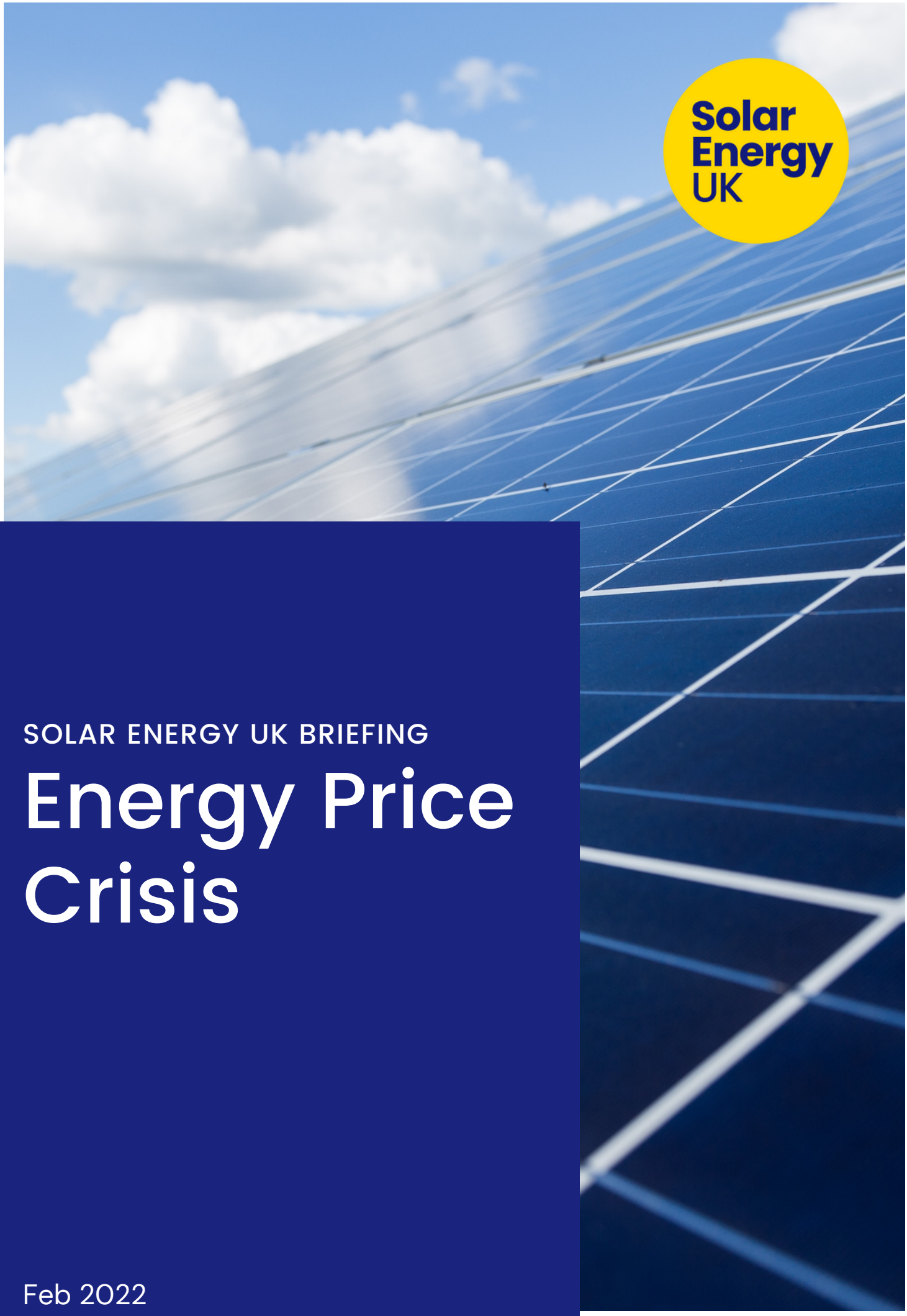


SOLAR ENERGY UK BRIEFING

Energy Price Crisis

Feb 2022

Context

Rapid increases in gas prices over the second half of 2021 are leading to record rises in energy bills which are impacting millions of households all across the country. Combined with the coming increase in the energy price cap from April 2022, this is causing a cost-of-living crisis in the UK and could severely undermine the country's economic recovery from the coronavirus pandemic.

