Security-orientated energy policy

A financing strategy for Germany's independence from natural gas

Executive Summary
Imprint

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The measures/statements were developed in ten meetings of the Energy Independence Council. The views expressed in this document are solely those of the authors and do not represent the official views of the organisations they represent. Depending on their area of specialisation, members are only able to speak on certain topics.

About the Energy Independence Council
The German Energy Independence Council (Fachrat Energieunabhängigkeit) is an interdisciplinary panel of experts. It consists of eight recognised experts from the financial sector (Tariq Noori | DZ Bank; Caroline Herkströter | DLA Piper; Kristina Jeromin | German Sustainable Finance Cluster), economic policy (Tom Krebs | University of Mannheim) and technical sciences (Frank Peter | Agora Industrie; Martin Pehnt | Institute for Energy and Environmental Research; Anna Leipprand | Wuppertal Institute). The spokesperson of the Council is Jonathan Barth (ZOE Institute for Future-fit Economies). In ten meetings and in dialogue with numerous representatives of the German government, industry associations and civil society, the Council developed an investment strategy for Germany's independence from natural gas with a focus on the buildings and industry sectors. The Expert Council is coordinated by ZOE Institute for Future-fit Economies and funded by the Climate Finance Fund.
Executive Summary

2022 marked a geopolitical turning point. Even if the immediate effects of the energy crisis have been mitigated, these short-term successes should not obscure the fact that a fundamental reassessment of German and European energy policy is necessary. This report formulates steps for politics, business and society to prioritise gas independence as a building block of a security-oriented energy policy for Germany, and to exploit the potential it offers.

Identify risks (Chapter 2)

- The EU and Germany have successfully decoupled themselves from Russian gas supplies in the short-term by importing 66% more Liquified Natural Gas (LNG) into the EU in 2021-22, and reducing consumption.
- In the longer-term, LNG import dependency exposes the economy and society to new inflation risks, geopolitical tensions, and increasing risks to the climate and to the planned energy transition.
- The associated risks to public finances have been highlighted not least by the support programmes in response to the energy crisis in 2022.
- These risks call for a fundamental reassessment of the long-term direction of German and European energy policy.

Seizing opportunities (Chapter 2)

- Prioritising independence from natural gas as a central component of a security-oriented energy policy has the potential to reduce security, economic and climate risks and offer an alternative to natural gas as a bridging technology.
- As a centre of innovation, Germany can benefit from its leading role in key green technologies, particularly in plant and mechanical engineering and heat pump technology.
- If Germany succeeds in catching up with global trends in green technologies, business and politics can increase domestic and European value creation and create new jobs.

Acting strategically (Chapter 4)

- This analysis presents a strategy for how policymakers can mobilise key stakeholders for private investment in Germany's natural gas independence in the wake of federal budget cuts.
- By redirecting capital flows into natural gas-free technologies – for Germany, estimated at 400 billion euros in the building sector and around 44 billion euros in industry – dependence on natural gas can be reduced by 64% and overall savings of almost 78% can be achieved.
- Priority areas are the gas heating stock in buildings (half of all heating systems in Germany) and the use of natural gas for industrial process heat (80% of industrial gas consumption).
- Actors in the industry and building sectors can rely on market-ready, proven and clean technologies and processes to replace natural gas in heating buildings, to electrify industrial process heat and to use limited hydrogen capacities specifically for material substitution in basic chemicals and for direct reduction processes in steel production.

Activating the main actors (Chapter 7)

- We present ten policy recommendations to enable an economically efficient and socially effective investment dynamic balancing short-term affordability, long-term competitiveness and social acceptance.
Institutional actors such as housing companies (1 in 5 of residential buildings), energy service providers and municipal utilities are central to natural gas-free buildings, while skilled trades play a cross-cutting role.

In the industrial sector, the basic chemicals, paper and food and beverage industries in particular can replace a third of their natural gas consumption with low investment volumes.

Pioneering companies, especially small and medium-sized enterprises, should be activated as trailblazers to inspire other companies to follow suit.

Targeted and accelerated funding for natural gas independence requires a precise matching of capital supply and demand.

Banks will become enablers of change for corporate and retail customers by recognising and addressing the risks of the transition.

Creating favourable conditions, ...

