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欧州のガス在庫は過去最低水準、冬季に向けた在庫余力は一段と低下

2026 年 10 月 26 日

(10 月 19 日公表のレポート *"Record-low gas inventories leave Europe with a thinner winter buffer"* の日本語版)

- EU のガス貯蔵率は足元で約 75%と、この時期としては記録が利用可能な 2011 年以降で最低の水準にある。貯蔵率の低さは輸入の急減によるものではなく、昨冬以降の在庫取り崩しと積み増し不足によるものである。中東情勢が緊迫化する中でも、ガス輸入はウクライナ戦争後の平均的な水準で、概ね底堅さを維持している。
- 低水準の在庫が危機に発展するかどうかを左右する最大の要因は天候である。当室のモデル分析では、想定し得る大半の冬季シナリオにおいて在庫に耐性があることが示されたが、極端な厳冬となった場合にはドイツとオランダで在庫がひっ迫する可能性がある。
- 欧州経済にとっての主なリスクは、ガスの不足そのものではなく、ガスを確保するためのコストの上昇である。LNG への依存拡大により、厳しい気象シナリオでも供給不足に陥る可能性は低下している。一方で、追加的な LNG 貨物を呼び込むには大幅な価格上昇が必要となる可能性があり、欧州産業の競争力を損なうとともに、持続的なインフレ圧力をもたらす恐れがある。

輸入は底堅いものの、天然ガス在庫は低水準

欧州では冬季入りを控え、暖房需要がピークを迎える時期が近づいているが、EU のガス貯蔵率は足元で約 75%にとどまっている。この時期としては 2011 年以降で最低水準であり、2022 年のエネルギー危機直前の 77%をも下回る（第 1 図）。冬季を迎えるにあたって心許ない出発点に見えるが、在庫水準が低いことだけでは直ちに危機が差し迫っているとまでは言い切れない。より重要なのは、なぜ貯蔵率が通常より低いのか、そして深刻なエネルギー危機に至るにはどのような条件があるのか、という点である。

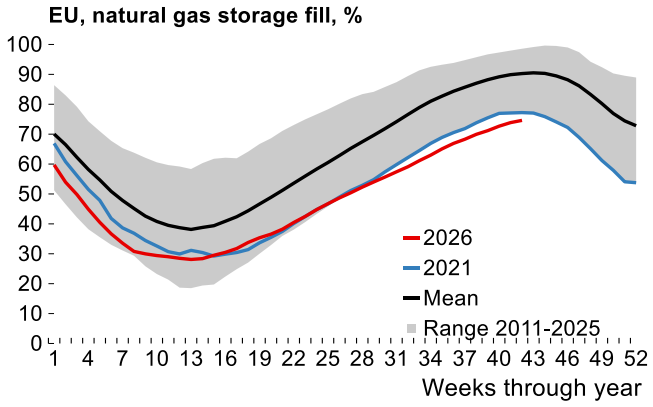
欧州は 2026 年の補充期を低い在庫水準からスタートした。昨冬が例年以上に寒かったことから、貯蔵施設からの取り崩しが膨らみ、在庫は平年を大きく下回る水準まで低下した。その結果、欧州では、冬季入りまでに在庫を通常の水準へ戻すだけでも、例年以上に大幅な積み増しが必要となっていた。

一見すると、中東情勢の混乱が欧州のガス供給に直接的な影響を及ぼしたようには見えない。第 2 図が示す通り、第 2 四半期の天然ガス輸入量は近年と概ね同水準で推移した。情勢悪化によって世界のガス市場が逼迫したことは間違いないが、これまでのところ欧州への直接的な影響は限定的である。欧州の大半の国では、湾岸諸国の生産者よりも、主に北海地域、米国、アルジェリア、アゼルバイジャンからガスを調達しているためである。しかし、在庫の出発点が異例に低かったことに加

