

# GEOPOLITICS AND GAS PIPELINES: CASE STUDY OF NATURAL GAS PIPELINES

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The quest for energy security is forcing countries to realign their geopolitical orientations. The geostrategic competition between the US and Russia has spilled over in the energy arena for the control of rich hydrocarbon resources in foreign lands especially in Caspian Sea and Central Asia. The rise of populism is threatening to undo the EU's unity and stability. Ukraine remains a quagmire that is affecting the roles of great powers as well as the future routes of natural gas pipelines. The most intense competition is currently happening in the relatively shallow bodies of waters like South China Sea (between China and Southeast Asian countries), Eastern Mediterranean (between Greece and Turkey) and Black Sea (between the US and Ukraine on the one side and Russia on the other). These water bodies are believed to contain substantial oil and natural gas reserves. The process of laying a pipeline in these waters is becoming an issue of disagreement between various stakeholders. Natural gas is often referred to as "bridging fuel" for its potential to reduce emissions by edging out, for example, coal as a source of electricity production and diesel as an automobile fuel. In the carbonised world, reducing carbon emission and pursuit of economic development is becoming increasingly challenging for the countries around

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the globe. In this context, this paper will try to understand the geopolitics involving the natural gas pipelines in the European region.

## INTRODUCTION

The power struggle for natural gas pipelines can be called the defining geopolitical theme of the post-Cold War world. Natural gas pipelines are rapidly emerging as the next big prize in the high stakes arena of energy politics. "What oil was to the twentieth century; natural gas will be to the twenty

first."<sup>1</sup> The need for energy security is increasingly setting the agenda for countries and natural gas is gradually taking the centre stage. The demand for natural gas is increasing at a rapid pace as it has a low carbon footprint as compared to oil and coal.

Natural gas has grown from a marginal fuel consumed in regionally disconnected markets to a fuel that is transported across great distances for consumption in many different economic sectors.<sup>2</sup> According to *International Energy Outlook*, the demand for natural gas<sup>3</sup> worldwide is projected to increase from 120 trillion cubic feet (TCF) in 2012 to 203 trillion cubic feet (TCF) by 2040. The demand for natural gas demand has increased in recent decades because of three main factors: (a) increase in awareness about the dangers of climate change (gas has low carbon footprint as compared to oil and coal); (b) increase in the global demand for gas (especially in developing countries like China and India, which have a huge population base, and are one of the fastest growing economies); (c) renewable energy cannot replace

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1. Michael T. Klare, "The Geopolitics of Natural Gas", *The Nation*, January 23, 2006, <https://www.thenation.com/article/archive/geopolitics-natural-gas/>. Accessed on January 6, 2020.
  2. "Gas 2019: Analysis and Forecast 2024", International Energy Association, June 2019, <https://www.iea.org/reports/market-report-series-gas-2019>. Accessed on January 11, 2020.
  3. "International Energy Outlook 2016 with Projection to 2040", May 2016, [https://www.eia.gov/outlooks/ieo/pdf/0484\(2016\).pdf](https://www.eia.gov/outlooks/ieo/pdf/0484(2016).pdf). Accessed on January 16, 2020.

non-renewable energy as a primary source of energy in the next few decades.<sup>4</sup>

The world's largest natural gas reserves are located mainly in West Asia, Russia, and Central Asia, far from Western Europe, East Asia and Southeast Asia where demand is greatest. There are only two ways to transport natural gas, either through pipelines or tankers (in the form of Liquefied Natural Gas). However, the most economical and efficient way to transport natural gas is through pipelines, which are increasingly becoming the primary source of a safe and constant supply of natural

gas. But pipelines have to traverse through the territory of a sovereign state (or states), and thus are tethered to geography.<sup>5</sup> The natural gas pipeline agreements are long-term contracts<sup>6</sup> in nature, because they provide safety of demand for the producer country and safety of supply for purchaser country (or countries). The destination clause prohibits the buyer from reselling the gas to other countries than those for which it is intended. The destination clause enables a supplier to charge differential pricing for the same product

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4. Robert Lyman, "Why Renewable Energy Cannot Replace Fossil Fuels by 2050", *Friends of Science*, May 1, 2016, <https://www.ourenergypolicy.org/resources/why-renewable-energy-cannot-replace-fossil-fuel-by-2050>. Accessed on January 16, 2019.
  5. Ilhan Oguz Akdemir, "Global energy circulation, Turkey's geographical location and petropolitics", *ScienceDirect*, 2011, <https://www.sciencedirect.com/science/article/pii/S1877042811012249>. Accessed on January 16, 2019.
  6. Most of the Natural Gas Pipeline agreements contain "Buy or Pay Clause" which means that either you purchase an agreed amount of natural gas or pay for refusal to buy natural gas. "Buy or Pay clause" are included in contracts because to transport natural gas through pipelines requires a huge investment in infrastructure. So investors are assured by the "Buy and Pay clause" that their investment is secured. Jeffrey M. Petrash, "Long-Term Natural Gas Contracts: Dead, Dying, or Merely Resting?" *Energy Law Journal*, 2006, <https://www.semanticscholar.org/paper/Long-Term-Natural-Gas-Contracts%3A-Dead%2C-Dying%2C-or-Petrash/b6bab9bba064f868cb1531fda02d97e4b34c5f4e# citing-papers>. Accessed on January 16, 2020.

in different countries.<sup>7</sup> So the very nature of natural gas pipeline agreements binds the producing, consuming and transit state (through whose territory the pipeline is passing) politics. The recent Nord Stream 2 natural gas pipelines project controversy is a classic example of this. The pipelines will supply 55 billion cubic metres (BCM) of natural gas to the Western European market. It will reduce Russian dependence on Ukraine to supply its natural gas to Western Europe. Moreover, it will increase the Western European countries'—especially Germany's—dependence on Russian gas. Thus, the rising demand for natural gas influences relations between major natural gas producing countries and consuming countries.