Ofgem, the UK's energy regulator, recently increased the price cap in August last year by 12 percent. It is expected that in April the regulator could increase the price cap by another 50 percent.[1] This could result in average energy bills rising to around £2,000 per year. This will especially impact lower income households and could push millions more into fuel poverty.[2]

Any response to the energy cost crisis must provide immediate support for vulnerable households and should be designed to address the long-term structural drivers of the UK economy's exposure to dramatic energy price fluctuations. Specifically, the UK must reduce its exposure to volatile gas markets and provide further support for improving the energy efficiency and energy self-sufficiency of domestic housing stock.

This briefing sets out several immediate and longer-term recommendations below.

Drivers of High Energy Costs

Exposure to volatile global gas markets is the major driver of the recent energy price rises. There are also several exacerbating factors which have contributed to the current situation.[3]

1.The winter of 2020/21 was particularly cold in Europe, and put pressure on reserve supplies.

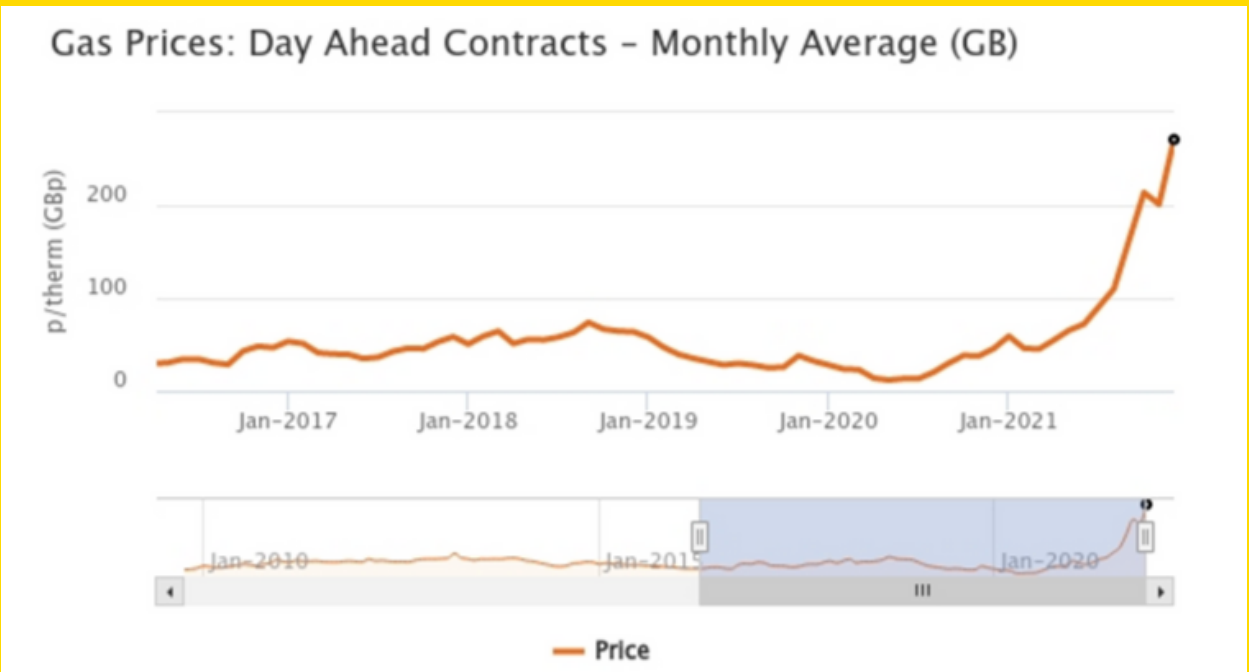
2. Demand from Asia - especially China - for liquefied natural gas has increased significantly.

3. The UK has been particularly impacted by this because it is one of the largest users of natural gas in Europe. Around 85% of homes still rely on gas heating, and roughly 30 percent of our electricity come from natural gas power plants.

1. https://www.independent.co.uk/news/uk/home-news/energy-price-rise-why-uk-b1998901.html
2. https://inews.co.uk/news/rising-energy-prices-significant-impact-uk-economy-business-groups-warn-1417435
3. https://www.bbc.co.uk/news/business-58090533

4. The UK also has less gas storage capacity than some other European countries.

As a result of these factors, gas prices hit record highs in December.



