

Rondeli Foundation – Georgian Foundation for Strategic and International Studies

**Can the Southern Gas Corridor be a solution to Europe's Energy Crisis?
Energy Security and Gas Pipeline Diplomacy**

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While war is raging in Ukraine and Europe faces a gas crisis, it has become evident that war is also played on the grounds of energy. As stated by Ursula Von Der Leyen, President of the European Commission on May 5th 2022, “Russia has been instrumentalizing energy for months, if not years, to pressure Ukraine and the European Union. We are now determined to end our dependency on Russian gas”. The EU is now actively working towards an acceleration of its energy transition, driven by the need to preserve democracy and fight for peace in Europe. While the EU is looking for alternative suppliers of gas since the Russian invasion of Ukraine, the Southern Gas Corridor (SGC) appears to be a potential solution to the issue of the EU’s dependency on Russian energy. **To what extent can Europe rely on gas from Azerbaijan? Can the Southern Gas Corridor redraw the energy map of Europe?**

This issue is especially pertinent as energy is the most important material driver of politics on various levels¹. Globally, to ensure sufficiency of resources; regionally, to ensure that trade can take place; at the country level, to ensure national security of supply; and at the consumer level, to make sure that consumer demand can be satisfied. Energy security can be defined as ‘an uninterrupted energy supply at a reasonable price and with environmental considerations’ (definition by the International Energy Agency²). In this regard, energy must be supplied in a timely and uninterrupted manner, at a reasonable price, from abundant, reliable and diverse sources, in order to contribute to the economic growth and social development of any country. Indeed, energy insecurity and shortages affect countries through restraining productive activities and disabling consumer well-being. From the 1970s, energy security was viewed as reduced dependence on oil imports, particularly in major oil-importing countries of the OECD. However, in today’s market, energy security is an issue for both importing and exporting countries. As much as importing countries need to ensure security by counting on sustainable sources, exporting countries are compelled to export to ensure sustainable income³.

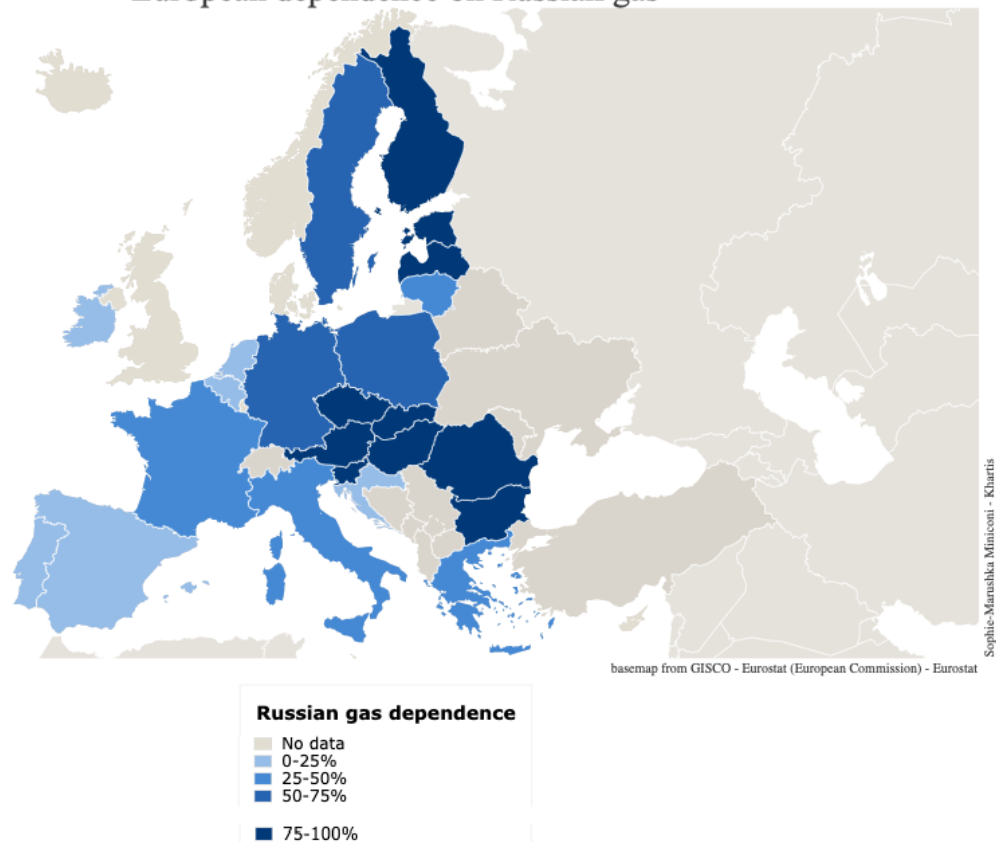
Why focus on gas in this study? Natural gas is becoming popular as a cleaner and more efficient type of fossil fuel given the energy and environmental challenges faced today. There is a growing energy demand and an increase in the demand for gas specifically. Global gas production in 2024 is expected to be 6% higher than 2019’s pre-Covid levels⁴. The world’s gas resources are unequally distributed, with nearly 80% of the world’s total proven natural gas reserves located in only ten countries. Russia holds about a fifth of the world’s total gas reserves, followed by Iran and Qatar in the Middle East. Gas trade being dominated by Russia poses urgent risks for the security of gas supplies and price stability, as the current energy crisis linked to the war in Ukraine demonstrates.

Europe’s energy security has been largely debated in the media since the beginning of the Russian invasion of Ukraine in February 2022, pointing out the political issues linked to the European Union’s dependence on Russian oil and gas. As of today, the 27 countries of the European Union are using 10% coal, 13% nuclear, 17% renewable energies, 24% gas and 36% oil in their energy mix. Europe has few fossil fuels in its soil and needs to import these sources of energy, to a large extent from Russia, especially for gas. Indeed, the EU imports about 300 billion cubic meters (bcm) of gas from abroad each year and nearly 40% comes from Russia (25% from Norway, 8% from Algeria, 7% from the USA)⁵. In addition, The International Energy Agency (IEA) expects European gas import demand to rise by around 45 billion cubic meters per year (bcm/y) by 2025.⁶

However, these numbers for gas imports are not homogeneous for the whole of Europe: we can note some discrepancies about the dependence upon Russian gas in different countries of the EU. Therefore, an EU strategy to diversify its suppliers of gas must consider the differing geopolitical positions of countries within the EU regarding Russian gas. We must distinguish between the most important buyers of gas in quantity and countries which are the most dependent on Russian gas in their energy mix. The biggest importers in quantity are Germany, Italy, France and Poland⁷. Nonetheless, we observe that Central and Eastern European countries have an important dependency on Russia in their energy mix. The most reliant countries according to statistics from 2020, are Hungary, Latvia, Finland, Estonia, Czechia, Slovenia, Slovakia, Bulgaria, Germany and Austria. The following map illustrates EU countries' dependence on Russian gas in their energy mix (this map was made with Eurostat data from 2020).