Another key factor in the geopolitics of natural gas is the heavy concentration of natural gas reserves in a relatively small number of producing countries. The top four producing countries—the US, Russia, Iran, and Canada—hold more than 50 percent of the world's natural gas reserves.<sup>8</sup> The recent shale revolution in the US made it one of the biggest producers of natural gas and oil and net energy exporter.<sup>9</sup> But most of the US natural gas will be sold in the North American market (because of well laid natural gas pipeline infrastructure) and will remain out of the emerging markets in Asia, Africa, and Eastern Europe. Also, according to the World Bank report, natural gas pipelines longer than 3,000 miles are not commercially viable.<sup>10</sup>

Furthermore, the spectre of climate change has forced countries to correct their course and decrease carbon emissions. With this, the dependence on oil is decreasing and natural gas is increasingly gaining importance in the world's

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7. Varvara Fomina, "Who Pays the Most for Russian Gas in Europe and Why", *ProJournno*, August 18, 2014, <http://projournno.org/2014/08/who-pays-the-most-for-russian-gas-in-europe-and-why/>. Accessed on January 2, 2020.
  8. "Global Energy Statistical Yearbook 2019", *Enerdata*, <https://yearbook.enerdata.net/natural-gas/world-natural-gas-production-statistics.html>. Accessed on January 15, 2020.
  9. Lucas Laursen, "US Set to Become Net Energy Exporter for First Time since 1953", *Fortune*, January 25, 2019, <https://fortune.com/2019/01/25/us-net-energy-exporter/>. Accessed on January 11, 2020.
  10. "Cross-Border Oil and Gas Pipelines: Problems and Prospects", World Bank, June 2003, <https://siteresources.worldbank.org/INTOGMC/Resources/crossborderoilandgaspipelines.pdf>. Accessed on January 6, 2020.

energy markets.<sup>11</sup> The future growth of a country depends upon uninterrupted access to energy resources at reasonable prices, and the rate of carbon emission allowed to that country. That is why nations like China are thinking of ways and means to diversify their energy needs, and carbon emission trading became the most trending topic. In this geostrategic competition, natural gas pipelines are increasingly becoming tools to influence the regional balance of power, and their commercial aspects are becoming secondary.

The ongoing civil war in Syria, which has led to the death and displacement of millions of people, is the perfect example of pipeline politics. In 2009, Qatar approached Syria with a proposal to construct a natural gas pipeline from Qatar's North fields in the Persian Gulf to Europe via Syria and Turkey. The natural gas pipeline project was backed by the United States because it will diversify the source of natural gas in the European market and will reduce Russian dominance in the European energy sector. But the Syrian government rejected the Qatari proposal in 2009 because they do not want to annoy their strategic partner, Russia, by challenging its dominance of Europe's gas market.<sup>12</sup> However, in July 2011, the governments of Iran, Iraq, and Syria signed a 10 billion dollar natural gas pipeline agreement in the midst of a civil uprising. The civilian uprising turned into armed insurgency after the Iran-Iraq-Syria natural gas pipeline agreement was signed. In the Syrian civil war, North Atlantic Treaty Organisation (NATO), along with Qatar and Saudi Arabia supported the rebels, while Iran and Russia supported the Syrian government. According to Pepe Escobar, a seasoned voice on the region, "The Iran-Iraq-Syria pipeline—if it's ever built—would solidify a predominantly Shiite axis through an economic, steel umbilical cord."<sup>13</sup>

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11. Louise Gray, "Era of Cheap, easy oil is over, warns study", *Telegraph*, October 8, 2009, <https://www.telegraph.co.uk/news/earth/earthnews/6269455/Era-of-cheap-easy-oil-is-over-warns-study.html>. Accessed on January 16, 2020.

12. Nafeez Ahmed, "Syria intervention plan fueled by oil interest, not chemical weapon concern", *The Guardian*, August 30, 2013, <https://www.theguardian.com/environment/earth-insight/2013/aug/30/syria-chemical-attack-war-intervention-oil-gas-energy-pipelines>. Accessed on December 20, 2019.

13. Pepe Escobar, "Syria's Pipelineistan War", *Al Jazeera*, August 6, 2012, <https://www.aljazeera.com/indepth/opinion/2012/08/201285133440424621.html>. Accessed on January 2, 2020.

In this context, pipeline politics constitute an important and seminal pillar of energy politics. Pipelines are used in oil, gas and electricity sectors, but it is in gas trade that their role has been more pronounced and crucial, predominantly for technical reasons related to the physical properties of natural gas. From the start, pipelines have dominated the gas trade and the politics surrounding it. In recent years, a quiet revolution is taking place in gas transport, in the form of Liquefied Natural Gas (LNG). In the coming years, according to some observers, LNG will make up of 40-50 percent of gas trade,<sup>14</sup> These expectations overlook an important factor which is the uneven progression of LNG in different regional markets. While, in the Asian market, LNG is increasing in importance, till date it has played a limited role in the European gas market on account of the extensive pipeline network in Europe. This paper will look into Russian natural gas export pipelines as a geostrategic game play in order to counter the probable American encroachment on Russia's sphere of influence in the European region. It will try to analyse Europe's inability to diversify its natural gas supplies and its effect on Europe's relations with Russia. This will be analysed in the backdrop of increasing competition for natural gas pipelines in Europe on the world's LNG markets.

#### **THE GREAT PIPELINE OPERA: EUROPE FROM YAMAL TO NORD STREAM 2 PIPELINE**

The Cold War divided Europe into two rival ideological camps and lasted for nearly half a century.<sup>15</sup> The Iron Curtain over Europe was lifted after the disintegration of the Soviet Union and countries in Eastern Europe and Central Asia gained independence. Finally, it seemed that "end of history" was near and Europe would never be divided again on nationalist, cultural or ideological lines. But that optimism did not last long. The United States

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14. Yichen Du and Sergey Paltsev, "International Trade in Natural Gas: Golden Age of LNG?" MIT Joint Program on Science and Policy of Global Change, November 2014, <https://pdfs.semanticscholar.org/0a8f/2b82f9376b512feb9169fdf216d054cd2008.pdf>. Accessed on January 1, 2020.

