

## **CAN ROMANIA BECOME A REGIONAL NATURAL GAS HUB? A COMPARATIVE STRATEGIC VIEW**

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### **ABSTRACT:**

Taking into consideration Romania's geographical position, the ambition of becoming a regional natural gas hub makes perfect sense. A regional hub brings multiple advantages like revenues from managing the natural gas transit, geopolitical leverage or more sources of supply for internal use. But developing a regional natural gas hub is not an easy job, for this sort of projects implies time and investment, while at the same time managing the regional competition of other contenders. This paper stresses the advantages and obligations attached to Romania's ambition of becoming a regional natural gas hub and it analyzes other neighbor countries' plans.

**JEL Classification:** Q40, Q41, Q48

### **1. INTRODUCTION:**

At the moment, the European Union is heavily dependent on energy imports, most of them from Russia. This is actually one of the main reasons the Energy Union project was developed. Nowadays, most of the gas-related projects (except Nord Stream 2) aim to diminish the dependence on Russian natural gas by diversifying the supply sources.

According to Eurostat, an analysis regarding the overall energy import dependency shows that for 2014 Romania places third (after Estonia – 8.9% and Denmark – 12.8%) in a top of the least dependent countries in the EU. Moreover, according to the same organization, Romania is the least dependent EU country on natural gas imports (5%) (except Denmark and Netherlands, which were net exporters).<sup>44</sup>

Driven by these numbers and, of course, by the fact that being a regional energy hub (be it electrical or natural gas) brings a lot of benefits to any owner – such as geopolitical leverage, significant revenues mostly due to transport management and the increase in energy security and energy independency – Romania is a strong candidate when it comes to choosing the perfect spot for a regional natural gas hub in South-Eastern Europe.

The same benefits are targeted by our neighboring countries, Greece and Bulgaria being hard to beat candidates. Also, a country that has a lot of arguments in favor of its candidacy is Turkey, which also needn't comply with EU energy policy, explicitly with the Third Energy Package (unbundling and third party access).

Basically, a natural gas hub is a point of converging pipelines, which has a large storage capacity and permits redirecting natural gas.

### **2. REGIONAL CONTEXT**

At this moment, in the South-Eastern Europe are being developed a few important natural gas projects (some of them are functional, while others are just plans or in construction phases).

The Southern Gas Corridor

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<sup>44</sup> [http://europa.eu/rapid/press-release\\_MEMO-16-308\\_en.htm](http://europa.eu/rapid/press-release_MEMO-16-308_en.htm)

The most important one, which is actually a group of smaller projects, is the Southern Gas Corridor, meant to bring natural gas from the Caspian Sea to Europe. The project comprises of the South Caucasus Pipeline (SCP), the Trans Anatolian Pipeline (TANAP) and the Trans Adriatic Pipeline (TAP), which totals over 3500 km and crosses seven countries. The total anticipated investment revolves around US\$45 billion.<sup>45</sup>



**Figure 2 - Southern Gas Corridor<sup>46</sup>**

#### The South Caucasus Pipeline (SCP)

With a length of 691 km, SCP was planned and developed in order to bring natural gas from Azerbaijan (from the natural gas field Shah Deniz) to Georgia and Turkey. The pipeline has been functional since the end of 2006, for the Azerbaijan-Georgia route, and beginning July 2007, the link to Turkey was operational.<sup>47</sup>

#### The Trans Anatolian Pipeline (TANAP)

The pipeline is design to start from Azerbaijan's terminal of Sangachal and will lead to the Turkey-Greece border. The construction started in March 2015 and is expected to be fully functional by the end of 2018. The pipeline will be able to transport about 16 billion cubic meters of natural gas per year.<sup>48</sup>

#### Trans Adriatic Pipeline (TAP)

The TAP project aims to bring natural gas from Greece (where TANAP ends), passing Albania and the Adriatic Sea, to Italy. The length of the pipeline is 870 km, with an estimated discharge level of 10-20 billion cubic meters per year and the construction is scheduled to be finished in 2018.<sup>49</sup>

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<sup>45</sup> <http://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor>

<sup>46</sup> <http://www.tap-ag.com/the-pipeline/the-big-picture/southern-gas-corridor>

