus: At the Crossroads of Eurasia in the 21st Century*, edited by Werner Hermann and Johannes F. Linn, 63-94. New Delhi: SAGE Publications India, 2011.

Omonbude, Ekpen James. *Cross-border Oil and Gas Pipelines and the Role of the Transit Country: Economics, Challenges and Solutions.* New York: Palgrave Macmillan, 2013.

Organisation for Economic Co-operation and Development. *OECD Reviews of Innovation Policy: Kazakhstan 2017*. Paris: OECD, 2017.

"Otsenka zapasov nefti na mestorozhdeniiakh Khazar i Kalamkas-more v Kazahstane okazalas' namnogo nizhe prognozoi" [The Oil-reserve Estimate at the Khazar and Kalamkas-Sea Fields in Kazakhstan Is Much Lower than Forecast]. *Neftegaz*, 14 March 2013. ‹https://neftegaz.ru/news/gas/258640-otsenka-zapasov-nefti-na-mestorozhdeniyakh-khazar-i-kalamkas-more-v-kazakhstane-okazalas-namnogo-nizh/›.

Paik, Keun-Wook. "The role of Sino-Russia gas cooperation in China's natural gas expansion". In *Handbook of Energy Politics*, edited by Jennifer I. Considine and Keun-Wook Paik, 133-152. Cheltenham: Edward Edgar Publishing, 2018.

Paraskova, Tsvetana. "The U.S. Just Became a Net Oil Exporter for the First Time Ever". Oil Price, 5 December 2019. https://oilprice.com/Energy/Crude-Oil/The-US-Just-Became-A-Net-Oil-Exporter-For-The-First-Time-Ever.html

Peyrouse, Sébastien. "Perspectives and limits on Sino-US competition: The Kazakhstan case study". In *Sino-US Energy Triangles: Resource diplomacy under hegemony*, edited by David Zweig and Yufan Hao, 169-184. London: Routledge, 2016.

"Poland, US, Ukraine Seal Deal on Gas Supplies Security". Tass, 31 August 2019. ‹https://tass.com/world/1075884›.

Prince, Todd. "Trump to Promote LNG Exports, Higher Defense Spending in Meeting with Bulgarian Leader". Radio Free Europe/Radio Liberty, 22 November 2019. ‹https://www.rferl.org/a/trump-to-promote-lng-exports-higher-defense-spending-in-meeting-with-bulgarian-leader/30287334.html›.

"Prognoz MEA: Spros na gaz v mire upadet na 4%!; Pechal′ vlastei RF" [IEA Forecast: World Demand for Gas Will Fall by 4 Percent!; The Russian Authorities' Grief], *Neftegaz*, 10 June 2020. ‹https://neftegaz.ru/news/finance/553313-spros-na-gaz-v-mire-upadet-na-rekordnye-4-a-vosstanovlenie-budet-postepennym/›.

Resnick-Ault, Jessica, and French, David. "Bankruptcy Looms over U.S. Energy Industry, from oil Fields to Pipelines". Reuters, 23 April 2020. ‹https://www.reuters.com/article/us-global-oil-usa-restructuring/bankruptcy-looms-over-u-s-energy-industry-from-oil-fields-to-pipelines-idUSKCN2250FQ›.

Roberts, John. "The Southern Gas Corridor". In *The European Gas Markets: Challenges and Opportunities*, edited by Manfred Hafner and Simone Tagliapietra, 315-357. Cham: Palgrave Macmillan, 2017.

Safirova, Elena. "The Mineral Industry of Azerbaijan". In U.S. Geological Survey, National Minerals Information Center, *Minerals Yearbook 2011*, vol. 3, *Area reports: International; Europe and Central Eurasia* (Washington, D.C.: U.S. Government Printing Office, 2013), 5.2. ‹https://doi.org/10.3133/70178412›.

Sharma, Gaurav. "Coronavirus Downturn Will Wipe Out 6.3% Of Global Oil Supply By 2030". Forbes. Last modified 24 April 2020. ‹https://www.forbes.com/sites/gauravsharma/2020/04/24/coronavirus-downturn-will-wipe-out-63-of-global-oil-supply-by-2030/#63d008a94854›.