え、夏の記録的な気温により冷房需要が増え、発電用ガスの消費が押し上げられたため、輸入が安定していても在庫を十分に積み増すことはできなかった。

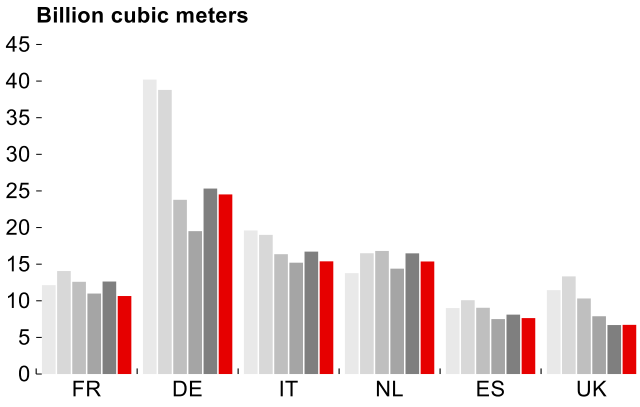
また、ロシア産パイプラインガスからの脱却により、欧州のガス市場は LNG 輸入への依存を強めるとともに、アジア諸国との調達競争を激化させている。最近の世界 LNG 市場の混乱とそれに伴う価格上昇は、貯蔵向けに追加的なガスを確保するインセンティブを低下させた。その結果、輸入量自体は底堅く推移したものの、低水準から始まった在庫と夏場の旺盛な需要を補うほどの余剰供給は確保できず、冬季入りを前にした在庫の積み増しは例年ほど進まなかった。

第 1 図：過去 15 年との比較でみても在庫は異例の低水準



Source: GIE, Macrobond, MUFG GMR

第 2 図：2021～2026 年の各年第 2 四半期の天然ガス輸入（パイプラインガスと LNG）



Source: JODI (Joint Organizations Data Initiative), MUFG Bank Economic Research Office

厳冬となればガス供給体制が試される可能性

低水準の在庫が実際に危機へ発展するかどうかは、最終的には冬季にどの程度の在庫取り崩しが必要となるかに左右される。中東情勢がこれまで以上に深刻なガス市場の混乱を引き起こさないと仮定すれば、最大の決定要因は天候となる可能性が高い。当室の推計によれば、ドイツでは月平均気温が 15℃を 1℃下回るごとに、その月のガス在庫は約 2%ポイント追加的に減少すると試算される[1]。

その影響を評価するため、過去 30 年間の気象データに基づく複数の気温シナリオを用いて、ガス在庫の推移を試算した。その結果、想定し得る大半のシナリオにおいて、ガス在庫には相応の耐性があることが示された。欧州の大半の国では、過去 30 年間で最も寒かった冬と同程度の厳冬となった場合でも、在庫水準は過去の変動レンジ内にとどまる。

例外はドイツとオランダであり、極端な寒波を想定した場合には最も脆弱な市場となる（第 3 図、第 4 図）。過去 30 年間で最も寒かった 1995/96 年の冬[2]と同程度の厳冬となれば、両国では在庫が枯渇する可能性がある。ドイツが欧州最大のガス消費国であることに加え、オランダが主要なガス中継拠点であり、欧州のガス価格指標である TTF を擁することを踏まえると、この点は特に重要である。

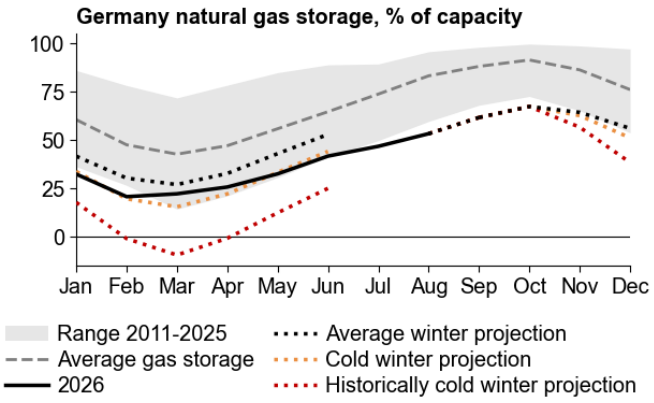
[1] 本モデルは、ガス在庫の変化率を被説明変数とし、15℃を下回る温度（寒さの度合い）およびそのラグ変数を説明変数とする月次パネル回帰モデル。国別の季節要因および時点固定効果を織り込んでいる。

[2] 1995/96 年冬の平均気温は、ドイツでは−2.2℃、オランダでは 0℃。

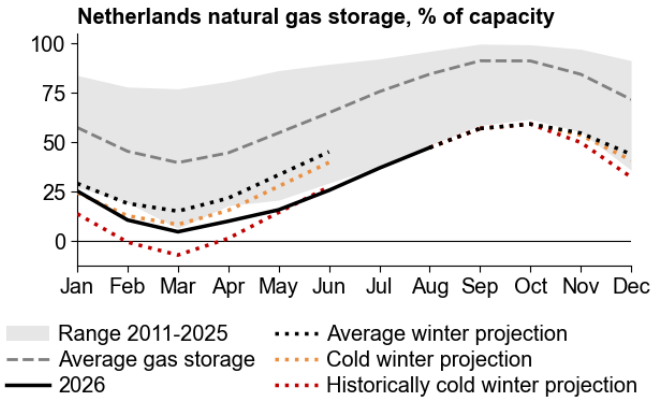
もっとも、両国ともに、冬季の気温がそれぞれの長期平均[3]を 1 標準偏差下回る程度であれば、在庫は過去の最低水準を上回る見込みである。このことは、リスクが顕在化するのは例外的に厳しい寒波に限られることを示唆している。