<sup>47</sup> [http://www.bp.com/en\\_az/caspian/operationsprojects/pipelines/SCP.html](http://www.bp.com/en_az/caspian/operationsprojects/pipelines/SCP.html)

<sup>48</sup> <http://www.euractiv.com/section/energy/news/turkey-and-azerbaijan-begin-construction-of-tanap-pipeline/>

<sup>49</sup> [https://en.wikipedia.org/wiki/Trans\\_Adriatic\\_Pipeline](https://en.wikipedia.org/wiki/Trans_Adriatic_Pipeline)

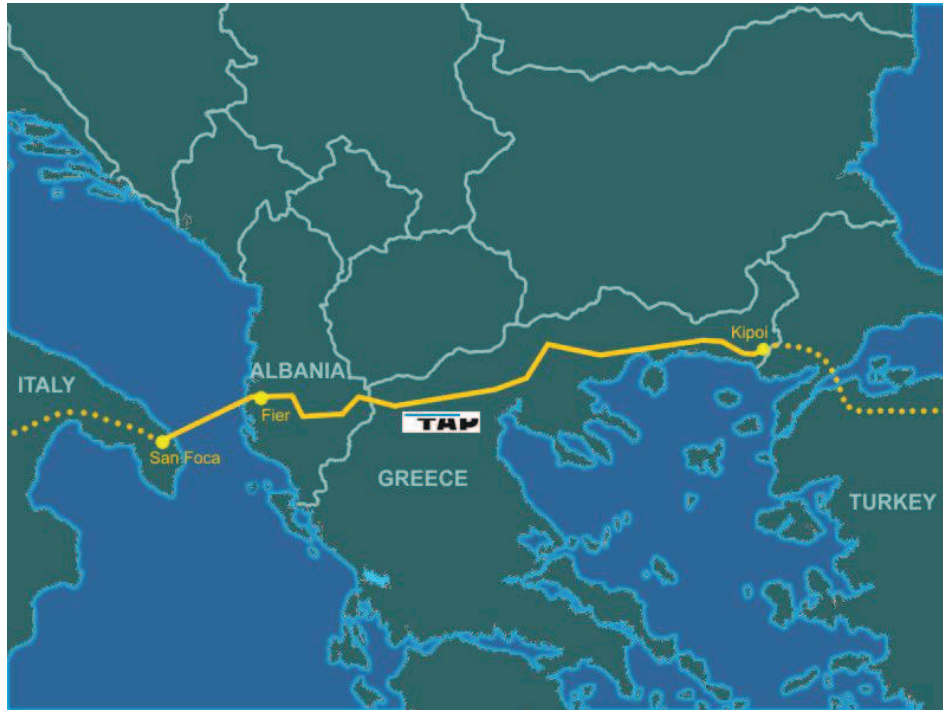


Figure 3 The Trans Adriatic Gas Pipeline<sup>50</sup>

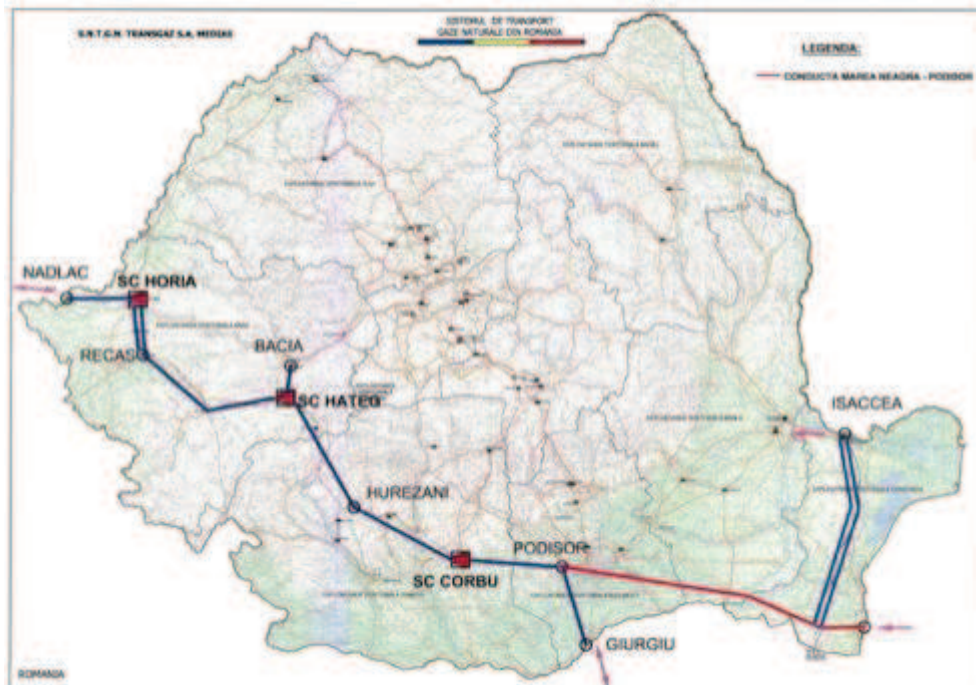
#### BRUA (Bulgaria-Romania-Hungary-Austria) Pipeline

