

# AUSTRIA

## KEY FACTS:

- Natural gas demand dropped by 4% from 2010 to 2017.
- Important transit country especially to Germany, Hungary, Italy
- Due to high storage capacities, Austria is resilient to most gas shortage scenarios
- Domestic production declining imports from Russia increasing
- Connected to many PCI projects despite unnecessary for Austria

## 1. GAS DEMAND

According to EU data:<sup>1</sup>

- Gas represented 35% of Austria’s energy mix in 2016. With the Austrian government notably forecasting that **around 900,000 households might switch away from oil to gas by 2020.**<sup>2</sup>
- Austrian gas demand dropped by 4% between 2010 and 2017.<sup>3</sup>
- Austria consumed 8.55bcm of gas in 2016.

As gas is largely used for heat and power generation, and given Austria’s continental climate, **seasonality of demand is strong**, with consumption being up to three times higher in winter than in summer.

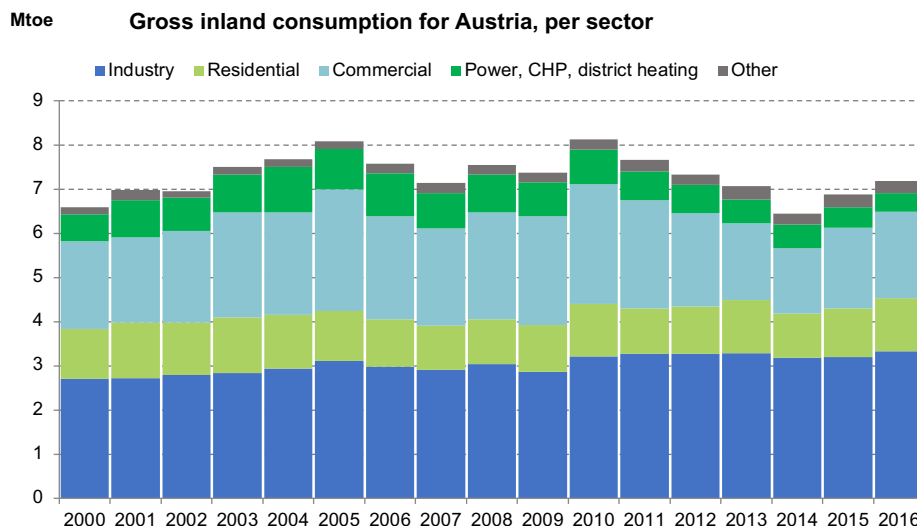
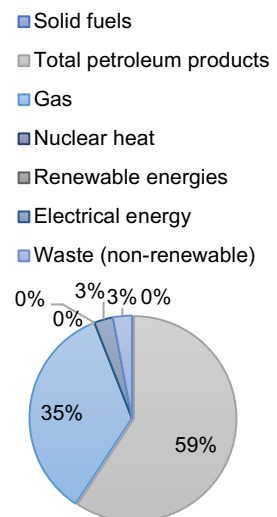


Figure 1: Austria 2016 Energy Mix



## 2. GAS SUPPLY

The domestic production of gas (done by OMV (87%) and RAG (13%)) has been strongly decreasing (by 46% from 2003 – 2016 and a trend towards a continued decline until 2018),<sup>4</sup> but still represented 14% of total Austrian gas needs in 2015.<sup>5</sup>

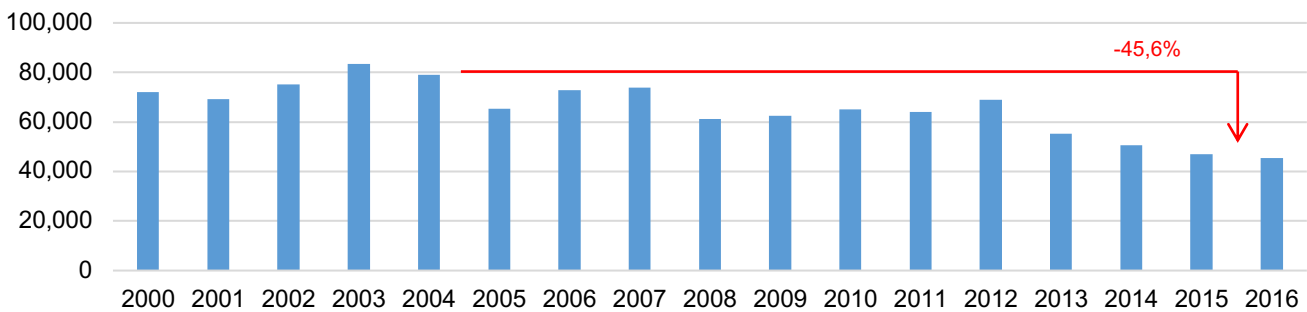
According to industry estimates (the Austrian gas company OMV), **Austria would allegedly hold about 300bcm of recoverable shale gas resources.**<sup>6</sup>