➔ **Up to 78% reduced dependence on natural gas can be achieved** by changing structural and economic conditions and strengthening feedback mechanisms between politics, business and society. We present **ten policy recommendations** that enable an economically efficient and socially effective investment dynamic in the area of tension between short-term affordability, long-term competitiveness and social acceptance. By **precisely dovetailing the supply and demand for capital**, they activate key players for private investment.

g ➔ **Institutional players such as housing companies (1 in 5 residential buildings), energy service providers and municipal utilities are central to natural gas-free buildings, with the skilled trades playing a cross-sectoral role.** A scaling programme for heat contracting, a support package for the municipal heating transition and practical help mobilises housing companies, energy service providers and municipal utilities to invest, create economies of scale and involve them in the further development of the legal framework. A Heat-for-All Programme ensures access to a natural gas-free heat supply, even for homeowners with poor credit ratings. A skilled labour campaign promotes the training of necessary skilled workers. **Overall, this reduces total natural gas consumption by 38% and paves the way for a further 12% in non-residential buildings.**

g ➔ **In industry, process heat accounts for half of industrial natural gas consumption (13% of total German demand) in the four sectors of food and tobacco, paper, stone and earth processing and basic chemicals, which can be electrified with 9.5 billion euros in plant investments.** To this end, an **Industrial Transition Accelerator Platform** mobilises pioneering companies – **especially small and medium-sized enterprises** – to lead the way in the electrification of process heat and creates confidence in the change through experience. These pioneers show the way how to effectively mitigate risks during the transition, minimise climate risks and inspire other companies.

g ➔ **Banks become companions of change for corporate and private customers.** **Aligning sustainable finance with change** enables them to use their risk management expertise to identify transition risks and build confidence in investments.

g ➔ **A commission for natural gas independence, targeted public funding and temporary green targeted longer-term refinancing operations (TLTROs) have a systemic effect across the board.**

...to overcome the barriers to investment,...
Building sector (Chapter 7.1)
1. The greatest potential for natural gas savings and investments lies with private owners, while municipal utilities face high concentrated costs.
2. Worsening credit conditions and bureaucratic obstacles are putting housing companies and institutional homeowners under pressure. As a result, housing companies are investing less and less in modernisation (only 38% of investment costs). At the same time, institutional homeowners own 1 in 5 residential buildings.
3. Municipal utilities must now develop new business models in order to compensate for sharp falls in turnover from the gas industry and secure their future competitiveness. 25% of the total turnover of large municipal utilities comes from the gas industry.
4. High liabilities and limited access to production reduce the potential of energy service providers to play a major role in accelerating gas independence.
5. 15-30% of private residential building owners have problems accessing capital and there are structural barriers to investment. 40% of owners state that they cannot afford to invest.
6. A lack of awareness of advisory and subsidy offers coupled with an aversion to long-term loans inhibit private investments. In general, investments with amortisation periods of more than two years are only considered in one third of 3 cases (27%).
7. The skilled labour gap could triple by 2026. The skilled trades sector faces major challenges in securing and mobilising skilled workers – further measures to bring in skilled workers are necessary.

Industrial sector (Chapter 7.2)
1. Industrial plants have long lifespans, which is why the timing of (re)investments is crucial. Utilising investment windows in line with renewal cycles can avoid standing assets.
2. Compared to investment needs in buildings and energy costs, investments in equipment for natural gas-free process heat are low, but require rapid amortisation in the typical logic of the sector.
3. Depending on the size, location and specific energy needs of companies, the importance of economic or structural challenges in replacing natural gas varies.
4. A large proportion of the total cost of ownership of green industrial plants is attributable to operating costs, with only a small proportion falling to capital costs. However, in basic chemicals and the food and tobacco industries, negligible operational expenditures increases can be expected for individual technologies as a result of electrification.

Financial sector (Chapter 7.3)
1. Where risks, lack of collateral and low revenues slow down investments, reliable regulation, public financing and risk assumption enable the crowding-in of private capital.
2. In order to reduce high lending costs, financing solutions are needed that effectively bundle loans.
3. To enable banks to identify and address transition risks, financing instruments must be based on standardised and binding targets as well as ongoing impact analyses.
4. A reliable data basis and clear categorisation of investments in gas independence in the context of the EU taxonomy supports the flow of capital into economic structural change.

5. A patchy EU taxonomy that does not clearly cover industrial investment in gas independence, on the other hand, promotes uncertainty.

...so that Germany can become independent of natural gas.

Implementing measures (Chapter 8)

Our recommendations are deliberately broad in scope, going beyond regulation, carbon pricing and subsidies. They aim to create an investment environment that fosters confidence. The following ten points can set in motion processes and feedback mechanisms that can create the momentum to make Germany independent of natural gas.