BRUA is the only project, among those that are actually being developed at the moment, in which Romania is participating. The BRUA corridor's purpose is to bring natural gas from Bulgaria to Central Europe, via Romania, Bulgaria and Austria.

The pipeline will consist of a system with a length of 500 km – only on Romanian territory – with the possibility of building an extension of 300 km, in order to access the Black Sea area. The pipeline will be able to transport approximately 1.5 billion cubic meters per year between Romania and Bulgaria and 4.4 billion cubic meters between Romania and Hungary, while the interconnectors will have a reverse-flow technology. The BRUA corridor is scheduled to start operating in 2019, after a total investment of 560 million Euros.<sup>51</sup>

<sup>50</sup> [https://en.wikipedia.org/wiki/Trans\\_Adriatic\\_Pipeline](https://en.wikipedia.org/wiki/Trans_Adriatic_Pipeline)

<sup>51</sup> <http://www.nineoclock.ro/brua-new-natural-gas-pipeline-appears-on-south-east-europe%E2%80%99s-map/>



**Figure 4 The BRUA Corridor<sup>52</sup>**

The project was included in the European Union' Project of Common Interests and Romania requested, by the Romania Gas Operator, Transgaz, funding for the domestic section of the pipeline. As a result, at the end of January 2016, the European Commission granted approximately 180 million Euros for the Romanian part of the BRUA project.<sup>53</sup>

Other important projects in the region were the Turkish Stream (a pipeline meant to bring natural gas from Russia to Turkey, across the Black Sea), abandoned in December 2015, and Nabucco, which is not a priority at the moment.<sup>54</sup>

### **3. ROMANIA AS A NATURAL GAS REGIONAL HUB**

When it comes to defining a good candidate for a regional natural gas hub, one must take into consideration some key requirements, such as:

#### Storage capacity

Romania's current storage capacity for natural gas revolves around 3 billion operational cubic meters per cycle, split between 7 storage facilities across the country. Multiple projects are being developed to increase storage efficiency and to increase the national storage capacity.<sup>55</sup>

If we analyze it, from a regional perspective, Romania has a huge advantage when

<sup>52</sup> <http://www.naturalgaseurope.com/interconnecting-central-and-south-eastern-europe-a-time-of-opportunity-for-romania-27214>

<sup>53</sup> <http://www.thediplomat.ro/articol.php?id=6832>

<sup>54</sup> [https://en.wikipedia.org/wiki/Turkish\\_Stream](https://en.wikipedia.org/wiki/Turkish_Stream)

<sup>55</sup> Ministerul Energie – Analiza stadiului actual al sectorului energetic din Romania (2016)

it comes to natural gas storage. According to Gas Infrastructure Europe's database, Romania places second among the aforementioned candidates<sup>56</sup>:

- Bulgaria has a storage capacity of 500 million cubic meters per cycle (in 4 storage facilities) and is planning to double the Chiren storage station. The expected expansion will give Bulgaria an additional 1.65 billion cubic meters per cycle.<sup>57</sup>
- Greece is planning a storage capacity of 360 million cubic meters per cycle, at South Kavala, facility which is going to be operational in 2020;
- Turkey is operating approximately 4.1 billion cubic meters per cycle, in 2 storage facilities, making it the best candidate, in terms of storage capacity. Moreover, for the next years, Turkey is going to develop almost 1.6 billion cubic meters more storage facilities, which will come in help of the new major projects, like TANAP;

#### Natural gas sources

Romania has an important domestic production of natural gas (approximately 10.8 billion cubic meters, in 2015<sup>58</sup>), while additional reserves were discovered in the Black Sea Coast (which are estimated at more than 100 billion cubic meters). Despite that, these may not be enough when it comes to the number of supply sources.

