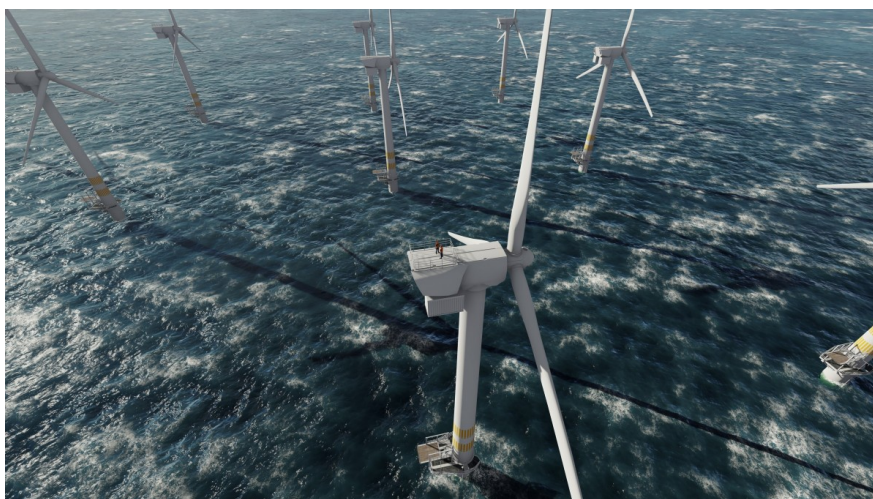


Energy Outlook: Solid growth for wind and solar amid energy crisis

Today's energy crisis is a wake-up call for Europe, which is increasingly dependent on suppliers outside the continent for gas. That's why we expect the focus on renewables to be balanced with the security of supply and affordability



The European wind market is set for growth of 8% in 2022

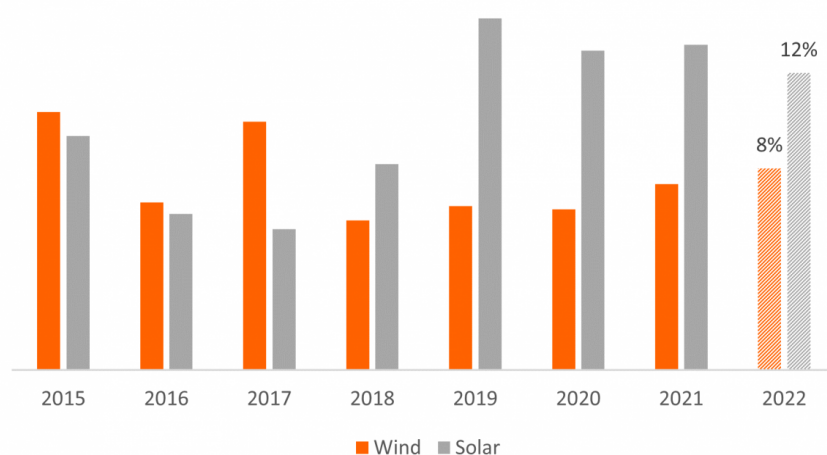
European wind and solar markets expected to grow

The European wind and solar markets are expected to provide solid growth of 8% and 12%, respectively, in 2022, in terms of capacity additions.

Growth in the solar market is highest for large-scale solar plants (+14%), while small-scale rooftop solar is set to increase by 11%. In the wind market, growth is highest in the offshore market (+16%) as some large offshore wind parks will come online in 2022. The onshore wind market is less subject to the timing of large projects and provides steady growth of 7%.

Growth in solar outpaces growth in wind

Annual growth in installed capacity for solar and wind energy in Europe



Source: ING Research based on BNEF

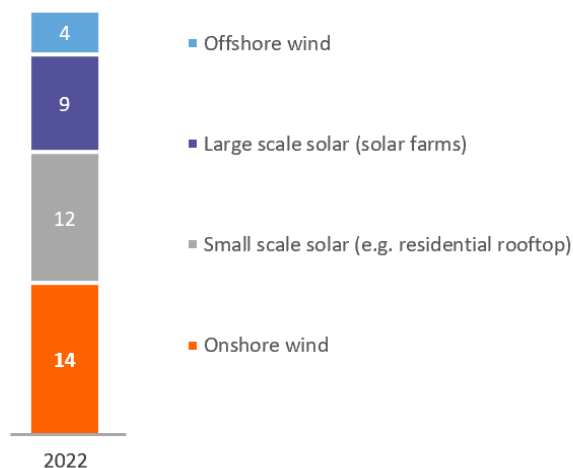
Growth is driven by small-scale rooftop solar and onshore wind farms

In absolute terms, capacity additions are largest in the onshore wind sector (+14 GW) and for small-scale solar projects (+12 GW).

In the offshore wind sector, 4 GW of capacity will be added in 2022. That is relatively small compared to the other segments, but policymakers in the Nordics, UK, Ireland, Germany and the Netherlands continue to work on special planning for offshore wind farms and grid infrastructure. So, much more is about to happen in the coming years for offshore wind farms.

Most capacity is added in onshore wind and small scale solar projects

Added capacity in Europe in gigawatt (GW)



Source: ING Research based on BNEF

Anticipated €50bn investment in wind and solar

All in all, we expect to see 39 GW growth in the combined wind and solar market. This equals €50bn of investment at current capex costs for the different wind and solar projects across Europe.

