



OFFICIAL REPORT
AITHISG OIFIGEIL

Meeting of the Parliament

Thursday 1 May 2025

Session 6



The Scottish Parliament
Pàrlamaid na h-Alba

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Scottish Parliament

Thursday 1 May 2025

[The Presiding Officer opened the meeting at 11:40]

General Question Time

The Presiding Officer (Alison Johnstone): Good morning. The first item of business is general question time.

Glasgow City Integration Joint Board (Reductions in Mental Health Support)

1. **Paul Sweeney (Glasgow) (Lab):** To ask the Scottish Government what support it is providing to any people in Glasgow who are at risk of losing their mental health support due to the reported reductions announced by the integration joint board. (S6O-04592)

The Minister for Social Care, Mental Wellbeing and Sport (Maree Todd): The Scottish Government and national health service boards continue to support spending in excess of £1.5 billion for mental health services in 2025-26. Specifically for mental health, boards were allocated £123.5 million in 2024-25 via the enhanced mental health outcomes framework, with NHS Greater Glasgow and Clyde receiving more than £27.5 million. That funding, which was provided in addition to core allocations to boards, is now being baselined, which will give local areas greater choice in how services are configured and organised in order to deliver better and more sustainable outcomes.

Decisions on the provision of mental health services are a local responsibility. Services should be planned by integration joint boards and delivered through a mixture of NHS, local authority and third sector organisations. The organisation, delivery and funding of mental health services will vary depending on local population needs and will be guided by clinical decision making.

Paul Sweeney: Clearly, the numbers that were cited by the minister are not getting to where they need to be, as I have been contacted by constituents who are deeply worried by the decision by Glasgow's health and social care partnership not to renew core funding for Flourish House, a mental health recovery community that has been based in the city's Woodlands district since 1997. Flourish House works on a clubhouse model, giving members a restorative living environment and supporting those whose lives have been severely disrupted, because of their mental illness.

It is appalling that such a successful and well-established place of healing and therapy is now in danger of closure. That is not rational—it is a cost-driven exercise. The care of all who rely on Flourish House will be disrupted, due to the budgetary constraints that are faced by the integration joint boards. Will the minister join me in raising her concern about that cut to a vital service in Glasgow, and work with Flourish House and the health and social care partnership to find a long and lasting future for this well-established and well-regarded service?

Maree Todd: My officials already meet representatives of the Glasgow IJB to understand the financial pressures that the partnership is facing, and it is my understanding that that IJB remains committed to protecting and delivering statutory services for the people of Glasgow.

It is vital that we all recognise the very difficult financial context that we collectively face. However, in recognition of those difficulties, funding from the Government has increased to both health and social care and our local government partners. I expect local decisions to be made in consultation with the communities in which they are based, in full awareness of the impact on them, and I expect them to take account of the potential impact on the other services that might be asked to step in.

I will certainly add the issue that Mr Sweeney has raised to the list of things that officials are discussing with that IJB.

NHS Borders (Hospital at Home Provision)

2. **Christine Grahame (Midlothian South, Tweeddale and Lauderdale) (SNP):** To ask the Scottish Government what discussions it has had with NHS Borders about extending the hospital at home provision throughout the Borders. (S6O-04593)

The Cabinet Secretary for Health and Social Care (Neil Gray): As outlined in our operational improvement plan, we are committed to expanding hospital at home services across Scotland to at least 2,000 beds by December 2026, as part of the £200 million that has been allocated from the record £21.7 billion for health and social care this year. Officials are in regular contact with each of the territorial boards, including NHS Borders, in support of their local planning process, and the expansion of hospital at home services should build on the success of services that are already in place and which are delivering positive outcomes for patients and staff.

Christine Grahame: The cabinet secretary and I had a visit to see the successful hospital at home service in the Borders and the impact that it has had in freeing up hospital beds. As of May 2025,

NHS Borders has created a virtual capacity of 20 beds. However, the availability of the service, which operates from the base at Borders general hospital near Melrose, is currently determined by its ability to travel safely and effectively to patients within the day. That means that those who wish to use the service in, for example, Tweeddale are excluded. Is there any way round that, for example, by using Hay Lodge hospital in Peebles as a local delivery centre?