"Shell vykhodit iz proekta Khazar v Kazakhstane iz-za nizkoi rentabel′nosti" [Shell Is Leaving the Khazar Project in Kazakhstan Due to Low Profitability]. Novosti, 21 October 2019. ‹https://finance.rambler.ru/other/43024275/›.

Sheppard, David. "ExxonMobil sells Norway assets to Var [Vår] for $4.5bn". *Financial Times*, 26 September 2019. ‹https://www.ft.com/content/f03fec96-e085-11e9-b112-9624ec9edc59›.

Sizdikbaev, Azamat. "Do 500 tysiach barelei khotiat uvelichit′ proizvoditel′nost′ dobychi na Kashagane" [They Want to Increase Production Capacity at Kashagan to 500 Thousand Barrels]. Kazinform, 2 October 2019, ‹https://www.inform.kz/ru/do-500-tysyach-barreley-hotyat-uvelichit-proizvoditel-nost-dobychi-na-kashagane_a3571425›.

"SOCAR Sums Up Its Activity, Unveils Plans for 2020". *AzerNews*. 8 January 2020. ‹https://www.azernews.az/oil_and_gas/160409.html›.

Stent, Angela E. *The Limits of Partnership: US-Russian Relations in the 21st Century*. Princeton, N.J.: Princeton University Press, 2015.

Stevens, Paul. *International Oil Companies: The Death of the Old Business Model*. London: Chatham House, May 2016. ‹https://www.chathamhouse.org/sites/default/files/publications/research/2016-05-05-international-oil-companies-stevens.pdf›.

TAP. "Snam S.p.A. to Join TAP Shareholding, Acquiring 20 Percent Stake in the Project from Statoil". TAP press release, 1 December 2015. ‹https://www.tap-ag.com/news-and-events/2015/12/01/snam-spa-to-join-tap-shareholding-acquiring-20-stake-in-the-project-from-statoil›.

______. "TAP Introduces First Natural Gas into the Greek Section of the Pipeline as part of its Testing Phase". TAP press release, 26 November 2019. ‹https://www.tap-ag.com/news-and-events/2019/11/26/tap-introduces-first-natural-gas-into-the-greek-section-of-the-pipeline-as-part-of-its-testing-phase›.

Teterevleva, Anastasia, and Auyezov [Auezov], Olzhas. "Russia's Gazprom Signs 5-Year Contract with Turkmenistan for Natural Gas". Reuters, 3 July 2019. ‹https://af.reuters.com/article/commoditiesNews/idAFR4N24200Y›.

Tétreault, Mary Ann. "Gulf Arab States' Investment of Oil Revenues". In *Shifting Geo-Economic Power of the Gulf: Oil, Finance and Institutions*, edited by Matteo Legrenzi and Bessma Momani, 9-22. Surrey: Ashgate, 2011.

Tordo, Silvana, and Anouti, Yahya. *Local Content in the Oil and Gas Sector: Case Studies*. Washington, D.C.: World Bank, 2013.

Total. "Azerbaijan: Total Sells Its 10 Percent Interest in Shah Deniz to TPAO". Total press release, 30 May 2014. ‹https://www.total.com/media/news/press-releases/azerbaidjan-total-vend-sa-participation-de-10-dans-shah-deniz-tpao›.

______. "Total Agrees with Occidental to Contingent Acquisition of Anadarko's Assets in Africa". Press release, 5 May 2019. Total. Accessed 5 May 2019. https://www.total.com/media/news/press-releases/total-agrees-occidental-contingent-acquisition-anadarkos-assets-africa

"Total Divests of $400 Million in Exploration, Production and Distribution Assets". World Oil, 4 July 2020. ‹https://www.worldoil.com//news/2020/4/7/total-divests-of-400-million-in-exploration-production-and-distribution-assets?id=83278356›.

Trochev, Alexei. "Editor's Introduction: Kazakhstan Has Adopted the Code on Subsoil and Subsoil Use". *Statutes & Decisions*. Vol. 52, no. 2 (2018): 65–67.

U.S. Government, Department of Energy. "U.S. Becomes World's Largest Crude Oil Producer and Department of Energy Authorizes Short Term Natural Gas Exports". DoE, 13 September 2018. ‹https://www.energy.gov/articles/us-becomes-world-s-largest-crude-oil-producer-and-department-energy-authorizes-short-term›.