On the other hand, Turkey is once again, one step ahead, mostly due to geographical reasons, which gives it the possibility of choice (Russia, Azerbaijan or even Iran). At the same time, Greece has also an important advantage, due to the LNG (Liquefied Natural Gas) infrastructure which explains the diversification of natural gas supply sources.

#### Market Liberalization and trading platforms

Every candidate still has regulated prices for natural gas, even if we talk only about one category of customers (like households in Romania). Romania has a liberalized retail market for companies, while the household customers have regulated prices until July 1<sup>st</sup> 2021. A fact that could bring Romania in pole-position regarding liberalization is the actual level of natural gas prices. In the spring of 2016, the Romanian regulator, ANRE stated that it will suggest to the IMF an early gas liberalization process, taking into consideration the low level of the natural gas' prices in the international markets.<sup>59</sup>

A regional hub, be it electrical or for gas, must have a free market, where prices are set only by the supply and demand.

Speaking of free markets, an energy hub must also benefit from trading platforms. Trading platforms for electricity have been developed, more or less, in every country in the region, but for natural gas trading mechanisms are still not available

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<sup>56</sup> <http://www.gie.eu/download/maps/2015/20150507%20-%20GSE%20map%20database%20-%20EXTERNAL%20final.xlsx>

<sup>57</sup> <http://www.naturalgaseurope.com/south-east-european-natural-gas-hubs-28086>

<sup>58</sup> Ministerul Energie – Analiza stadiului actual al sectorului energetic din Romania (2016)

<sup>59</sup> <http://www.energyworldmag.com/10/03/2016/romania-havrilet-anre-we-will-suggest-imf-early-gas-market-liberalization/>

at an important level. The Romanian natural gas market, for instance, lacks the liquidity of the wholesale centralized market, reference prices and a balancing market.<sup>60</sup>

#### 4. CONCLUSIONS

- Romania can be an important candidate for a regional natural gas hub in the South-East of Europe.
- A regional hub means significant revenues from transit management, an important position in terms of geopolitics and of course many supply opportunities for domestic customers.
- Although Romania is not part of the development of the Southern Corridor, a system of pipelines (SCP, TANAP and TAP) which aims to bring natural gas from the Caspian Sea to Eastern Europe (via Greece) and to Central Europe (via Italy), Romania is an important member of the BRUA project – the system developed between Bulgaria, Romania, Hungary and Austria – for which it received important EU funding for its sector of the project (approximately 180 million Euros).
- In terms of natural gas storage, Romania has an important role in the region, placing second (after Turkey) with around 3 billion cubic meters per cycle.
- Romania is the country least dependent on natural gas imports, with only 5% of the consumption being imported. Despite that and the fact that Romania has important production resources – while others have been discovered offshore in the Black Sea region – Romania has some disadvantages in terms of number of sources of supply. Turkey is privileged, due to geographical reasons, being able to choose as natural gas supply between Russia, Iran or Azerbaijan. Moreover, Greece has also a diverse supply system, due to its LNG terminals.
- Regional markets are not fully liberalized and lack operational and high-liquidity trading platforms. Romania liberalization calendar can be accelerated due to the low level of prices of natural gas, an element that can bring the necessity of further developing the available trading mechanisms.
- Although the competition is tough in the region, Romania has some important arguments of becoming a regional natural gas hub or, at least, an important member in the Eastern Europe. Doubled by the over production of electricity, Romania will have an important contribution to the Energy Union, being an energy security pillar in the region.

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<sup>60</sup> Ministerul Energie – Analiza stadiului actual al sectorului energetic din Romania (2016)

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