In 2012, a project to drill two wells for shale gas north of Vienna, failed because of public protest and new legislation requiring a lengthy mandatory environmental impact assessment for each well using hydraulic fracturing. Shortly after, OMV announced it would abandon its shale gas plans in the country.<sup>7</sup>

<sup>1</sup> E3G compilation of data extracted from Eurostat  
<sup>2</sup> <http://www.iea.org/publications/freepublications/publication/Austria2014.pdf>  
<sup>3</sup> [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrq\\_cb\\_gas&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrq_cb_gas&lang=en)  
<sup>4</sup> <https://www.wienerborse.at/news/apa-news-detail/?id=839249070>  
<sup>5</sup> <https://www.wienerborse.at/news/apa-news-detail/?id=839249070>  
<sup>6</sup> <http://www.iea.org/publications/freepublications/publication/Austria2014.pdf>  
<sup>7</sup> <http://www.reuters.com/article/2012/09/17/omv-shale-austria-idUSL5E8KHHDG20120917>

Most of Austria's domestic gas needs are therefore imported: **already in 2014 a significant amount of gas imports came from Russia (~70%), with the rest contractually coming from Norway,**<sup>8</sup> and the gas volumes to Austria from Russia rose even higher in the past years.<sup>9</sup> The numbers could be even higher: in terms of physical molecules entering the country, a big share of gas supply is sourced from Russia from a single supplier: Gazprom, and a single supply route: via Ukraine and Slovakia.

Austria - Gas domestic production (in Terajoules)



Austria has several key geographical advantages, such as **its location on a transit route and its storage capacities, which mitigate its exposure to a severe gas disruption.** To date the country has not suffered from any major gas shortage. Also, Austria has taken effective steps to prepare for a gas emergency, notably by enabling the physical reversibility of a large number of its gas pipelines with neighboring countries in 2011.

### 3. GAS INFRASTRUCTURE



Figure 2: Gas Infrastructure of Austria

Austria is an important gas transit country, as it is well-located along gas routes from Russia to Italy and southern Germany.

The total length of the gas pipeline network in Austria is 38.293km, of which 2.876km are transmission pipelines and 35.417km are distribution pipelines. **Austria's gas grid is directly connected to Germany, Italy and Hungary through the Baumgarten hub** where a number of pipelines converge.

In total, the six Austrian transmission pipelines have the capacity to import 2217.8GWh/d of gas, that's **~72.8bcm/y which is almost 9 times more than it consumes** and export 2108GWh/d of gas (~69bcm/y).<sup>10</sup>

According to the Austrian gas regulator E-Control, total gas volumes which transited in 2012 amounted to 43.6bcm; barely more than 50% of Austria's total transit capacity. It is therefore not surprising to know that Austria easily meets the N-1 rule with 178.8%.<sup>11</sup>

Key elements to Austrian security of supply strategy are large stocks held by major gas players, not the government, and **high storage capacity, with a capacity of ~8bcm just slightly below Austria's yearly gas demand**<sup>12</sup>. Austria's high commercial gas storage capacity gives it a significant buffer during potential gas supply shortage.

Yet, despite a level of infrastructure which allows Austria to import much more gas than it needs, at a time when the needed energy transition necessarily means a fast decrease in our reliance on fossil fuels, the country could soon benefit from new gas projects, which received PCI status (see figure3), and which would very likely contribute a new fossil fuel lock-in:

<sup>8</sup> [https://www.iea.org/media/freepublications/security/EnergySupplySecurity2014\\_Austria.pdf](https://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_Austria.pdf)

<sup>9</sup> <https://www.ft.com/content/90ecea12-e0dd-11e8-a6e5-792428919cee>

<sup>10</sup> <http://www.entsoe.eu/maps/transmission-capacity-map> with BCM conversion through Statoil converter website: <http://ngc.statoil.com/>

<sup>11</sup> [https://www.iea.org/media/freepublications/security/EnergySupplySecurity2014\\_Austria.pdf](https://www.iea.org/media/freepublications/security/EnergySupplySecurity2014_Austria.pdf)

<sup>12</sup> <https://www.bmnt.gv.at/energie-bergbau/energie/Zahlen--Daten--Fakten.html>

There are several projects that are applying for, or are already included in the PCI list on Austrian territory, seeking the status of highest priority across the EU. While one of the main reasons behind the need for this list is reducing dependence on Russia, Austria just recently showed that it does not have the same goal. In 2018, Russian Gazprom and Austrian OMV signed an agreement to extend an existing contract for Russian gas supplies to Austria until 2040 and in early 2019 they signed an amendment to increase the contracted supply volumes by another 1bcm.<sup>13</sup> This means that many of the gas projects aiming for PCI statuses, that Austria supports can't be welcomed with the aim of moving away from Russian gas – revealing a certain level of hypocrisy in the gas supply plans of Austria.