15. The capitalist camp was led by the US and includes Western European countries, whereas the communist camp was led by the Soviet Union and includes Eastern European countries.

of America's policy of expanding NATO eastward led to the feeling of encirclement in Russia. The Russians felt threatened by this move because the US wanted to encroach upon their traditional sphere of influence. This has led to the renewal of geopolitical competition between Russia and the US for control of Eastern Europe. Ukraine is increasingly becoming ground zero for the Russian-US rivalry in Eastern Europe. In recent years, because of US prodding and Russian threat, joining the EU and NATO became the strategic objective of Ukraine.<sup>16</sup> But many member states did not support the idea of Ukraine joining NATO because they do not want to strain their relationship with Russia. After the Russian invasion of Crimea in 2014, the US and Western European countries imposed crippling sanctions on Russia, which led to the near collapse of the Russian economy. The Russians retaliated by launching the so-called "hybrid warfare"—the use of proxies, disinformation, interference in foreign elections, and other measures short of war to escape the Western chokehold before it became fatal.<sup>17</sup> In this geopolitical competition, natural gas and its associated infrastructure like pipelines, LNG import terminals, etc., are increasingly used by countries as a tool to tip the balance of forces in their favour. The following paragraph looks into various natural gas pipeline projects in Europe and how they are affecting EU foreign policy stance, especially in relation to Russia.

### *Yamal Pipeline*

In July 1981, Western Germany and Soviet Union had concluded a framework agreement for supply of natural gas from Yamal Peninsula (Siberia) to Western Europe through pipelines, which would pass through Ukraine, Belarus and Poland (at that time members of Soviet-led Warsaw pact).<sup>18</sup> But the US government's stand from the beginning was against the

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16. Steven Piffer, "NATO's Ukraine Challenge", Brookings, June 2019, <https://www.brookings.edu/blog/order-from-chaos/2019/06/06/natos-ukraine-challenge/>. Accessed on January 24, 2020.

17. Jovana Marovic, "War of Ideas: Hybrid Warfare, Political Interference, and Disinformation", Carnegie Endowment for International Peace, November 28, 2019, <https://carnegieeurope.eu/2019/11/28/wars-of-ideas-hybrid-warfare-political-interference-and-disinformation-pub-80419>. Accessed on January 4, 2020.

18. Yamal-Europe pipeline or Urengoy-Pomary-Uzhhorod Pipeline or Trans-Siberian Pipeline.

**The Western European countries' perception of the threat posed by the Soviet Union differed from that of the United States, and they considered that Moscow's dependence on Western technology would considerably reduce Moscow's options of using energy as leverage in its relations with Western Europe.**

Yamal-Europe natural gas pipeline project going forward. The US government viewed the Yamal pipeline project through the geopolitical lens<sup>19</sup> and considered it one of the significant tools aimed at spreading Moscow's influence in the European region, especially Western Europe. The Yamal pipeline project was agreed upon during the Cold War. This was also the time when the Soviets invaded Afghanistan (1979) and the Iran-Iraq war (1980-1988) was in full swing. The US government had imposed sanctions against the Western companies which were supplying pipes and other gas-transport related equipment for the Yamal pipeline

project, because the Soviet Union did not have the necessary technology to lay the pipelines.<sup>20</sup> The unilateral imposition of sanctions drew a wedge between the US and its Western European allies, as the latter dismissed both the US government arguments and (their) sanctions proposal. The Western European countries' perception of the threat posed by the Soviet Union differed from that of the United States, and they considered that Moscow's dependence on Western technology would considerably reduce Moscow's options of using energy as leverage in its relations with Western Europe. Ultimately, in November 1982, the US government lifted the embargo after it realised that its sanctions strategy had backfired and alienated its strategic

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19. The US government at that time thought that the Soviet Union would use the money earned by selling natural gas to intensify military spending. Secondly, it would increase the Soviet's role in providing vital energy resources to Western Europe. "USSR-Western Europe: Implications of Siberia-to-Europe Gas Pipeline—An Intelligence Assessment", National Foreign Assessment Centre", March 1981, [https://www.cia.gov/library/readingroom/docs/DOC\\_0000500594.pdf](https://www.cia.gov/library/readingroom/docs/DOC_0000500594.pdf). Accessed on December 19, 2019.

20. Under the "*Gas for Pipe*" deal, the USSR will supply gas to Europe for 25 years and Western companies will lay the pipelines.



allies in Western Europe.<sup>21</sup> But, in 1991, the Soviet Union disintegrated. After the end of the Cold War, Russia inherited contracts to supply gas to Europe. It was one of the biggest sources of hard currency for Russia's post-Soviet reeling economy.<sup>22</sup> But there was a glitch: the Soviet pipelines were laid across Belarus and Ukraine, which were part of the then Soviet empire. After the fall of the Soviet Union they became independent and demanded transit fees and low-priced natural gas supplies in exchange for maintaining Russia's energy supplies to Europe.<sup>23</sup> After their independence from the Soviet Union, Azerbaijan and Central Asian countries also aspired to sell gas to Europe via Turkey through pipelines.<sup>24</sup>

The Russian government realised the need for alternative routes to increase its gas exports and to maintain its dominance in the European gas market. Russia sought ways to decrease its dependence on Ukraine for supply of its gas to Europe. The Blue Stream pipeline was the opening move of the Russian gas game.<sup>25</sup> The pipeline was laid across the bottom of the Black Sea to supply natural gas to Turkey. The Blue Stream pipeline project allowed Russians to compete in the Turkish market, but it did not solve the bigger problem of Russia's dependence on Ukraine to supply its gas to the European market.<sup>26</sup>

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21. Oliver C. Diggle, "The Reagan Pipeline Sanctions: Implications for U.S. Domestic Policy and the Future of International Law", *Towson University Journal of International Affairs*, Fall 2016, <https://cpb-us-w2.wpmucdn.com/wp.towson.edu/dist/b/55/files/2017/11/REAGAN-PIPELINE-SANCTIONS-19q4sd1.pdf>. Accessed on January 25, 2020.

22. Leonid Bershidsky, "Putin's Grand Gas Project Makes Sense Now", Bloomberg, December 25, 2019, <https://www.bloomberg.com/opinion/articles/2019-12-26/putin-s-grand-gas-project-makes-sense-now>. Accessed on December 7, 2019.