Map 1.

European dependence on Russian gas

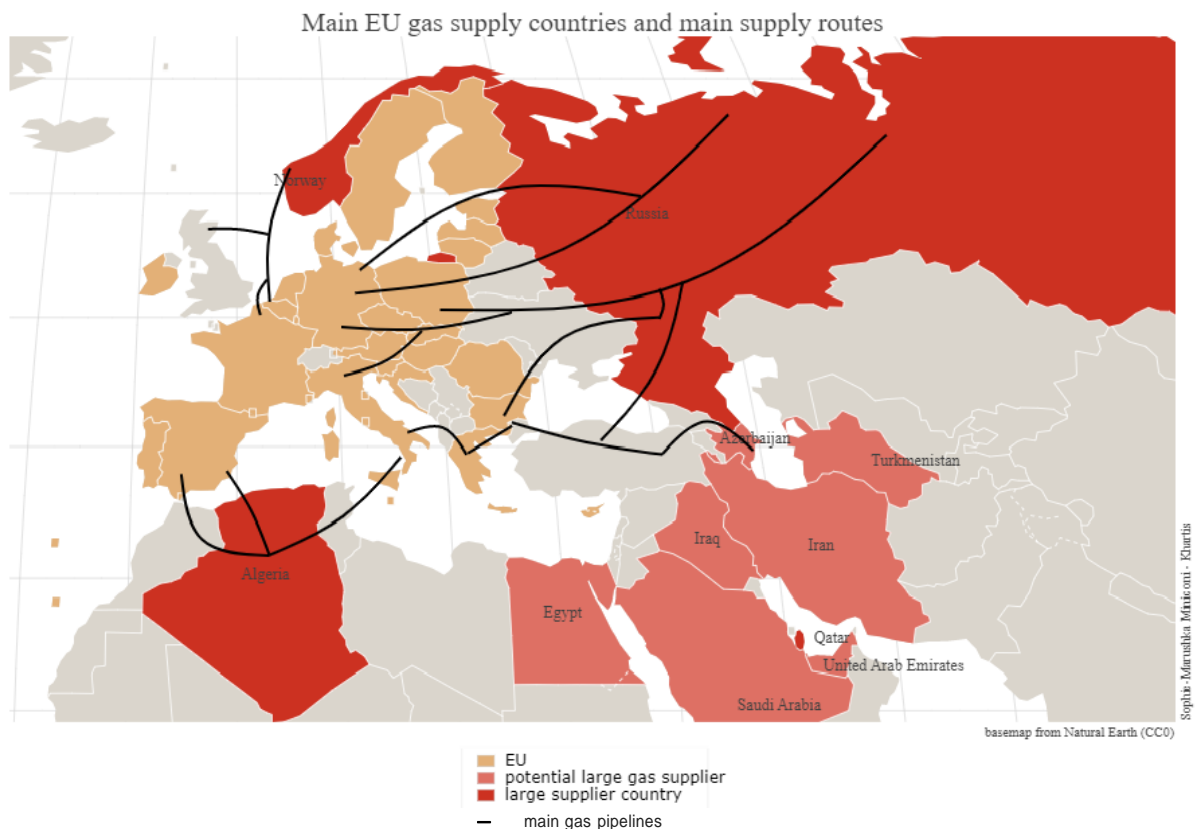


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It is in this context that the European Union is trying as best as it can to change the trajectory of its natural resources supply. As a result of the war waged by Russia in Ukraine, Germany has already put an end to the NordStream II underwater pipeline project and the EU has signed new contracts with the US for Liquefied Natural Gas (LNG) imports. A notable example of a successful energy security strategy is that of the Baltic countries, Lithuania,

Latvia, Estonia, which were extremely dependent on Russian gas until recently. In April 2022, the three countries entirely renounced to Russian gas thanks to the expensive gas terminal based in Klaipeda, Lithuania, built in 2014 as a result of the Russian invasion of Crimea. This infrastructure allows the three Baltic states to be independent from Russian gas imports, thanks to imported Liquid Natural Gas (LNG) from Norway, which is re-gasified in the terminal in Klaipeda. A bold political choice taken by Lithuania in 2014 is now proving of capital importance. However, adopting a new strategy requires several considerations. Firstly, diversifying energy suppliers and not signing any new gas contracts with Russia. Secondly, being in a better position to negotiate gas contracts with suppliers. Thirdly, minimizing risks for the environment, for example by avoiding under-water pipelines. Bettering gas related energy security also requires the introduction of gas storage facilities. These considerations enter the framework of improving Europe's energy security and independence.

Map 2.



The solutions for a diversification of gas suppliers for Europe lie in the following options: Norway, the United States, Qatar and Azerbaijan. The map above underlines the main gas pipelines supplying Europe, from Russia, Algeria and Norway. Azerbaijan, Egypt, Iraq, Iran, UAE, Saudi Arabia and Turkmenistan (mapped in light red) are the countries whose gas reserves have proven that they can hypothetically become large exporting countries in the future.

