# SYSTEM DEVELOPMENT MAP 2020 / 2021


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The System Development Map 2020 / 2021 presents existing gas infrastructure and capacity information for 2021. Data presented in the capacity matrix were obtained from the ENTSOG Transmission Capacity Map 2021 and ENTSOG Transparency Platform, adapted and approved by gas TSOs on 1 December 2021.

The 2020 / 2021 historical data on gas demand and supply are presented aggregated in the form of charts (using data during summer 2020 and winter 2020/2021 to allow the analysis of gas storage usage) – these data are available in the ENTSOG Summer and Winter Outlook Review Reports.

Information regarding the gas storage fill rate was obtained from GIE AGSI+.

The Country Profiles include demand data that represent actual country demand for the days/periods shown, storage and LNG capacities according to the interconnection to the country's transmission system, and installed gas fired power generation capacity (additional data sources: GSE 2021 Storage Map (including necessary updates), GLE 2019 LNG Map and ENTSO-E Transparency Platform). The gas production data reflects the maximum deliverability achieved. All data provided in the map are for information purposes, should be treated as indicative only, and should not be used for commercial purposes.

polaris — Version : December 2021
WGS 84 / Pseudo-Mercator projection

## KEYS

**Countries**
- ENTSOG Member Countries
- ENTSOG Associated Partner
- ENTSOG Observers
- Other Countries

**Transport by pipeline**
- under 24"
- 24" to 36"
- 36" and over
- project

**Gas Reserve areas**
- gas field
- drilling platform

**Gas storage facilities**
- Acquifer
- Salt cavity - cavern
- Depleted (Gas) field on shore / offshore
- Other type
- Unknown
- Gas storage projects
- multiple storage facilities operated by different SSOs

**Map points**
- Trading Points / Market Areas
- Intra-country or intra balancing zone points
- Cross-border interconnection point within Europe or export point to non-EU country
- Cross-border interconnection point with third country (import)
- LNG Terminals' entry point intro transmission system
- LNG Export Terminal
- Virtual Point
- Small scale LNG liquefaction facilities
- Third country cross-border interconnection point
- Cross-Border Europe *Under construction or Planned*
- Cross-Border third country import/export *Under construction or Planned*
- LNG Import Terminal *Under construction or Planned*
- LNG Export Terminal *Under construction or Planned*
- Small scale LNG liquefaction facilities *Under construction or Planned*

**Data keys**
- NATIONAL PRODUCTION (NP)
- RUSSIA (RU)
- NORWAY (NO)
- ALGERIA (DZ)
- LIBYA (LY)
- CASPIAN REGION (CA)
- UGS (UGS)
- LNG (LNG)

## Import & Transmission Capacity

1 December 2021 (GWh/d)

(Values submitted by TSO from Transparency Platform - the lowest value between the values submitted by cross border TSOs)

**Import Capacities**

| TO \ FROM | CA | DZ | LNG | LY | NO | RU | TR | |
|---|---|---|---|---|---|---|---|---|
| AT | | | | | | | | 0 |
| BA | | | | | | | | 0 |
| BE | | | 477 | | 488 | | | 965 |
| BG | | | | | | 576 | | 576 |
| CH | | | | | | | | 0 |
| CZ | | | | | | | | 0 |
| DE | | | | | 1.247 | 1.351 | | 2.597 |
| DK | | | | | | | | 0 |
| EE | | | | | | 36 | | 36 |
| ES | | 781 | 1.911 | | | | | 2.691 |
| FI | | | | | | 220 | | 220 |
| FR | | | 1.193 | | 570 | | | 1.763 |
| GR | 350 | | 204 | | | | 49 | 603 |
| HR | | | 80 | | | | | 80 |
| HU | | | | | | 762 | | 762 |
| IE | | | | | | | | 0 |
| IT | | 1.138 | 474 | 476 | | | | 2.088 |
| LT | | | 122 | | | 325 | | 447 |
| LU | | | | | | | | 0 |
| LV | | | | | | | | 0 |
| MD | | | | | | | | 0 |
| MK | | | | | | | | 0 |
| NL | | | 385 | | 963 | | | 1.348 |
| PL | | | 158 | | | 1.339 | | 1.497 |
| PT | | | 200 | | | | | 200 |
| RO | | | | | | 1.163 | | 1.163 |
| RS | | | | | | | | 0 |
| RU | | | | | | | | 0 |
| SE | | | | | | | | 0 |
| SI | | | | | | | | 0 |
| SK | | | | | | 2.028 | | 2.028 |
| SM | | | | | | | | 0 |
| TR | | | | | | | | 0 |
| UA | | | | | | 122 | | 122 |
| UK | | | 1.616 | | 1.499 | | | 3.116 |
| Total | 350 | 1.919 | 6.821 | 476 | 4.767 | 7.922 | 49 | |

