

New gas fired power station at Peterhead

March 2024

A Briefing by Friends of the Earth Scotland



Summary

- SSE and Equinor have submitted a planning application for a new gas burning power station with a carbon capture at Peterhead, Aberdeenshire. The application is for an additional plant alongside the existing Peterhead gas burning power station.
- Friends of the Earth Scotland believes the development poses a significant risk to Scotland's climate and emission reduction targets and to a just transition for workers and communities.
- The Peterhead power site is already Scotland's single biggest polluter. To limit warming to 1.5°C the Scottish Government cannot allow a major emitter to get even worse.
- Workers in high polluting sectors cannot wait on speculative technologies with a track record of failure. A just transition for workers means secure, stable, well-paid jobs in fields we know will reduce our carbon emissions, such as renewables and energy efficiency, and making that transition now.
- Offshore storage of carbon entrenches the exploitation of our seas and oceans from continued use of disruptive and polluting oil and gas infrastructure and runs the risks of leaks, damage to sensitive marine life and ocean acidification.¹
- Gambling on an unproven technology to reduce our emissions puts us on the path to climate and environmental chaos. The most effective way to reduce carbon emissions is not to create them in the first place by stopping burning fossil fuels.

The application is now with Scottish Government Ministers for decision. Friends of the Earth Scotland urges Ministers to reject the application and focus instead on building Scotland's renewable energy future and a just transition for workers and communities.

Introduction

In February 2022, SSE plc and Norwegian oil and gas company Equinor submitted a section 36 planning application² to the Scottish Government Energy Consents Unit to build a new 910MW gas burning power station with carbon capture at Peterhead, Aberdeenshire. The proposed power station would be **additional to the existing 1,180MW gas fired power station on the site, which has been Scotland's single biggest polluter for the past 5 years.**³ There is no plan for phasing down or closure of the existing plant and the developers have been forced to admit they could both run at the same time. **If approved, the power station would operate into the early 2050s - well past the point by which both Scotland**

¹ <https://www.ciel.org/wp-content/uploads/2023/11/Deep-Trouble-The-Risks-of-Offshore-Carbon-Capture-and-Storage.pdf>

² Section 36 of the Electricity Act 1989 applies to proposals for the construction, extension or operation of an onshore electricity generating station whose capacity exceeds (or, when extended, will exceed) 50 megawatts (MW).

³ <https://www.sepa.org.uk/environment/environmental-data/spri/>

and the UK are due to reach Net Zero – keeping Scottish homes locked on gas for decades to come.

Global consensus on the need to transition away from gas

Climate science is clear that to limit global heating to 1.5°C there must be a just and rapid transition away from fossil fuels. The impacts of extreme weather driven by climate breakdown are already being felt first and hardest by those who have done least to cause the problem. At COP28 in December, it was agreed that developed countries like Scotland must take the lead on a “transition away from fossil fuels”. The Scottish Government must heed both the science and moral obligation to rapidly phase out fossil fuels and reject the application for a new gas burning power station.

Missing Scotland’s climate targets

The Scottish Government is not currently on track to meet its climate commitments and has already missed 8 of its last 12 legally enshrined climate targets. An increase in climate emissions at the power station risks Scotland once again missing these vital targets. **SSE has conceded** in planning documents submitted to the Energy Consents Unit **that “should both plants (at the site) operate simultaneously this will result in emissions increase [that] would represent 10.7% of the Scottish Carbon Budget in 2034.”**⁴

Carbon Capture and Storage (CCS) has a track record of failure

CCS has long history of failure and should not be gambled on to hit our climate targets. A global report by the Institute for Energy, Economics and Financial Analysis ⁵ described CCS as a “decarbonisation pipe dream”. Of the 13 CCS plants they examined, seven underperformed, two failed completely and one was mothballed. **CCS does not capture all the carbon emissions generated from a power station, nor does it effectively reduce the highly potent greenhouse gas methane which has a global warming potential 25 times higher than carbon dioxide.**

The developers of the new gas power station are claiming they will capture 90% and up to 95%⁶ of the carbon from the new plant. **No power plant project in the world has managed to successfully and consistently capture 90% of carbon emissions.** Additional energy is also required to power CCS equipment. This energy has to be provided from the plant itself or a different power source. This is known as the “energy penalty” and means that capture rates are often far lower than promised. SSE have still not published detailed information on their energy penalty.

⁴ Peterhead Low Carbon CCGT Power Station proposal - ADDITIONAL INFORMATION . (2023). www.energyconsents.scot, SSE , pp.10–11.