23. "Russia's Gazprom pays \$2.9 bn to settle Ukraine dispute", EURACTIV, December 21, 2019, <https://www.euractiv.com/section/energy/news/russias-gazprom-pays-2-9-bn-to-settle-ukraine-dispute/>. Accessed on December 28, 2019.

24. Central Asian countries and Azerbaijan gained their independence from the Soviet Union in 1991. Earlier their gas was supplied to Russia, which further sold it in Europe. After independence, these countries wished to diversify their supply routes to decrease their dependence on the Russian pipelines system to supply their gas to Europe.

25. The capacity of the pipeline is 16 billion cubic metres per year and it was opened in 2003. All of the gas supplied through Blue Stream is earmarked for the Turkish domestic market only.

26. In 2004-2005 more than 80 percent of Russian gas export to the EU passed through Ukraine. Data on natural gas export to Europe through Ukraine: <http://www.naftogaz-europe.com/article/en/naturalgastransitviaukraine2017>. Accessed on December 14, 2019.

**After the gas price dispute between Ukraine and Russia, Europeans began to see Russia as not a reliable supplier of energy but a petrostate that privileged its political organisation over its commercial obligations.**

In 2006, Russia shut off gas supplies to Ukraine ostensibly due to a price dispute,<sup>27</sup> in turn denying gas to millions of Europeans as well. At that time, most of the Russian gas passed through Ukraine and there was no alternative route to supply Russian gas to the Western European market. After the gas price dispute between Ukraine and Russia, Europeans began to see Russia as not a reliable supplier of energy but a petrostate<sup>28</sup> that privileged its political organisation over its commercial obligations. To reduce their dependence on Russian gas, the European Union (EU) backed the Nabucco pipeline project. This event alarmed the Russians to counter the European moves to import natural gas from Caspian Sea and West Asia through the Nabucco pipeline.

### *Nabucco vs. South Stream Pipeline*

In February 2002, Bulgaria, Hungary, Austria, Turkey and Romania signed a protocol to construct the Nabucco pipeline.<sup>29</sup> Nabucco would bring gas from West Asian and Caspian fields across Turkey and into Europe. The most important thing about the Nabucco pipeline was that it would diversify the source of natural gas in Europe and completely bypass Russia. Specifically, the

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27. The most plausible explanation for Russia's action is its concern about Kyiv's pro-Western stance and loss of political influence in Central and Western Ukraine. Andrew E. Kramer, "Russia Cuts off gas to Ukraine in Cost Dispute," *New York Times*, January 2006, <https://www.nytimes.com/2006/01/02/world/europe/russia-cuts-off-gas-to-ukraine-in-cost-dispute.html>. Accessed on January 2, 2020.

28. A Petrostate is a country which gets aggressive and ambitious on the international stage once it accumulates substantial oil and gas revenues. When the Soviets invaded Afghanistan in 1979, the oil price was at that period's peak of \$101 a barrel. Russia's war with Georgia in 2008 took place when the price of oil hit its highest point since 1980 (\$105 a barrel). Maria Snegovaya, "Think of Russia as an ordinary petrostate, not an extraordinary superpower", *Washington Post*, March 9, 2015, <https://www.washingtonpost.com/news/monkey-cage/wp/2015/03/09/to-understand-russia-think-of-it-as-an-ordinary-petrostate-as-opposed-to-an-extraordinary-superpower/>. Accessed on January 6, 2020.

29. The Nabucco Pipeline name was taken from the famous Italian language Opera Nabucco, composed by Giuseppe Verdi.

stakes for Central and Eastern European states are even higher because they are the ones who are more dependent on Russian gas and they have to pay more than Western European counterparts who are less dependent on Russian gas supplies.<sup>30</sup> But the big powers in Western Europe like Germany, France, and Italy did not support the project since they were less dependent on Russian gas at that time. Furthermore, they did not wish to antagonise Moscow by bringing non-Russian gas into the market through former Soviet satellites states. But the Ukraine-Russia gas price dispute in 2006 forced European states to put their house in order (at that time more than 80 percent of natural gas of Russia travelled to Europe through Ukraine). The support for the Nabucco pipeline dramatically grew overnight throughout Europe. The Nabucco pipeline project was also backed by the US for the reason that it would decrease Russian influence in the European gas market and allow Caspian region countries like Azerbaijan and Turkmenistan to supply their gas to Europe through Turkey without going through Russian routes.

The Nabucco project was at the heart of Europe's grand strategy to diversify its energy sources and reduce its dependence on Russian gas. But the Nabucco pipeline project became a victim of geopolitical power play in the region at that time. First, the Russia-Georgia war in 2008 over the wayward province of South Ossetia fully exposed the vulnerability of gas pipelines passing through the Caucasus region. After the fall of the Soviet Union, the countries in Central Asia and the Caucasus gained independence but they were dependent on Russians to export their oil and gas to European countries. Their desire to diversify supply routes came into direct conflict with Russian interest in the region because it challenged Russia's dominance of the European gas market and it lost millions of dollars in transit fees. The EU, with US backing, had been trying to wean itself off energy dependence on Moscow by developing a network of energy routes through the Caucasus (Georgia).<sup>31</sup> The construction of the Baku-Tbilisi-Ceyhan

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30. "Reducing European Gas Dependence on Russian Gas: Distinguishing Natural Gas Security from Geopolitics", Oxford Institute for Energy Studies, October 2014, <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2014/10/NG-92.pdf>. Accessed on December 24, 2019.

31. Baku-Tbilisi-Ceyhan (BTC) pipeline completely bypasses Russian territory and transports gas from Caspian Sea across Caucasus (especially Georgia) to Turkey. BTC pipeline is a major geopolitical coup for the EU and the US and a loss to Russia.