**Cross-Border Capacities**

| TO \ FROM | AT | BA | BE | BG | CH | CZ | DE | DK | EE | ES | FI | FR | GR | HR | HU | IE | IT | LT | LU | LV | MD | MK | NL | PL | PT | RO | RS | RU | SE | SI | SK | SM | TR | UA | UK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AT | | | | | | | 340 | | | | | | | | | | 194 | | | | | | | | | | | | | | 1.570 | | | | | 2.104 | AT |
| BA | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 | | | | | | | | 18 | BA |
| BE | | | | | | | 396 | | | | | 270 | | | | | | | | | | | 1.397 | | | | | | | | | | | | 652 | 2.715 | BE |
| BG | | | | | | | | | | | | 65 | | | | | | | | | | | | | | 806 | 335 | | | | | | | | 1.206 | BG |
| CH | | | | | | | 319 | | | | | 223 | | | | | 444 | | | | | | | | | | | | | | | | | | 986 | CH |
| CZ | | | | | | | 1.804 | | | | | | | | | | | | | | | | | | | | | | | 458 | | | | | 2.261 | CZ |
| DE | 335 | | 323 | | 173 | 1.232 | | 4 | | | | | | | | | | | | | | | 1.273 | 932 | | | | | | | | | | | 4.271 | DE |
| DK | | | | | | | 136 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 136 | DK |
| EE | | | | | | | | | | | 28 | | | | | | | | | | | | | | | | | | | | | | | | 28 | EE |
| ES | | | | | | | | | | | | 165 | | | | | | | | | | | | | 80 | | | | | | | | | | 245 | ES |
| FI | | | | | | | | | 33 | | | | | | | | | | | | | | | | | | | | | | | | | | 33 | FI |
| FR | | | 870 | | 100 | | 614 | | | 224 | | | | | | | | | | | | | | | | | | | | | | | | | 1.808 | FR |
| GR | | | | | 118 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 118 | GR |
| HR | | | | | | | | | | | | | | | 78 | | | | | | | | | | | | | | | | | | | | 132 | HR |
| HU | 153 | | | | | | | | | | | | | 52 | | | | | | | | | | | | 50 | 246 | | | 54 | | 129 | | 516 | 1.140 | HU |
| IE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 387 | IE |
| IT | 1.150 | | | | 640 | | | | | | | 487 | | | | | | | | | | | | | | | | | | 22 | | | | | 2.299 | IT |
| LT | | | | | | | | | | | | | | | | | | | 65 | | | | | | | | | | | | | | | | 65 | LT |
| LU | | | 49 | | | | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 76 | LU |
| LV | | | | | | | | | | | | | | | | | 68 | | | | | | | | | | | | | | | | | | 236 | LV |
| MD | | | | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | | | | | | 16 | MD |
| MK | | | | | 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 27 | MK |
| NL | | | 331 | | | | 594 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.099 | NL |
| PL | | | | | | 28 | 234 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 262 | PL |
| PT | | | | | | | | | | | 144 | | | | | | | | | | | | | | | | | | | | | | | | 144 | PT |
| RO | | | | 148 | | | | | | | | | | | 77 | | | | | 2 | | | | | | | | | | | | | | | 227 | RO |
| RS | | | | 398 | | | | | | | | | | | 142 | | | | | | | | | | | | | | | | | | | | 540 | RS |
| RU | | | | | | | | | | | | | | | | | 114 | | 85 | | | | | | | | | | | | | | | | 199 | RU |
| SE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SE |
| SI | 113 | | | | | | | | | | | | 8 | | 29 | | | | | | | | | | | | | | | | | | | | 149 | SI |
| SK | 247 | | | | | 1.246 | | | | | | | | | 51 | | | | | | | | | | | | | | | | | | | 250 | 1.790 | SK |
| SM | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | 4 | SM |
| TR | | | | | 497 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 475 | TR |
| UA | | | | | | | | | | | | | | | 217 | | | | | | | | | | | | | | | | | | | | 633 | UA |
| UK | | | | | | | | | | | | | | | | | | | | | | | 494 | | | | | | | | | | | | 1.298 | UK |
| | 1.997 | 0 | 2.376 | 1.188 | 913 | 2.506 | 4.463 | 4 | 33 | 368 | 28 | 658 | 552 | 59 | 565 | 0 | 671 | 182 | 0 | 150 | 2 | 0 | 3.164 | 932 | 80 | 872 | 599 | 168 | 0 | 75 | 2.573 | 0 | 0 | 766 | 1.207 | |
| | AT | BA | BE | BG | CH | CZ | DE | DK | EE | ES | FI | FR | GR | HR | HU | IE | IT | LT | LU | LV | MD | MK | NL | PL | PT | RO | RS | RU | SE | SI | SK | SM | TR | UA | UK | |