⁵ <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>

⁶ EIA Report - Volume 2 - Chapter 4 - The Proposed Development. (2022). [online] www.energyconsents.scot, SSE, p.9. Available at: <https://www.energyconsents.scot/>.

CCS is a highly complex three stage process that usually involves numerous developers and individually managed elements. A new gas power station would attempt to capture carbon but then is reliant on the increasingly precarious Acorn project to provide the transportation and storage of any carbon captured. The Acorn project is not under construction or even within the planning system itself. Since its inception, the Acorn project has faced numerous setbacks and has failed to be picked for priority Track 1 status by the UK Government. It is also crucial to note that the Acorn project will be subject to its own incredibly complex planning permissions. It also appears to be totally reliant on UK and Scottish Government funding, much of which has still not been given.

Gas is driving the energy price crisis

Expansion of fossil fuel production and new infrastructure at Peterhead is inconsistent with preventing climate breakdown. New infrastructure or investment will only serve to entrench our reliance on volatile and exploitative oil and gas. There is an urgent need for action to support people now, and to build a more resilient, affordable energy system to prevent climate breakdown and future social crises.

Environmental and marine impacts of carbon dumping in North Sea

Oil and gas infrastructure & development is a key contributor to marine pollution from oil spills, noise pollution and the leaking of other chemicals and microplastics attached to the extraction and production process.⁷ Research shows that transportation and storage infrastructure attached to carbon capture processes would also be situated in locations with well-established and intensive sites of oil and gas exploration, such as in the North Sea.⁸ Not only does CCS allow the fossil fuel industry to continue climate damaging activities that are driving the nature crisis, it entrenches environmentally destructive practices in already ecologically vulnerable locations.

The Scottish Government estimate up to 46 Gigatonnes⁹ of carbon could be stored in the North Sea, over 1000 times Scotland's domestic climate pollution, effectively transforming it into Europe's carbon dumping ground. Injecting carbon at this scale is unprecedented¹⁰ and has the potential to cause earthquakes, displace deposits of brine, contaminate ground water, contribute to ocean acidification and therefore pose severe hazards to marine organisms.¹¹

New gas will not fund secure jobs and support a real just transition

CCS has time and again been over-promised and under delivered on achieving climate ambitions as well as secure jobs. **This is the third time CCS has been proposed at the Peterhead site and it will be the third time that promised jobs and economic opportunities will fail to materialise for workers and the community.** Those people dependent on the current energy system will be significantly affected by the transition to a

⁷ <https://www.indeepwater.co.uk/>

⁸ <https://www.ciel.org/wp-content/uploads/2023/11/Deep-Trouble-The-Risks-of-Offshore-Carbon-Capture-and-Storage.pdf>

⁹ <https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/>

¹⁰ <https://ieefa.org/resources/norways-sleipner-and-snohvit-ccs-industry-models-or-cautionary-tales>

¹¹ <https://www.ciel.org/wp-content/uploads/2023/11/Deep-Trouble-The-Risks-of-Offshore-Carbon-Capture-and-Storage.pdf>

renewable energy system and should not be strung along with promises of a technology that continues to fail.

In 2017 the UK Government spent £100 million on a competition for developing CCS before scrapping the project entirely¹². We cannot allow public money to continue to be wasted on speculative technology to allow oil and gas companies to continue its reckless business as usual. **The Scottish Government cannot afford to put the livelihoods of workers and communities most affected by the transition on the line once again by letting the transition be dictated by the whims of an uncaring energy industry.**

The closure of Grangemouth by Petroineos shows that big business will not plan for a just transition for workers, causing undue stress on the workers, families and communities at the heart of these industries.

We need to prioritise renewable energy & energy efficiency measures

Our energy system is already dominated by private companies who have continued to extract phenomenal profits at a time of crisis. Right now, as the climate crisis escalates ordinary people are having to choose between heating and eating.

Instead of backing an exploitative and precarious fossil fuel future, the Scottish Government must reject the proposal for a new gas burning power station. **New gas would be a disaster for our climate, bills and unproven carbon capture distracts from the provision of real and decent jobs.** The Government must instead focus on renewable energy projects and large-scale energy efficiency projects that would tackle fuel poverty and would provide the opportunity to create secure green jobs.

If you have any questions or follow ups from this briefing, please contact:

Alex Lee
False Solutions Campaigner
alee@foe.scot

¹² <https://www.nao.org.uk/wp-content/uploads/2017/01/Carbon-Capture-and-Storage-the-second-competition-for-government-support.pdf>