(BTC) pipeline was the first step in that direction. The oil pipeline was completed in 2006 and it will supply oil from the Caspian Sea across Tbilisi (Georgia) to Ceyhan (Turkey) and from there it will be supplied to the European market. During the Russian-Georgian War, Russian warplanes repeatedly targeted the Baku-Tbilisi-Ceyhan pipeline. The purpose of targeting the Baku-Tbilisi-Ceyhan pipeline was to deprive Georgia of hundreds of millions of dollars in transit fees and more importantly send a signal to the wider region that you cannot bypass Russia in its traditional sphere of influence without a cost. Second, Western sanctions on Iran were a major blow to the Nabucco pipeline project.<sup>32</sup> Originally, it was hoped that the gas for the Nabucco pipeline would come from Iran. But the sanctions on Iran forced the Nabucco consortium to opt for Azerbaijan. Finally, in June 2013, after Shah Deniz consortium decided to prefer Trans-Adriatic Pipeline<sup>33</sup> over Nabucco pipeline project, the Nabucco pipeline plan was aborted. The consortium that chose the Trans-Adriatic Pipeline over the Nabucco to transport Azeri gas to Europe pointed to higher gas prices in Italy and Greece as the main reason<sup>34</sup> behind the decision. But press reports at that time had suggested that Azerbaijan did not want to annoy its Russian neighbour, who had its own South Stream pipeline project as a rival to the Nabucco pipeline.<sup>35</sup> More importantly, Greece and Italy at that time were in the grip of tough austerity measures,<sup>36</sup> and would not be able to buy enough of the gas to make the venture profitable.

In 2007, Russia launched the South Stream pipeline project that would supply gas under the Black Sea via Bulgaria to the EU. The South Stream

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32. David Ramin Jalilvand, "Iran's gas exports: Can past failure become future success?" The Oxford Institute for Energy Studies, June 2013, <https://www.oxfordenergy.org/wpcms/wp-content/uploads/2013/06/NG-78.pdf>. Accessed on December 12, 2019.

33. Trans-Adriatic Pipeline will supply gas to Southern European countries like Greece and Italy.

34. "Nabucco West loses out to TAP in Shah Deniz II gas pipeline project", *World Pipelines*, June 27, 2013, [https://www.worldpipelines.com/business-news/27062013/nabucco\\_west\\_loses\\_out\\_to\\_tap\\_in\\_shah\\_deniz\\_ii\\_gas\\_pipeline\\_project\\_360/](https://www.worldpipelines.com/business-news/27062013/nabucco_west_loses_out_to_tap_in_shah_deniz_ii_gas_pipeline_project_360/). Accessed on December 18, 2019.

35. Leslie Palti Guzman, "Don't cry for the Nabucco pipeline", Reuters, May 1, 2014, <http://blogs.reuters.com/great-debate/2014/05/01/dont-cry-for-the-nabucco-pipeline/>. Accessed on January 3, 2020.

36. Susannah Verney and Anna Bosco, "Living Parallel Lives: Italy and Greece in an Age of Austerity", *South European Society and Politics*, February 12, 2014, <https://www.tandfonline.com/doi/full/10.1080/13608746.2014.883192>. Accessed on January 22, 2020.

pipeline was the rival of the Nabucco pipeline<sup>37</sup> and was proposed by the Russian government to maintain their stranglehold on the EU gas market and decrease their dependence on Ukraine to export gas to Europe. Many energy analysts at that time believed that it was very difficult to build a pipeline through the Black Sea as it required an enormous amount of money. But the Russian government was hell-bent on completing the pipeline project at any cost. However, in December 2014, Russia withdrew from South Stream pipeline project because Bulgaria did not allow the pipeline to pass through its territorial waters after pressure from EU and withdrew from the project.<sup>38</sup> The Russian decision to cancel the South Stream pipeline came at the time of increased diplomatic tension with the EU (which had adopted sanctions against Russia after its annexation of Crimea in March 2014).

Tensions with EU over the annexation of Crimea (Ukraine) further strengthened the resolve of the Russian government to build alternate supply routes to Europe. In the same year, Russia signed an agreement with Turkey for the Turk Stream natural gas pipeline project.<sup>39</sup> TurkStream is the replacement of the South Stream project, and it supplies gas to Eastern European countries through Turkey. TurkStream was also backed by the Turkish government because it will cement Turkey's position as a gateway to the European gas market.<sup>40</sup> In January 2020, Russian President Vladimir Putin and Turkish President Recep Tayyip Erdogan formally launched the TurkStream gas pipeline. The TurkStream pipeline will further reduce Russian dependence on Ukraine to supply its gas to Europe and strengthen the nascent Turkish-Russian alliance.<sup>41</sup>

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37. South Stream and the Nabucco pipelines follow a similar path and both pipelines target the Central European market.

38. Tim Boersma, "The Cancellation of South Stream is a Pyrrhic Victory, At Best", Brookings, December 2014, <https://www.brookings.edu/blog/up-front/2014/12/18/the-cancellation-of-south-stream-is-a-pyrrhic-victory-at-best/>. Accessed on December 27, 2019.

39. The Turk Stream consists of two pipelines with a total capacity of 31.5 billion cubic metres (BCM).

40. John Roberts, "The Turkish Gate: Energy Transit and Security Issues", *Turkish Policy Quarterly*, [https://esiweb.org/pdf/esi\\_turkey\\_tpq\\_id\\_13.pdf](https://esiweb.org/pdf/esi_turkey_tpq_id_13.pdf). Accessed on December 15, 2019.

41. Turkey purchased S-400 missile defense system from Russia which had sparked a major diplomatic crisis within NATO; also Turkey and Russia are cooperating in Northern Syria. Keith Johnson and Robbie Gramer, "Who Lost Turkey", *Foreign Policy*, July 2019, <https://foreignpolicy.com/2019/07/19/who-lost-turkey-middle-east-s-400-missile-deal-russia-syria-iraq-kurdish-united-states-nato-alliance-partners-allies-adversaries/>. Accessed on December 22, 2019.