1. Natural Gas Commission
   Establish an expert commission to accelerate gas independence. The aim is to identify a realistic, socially acceptable path to gas independence that is compatible with the German government’s climate goals and to develop proposals for the necessary regulatory adjustments and financing commitments.

2. Support package for the municipal heating transition
   Accelerate the implementation of municipal heat planning by strengthening the adaptability of legislation, establishing effective municipal coordination, strengthening local players and taking a synergetic view of planning, financing and implementation. Five pillars form the backbone of the package of measures: - the provision of municipal heat transition teams, - federal level dialogues, - exchange and learning programmes at state level, - innovation clusters for municipal utilities and energy suppliers, and - increasing and responsive federal funding for efficient heating networks.

3. Scaling up programme for heat contracting
   Scaling up heat contracting enables economic financing of energy-efficient renovations and heating system replacements, as well as new business opportunities for municipal utilities. The focus is on the creation of regional Special Purpose Vehicles that bundle loan and leasing offers to promote renewable heating technologies such as heat pumps and energy efficient envelope renovations. The Special Purpose Vehicles act as a link between energy service providers, municipal utilities and property owners, improve loan conditions and increase uptake by providing opportunities for citizens to participate. Additional add-ons, such as graduated premiums and insurance against electricity price fluctuations, improve the economic efficiency and security of the model, thus achieving wider implementation in the housing sector.

4. Practical help for the heat transition
   The aim of this measure is to accelerate energy-efficient renovation of building envelopes, replacement of heating systems and energy services in the building sector by identifying and removing bureaucratic obstacles. Practical barriers such as municipal requirements and technical building regulations will be analysed in participatory conferences with key players from the housing sector and energy service providers. The resulting Heat Transition Package includes legal adjustments to promote a targeted reduction of bureaucracy and establish a mutual learning process.
5. **Heat-For-All Programme for vulnerable homeowners**
The aim is to make it easier for low-income households with poor credit ratings to access loans and at the same time to encourage investment in energy-inefficient buildings. The programme works via a **government guarantee**, which is activated in the event of loan defaults and gives favourable loan conditions. Strict control mechanisms, such as the direct transfer of the loan amount to certified construction companies and confirmation of acceptance by the owners, prevent abuse.

6. **Skilled labour campaign for the heat transition**
A strategic initiative to recruit and retrain skilled workers from sectors affected by structural change and the collapse of the construction industry to fill the gap in finishing trades such as heating, ventilation, air conditioning and building electrics. This initiative builds on proven retraining programmes, such as Vaillant’s, and complements them with the German government’s heat pump subsidy programme.

7. **Industrial Transition Accelerator Platform**
The Platform fosters **knowledge exchange** between pioneering companies investing in zero-carbon technologies and second movers to create investment momentum while enabling regulatory learning. It reduces the perception of risk for companies investing in new technologies and increases profitability through targeted investment support. The Platform assists **large companies and SMEs** with transformation planning and offers incentive programmes and status benefits for participants. By forming technology and industry clusters and involving public and private banks, the platform facilitates access to capital.

8. **Aligning sustainable finance with change**
Changes to the Sustainable Finance Regulation can help channel investment into zero-carbon technologies. Proposed changes include expanding the **EU taxonomy** to include additional sectors and electrification activities, developing common and binding standards for transition plans to assess the risk of projects, and extending the Corporate Sustainability Reporting Directive (CSRD) to cover more companies and to harmonise their reporting obligations. This approach is intended to facilitate the assessment of transition risks by financial companies and to improve the transparency and comparability of corporate investments.

9. **Targeted public funding**
Targeted public funding enables private investment in Germany’s independence from natural gas in areas that are not profitable in the short to medium term but are necessary in the long term. The **estimated additional funding requirement of at least 3.3 billion euros per year until 2030** covers areas such as heating networks, electrification of industry, training of skilled workers and the Heat-For-All Programme. Various options to close this financing gap include reforms of the debt brake, modernising the expenditure side, introducing new revenue sources such as increasing carbon prices and inheritance taxes, and closing tax loopholes.

10. **Interest rate advantages for investments in energy independence (à go to measure)**
A European Central Bank ‘temporary green targeted longer-term refinancing operations (TLTRO) programme’ would provide **interest rate subsidies on loans for EU taxonomy-compliant investments** to reduce the cost of capital for gas independence investments until transition risks are adequately addressed in financial markets. This temporary programme would correct market failures, thereby allowing for long-term financial stability and a reduction of transition risks. In line with the ECB’s mandate, the programme contributes to price stability and the EU’s climate objectives.