さらに、欧州のガス市場は 2022 年以降、大きく変化しているため、こうした試算はガス不足のリスクを過大評価している可能性がある。価格上昇を受けて産業部門のガス需要は減少し、省エネ対策によって消費が抑制されたほか、再生可能エネルギーの導入拡大が続いたことでガスへの依存度も低下している。同様に重要なのは、LNG が欧州市場の需給調整において以前より大きな役割を果たすようになったことである。これにより、世界的な価格変動やアジアとの調達競争への感応度は高まったものの、市場が逼迫した際に在庫だけに依存して需給を調整する必要性は低下した。その結果、最も厳しい気象シナリオであっても、必ずしも物理的なガス不足に陥るとは限らない。むしろ問題となるのは、追加的な供給を確保するために必要となる価格水準である。欧州の買い手は、競合する輸入国より高い価格を提示することで LNG 貨物を呼び込もうとすると考えられるが、そのためには大幅な価格上昇が必要となり、価格に敏感な需要家の一部がガス消費の削減を余儀なくされる可能性がある。

第 3 図：冬季気温がドイツのガス在庫に与える影響



第 4 図：冬季気温がオランダのガス在庫に与える影響



危機が回避されても、エネルギーコストは成長と物価の重石に

当室のメインシナリオでは、欧州は 2022 年のような深刻なガス危機を回避するとみている。ガス在庫は例年に比べて低水準にあるものの、当室の分析によれば、主要市場で在庫が枯渇する可能性があるのは、極めて厳しい寒冬シナリオに限られる。仮にそうした状況となった場合でも、欧州には追加的な LNG 貨物を呼び込むことができるため、物理的な供給不足に陥る可能性は低い。実際、一部の政府はすでに冬季に備えて在庫の積み増しを進めている[4]。

もっとも、中東情勢が世界のガス供給を引き続き混乱させる中、欧州は十分な在庫余力を持たないまま冬季入りを迎えることになる。これらが重なり、当面の間はガ

[3] 冬季気温は 12 月から 2 月までの平均気温で測定。冬季の長期平均気温は、ドイツで 1.6℃、オランダで 4.1℃。第 3 図および第 4 図の「Cold winter」シナリオは、これらの平均を 1 標準偏差下回る気温を想定しており、ドイツでは−0.1℃、オランダでは 2.4℃に相当。

[4] Germany orders SEFE to buy more gas to shore up winter reserves | Reuters

ス価格が高止まりする公算が大きい。冬季に在庫への圧力が一段と強まった場合、追加的な LNG 貨物を呼び込むために必要となる価格が上昇することで、欧州経済にとって大きな負担となる可能性がある。

ドイツでは、安価なガス供給の喪失が経済低迷の重要な要因となっている。価格への上昇圧力が続けば、ドイツ産業のみならず、欧州製造業全体が直面する競争力上の課題をさらに深刻化させるだろう。

その影響は成長率にとどまらない。ガス価格の上昇は、原油価格の上昇に比べて、より広範かつ持続的なインフレ圧力を生じさせる傾向がある[5]。当室では、TTF 価格の第 4 四半期平均が 100 ユーロ／MWh となった場合、総合 HICP インフレ率のピークがメインシナリオ対比で約 20bp 押し上げられると試算している。さらに厳しい 150 ユーロ／MWh のシナリオでは、その影響は約 60bp まで拡大する。このような環境下では、ECB はエネルギー主導のインフレを一時的なものとして看過することに慎重になる可能性がある。その結果、ショックの本質が供給側にあるにもかかわらず、インフレ期待を安定させるために金融政策が過度に引き締め的な状態に維持されるリスクが高まる。

欧州が 2022 年のようなガス危機の再来を回避するという当室のメインシナリオに対する最大のリスクは、例年を大きく下回る厳冬と、世界のガス市場における供給混乱のさらなる深刻化が同時に発生することである。これらのショックはいずれも単独であれば対応可能と考えられる。しかし、厳冬が世界的なガス供給環境の一段の悪化と重なった場合、在庫や価格にはメインシナリオが想定する以上の大きな圧力がかかる可能性がある。そのような状況では、欧州は広範な物理的供給不足に直面するのではなく、より高い価格を支払うことで追加的な LNG 供給を確保しようとするだろう。その結果、需要の大幅な抑制が生じ、成長とインフレの双方にとってより厳しい環境となる可能性がある。

[5] The different effects of oil and gas supply shocks on euro area inflation, CEPR VoxEU, May 2026

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