## DEMAND

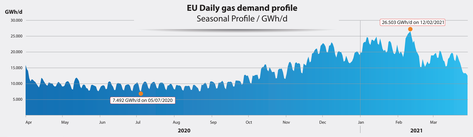
### EUROPEAN DEMAND

**EU Total 2020** 5.000.524 GWh

**EU 1 Apr 2020 - 30 Sep 2020** (Summer) 1.770.373 GWh
**EU Min. Day** (05/07/2020) 7.492 GWh/d

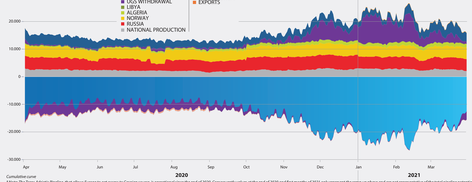
**EU 1 Oct 2020 - 31 Mar 2021** (Winter) 3.319.267 GWh
**EU Max. Day** (12/02/2021) 26.503 GWh/d

**EU Daily gas demand profile**
Seasonal Profile / GWh/d




## SUPPLY

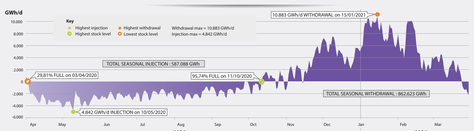
### EUROPEAN SUPPLY* & DEMAND



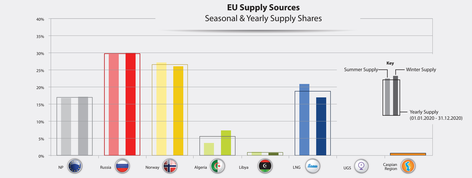

Cumulative curve

* Note: The Trans Adriatic Pipeline, that allows Europe to get access to Caspian source, is operational since the end of 2020. Consequently values at the end of 2020 and first months of 2021 only represent the ramp up phase and are not representative of the total pipeline potential

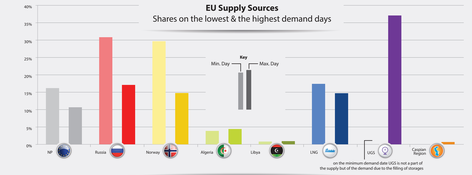
**EU Storage / Injection / Withdrawal**
Seasonal Profile / GWh/d




**EU Supply Sources**
Seasonal & Yearly Supply Shares

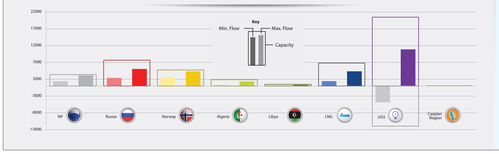



**EU Supply Sources**
Shares on the lowest & the highest demand days




On the minimum demand date UGS is not a part of the supply but of the demand due to the filling of storages