______, Department of Energy, Energy Information Administration. "Caspian Sea Region". EIA, 26 August 2013. ‹https://www.eia.gov/international/content/analysis/regions_of_interest/Caspian_Sea/caspian_sea.pdf›.

______, Department of Energy, Energy Information Administration. "The United States exported more natural gas than it imported in 2017". EIA, 19 March 2018. ‹https://www.eia.gov/todayinenergy/detail.php?id=35392›.

______, Department of Energy, Energy Information Administration. "Country Analysis Executive Summary: Azerbaijan". EIA, 7 January 2019. ‹https://www.eia.gov/international/content/analysis/countries_long/Azerbaijan/azerbaijan_exe.pdf›.

______, Department of Energy, Energy Information Administration. "European natural gas storage inventories are at record-high levels at the end of winter". EIA, 24 March 2020. ‹https://www.eia.gov/todayinenergy/detail.php?id=43235›.

______, Federal Energy Regulatory Commission. *State of the Markets 2019*. Washington, D.C.: FERC, March 2020. ‹https://www.ferc.gov/sites/default/files/2020-04/2019StateoftheMarketsReport.pdf›.

"US Surpasses Russia as World's Largest Natural Gas Producer". World Oil, 13 January 2010. ‹https://www.worldoil.com/news/2010/1/13/us-surpasses-russia-as-world-s-largest-natural-gas-producer›.

West, Rob, and Fattouh, Bassam. *The Energy Transition and Oil Companies Hard Choices*. Energy Insight 50. Oxford: Oxford Institute for Energy Studies, July 2019. ‹https://www.oxfordenergy.org/wpcms/wp-content/uploads/2019/07/The-Energy-Transition-and-Oil-Companies-Hard-Choices-Energy-Insight-51.pdf›.

White House, Office of the Press Secretary. "Caspian Pipeline Consortium Factsheet" White House press release, 13 November 2001. ‹https://georgewbush-whitehouse.archives.gov/news/releases/2001/11/20011113-17.html›.

Winfield, Nicole, and Jordans, Frank. "Major Oil Companies Commit to Carbon Pricing at Vatican". Associated Press, 14 June 2019. ‹https://apnews.com/3460d18f3d414f65b9a70575a3080832›.

Yagova, Olga; Afanasyeva [Afanas'eva], Alla; and Zhdannikov, Dmitry. "Oil Majors, Governments Haggle over Sharing Pain of Deepest Cuts Yet". Reuters, 28 April 2020. ‹https://www.reuters.com/article/us-global-oil-opec-majors/oil-majors-governments-haggle-over-sharing-pain-of-deepest-cuts-yet-idUSKCN22A2DF›.

Yagova, Olga, and Zhdannikov, Dmitry. "Azerbaijan Imposes Oil Cuts on BP-Led Fields: Sources". Reuters, 23 April 2020. ‹https://www.reuters.com/article/us-global-oil-azerbaijan/azerbaijan-imposes-oil-cuts-on-bp-led-fields-sources-idUSKCN225328›.

Zhang, Chi. *The Domestic Dynamics of China's Energy Diplomacy*. Series on Contemporary China 38. Singapore: World Scientific Publishing, 2016.

Zhang, Zhijie, and Xing, Wanli. "Overseas Oil Cooperation between China and India Based on Crude Oil Trade Flow Analysis". *IOP Conference Series: Earth and Environmental Science* 153, no. 3 (2018): 032046. ‹https://doi.org/10.1088/1755-1315/153/3/032046/pdf›.

Zhdannikov, Dmitry, and Bousso, Ron. "Exclusive: Exxon, Chevron Seek to Exit Azerbaijan's Oil after 25 Years". Reuters, 4 December 2018. ‹https://www.reuters.com/article/us-exxon-azerbaijan-exclusive/exclusive-exxon-chevron-seek-to-exit-azerbaijans-oil-after-25-years-idUSKBN1O315D›.

Zhiltsov, Sergey S.; Zonn, Igor S.; and Semenov, Aleksandr V. "Hydrocarbon Potential of the Caspian Region". In *Oil and Gas Pipelines in the Black-Caspian Seas Region*, edited by Sergey S. Zhiltsov, Igor S. Zonn, and Andrey G. Kostianoy, 37-50. Switzerland: Springer, 2016.