The energy crisis reveals the shortcomings of the 'sustainability only focus'

Climate change calls for a radical new [future energy system](#) that heavily depends on renewable energy and reduces unabated fossil fuels. Solar and wind power will be driving future power systems in a zero-carbon economy, which Europe aims to reach by 2050.

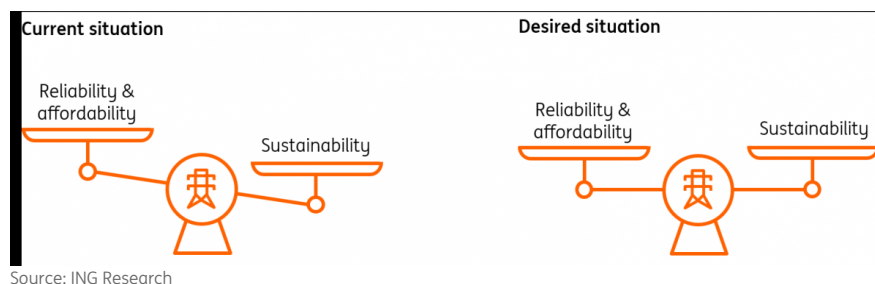
To meet these climate goals, policymakers across Europe have shifted their focus almost entirely to the sustainability aspect of the energy system. The focus has been on phasing out coal- and nuclear-fired power plants, reducing European oil and gas production and increasing power generation from wind turbines and solar panels.

As a result, the supply-side of the energy system has been reformed much faster than the demand-side. Europe now heavily depends on natural gas imports from Russia and Norway and liquefied natural gas (LNG) out of the US and Qatar. That worked fine in abundant energy markets, but not in the current energy crisis for which there is [no quick fix](#).

In short, old energy systems are being taken down faster than the demand for fossil fuels has declined and new renewable energy systems are being built. [Investment in upstream oil and gas is stubbornly low](#) and hence [commodity](#) and [power prices](#) are expected to remain high in the coming years.

Energy crisis calls for a rebalancing of priorities

Weighing of the three main pillars of energy systems: sustainability, reliability and affordability



Calls for a rebalancing towards security of supply and affordability

The energy crisis has put the other two pillars of the energy system; reliability and affordability, in the spotlight again.

The reliability of energy systems is no longer a guarantee, particularly in the case of a severe and prolonged winter, be it in Europe, Asia or both. And bankruptcies of energy providers could be a blow to the perceived reliability of the energy system for energy consumers, even if the energy system remains functioning.

The affordability of energy needs little explanation in the current crisis. A perfect storm occurred, with average power prices last year rising eightfold and gas prices sevenfold.

The current energy crisis calls for a rebalancing of priorities: from a sustainability, or 'renewables only' approach towards a balanced approach that includes the reliability and affordability of the European energy systems.

In that respect, today's energy crisis is a wake-up call. Gas consumption in Europe is becoming increasingly dependent on suppliers outside the European continent. As the 'renewables only' approach is not possible, Europe needs to develop more green energy alternatives, such as hydrogen. Well-balanced and coordinated energy transition plans from member states are needed to solve Europe's energy supply challenges.

Such a rebalancing does not mean that growth in wind and solar will slow down. In fact, coordinating the coal and nuclear phase-out across countries, keeping closed coal plants available as a backup instead of tearing them down, and the building of new gas-fired power plants with carbon capture and storage could in fact enable an acceleration of growth in renewables.

Author

Gerben Hieminga

Senior Sector Economist, Energy

gerben.hieminga@ing.com

Nadège Tillier

Head of Corporates Sector Strategy

nadege.tillier@ing.com

Disclaimer

This publication has been prepared by the Economic and Financial Analysis Division of ING Bank N.V. ("ING") solely for information purposes without regard to any particular user's investment objectives, financial situation, or means. *ING forms part of ING Group (being for this purpose ING Group N.V. and its subsidiary and affiliated companies).* The information in the publication is not an investment recommendation and it is not investment, legal or tax advice or an offer or solicitation to purchase or sell any financial instrument. Reasonable care has been taken to ensure that this publication is not untrue or misleading when published, but ING does not represent that it is accurate or complete. ING does not accept any liability for any direct, indirect or consequential loss arising from any use of this publication. Unless otherwise stated, any views, forecasts, or estimates are solely those of the author(s), as of the date of the publication and are subject to change without notice.

The distribution of this publication may be restricted by law or regulation in different jurisdictions and persons into whose possession this publication comes should inform themselves about, and observe, such restrictions.

Copyright and database rights protection exists in this report and it may not be reproduced, distributed or published by any person for any purpose without the prior express consent of ING. All rights are reserved. ING Bank N.V. is authorised by the Dutch Central Bank and supervised by the European Central Bank (ECB), the Dutch Central Bank (DNB) and the Dutch Authority for the Financial Markets (AFM). ING Bank N.V. is incorporated in the Netherlands (Trade Register no. 33031431 Amsterdam). In the United Kingdom this information is approved and/or communicated by ING Bank N.V., London Branch. ING Bank N.V., London Branch is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. ING Bank N.V., London branch is registered in England (Registration number BR000341) at 8-10 Moorgate, London EC2 6DA. For US Investors: Any person wishing to discuss this report or effect transactions in any security discussed herein should contact ING Financial Markets LLC, which is a member of the NYSE, FINRA and SIPC and part of ING, and which has accepted responsibility for the distribution of this report in the United States under applicable requirements.

Additional information is available on request. For more information about ING Group, please visit www.ing.com.