**When the Nord Stream 2 pipelines project is completed, it will consolidate Russia's dominant status in the European gas market and further diversify its supply routes. Most importantly, after the completion of the Nord Stream 2 pipelines, Ukraine will lose its status as Russia's gateway into the European gas market.**

### *Nord Stream Pipelines System*

The Nord Stream natural gas pipeline project is the most important in the European perennial pipeline opera. The Nord Stream is a system of offshore natural gas pipelines from Russia across to the Baltic Sea bypassing Eastern and Central European countries like Ukraine, Poland, etc.<sup>42</sup> The first two pipelines (known as Nord Stream 1) were completed in October 2012, whereas two more pipelines (known as Nord Stream 2) are in their final phase.<sup>43</sup>

But, in December 2019, the US government imposed unilateral sanctions against Western companies which were laying deep sea pipelines for the Nord Stream 2

project. After the imposition of sanctions against the Nord Stream 2 project, a Swiss-Dutch company *Allseas*, which was laying the pipelines, suspended work to avoid US sanctions.<sup>44</sup> The imposition of sanctions by the US will delay the laying of pipelines. However, the Nord Stream 2 project will be completed because Russia and other Western European countries are eager to complete the project and most of the pipeline laying work is already completed.<sup>45</sup>

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42. Mikhail Korchemkin, "With Gazprom's Nord Stream 2, Putin is Getting Ready to Put Screws on Europe", *Foreign Policy*, October 2019, <https://foreignpolicy.com/2019/10/07/gazproms-nord-stream-2-will-help-putin-cut-off-natural-gas-supplies-to-europe/>. Accessed on January 12, 2020.

43. The capacity of Nord Stream 1 pipeline is 55 billion cubic metres (BCM) and Nord Stream 2 capacity in 55 billion cubic metres, which make the total capacity of Nord Stream pipelines 110 Billion Cubic Metres.

44. Vanand Meliksetia, "Nord Stream 2 Sanctions Are A Win-Win For Putin", *Oil Price*, December 23, 2019, <https://oilprice.com/Energy/Natural-Gas/Nord-Stream-2-Sanctions-Are-A-Win-Win-For-Putin.html>. Accessed on December 27, 2019.

45. Stuart Elliott, "So close: Nord Stream 2 gas links completion trips at last hurdle", *S&P Global Platts Insight*, January 7, 2020, <https://blogs.platts.com/2020/01/07/nord-stream-2-gas-pipeline-trips-at-last-hurdle/>. Accessed on January 18, 2020.

When the Nord Stream 2 pipelines project is completed, it will consolidate Russia's dominant status in the European gas market and further diversify its supply routes. Most importantly, after the completion of the Nord Stream 2 pipelines, Ukraine will lose its status as Russia's gateway into the European gas market. The Nord Stream 1 and 2 and TurkStream pipelines projects were designed by the Russian government to punish Ukraine by depriving it of transit fees.<sup>46</sup>

In March 2014, Russia annexed Crimea from Ukraine and provoked a major geopolitical crisis. The United States and the EU responded by imposing sanctions against the Russian state. The economic sanctions hit the Russian economy very hard and its oil and gas companies had lost access to the Western technology. But in recent years production of gas in the North Sea<sup>47</sup> has decreased, Qatari gas is out of reach for the Western European countries because of the Syrian civil war, and reimposition of sanctions by the US government on Iran also closed another important gas market for the European countries. This has put the Western European countries, especially Germany (the economic powerhouse of Europe), into a difficult position. The domestic pressure to reduce carbon emissions and lack of other commercially viable options to import gas put the Western European countries like Germany on a path that will increase their dependence on Russian gas<sup>48</sup> and will weaken their united front in the Russia-Ukraine dispute.

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46. Ukraine collected US\$ 3 billion in transit fees last year, which is 3 percent of its annual budget. Steven Pifer, "Congress, Nord Stream II, and Ukraine", Brookings, November 12, 2019, <https://www.brookings.edu/blog/order-from-chaos/2019/11/12/congress-nord-stream-ii-and-ukraine/>. Accessed on January 3, 2020.

47. Most of Western European gas came from North Sea region and onshore fields in Netherlands.

48. After the completion of Nord Stream 2 pipeline, approximately 75 percent of Germany gas import will be from Russia.

**Two major developments in the twenty-first century have transformed the global energy system in the general and gas market in particular. The first is the shift in the centre of demand from developed countries to developing countries like China and India, etc. The second development is the shale revolution in the US that has decreased the US' dependence on energy imports.**

#### **RISKING PIVOT: GERMANY AND TURKEY**

Two major developments in the twenty-first century have transformed the global energy system in the general and gas market in particular. The first is the shift in the centre of demand from developed countries to developing countries like China and India, etc. The second development is the shale revolution in the US that has decreased the US' dependence on energy imports. In this changing energy landscape, new alliances are being formed and old ones are rapidly becoming redundant. The recent actions of Germany and Turkey prove this point.

The two countries are perfect case studies of natural gas pipeline politics. Both countries are traditionally considered as part of the western bloc led by the US. But their heavy dependence on imported energy and desire to become "natural gas hub," can lead to their pivot away from the US-led western bloc.

**Germany:** Germany is an export-based economy and is heavily dependent on energy imports for its domestic requirements.<sup>49</sup> First, the competitiveness of German products in the international market depends upon the availability of cheap oil and gas to its industries.<sup>50</sup> Second, Germany will close all civilian

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49. Germany imports more than 60 percent of its primary energy requirements.

50. In Germany, the share of industries in which energy is a key factor for gaining a competitive advantage is larger than in any other western industrialised nation. In 2008, these industries generated over 44 percent of German revenue. In industrialised nations, this share is matched only by Japan with around 43 percent. The European average is much lower, and trailed by the US at 30 percent. "Energy: A key to competitive advantage", McKinsey & Company, April 2009, [https://www.mckinsey.com/~/media/mckinsey/dotcom/client\\_service/sustainability/pdfs/energy\\_competitive\\_advantage\\_in\\_germany.ashx](https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/sustainability/pdfs/energy_competitive_advantage_in_germany.ashx). Accessed on January 25, 2020.



nuclear power plants by the end of 2022.<sup>51</sup> Finally, it did not have any LNG import terminal,<sup>52</sup> so it is dependent on pipeline infrastructure for the import of natural gas. It is traditionally considered as part of the US-led international order. In 2006, when Russia had stopped exporting gas to Ukraine, Western European countries like Germany were not affected much because at that time they were less dependent on Russian gas imports than Central and Eastern European countries. During that period, most of the German imports came from the North Sea region and onshore gas fields in the Netherlands. But, in recent years, the demand for natural gas in Germany has increased, whereas the production in the North Sea region and gas fields of the Netherlands has declined. This has forced Germany to look for new markets of natural gas.