In this context, the Southern Gas Corridor (SGC) appears as a potential solution for the diversification of gas imports into the European Union. The Southern Gas Corridor is a 2008 initiative from the European Commission which aims at transporting gas from the Caspian Sea

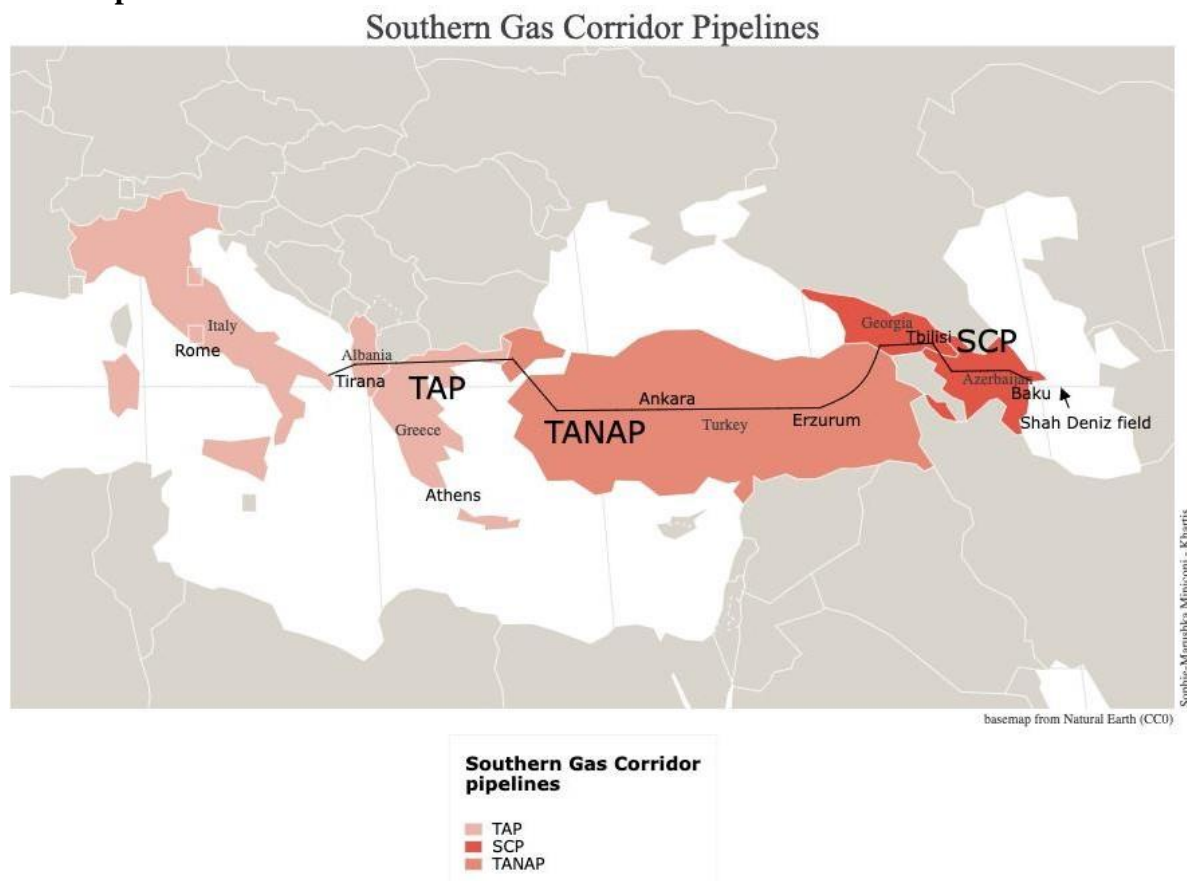
region all the way to Europe. The Southern Gas Corridor appears as a potentially good option to balance geopolitical interests of producer, transit and consumer countries.

Therefore, more than ever, natural gas resources in the Caspian region are a vital source of strategic energy, since they offer a crucial diversification opportunity for European countries, provided that the resolution of some technical and political issues is successful. We will firstly examine the energy security concerns of each actor in the Southern Gas Corridor. Flows of Caspian gas to broader markets can contribute to the economic development and independence of producing countries, while being a source of income for transit countries and finally broadening options for importing countries. We shall then underline the role of the Southern Gas Corridor in favor of global energy security amid and highlight the prospects for enlargement of the project.

I. THE SOUTHERN GAS CORRIDOR (SGC)

The Southern Gas Corridor is a 2008 initiative from the European Commission, expressed as a part of “Second Strategic Energy Review – An EU Energy Security and Solidarity Action Plan” which aims at transporting gas from the Caspian Sea region all the way to Europe, through the **South Caucasus Pipeline**, running through Azerbaijan and Georgia to Turkey, where the **Trans-Anatolian Pipeline** runs through the country and connects with the **Trans-Adriatic Pipeline** running through Greece, Albania and Italy. The main supply source of the pipeline network is the Shah Deniz gas field in the Caspian Sea, which has a current annual production of 20 billion cubic meters (bcm) (Shah Deniz Field Development)⁸. Amid the gas crisis in Europe, the significance of the Southern Gas Corridor for Europe’s energy diversification and energy security becomes even clearer. The project has also received substantial support from the United States at the time of implementation.

Map 3.



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1. The South Caucasus Pipeline (SCP)

The South Caucasus Pipeline (SCP) runs natural gas from the Azerbaijani Sangachal terminal close to Baku and ends in Erzurum, Turkey, transiting through Georgia. This 692-kilometer-long gas pipeline runs parallel to the Baku-Tbilisi-Ceyhan (BTC) oil pipeline. First deliveries through the pipeline started in 2006. The pipeline is owned by the South Caucasus Pipeline Company, which is a consortium led by British Petroleum (BP) and SOCAR. The project is estimated at USD 40 billion, of which Azerbaijan has committed nearly USD 10 billion.

The shareholders of the consortium are as follows⁹:

- BP (UK): 28.83%
- TPAO (Turkey): 19%
- SOCAR (Azerbaijan): 16.67%
- Petronas (Malaysia): 15.5%
- Lukoil (Russia): 10%
- Naftiran Intertrade (Iran): 10%

With the expansion of the SCP into SCPX in 2018¹⁰, the pipeline currently has a capacity of 23 bcm of gas per year. The first aim of the pipeline was to supply Georgia and Turkey in gas. The goal in the longer term is to supply Europe through the Trans-Anatolian and the Trans-Adriatic pipelines. Indeed, The Southern Gas Corridor is currently exporting 6 bcm to Turkey and 9 bcm further, to Europe every year. Azerbaijan plans to export 11 bcm to Europe in 2023 (Barrel, 2022).¹¹

Shah Deniz is the most important gas field in Azerbaijan, located in the Caspian Sea, about 70km away from Baku. It is the gas source of the whole Southern Gas Corridor. The Shah Deniz field is operated by BP, partnered with the other companies in the South Caucasus Pipeline Company. Shah Deniz is divided into two stage projects: Shah Deniz Stage 1 project (SD1) and Shah Deniz Stage 2 project (SD2). SD1 has a gas production capacity of 11 bcm per year while under SD2, the gas production capacity is of 16 bcm annually. The transportation capacity of the SCP was expanded to 23 bcm a year as part of the Shah Deniz 2 development.