**EU Supply Sources**
Minimum and Maximum use of import capacity (GWh/d)




| | AUSTRIA | BELGIUM | BOSNIA-HERZ. | BULGARIA | CROATIA | CZECH REPUBLIC | DENMARK | ESTONIA | FINLAND | FRANCE | N. MACEDONIA | GERMANY | GREECE | HUNGARY | IRELAND | ITALY | LATVIA | LITHUANIA | LUXEMBURG | NETHERLANDS | POLAND | PORTUGAL | ROMANIA | SERBIA | SLOVAKIA | SLOVENIA | SPAIN | SWEDEN | SWITZERLAND | UNITED KINGDOM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total 2020 | 90.978 GWh | 171.072 GWh | 7.751 GWh | 31.609 GWh | 31.881 GWh | 92.240 GWh | 39.996 GWh | 4.493 GWh | 25.429 GWh | 400.650 GWh | 3.322 GWh | 964.900 GWh | 82.925 GWh | 71.552 GWh | 37.178 GWh | 796.210 GWh | 11.567 GWh | 25.990 GWh | 8.638 GWh | 396.174 GWh | 194.554 GWh | 84.982 GWh | 61.120 GWh | 13.984 GWh | 53.994 GWh | 9.646 GWh | 259.692 GWh | 8.322 GWh | 35.494 GWh | 823.968 GWh |
| Summer | 27.674 GWh | 71.372 GWh | 3.022 GWh | 11.422 GWh | 11.360 GWh | 32.490 GWh | 14.000 GWh | 1.662 GWh | 8.476 GWh | 139.440 GWh | 1.162 GWh | 331.000 GWh | 31.000 GWh | 24.000 GWh | 13.000 GWh | 273.000 GWh | 4.100 GWh | 9.000 GWh | 3.000 GWh | 140.000 GWh | 69.000 GWh | 29.000 GWh | 22.000 GWh | 5.000 GWh | 19.000 GWh | 3.400 GWh | 90.000 GWh | 3.000 GWh | 13.000 GWh | 290.000 GWh |
| Max. Day | 321 GWh/d | 1.148 GWh/d | 14 GWh/d | 164 GWh/d | 192 GWh/d | 388 GWh/d | 267 GWh/d | 37 GWh/d | 179 GWh/d | 1.843 GWh/d | 15 GWh/d | 4.011 GWh/d | 312 GWh/d | 378 GWh/d | 170 GWh/d | 1.174 GWh/d | 95 GWh/d | 140 GWh/d | 7 GWh/d | 2.019 GWh/d | 1.007 GWh/d | 295 GWh/d | 160 GWh/d | 33 GWh/d | 121 GWh/d | 12 GWh/d | 1.007 GWh/d | 120 GWh/d | 42 GWh/d | 1.080 GWh/d |
| Min. Day | 97 GWh/d | 264 GWh/d | 1 GWh/d | 46 GWh/d | 44 GWh/d | 92 GWh/d | 27 GWh/d | 4 GWh/d | 42 GWh/d | 484 GWh/d | 0,000145 GWh/d | 1.176 GWh/d | 68 GWh/d | 121 GWh/d | 50 GWh/d | 594 GWh/d | 7 GWh/d | 34 GWh/d | 2 GWh/d | 346 GWh/d | 163 GWh/d | 66 GWh/d | 102 GWh/d | 11 GWh/d | 33 GWh/d | 2 GWh/d | 603 GWh/d | 10 GWh/d | 92 GWh/d | 1.225 GWh/d |
| EU Min. Day | 521 GWh/d | 1.078 GWh/d | 10 GWh/d | 132 GWh/d | 132 GWh/d | 272 GWh/d | 196 GWh/d | 26 GWh/d | 126 GWh/d | 1.440 GWh/d | 11 GWh/d | 3.405 GWh/d | 219 GWh/d | 170 GWh/d | 111 GWh/d | 1.145 GWh/d | 62 GWh/d | 120 GWh/d | 6 GWh/d | 1.204 GWh/d | 574 GWh/d | 273 GWh/d | 272 GWh/d | 33 GWh/d | 93 GWh/d | 11 GWh/d | 1.750 GWh/d | 1.003 GWh/d | 375 GWh/d | 4.335 GWh/d |