The nuclear deal in 2015 with Iran opened the Iranian gas market for the European countries. But that window did not last long because of the unilateral withdrawal of the US from the Iran nuclear deal in May 2018 and reimposition of sanctions on Iran's oil and gas sectors. This has rattled European countries like Germany which were in favour of maintaining closer relations with the Iranian government and also wanted to import natural gas from Iran.<sup>53</sup> The US is also offering to supply LNG to Germany but it will be more expensive than the piped natural gas. This has forced Germany to develop a closer relationship with the Russians for its energy security. Ultimately, with the completion of Nord Stream 2 pipeline, Germany will not only become a major gas importer from Russia, but it will also become a gas hub in Western Europe.<sup>54</sup>

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51. Tsvetana Paraskova, "Germany Aim To Close All Nuclear Plants By 2022", *Oil Prices*, December 30, 2019, <https://oilprice.com/Alternative-Energy/Nuclear-Power/Germany-Aims-To-Close-All-Nuclear-Plants-By-2022.html>. Accessed on January 14, 2020.

52. Rachel Waldholz, "Liquefied Gas—Does LNG have a place in Germany's energy future?" *Clean Energy Wire*, February 12, 2019, <https://www.cleanenergywire.org/factsheets/liquefied-gas-does-lng-have-place-germanys-energy-future>. Accessed on December 11, 2019.

53. Lucas Tichy and Nikita Odintsov, "Can Iran Reduce EU dependence on Russian Gas?" *Middle East Policy Council*, <https://mepc.org/journal/can-iran-reduce-eu-dependence-russian-gas>. Accessed on January 11, 2020.

54. Julia Demirdag, "Germany to become key to EU gas transit-analysts", *Montel*, November 6, 2019, <https://www.montelnews.com/en/story/germany-to-become-key-to-eu-gas-transit--analysts/1057564>. Accessed on January 19, 2020.

When the Nord Stream 2 pipeline project is completed, it will improve bilateral relations between Germany and Russia. In any future conflict between Russia and the US in Eastern Europe, it will be very difficult for Germany to forcefully condemn Russian actions. This will be a major blow to the trans-Atlantic relations and a major diplomatic victory for Russia.

**Turkey:** In European pipeline politics, Turkey has been a key player. Turkey is not a major energy producer country, but it has plans of becoming a gas transit hub because of its favourable geographical position between the gas fields of Caspian region, West Asian region and Europe. Since the foundation of the Turkish Republic it has maintained close relations with the US and is a part of the US-led NATO bloc. But, in the recent years, relations between the US and Turkey have worsened because of US support for the Kurdish-led Syrian democratic forces against Islamic State in Syria, which Turkey considers an offshoot of Kurdish Workers' Party (PKK).<sup>55</sup>

Relations between Turkey and Russia, on the other hand, have improved in recent years because of their close cooperation in northern Syria and Turkey's recent purchase of S-400 missile defence system.<sup>56</sup> The failure of the Nabucco pipeline project and sanctions on Iran also forced Turkey to look towards Russia. The Russian government was also searching for alternative routes to supply its gas to Europe. The Blue Stream pipeline was completed in 2003 for the supply of natural gas to the Turkish domestic market. In 2014, the Russian and Turkish government signed the TurkStream pipeline project, which will supply Russian gas to the European market through Turkey. The TurkStream pipeline was completed in January of this year and it will cement Turkey's position as a transit state for natural gas. The Turkish pivot towards Russia was so rapid and even surprising for many in the region. The US Senate had

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55. "The issues behind worsening Turkey-US relations", *TRT World*, July 19, 2019, <https://www.trtworld.com/turkey/the-issues-behind-worsening-turkey-us-relations-28372>. Accessed on December 28, 2019.

56. Seth J. Frantzman, "Russia and Turkey are becoming allies, overshadowing Israel—Analysis", *Jerusalem Post*, July 29, 2019, <https://www.jpost.com/Middle-East/Russia-and-Turkey-are-becoming-allies-overshadowing-Israel-analysis-597004>. Accessed on December 21, 2019.

imposed sanctions on Turkey for its purchase of the S-400 missile defence system and experts are discussing, "Who Lost Turkey."<sup>57</sup>

The Turkish stand on East Mediterranean Pipeline project also highlights its pivot away from the US-led international order. In early 2019, East Mediterranean Gas Forum was founded by Israel, Egypt, Jordan, Greece, and Cyprus. The forum was created to develop a regional gas market and ultimately export gas to Europe. The Eastern Mediterranean Sea contains huge reserves of gas and oil. In 2010, a large gas field was discovered off the coast of Israel and in later years other offshore gas fields were discovered in Cyprus and Egypt. This has led to an agreement between Greece, Israel, Egypt, and Cyprus to lay a gas pipeline from Israel to Greece through Eastern Mediterranean.<sup>58</sup> Turkey was excluded from the pipeline project at the insistence of Greece and Cyprus. In 1974, Turkey invaded Cyprus and annexed Northern Cyprus after a long diplomatic spat with Greece. Turkey fears that Eastern Mediterranean Gas Forum is a geopolitical weapon to counter its influence in the region. The Eastern Mediterranean Pipeline is supported by the US because it will reduce Europe's dependence on Russian natural gas. This is the reason it wants to reassert its dominance in eastern Mediterranean region by supporting factions in Libyan conflicts and sending naval warships to stop Cyprus from exploration and research in the eastern Mediterranean waters.