1.1. Azerbaijan's energy strategy

Azerbaijan is the source country of the entire Southern Gas Corridor pipeline network. Azerbaijan has an estimated 1.3 trillion cubic meters¹² of proven natural gas reserves, ranking 25th in the world and accounting for about 0.7% of the world's total natural gas reserves but with substantial unexplored offshore potential. Oil and gas dominate Azerbaijan's economy and provide most of its export revenue. Oil and natural gas bring in around 90% of Azerbaijan's export revenues, and they finance around 60% of the government budget. The country's energy mix is concentrated in fossil fuels, with oil and gas accounting for more than 98% of total supply.¹³

Azerbaijani natural gas is exported through several pipelines: the South Caucasus Pipeline (SCP), the Hajiqabul-Abadan (Iran), opened in 2006; and the Hajiqabul-Mozdok (Russia), opened in 2009. Azerbaijan's priority however is the implementation of the Southern Gas Corridor. Azerbaijan greatly benefits from this large-scale project economy-wise. In addition, Azerbaijan's position in the SGC puts it in a favorable power relationship with countries in the Caucasus and Europe. The SGC gives Azerbaijan a new source of gas export revenues while helping Europe diversify its gas supply routes and improve gas security.

Another notable dimension is that of the role of the Azerbaijani State in this project. The representation of the Azerbaijani State in the SOCAR company is essential for the economic and political security of the country. The State is directly involved in the process of forming partnerships for the exploitation and transit of oil and gas. Indeed, SOCAR holds 51% of the capital of TANAP, the pipeline crossing Turkey. SOCAR is the head of the development strategy of the gas and oil distribution network in the Caucasus, Turkey and Southern Europe.

This logic follows that of the "contract of the century"¹⁴, which puts forward the strongly intertwined trajectory between the national interest and the interest of the state corporation itself. Indeed, we can note that six out of the world's top 10 oil and gas companies are state-owned.¹⁵ In the end, the State seems strengthened by this energy route, as the national interests are made to coincide with the economic interests of the managing companies. In the 1990s, the strategy formulated by Azerbaijan's president Aliyev was to turn Azerbaijan into an energy self-sufficient country and become a strategically important gas supplier for neighboring countries and for the whole of Europe, as well as an important transit country for Central Asian natural resources¹⁶. The Southern Gas Corridor and recent EU-Azerbaijan negotiations on gas trade are an opportunity for Azerbaijan to develop ties with the EU and diversify its relations.

1.2. Georgia as a transit country in the SCP corridor

Georgia has a very favorable geographic position as a transit country along the East-West axis, due to its proximity to the Black Sea, the Caspian Sea and Central Asia. Georgia has been considered as a transit route alternative to Russia, by the US and the European Union. Georgia appears to have quite a unique position as a transit country at the crossroads of North-South gas transports (mainly for gas coming from Russia to Armenia) and East-West flows, through the SCP. Georgia's pro-western orientation and political independence from Russia makes the current and future project possible. Through TANAP and TAP, Georgia is now a transit country contributing to Europe's energy security. The new infrastructure strengthens ties with EU and NATO members such as Italy, Greece and Bulgaria. This is a real asset for Georgian foreign policy and a strategic advantage.

Demand of natural gas in Georgia is of about 2.2 bcm on average in the last years with slight occasional deviations. It is from the SCP that Georgia gets natural gas in exchange for the transit of natural gas from Azerbaijan to Turkey, as well as optional additional volumes according to the agreement made between the government of Georgia and the parties of the South Caucasus Pipeline project. In accordance with these agreements, Georgia has a right to purchase up to 5% of transit gas at preferential price. This contract is valid until 2068.

According to Energy Balance of Georgia developed by the Geostat, the share of natural gas in the total consumption of energy equaled to 36.4% in 2019¹⁷. As a result, 94%¹⁸ of imported gas is supplied from Azerbaijan, which does nonetheless make Georgia highly dependent on a single source.

Energy seems to be the most important form of cooperation and driver of policies in the Caucasus region. Indeed, the South Caucasus region is facing many challenges, which might hinder such energy-related international projects. The conflict in Nagorno Karabagh, between

Armenia and Azerbaijan fragilizes peace and stability in the region. Armenia is not expected to require any Azerbaijani gas in the near future, as Armenia imports gas from Russia, flowing through Georgia, and imports a minimal quantity from Iran, under a gas-for-electricity swap deal. In addition, the consequences of the 2008 Russo-Georgian war weaken Georgia and pose some security issues. In the end, energy cooperation can strengthen the region through common interests and proximity to Europe, in alignment with Azerbaijan's independence and economic stability and Georgia's pro-Western aspirations.

2. The Trans-Anatolian Pipeline (TANAP)

The Trans-Anatolian Natural Gas Pipeline (TANAP) is the central part of the Southern Gas Corridor pipeline network, being 1 814-kilometers long, linking Erzurum in the East to Eskisehir in the West. The SOCAR operated pipeline was inaugurated in 2018 and has a current capacity of 16 bcm of gas per year. Turkey receives 6 bcm of gas from Azerbaijan and transits about 10 bcm further to Europe.

TANAP reinforces Turkey's role as a regional energy hub and a central connector between resources in the Caucasus, Middle East, Central Asia and the market in Europe. Turkey and Azerbaijan have relationships based on deep historical roots and the current economic relationship between the two countries provide important opportunities for both countries, through Azerbaijan's energy potential and Turkey's geo-strategic position. TANAP is exploited by Azerbaijani SOCAR. The shareholders are Azerbaijani SOCAR at 51%, Turkish pipeline operator BOTAS at 30%, BP at 12% and SOCAR Turkey at 7%¹⁹. Construction of the pipeline is estimated at USD 11 billion.

In addition, TANAP helps lessen Turkey's previous dependence on Russian and Iranian gas as well as being an excellent opportunity for Turkey to revive its diplomatic and commercial relationship with Europe. The tensions between the EU and Turkey have not affected commercial relations regarding gas projects and trade currently taking place. In the end, the EU placed high importance on the transit of gas from the Caspian Sea through Turkey, as an alternative to a Russian route. Therefore, the influence of TANAP is essential on chances of realizing other pipelines extending the pipeline network reaching Europe.