Source: Ofgem [4]

Solar is the Solution

We can reduce the UK's exposure to volatile gas markets by reducing demand for natural gas and committing to the rapid expansion of the renewable energy industry. The current energy price crisis shows the clear need for more investment in renewable energy, not less. Analysis shows that the near-sighted cuts to previous renewable energy and climate policies over the last decade has resulted in consumers paying at least £2.5 billion more in annual energy costs.[5]

This same analysis concluded that if solar has not been excluded from the Contracts for Difference scheme in 2015, energy bills could have been reduced by a further £500 million per year.

Meeting the government's commitment to deliver net zero by 2050 requires a huge increase in the deployment of renewable electricity generation in

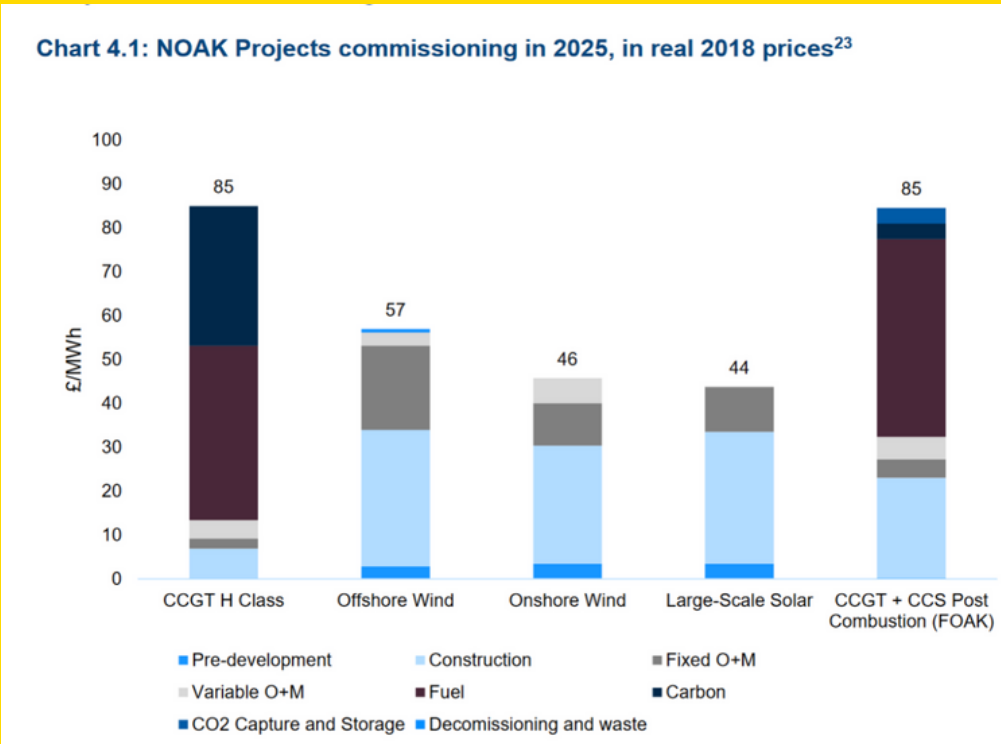
4. https://www.ofgem.gov.uk/energy-data-and-research/data-portal/wholesale-market-indicators
5. [1]https://www.carbonbrief.org/analysis-cutting-the-green-crap-has-added-2-5bn-to-uk-energy-bills

order to decarbonise the power sector and sustainably meet the rapid growth in demand which will result from the electrification of heating, transport, and the wider economy.

Solar technologies, particularly when combined with battery storage, provide reliable, predictable, and affordable electricity. Solar can be deployed at all scales, meaning it can contribute to the national electricity mix, and directly reduce the exposure of households and businesses to volatile energy markets.

Solar supports a more resilient and affordable energy system for all

The government's own figures demonstrate that solar is already the most cost-effective of any renewable energy technology. Further, even before the current gas price spikes, the data below from the Department for Business, Energy & Industrial Strategy (BEIS) shows that electricity generated by solar and wind is already much more affordable than electricity generated by natural gas (CCGT).



Source: BEIS Electricity Generation Costs [6]

6. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911817/
7. electricity-generation-cost-report-2020.pdf
[1] https://solarenergyuk.org/resource/the-value-of-solar-property-report/

Solar directly reduces energy costs for homeowners and businesses

Our recent ground-breaking research also shows clearly that the return on investment makes upgrading a home with a solar power system an easy and simple way to lower a property's running costs and increase its value while also reducing its environmental impact.[7]

This research, conducted in partnership with the University of Cambridge, determined that a typical residential solar installation can reduce annual energy bills by more than £300. This is double the average rise in energy bills that resulted from the increase in the energy price cap last year.