## **THE IMPLICATION OF EUROPEAN PIPELINE POLITICS ON GAS MARKETS AROUND THE WORLD**

The realisation of a natural gas pipeline project is like a marathon. It takes years for the first shovel to hit the ground for constructing the pipeline. But this metaphor is partially valid. In the last laps of a marathon it becomes

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57. Keith Johnson and Robbie Gramer, "Who Lost Turkey", *Foreign Policy*, July 2019, <https://foreignpolicy.com/2019/07/19/who-lost-turkey-middle-east-s-400-missile-deal-russia-syria-iraq-kurdish-united-states-nato-alliance-partners-allies-adversaries/>. Accessed on December 22, 2019.

58. East Mediterranean pipeline will transport gas across the Mediterranean to the European countries.

**The United States of America wants to sell its gas in the form of Liquefied Natural Gas (LNG) to the European market. But the US LNG is much more expensive than the piped gas from Russia. That is why most of the Western European countries are not interested in buying American LNG and are opting for Russian gas.**

more apparent who will be the winner.<sup>59</sup> The great gas pipeline game in Europe is entering the advanced stage. The winner of gas pipeline politics in Europe is going to be decided in the coming years after the completion of major natural gas pipelines like East Mediterranean and Nord Stream 2 pipelines.

The main aim of Russia in recent years has been to diversify its supply routes so that it can reduce its dependency on the Ukrainian transit system for the supply of its natural gas. Second, it wants to maintain its stronghold on the European gas market. The TurkStream and Nord Stream pipeline systems were designed to reduce the flow of gas through Ukraine without affecting the supply of Russian gas to European market.<sup>60</sup> This will be a serious blow to Ukraine because it will lose billions of dollars in transit fees after the completion of these pipeline projects. Second, it will also decrease Ukraine's importance in the EU because it will not remain as a transit state for Russian gas. Third, it will weaken the EU even further by preventing it from developing common EU energy policy<sup>61</sup> to counter Russia's hegemonic plans in the region.

The underdogs in this natural gas pipeline politics are the Eastern European countries and the US. The recent Shale revolution in the US made it one of the biggest producers of oil and gas in the world.

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59. Barcin Yinanc, "Is Nabucco dead, and no one dares to say it?" December 6, 2011, <http://www.hurriyetdailynews.com/opinion/barcin-yinanc/is-nabucco-dead-and-no-one-dares-to-say-it-8499>. Accessed on January 7, 2020.

60. According to Gazprom's (Russian gas monopoly) "optimization program" the company will reduce the capacity of pipelines delivering gas to the Russian-Ukrainian border to 10 billion to 15 billion cubic metres a year, <https://www.gazprom.com/press/news/miller-journal/2016/277026/>. Accessed on December 23, 2019.

61. Richard Wietz, "Countering Russian Energy Diplomacy", International Centre for Defense and Security, June 20, 2014, <https://icds.ee/countering-russian-energy-diplomacy/>. Accessed on December 19, 2019.

The United States of America wants to sell its gas in the form of Liquefied Natural Gas (LNG) to the European market. But the US LNG is much more expensive than the piped gas from Russia.<sup>62</sup> That is why most of the Western European countries are not interested in buying American LNG and are opting for Russian gas. The pressure of climate change is also forcing countries in Europe to switch towards natural gas. The US is also concerned that Western Europe is increasingly becoming dependent on Russian gas imports, which will weaken their resolve to counter Russia's hegemonic plans in Eastern Europe.

**China is importing gas through a pipeline from Russia. In 2025, the major natural gas pipeline project will be completed for export of gas from Russia to China.**

Countries like India and China are increasing their LNG imports from around the world. In the 1990s and 2000s, India was involved in multilateral negotiations for the building of natural gas pipelines from Iran, Turkmenistan and Myanmar.<sup>63</sup> However, these projects failed to make any headway owing to various factors like gas pricing dispute, the changing geopolitical chessboard and fluctuating bilateral relations between the countries involved. Today, India imports a large amount of LNG from countries like Qatar, Australia, the US and Russia and has also been purchasing natural gas from spot markets. In recent years, India has built new LNG import terminals to increase its capacity to import LNG.

The Chinese government is also importing a large amount of LNG and soon it will overtake Japan as the largest LNG importer in the world. China is importing LNG from the US to fulfil its energy demands and to reduce its

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62. Murat Temizer, "US LNG price up to 40% higher than Russian gas: Novak", Anadolu Agency, May 27, 2018, <https://www.aa.com.tr/en/energy/energy-diplomacy/us-lng-price-up-to-40-higher-than-russian-gas-novak/20225>. Accessed on January 7, 2020.

63. Iran-Pakistan-India (IPI) Gas Pipeline Project, Turkmenistan-Afghanistan-Pakistan-India (TAPI) Gas Pipeline Project and Myanmar-India Gas Pipeline Project. Sanket Sudhir Kulkarni, "India's Import Diversification Strategy for Natural Gas: An Analysis of Geopolitical Implications", *Observer Research Foundation*, December 6, 2019, <https://www.orfonline.org/research/indias-import-diversification-strategy-for-natural-gas-58395/>. Accessed on January 11, 2020.

trade surplus with the US.<sup>64</sup> China is importing gas through a pipeline from Russia. In 2025, the major natural gas pipeline project will be completed for export of gas from Russia to China.<sup>65</sup>

Finally, the demand for LNG is going to increase in the coming years, especially in the Asian region where natural gas pipeline infrastructure is non-existent. On the other hand, the demand for LNG in Europe is going to remain steady in the coming years because of the well-established natural gas pipeline infrastructure already in place there. As technological improvements and infrastructure investments reduce the cost of LNG, it will also incentivise European states that are already looking for alternatives gas supply options.<sup>66</sup>

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64. Stephen Stapczynski, "Trade Deal Could Propel US to Top of China's LNG Supplier List", Bloomberg, <https://www.bloomberg.com/news/articles/2019-06-12/trade-deal-could-propel-u-s-to-top-of-china-s-lng-supplier-list>. Accessed on December 9, 2019.

65. The Power of Siberia natural gas pipeline will supply 38 BCM annually from year 2025.

66. Dr. Paula Stern, "The LNG moment: How US production could change more than just markets", *Atlantic Council*, April 16, 2019, <https://www.atlanticcouncil.org/commentary/article/the-lng-moment-how-us-production-could-change-more-than-just-markets/>. Accessed on January 2, 2020.