3. The Trans-Adriatic Pipeline (TAP)

On November 21, 2018, TANAP and the TAP have been joined along the shores of the Maritsa River on the Turkish-Greek border. Operational since 2020, TAP is the European section of the SGC, with gas flowing from Greece to Italy, passing through Albania. The project was first proposed in 2003 by a Swiss group. The strategic importance of TAP can be

understood with regards to the abandoned competing projects of pipelines linked with TANAP, namely Nabucco (EU project) and South Stream (Russian project).

Nabucco was a project for a pipeline, from Erzurum (Turkey) to Austria, passing through Bulgaria, Romania and Hungary, which emerged shortly after the announcement of the construction of TANAP. The goal of this EU and US supported project was to lessen dependence on Russian energy. Nabucco was brilliant politically but made little economic sense. The value of Nabucco was that it was supposed to run through many countries, which would have been excellent for each of the transit states' energy security. However, commercially, discussing conditions and tariffs in each of these countries turned investors away. The fact that the pipeline would end in a small consumer country instead of a big consumer country also compromised the project. These aspects shed light on the political and economic requirements for pipeline projects.

On the other hand, the main competition for Nabucco was the Russian lead South Stream gas pipeline project. This pipeline was supposed to transport gas from Russia, under the Black Sea to Bulgaria, then to Romania, Hungary and Austria. The project would have allowed Gazprom to bypass Ukraine as a transit country. The project was cancelled by Russia in December 2014 due to European sanctions on Russia following the 2014 Russian annexation of Crimea. The TurkStream project, linking Russia to Turkey through the Black Sea, and further to the Balkans was proposed following the end of South Stream. Gas flows through this pipeline began in 2020, supplying Turkey and Europe through Bulgaria.

The capacity of TAP is of 10 bcm of natural gas per year, of which about 8 bcm are delivered to Italy, 1 bcm to Greece, and 1 bcm to Bulgaria, through the Kula-Sidirokastro pipeline between Greece and Bulgaria. These imports of gas cover a quarter of annual demand in Greece and a third of the demand in Bulgaria. Albania does not take any gas from TAP in the first phase of the project.

Overall, TAP, as a source of diversification, enables these countries to negotiate better contracts with Gazprom, on which they are very dependent. For instance, at the moment, the Southern Gas Corridor is not the centerpiece of Italy's energy diplomacy, given ENI's (Italy's major energy company) long-standing partnerships with Gazprom and Rosneft and given Italy's consumption of 74 bcm every year, but it surely carries some diplomatic weight, which can only expand in the future. In a more significant way, Bulgaria depends upon Russia for 2.3 bcm (80%) of its gas imports but signed a long-term agreement with Azerbaijan for 1 bcm of direct gas deliveries, showcasing the strategic energy policy importance of TAP, without it necessarily being the major source of natural gas. Indeed, on Tuesday, April 26th, the Russian gas giant Gazprom announced it would stop delivering gas to Poland and Bulgaria after the two countries refused to pay gas deliveries in rubles, as the company had asked²⁰, a point which again strengthens the need for Bulgaria and other Eastern and Southern European countries to find alternatives to Russian gas.

In the near future, we can expect the Balkan countries to connect to TAP through a local interconnector network which will enable these highly dependent countries to reduce their gas imports from Russia and simultaneously give them options to negotiate better prices with Gazprom.

The TAP has been strongly supported by European institutions and seen as a "Project of Common Interest" to strengthen energy security and diversify gas supplies for European markets. Support for extension of the pipeline has been already demonstrated a number of

times. The Western Balkan countries hope to be importers of Azerbaijani gas if the Southern Gas Corridor's throughput capacity is scaled up to 20 bcm. In this case, feasibility of the project for the Ionian Adriatic Pipeline (IAP) can only increase. The IAP would be connected with the TAP and run from Albania through Montenegro and Bosnia and Herzegovina to Croatia. Higher reliance on natural gas in these countries would end several energy-related issues and dependence upon coal and Russian gas.²¹

Competing and complementary EU-backed projects worth noting are White Stream and AGRI. White Stream is also known as the Georgia–Ukraine–EU gas pipeline is a pipeline project, which has only been proposed, to transport natural gas from the Caspian, through Georgia to Romania and Ukraine, through the black sea and with further supplies to Central Europe. Another similar pipeline project, also considered a “proposed” project only is the Azerbaijan-Georgia-Romania Interconnector (AGRI), also known as the Azerbaijan-Georgia-Romania-Hungary Interconnector.

II. Southern Gas Corridor prospects for enlargement: Can the Southern Gas Corridor change the energy map of Europe?

In July 2022, European Commission President Ursula von der Leyen and Commissioner for Energy Kadri Simson met in Baku with President Ilham Aliyev and Azeri Energy Minister Parviz Shahbazov to strengthen the existing cooperation between the EU and Azerbaijan in the field of energy. The two Presidents signed a new Memorandum of Understanding on a Strategic Partnership in the Field of Energy. Under this memorandum, it has been agreed that the capacity of the Southern Gas Corridor will be doubled to deliver at least 20 billion cubic meters of gas to the EU annually by 2027. In the meantime, Azerbaijan is already increasing deliveries of gas to the EU, increasing from 8.1 bcm in 2021 to an expected 12 bcm in 2022²².

Luca Schieppati, Managing Director of TAP, announced that “TAP is ready to expand its capacity one year in advance if needed to meet market demand”²³, following Russia’s announcement that it is prepared to divert gas supplies from Europe if punitive sanctions are imposed on its economy. The current crisis is improving the chances of investment in the doubling of TAP’s capacity and the overall expansion of the SGC. However, Russian gas exports to Europe totaled 158.5 bcm in 2020, while 8-10 bcm of gas currently reach Europe under the SGC. **To what extent can Europe rely on gas from the Shah Deniz field in the short and long term given the infrastructures presently in place?**

P. Shahbazov, Azerbaijan's Energy Minister, mentioned that Azerbaijan has enough reserves to increase TANAP from 16 bcm to 31 bcm and to double the TAP's 10 billion cubic meters²⁴. This statement has been confirmed in other media: Suleymanov, Azerbaijan’s ambassador to the UK, emphasized in an interview with Bloomberg²⁵, the potential for expanding exports to Europe through future investment, in expanding both production and pipeline capacity. All involved parties seem to be in favor of such investments but those can only deliver results in the long term. Political support for the SGC have kept growing over the last two decades and even more recently, but commercial feasibility due to resources and infrastructures remains uncertain.