| EU Max. Day | 521 GWh/d | 1.078 GWh/d | 10 GWh/d | 132 GWh/d | 132 GWh/d | 272 GWh/d | 196 GWh/d | 26 GWh/d | 126 GWh/d | 1.440 GWh/d | 11 GWh/d | 3.405 GWh/d | 219 GWh/d | 170 GWh/d | 111 GWh/d | 1.145 GWh/d | 62 GWh/d | 120 GWh/d | 6 GWh/d | 1.204 GWh/d | 574 GWh/d | 273 GWh/d | 272 GWh/d | 33 GWh/d | 93 GWh/d | 11 GWh/d | 1.750 GWh/d | 1.003 GWh/d | 375 GWh/d | 4.335 GWh/d |
| Maximum Production | 24 GWh/d | - GWh/d | - GWh/d | 1 GWh/d | 24 GWh/d | 4 GWh/d | 12 GWh/d | - GWh/d | - GWh/d | 10 GWh/d | - GWh/d | 184 GWh/d | - GWh/d | - GWh/d | - GWh/d | 107 GWh/d | - GWh/d | - GWh/d | - GWh/d | 1.204 GWh/d | 82 GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | 3 GWh/d | - GWh/d | - GWh/d | - GWh/d |
| Dedicated Production | 1.055 GWh/d | 170 GWh/d | - GWh/d | 36 GWh/d | 80 GWh/d | 22 GWh/d | 194 GWh/d | - GWh/d | - GWh/d | 1.440 GWh/d | - GWh/d | 1.079 GWh/d | - GWh/d | - GWh/d | - GWh/d | 1.107 GWh/d | 62 GWh/d | - GWh/d | - GWh/d | 1.204 GWh/d | 574 GWh/d | 273 GWh/d | 272 GWh/d | - GWh/d | 93 GWh/d | 11 GWh/d | 1.750 GWh/d | 1.003 GWh/d | 375 GWh/d | 4.335 GWh/d |
| Dedicated Storage | 1.055 GWh/d | 170 GWh/d | - GWh/d | 36 GWh/d | 80 GWh/d | 22 GWh/d | 194 GWh/d | - GWh/d | - GWh/d | 1.440 GWh/d | - GWh/d | 1.079 GWh/d | - GWh/d | - GWh/d | - GWh/d | 1.107 GWh/d | 62 GWh/d | - GWh/d | - GWh/d | 1.204 GWh/d | 574 GWh/d | 273 GWh/d | 272 GWh/d | - GWh/d | 93 GWh/d | 11 GWh/d | 1.750 GWh/d | 1.003 GWh/d | 375 GWh/d | 4.335 GWh/d |
| MOP | 24 GWh/d | 170 GWh/d | - GWh/d | 36 GWh/d | 80 GWh/d | 22 GWh/d | 194 GWh/d | - GWh/d | - GWh/d | 1.440 GWh/d | - GWh/d | 1.079 GWh/d | - GWh/d | - GWh/d | - GWh/d | 1.107 GWh/d | 62 GWh/d | - GWh/d | - GWh/d | 1.204 GWh/d | 574 GWh/d | 273 GWh/d | 272 GWh/d | - GWh/d | 93 GWh/d | 11 GWh/d | 1.750 GWh/d | 1.003 GWh/d | 375 GWh/d | 4.335 GWh/d |
| MOU | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d |
| Send-out | 427 GWh/d | 2.747 GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d |
| Storage | 24% | 6% | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d | - GWh/d |
| Installed gas-fired capacity | 4.449 MWe | 7.282 MWe | - MWe | 1.971 MWe | 760 MWe | 1.626 MWe | 9.000 MWe | - MWe | 1.604 MWe | 31.062 MWe | - MWe | 207 MWe | 6.902 MWe | 1.800 MWe | 4.265 MWe | 19.429 MWe | 1.022 MWe | 1.067 MWe | 48 MWe | 10.500 MWe | 2.156 MWe | 2.184 MWe | 5.900 MWe | 350 MWe | 1.220 MWe | 556 MWe | 6.000 MWe | 2.000 MWe | 15.992 MWe | 51.291 MWe |

Total LNG 1 Jan 2020 to 31 Dec 2020: 1.164 GWh
Summer: 1 Apr 2020 to 30 Sep 2020
Winter: 1 Oct 2020 to 31 Mar 2021