### The Bidirectional Austrian-Czech interconnection<sup>14</sup>

This 50km+ pipeline would be the first connection between these two countries and would have the capacity to transmit, both ways, 18mcm of gas (~7bcm/y) daily. However, apart from further densifying the gas grid in the middle of the continent, this project raises many questions: both countries already have significant transmission capacity which greatly exceed their domestic consumption needs and which ensure a smooth and reliable transit of gas for neighboring countries. Austria and the Czech Republic have connections to similar countries and therefore benefit from similar gas suppliers. Adding more connections will therefore likely fail to contribute to diversification. There is also a high risk that it would lock Austria further in a gas dependency and/or that as part of the needed energy transition away from fossil fuels, this investment would soon become stranded.

### The Cluster Croatia – Slovenia – Austria<sup>15</sup>

Austria is part of a series of PCI projects (called 'cluster') also involving Croatia and Slovenia. The objective of this cluster would be to bring new gas sources to the countries in the region, including the Austrian market, and to increase capacity at the relevant cross-border points. This would therefore include the construction of

- (1) an LNG terminal in Croatia (in Krk), with a 2.6-7bcm/y import capacity,<sup>16</sup>
- (2) a number of transmission pipelines in Croatia,<sup>17</sup> Slovenia<sup>18</sup> and Hungary,<sup>19</sup> and
- (3) development of reverse flow capacity so gas can come up to Austria, via Slovenia, notably at the Murfeld cross-border point.<sup>20</sup>



Figure 3: Proposed PCI Projects for Austria

This cluster therefore implies significant investment in many countries, including Austria, yet Austria does not need to further increase its import capacity, which is already at overcapacity.

### The Cluster phased capacity increase on the Bulgaria — Romania — Hungary — Austria bidirectional transmission corridor<sup>21</sup>

Austria is at one extremity of what composes the biggest cluster project of the current PCI list<sup>22</sup> (see figure 5) and which, in a nutshell, aims at connecting Greece, Bulgaria and Romania to the Austrian gas hub.

<sup>13</sup> <https://www.omv.com/en/news/181105-gazprom-and-omv-sign-addendum-to-the-contract-to-increase-gas-supplies-to-austria>

<sup>14</sup> [https://www.net4gas.cz/files/en/projects/n4g\\_pci\\_info\\_leaflet\\_baci\\_en.pdf](https://www.net4gas.cz/files/en/projects/n4g_pci_info_leaflet_baci_en.pdf)

<sup>15</sup> <http://www.plinacro.hr/default.aspx?id=912>

<sup>16</sup> [https://ec.europa.eu/info/sites/info/files/pci\\_gas\\_candidates\\_description.zip](https://ec.europa.eu/info/sites/info/files/pci_gas_candidates_description.zip)

<sup>17</sup> <https://circabc.europa.eu/ui/group/3ba59f7e-2e01-46d0-9683-a72b39b6decf/library/e1fd3867-2971-463e-aec5-2b3c603a0c4f/details>

<sup>18</sup> *ibid.*

<sup>19</sup> *ibid.*

<sup>20</sup> *ibid.*

<sup>21</sup> *ibid.*

<sup>22</sup> [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL\\_2016\\_019\\_R\\_0001&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2016_019_R_0001&from=EN)

The cluster includes the 528km bidirectional pipeline contributing to the connection between Bulgaria, Romania, Hungary and Austria (also known as "RO HUAT/BRUA")<sup>23</sup> with a bidirectional transmission capacity of up to 4.4bcm/y.<sup>24</sup>

A compressor station would be built in Austria as part of this project.<sup>25</sup>

While the project is mainly meant to make Central Europe benefit from newly discovered offshore reserves in the Black Sea, this project is also connected to an even bigger one which aims at developing infrastructure in the Northern ring of the Bulgarian and Romanian gas transmission networks<sup>26</sup> with the purpose to distribute a part of the gas which would arrive in Greece from its future LNG terminal (PCI)<sup>27</sup> or from the Southern Gas Corridor, the mega-pipeline project to import gas from Azerbaijan.<sup>28</sup>



Figure 4: Proposed bidirectional transmission corridor

While it is sometimes presented as a being capable of bringing new gas supply sources to Austria the need for Austria to be associated to these projects is extremely doubtful. Austria is already well secured in terms of gas, and so are the countries to whom this gas could be transmitted to beyond Austria in Western Europe. Austria associates itself *de facto* to the Southern Gas Corridor, a very costly project, heavily supported with EU tax payers' money, but which further extends Europe's reliance on fossil fuels and which involves some serious cases of corruption and human rights violations.<sup>29</sup> Finally, with Gazprom now eyeing up this pipeline project as a way to bring even more Russian gas to Europe,<sup>30</sup> the diversification argument would also be acutely weakened.



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<sup>23</sup> <https://circabc.europa.eu/ui/group/3ba59f7e-2e01-46d0-9683-a72b39b6decf/library/e1fd3867-2971-463e-aec5-2b3c603a0c4f/details>

<sup>24</sup> *Ibid.*

<sup>25</sup> *Ibid.*

<sup>26</sup> *Ibid.*

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

<sup>29</sup> <http://globalmotion.pageflow.io/walkingtheline#37823>

<sup>30</sup> <http://www.naturalgasworld.com/gazprom-eyes-tap-for-russian-gas-35548>