1. Azerbaijan’s and Georgia’s increased need for gas a potential break to the SGC’s ambitions

Even then, would Azerbaijan’s gas reserves be enough to be a significant game changer in the European market? How many bcm of gas can Europe hope to receive from Azerbaijan in the near future?

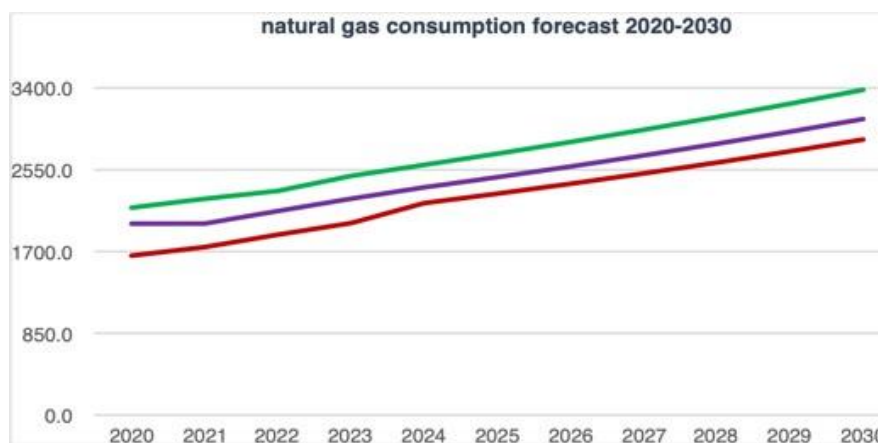
Given the numbers, it seems that Azerbaijan’s current gas production and the capacity of the pipelines are not enough to supply Europe in a significant way. Despite projects and enthusiasm for the expansion of the SGC to diversify the EU’s gas supply, it seems that these projects cannot offer prospects for Western, Central and Eastern European markets beyond South European countries like Italy, Greece and the Balkans²⁶. SGC projects for expansion will indeed bring leverage, for all countries concerned, to negotiate better deals with Russian companies, but still leaving Russian gas to be the dominant exporter in the region.

For the SGC to be a compelling player for the European market, Azerbaijan would need to commit a sufficient volume of gas to Europe, despite the economic logic of diverting gas to Turkey and Georgia first. An element going in favor of the argument that there will not be enough Azerbaijani gas to significantly supply Europe in the near future, given gas reserves and current infrastructure

in place, is the growing local gas demand in Azerbaijani and Georgian markets. According to a paper published by the Oxford Institute for Energy Studies²⁷, we can expect Azerbaijan’s gas consumption to rise from 12 bcm/year to 14 bcm/year by the end of the 2020s, due to a rising population and increasing need of gas as a main source of energy (natural gas representing 69% of Azerbaijan’s total primary energy consumption in 2020)²⁸. Indeed, this increasing domestic demand has required Azerbaijan to occasionally import small volumes of gas since 2015, first from Russia, and then from Turkmenistan, through swaps with Iran. We can therefore imagine that Azerbaijan’s priority will be to cease imports, and that both its domestic consumption and exports to Georgia will rise gradually through the 2020s.

In addition to the demand for Azerbaijan’s gas in its own market, Georgia is highly dependent on Azerbaijani gas and this demand can only be expected to grow. Since the SCP started being operational in 2006 and since the 2008 Russo-Georgian war, for political and strategic reasons, Georgia has aimed to reduce its gas imports from Russia and increase imports from Azerbaijan. Natural gas is the most important fuel in Georgia’s energy mix (45.4%), followed by oil (27%), renewables (20.4%) and coal (4.7%)²⁹. This tendency and dependence on gas is expected to increase with increasing energy needs. According to the forecasts explained in the SoS statement published on Economy Ge³⁰, natural gas consumption in Georgia is expected to grow in the following manner, making Azerbaijani gas production all the more vital first on a regional level:

Graph 1.



optimistic scenario, baseline scenario, pessimistic scenario (mcm/y)

Consumption forecast prepared by the Georgian Gas Transportation Company in cooperation with the Georgian Oil and Gas Corporation as a part of the training on Ten Year Network Development³¹

Because of the substantial rise in domestic energy demand, the Georgian government is exploring different ways to diversify natural gas sources. Crucial to its energy security, Georgia is developing underground gas storage to provide seasonal changes of supply and demand as well as compensate for possible supply interruptions.

According to the Oxford Institute for Energy Studies report³², “in 2025 and 2030, the estimates show that – if the assumptions about the Azerbaijani and Georgian markets are correct – then, after the quantities specified in the Shah Deniz II contracts are delivered, there would be in

the very best possible case 12.6 bcm of gas by 2025, and 21.9 bcm by 2030, for other deliveries in Turkey and Europe.” Another Oxford Energy report pays attention to political issues between Europe and Turkey which could impact the development of the pipeline network and would bring the numbers to 15 bcm/year of extra output to be envisaged, but only by 2030³³.

2. Investment in Azerbaijan’s unexploited gas reserves and investment in infrastructures

As shown previously, there are doubts as to whether Azerbaijan has enough gas to continue exporting large quantities in the long term. What gas field extraction projects are currently under development and is it possible to count on them for further Azerbaijani exports to Europe? What gas output can be expected in the future?

There are a number of fields that could contribute to Azerbaijan’s gas balance in this decade and several projects are currently considered or under development. Namely, the Absheron project seems to be the most promising and developed project. The Absheron gas field is an offshore natural gas field in the Caspian Sea, located 25 kilometers northeast of the Shah Deniz Field. It is being developed by the Joint Operating Company of Absheron Petroleum (JOCAP), a joint project between SOCAR (50%) and French TOTAL (50%). The field is scheduled to start production soon. However, it will start production at only 1.5 bcm/year, most of which will be allocated to meet Azerbaijan's own growing gas demand. Therefore, massive long-term investments need to be made in order to consider importing an increased significant amount of Azerbaijani gas through the SGC, which will take a long time. Indeed, plans exist to raise the production of this field to a second stage, raising the production to 5 bcm/year but this requires considerable investment, and no final investment decision has yet been made.