Given the recent rises in energy bills, the economics of installing rooftop solar on homes and businesses have become even more attractive. This is reflected by the increased interest from commercial energy users in securing renewable energy power purchase agreements in recent months, which lock in power prices over the long term.

Our Recommendations

Accelerate deployment of onsite generation and storage and reduce energy costs for businesses and homeowners

1. **A nationwide green home retrofit programme:** Following the poor rollout and rapid closure of the Green Homes Grant Scheme, there is an urgent need for the government to introduce long-term funding support for a green residential retrofit scheme and deliver on their manifesto commitments. Investing in more efficient homes is essential to reduce demand for fossil fuel heating while we transition to clean renewable heat technologies. Any retrofit programme should include funding support for installing solar and energy storage technologies. This will reduce energy costs for consumers and reduce strain on the electricity grid as demand for electrified heating and transport increases by allowing electricity to be generated and stored right where it is consumed. Investing in domestic infrastructure will not only deliver benefits for households but will support the wider economy by reducing domestic energy bills and exposure to future price volatility. Our research has showed that installing solar can save households over £300 in energy costs per year.[8]

2. **Apply 0% VAT on domestic renewable energy improvement to accelerate deployment of onsite generation and storage.** The government should apply zero-rate VAT to solar energy and energy storage assets. At a minimum, the reduced VAT rate of 5% should be restored for solar technologies and be applied to energy storage technologies.

3. **Support a rapid transition to low carbon heating:** Additional investment in schemes to accelerate the transition to low carbon heating is essential. These should directly support both solar electricity and solar heat technologies, as the Scottish Government has done through the Home Energy Scotland Scheme, for example.[9] This would directly reduce household reliance on fossil fuel heating.

4. **Remove environmental levies from consumer bills:** The costs for important programmes like the Renewables Obligation and Feed in Tariff scheme continue to be paid for by levies on energy bills. According to analysis by Cornwall Insight, removing these levies from consumer bills could save households over £160 annually. Moving these costs to general taxation is already being considered as part of the Government's Net Zero Strategy, and this should be accelerated considering the current price crisis.

8. https://solarenergyuk.org/resource/the-value-of-solar-property-report/
9. [1]https://www.gov.scot/news/renewable-heat-scheme-for-homeowners/
10. [1] https://solarenergyuk.org/resource/lighting-the-way-making-net-zero-a-reality-with-solar-energy/

Accelerate the system wide transition to renewable energy

1.Support the rapid expansion of the renewable energy and storage sectors: The current price crisis is a clear indicator that the government must significantly ramp up the pace and scale of investment in the clean energy transition to reduce the UK's reliance on volatile international gas markets. Our Lighting the Way report sets out several further recommendations in addition to those outlined in this briefing for how the government can accelerate solar deployment at all scales.[10] This includes, holding annual Contracts for Difference Auctions, streamlining the planning process, raising building efficiency standards, extending existing capital allowances, and expanding public sector retrofit funding.

2. Introduce a tax on carbon: While a carbon tax alone is not a silver bullet, it is an essential and effective market mechanism to reduce fossil fuel reliance. A carbon tax is based on the fundamental principle of making polluters pay the true costs of doing business. It has effectively reduced dependence on fossil fuels where it has been implemented across Europe, and according to research by the London School of Economics it could generate nearly £60 billion in revenue for the Treasury over the period to 2030. Far more than the £1.5 billion committed to the now abandoned Green Homes Grant Scheme.

3. Provide long term support to develop green skills: Delivering the clean energy transition will require ramping up our domestic capacity to install, operate, and maintain renewable energy infrastructure. Accelerating the roll out of solar could create over 20,000 new jobs by 2030.[11] However, targeted investment is needed to ensure the UK labour market has the skills that companies need, in everything from data, to finance, to engineering and AI, to deliver the renewable energy transition.

11. https://solarenergyuk.org/resource/lighting-the-way-making-net-zero-a-reality-with-solar-energy/

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Chapter House, 22 Chapter St, London, SW1P 4NP

solarenergyok.org @SolarEnergyUK_ linkedin.com/company/solarenergyuk