Other fields are at various stages of exploration and development and have offered quite promising discoveries. The Shafag-Asiman field is located in the Caspian Sea, 125km southeast of Baku. It is explored under a BP-SOCAR production sharing agreement, in an equal share. The well drilling completed in 2021 encountered gas reserves and data analysis of the field’s capacities is still ongoing.³⁴ Another promising prospect is the fields explored by a SOCAR-Equinor deal (Equinor is a Norwegian company). The fields analyzed under this consortium are the Karabagh and Dan Ulduzu-Ashrafi-Aypara fields³⁵. The Ashrafi-Dan Ulduzu-Aypara area is located 50 km east of Baku and 14 km east of the coastline of the Absheron Peninsula. Preliminary results of interpretation demonstrated that oil and gas reserves in these prospects are higher than previously expected.³⁶

In the end, Azerbaijan’s contribution to European gas demands can be important but is insufficient considering the real needs of the EU. This ranks Azerbaijan as a second-rank partner in the EU’s strategy of diversification. According to a European Parliament report published in March 2020³⁷, Azerbaijan can be expected to fill only 3% of global energy imports of the EU. However, as mentioned previously, Azerbaijan’s contribution can be important for Eastern and Southern Europe as a leverage for these countries to negotiate better deals with other source countries, namely Russia. Prospects of building new connectors to Southern and Eastern Europe countries, North Macedonia, Serbia and Hungary in particular, seems nonetheless to depend on prospects of enlargement of the SCP for these investments to make economic sense. Indeed, there are two points to consider. First, from a political point of view, it is more advantageous to have many pipelines. Secondly, from an economic point of view however, it is essential that pipelines are full, rather than numerous.

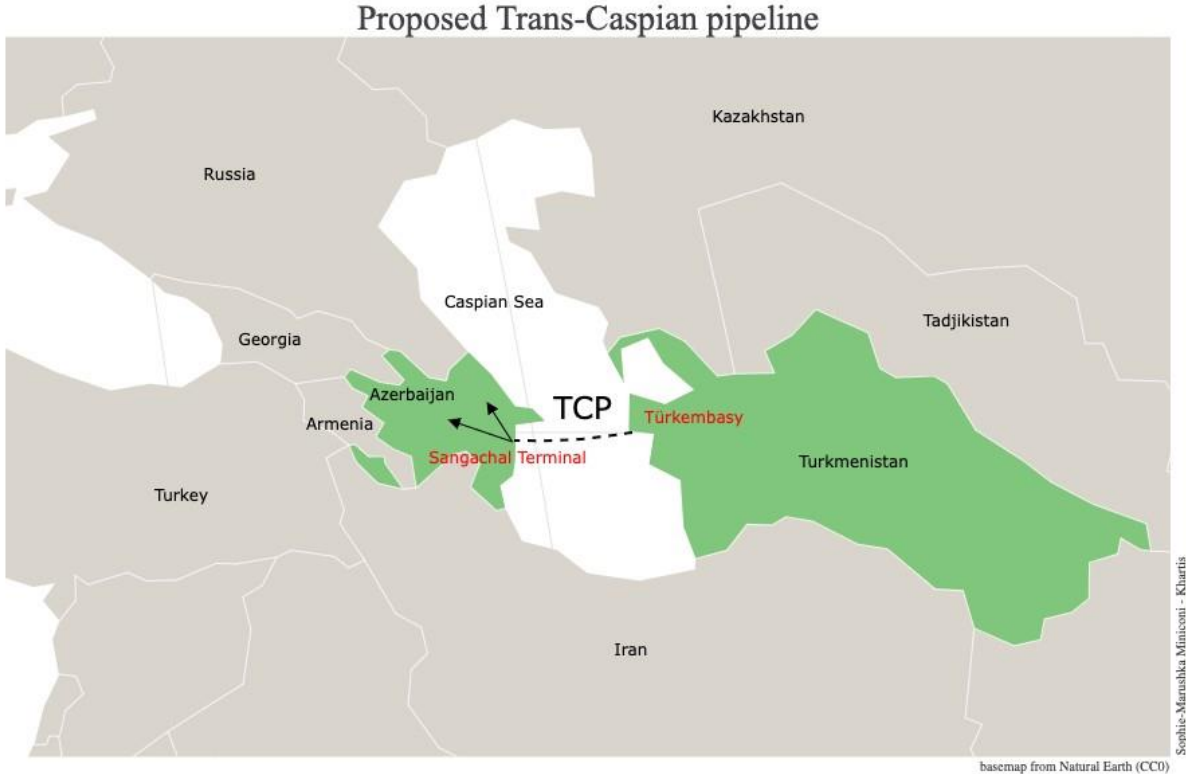
In addition, during the July 2022 meeting between the European Commission and President Aliyev, President Ursula von der Leyen underlined Azerbaijan’s potential for renewable energy, in the form of offshore wind, and therefore green hydrogen production. Indeed, Azerbaijan does have a potential for renewable energies and is planning on increasing the share of renewables in its energy mix. These new developments might further contribute to Azerbaijan’s energy strategy abroad.

3. A promising alternative: the Trans-Caspian Pipeline (TCP)

Azerbaijan has several gas fields in the Caspian, either currently under development or awaiting the necessary investment; while neighboring Turkmenistan boasts to have the fourth-largest gas reserves in the world at 19.5 trillion cubic meters. These could technically easily be piped across the Caspian to Azerbaijan and on to Turkey and Europe. Turkmenistan's location in Central Asia has made it difficult to export gas to European markets, being forced instead to periodically sell gas cheaply to Russia and Iran. Bringing gas from Turkmenistan over to Europe would require enormous investment, regarding the country's under-developed gas fields, and construction of transit pipelines. Nonetheless, it seems that time has come to consider these developments, both thanks to favorable strategic and economic prospects and thanks to a new favorable political situation between Azerbaijan and Turkmenistan.

The Trans-Caspian Gas Pipeline (TCP) is a proposed pipeline which would transport gas from Turkmenistan to Azerbaijan across the Caspian Sea via an undersea pipeline. It is also known as the South Caucasus Pipeline Future Expansion (SCPFX). The pipeline would start near Balkanabat in Turkmenistan, run to Belek and Turkmenbashi on the western shore of Turkmenistan, and transport gas through an undersea pipeline to Sangachal Terminal on the coast of Azerbaijan.

Map 4.



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The Trans-Caspian pipeline has been discussed since 1996 but has faced many political and economic obstacles until the most recent years. From geopolitical and strategic points of view, both Russia and Iran have been historically opposed to such a pipeline project, which would mean the entry of a major competitor into European markets. Indeed, Russia's energy policy consists in limiting the development of routes for natural gas imports from Central Asia to Europe, since it would weaken Russia's importance in the European market³⁸. However, some news in recent years indicate a revived potential for the TCP, through regional agreements and Europe's and the US's support. Indeed, the US position concerning energy in the region is that Russia should not have the monopoly on the flows of Caspian natural gas resources. The US tends to support projects developed by American companies or projects from countries friendly to the US. In addition, it is in the US strategy that no pipeline should pass through Iran.³⁹

The legal framework around the Caspian Sea territory between Azerbaijan and Turkmenistan had been in question for decades after the dissolution of the Soviet Union, until an agreement has finally been found with the 2018 Convention on the legal status of the Caspian Sea, settling disputes around the division of the sea between the five bordering countries (Russia, Kazakhstan, Turkmenistan, Iran and Azerbaijan), and finally allowing co-operation between Azerbaijan and Turkmenistan. However, the 2018 Convention on the Legal Status of the Caspian Sea gives its members the right to oppose any new pipeline on environmental grounds. Given the fact that the largest part of the energy resources ended up in the waters belonging to Kazakhstan, Turkmenistan and Azerbaijan, Russia and Iran oppose the implementation of projects independent from them in the region, by using the leverage of environmental considerations of a Trans-Caspian pipeline.

In addition, in early 2021, Azerbaijan and Turkmenistan have signed a landmark agreement to jointly develop a Caspian gas field which had been long-disputed. The field has been renamed in 2021 for "Dostlug/Dostluk" (previously "Kepez" or "Sardar"). The agreement is likely to attract foreign investment for exploratory drilling and development in the Dostluk field.⁴⁰ Indeed, Turkey has already announced it welcomes the agreement between Azerbaijan and Turkmenistan for the joint exploration and development of this field. As published on the Anadolu Agency website, Turkish Energy and Natural Resources Minister Fatih Donmez,⁴¹ "We wish that this agreement will further strengthen the friendship between the two countries. We also wish this agreement will pave the way for projects to deliver Turkmenistan natural gas to Turkey and to the rest of Europe. Turkey is ready to provide all political, technical, and economic support to both Turkmenistan and Azerbaijan".

One project, going in the direction of a successful TCP, worth noting is a project brought forward by a US-based company Trans Caspian Resources (TCR), co-headed by a former US ambassador to Turkmenistan, Allan Mustard. The TCR's plan is to build a 77km pipeline from Turkmenistan's offshore Magtymguly oil field, across the middle of the Caspian to Azerbaijan's BP-operated Azerbaijani-Chirag-Gunashli (ACG) oil field. The pipeline would be capable of carrying between 10 and 12 bcm of gas per year. The interesting idea behind the project is the following: it would transit only "associated gas" from the Turkmenistan field. "Associated gas" means gas that is emitted as a result of oil drilling; and this gas is currently "flared" (burned off), a practice that wastes the gas and contributes to Greenhouse gas emissions (GHE). This project can serve as a first stage to show how gas from Turkmenistan can be delivered westward, in an economically viable way, and Azerbaijan has already showed support for the project.

The market exists. Countries in the region, in Turkey and in Europe need more gas. The natural gas resources in Turkmenistan give greater value and opportunity to the Eastern parts of the SGC. Azerbaijan and Turkmenistan are communicating and cooperating in unprecedented

ways to develop Caspian energy resources, which might indicate it is the right time to consider the expansion of the Southern Gas Corridor seriously. However, a serious competitor in this initiative is China, who is very active in terms of energy in the region of Central Asia, which increases Turkmenistan's dependence on China.

Conclusion

The Southern Gas Corridor is a vast energy project providing Europe was a non-negligible part of its annual imports and enhancing the energy security of every country on its path from the Caspian Sea to Italy. Azerbaijan gains much from the Southern Gas Corridor as a country whose economy is very dependent on hydrocarbon exports. Cooperation with Azerbaijan makes Georgia a lot less dependent on Russian gas, which is crucial for Georgia's independence given geopolitical tensions between the two countries. In addition, diversification of gas sources helps Georgia fulfill the market obligations of the Energy Community which is to bring Georgian legislation in line with European legislation.

Turkey and Southern Europe's energy security concerns also greatly benefit from the SGC, even though the "Azerbaijani solution" is not a miracle solution. Indeed, it allows these countries to negotiate better deals with other exporters and slightly lessen their dependence on Russia. Further investments in the Southern Gas Corridor, through new generation infrastructures, new interconnectors in Southern Europe and a possible extension of the pipeline network over the Caspian Sea might greatly impact the energy geopolitical game and push giants like Russia out of their negotiating comfort zone. In that perspective, the Southern Gas Corridor is of very significant importance for the different actors and beneficiaries, as well as for countries impacted by the pipeline network without it crossing their lands.

However, for a successful EU energy policy to be enforced, it is important for leaders not to focus only on the role of the South Caucasus as a region for the source and transit of gas but they should adopt a broader long-term approach of developing democracy, good governance, fair market rules and conflict management. In addition, we can note that, in the area of energy policy, there is no real agreement among the EU Member States on priorities and common projects and strategies. The disagreements between Member States concerning the nature of the sanctions to be imposed on Russia underline the fact that energy policy is still very much determined on a national level, with differing interests. Another significant example of this tendency is the number of pipeline projects that were proposed in the last two decades that failed either because of geopolitical tensions or economic nonsense. Furthermore, we can highlight a tendency for States to promote the projects in which companies from their own states are favored.

Finally, the global initiatives for clean energy will inevitably affect gas demand in the medium term. Some of the world's largest gas importers (the EU, Japan, South Korea) have pledged to reduce their greenhouse gas emissions to zero by 2050 and by 2060 for China, which might hinder gas export opportunities. Indeed, officials have called for an accelerated energy transition in the EU, through energy savings and a transition to renewable sources of energy, given its current energetic difficulties related to Russia, its imperialistic policies and strong will to use energy as a political lever to control its importers. Changes in energy policies and types of energies consumed will change strategies of energy security for countries dependent on gas export and transit, opposite to the present dynamics.

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