Neil Gray: As Christine Grahame has referenced, I had the great pleasure of visiting Borders general hospital with her last August. We met the hospital at home team, the chief executive and officials from Healthcare Improvement Scotland who have supported the development of the local hospital at home programme, and they described the expansion of the service, as Christine Grahame has set out, through an additional nurse practitioner. The service has been supporting a case load of 20 patients in recent weeks.

We are working with all health boards, including NHS Borders, to develop plans for the coming year and to continue to grow our hospital at home services. Our long-standing aim is to provide patients with the right care at the right time in a way that is as person centred as possible. I will absolutely take away Christine Grahame's comments about her constituents in Tweeddale to see whether her suggestion regarding Hay Lodge hospital in Peebles could be a viable option, and I will write to Ms Grahame to confirm those conversations.

Lochgelly Fire Station (Resources)

3. **Alex Rowley:** To ask the Scottish Government what its response is to reports that Lochgelly fire station could lose a fire engine and rope rescue unit. (S6O-04594)

The Minister for Victims and Community Safety (Siobhian Brown): The Scottish Fire and Rescue Service is carrying out a service delivery review to ensure that its fire stations, appliances and crews are in the right place at the right time to deal with the current and future risks in our communities. Following pre-consultation engagement last year, the SFRS developed a list of possible service changes, and it is currently undertaking staff and trade union engagement on those proposals in advance of undertaking a full public consultation in the summer. I encourage anyone with an interest to engage in that consultation. The SFRS board will then carefully consider the responses in advance of any final decisions being made.

Alex Rowley: Staff in Lochgelly have been told that they will lose an engine and possibly the rope unit, which is one of only four such units across

Scotland. Already, in the past two weeks, 2,700 people have signed a local petition, such is the fear. Lochgelly community council has sent a clear message to the politicians that, instead of cutting things, now is the time to invest to ensure that Lochgelly fire station has the personnel, equipment and specialist units required to meet the growing challenges in the current climate. Removing the rope unit and fire engine would increase risk. Will the minister stop hiding behind operational matters and instead come to the Cowdenbeath area of Fife, meet the people and hear their fears?

Siobhian Brown: I am always happy to go on visits to fire stations and listen to members of the SFRS. However, we have to be clear that the SFRS is undertaking staff and union engagement on the matter. The final list of possible changes will be subject to public consultation and it has not yet been finalised.

I am not hiding—it is just not appropriate for me to comment on individual options at this stage. The SFRS board and the chief officer are best placed to take decisions on how resources should be deployed, and it would be inappropriate for a minister to direct the SFRS on how it should deploy its resources. This is not a cuts exercise; it is about the SFRS carefully examining the risks that are present in our communities and configuring its resources in the best possible way to deal with those risks.

Annabelle Ewing (Cowdenbeath) (SNP): I listened carefully to what the minister has just said in response to Alex Rowley MSP, but I am sure that my constituents will nonetheless remain very concerned to note that she has not, in fact, ruled out those dangerous cuts to Lochgelly fire station, which is indeed one of only four rope rescue centres in Scotland, and that the cuts could lead to the very closure of Lochgelly fire station itself.

I hear that the minister is happy to visit fire stations. Will she commit to having her private office today set up a visit to Lochgelly fire station to meet local firefighters and hear their very significant concerns about the considerable risks that such cuts pose to their ability to keep us all safe?

Siobhian Brown: The changes that the Fire and Rescue Service is consulting on have been very carefully considered using substantial evidence and analysis of risk.

As I have said, I am always open to visiting fire stations and hearing directly from those on the front line, and I will speak to my private office about organising a visit. As I set out in my original answer, there will be a full public consultation where everyone will have the opportunity to make their views known.

“Review of data, statistics and research on sex and gender”

4. Stephanie Callaghan (Uddingston and Bellshill) (SNP): To ask the Scottish Government whether it will provide further detail on the approach it is taking to consider the recommendations set out in the independent report, “Review of data, statistics and research on sex and gender”, also known as the Sullivan review. (S6O-04595)

The Cabinet Secretary for Social Justice (Shirley-Anne Somerville): In 2021, the office of the chief statistician published guidance for public bodies in Scotland on the collection of sex and gender data, which recommended that statistics producers should collect data that best serves the needs of users in their specific context. That approach aligns with the 2024 guidance that was published by the Office for Statistics Regulation. The Sullivan review recommended that the Scottish Government should review its guidance in light of the recommendations contained in that review, and the Scottish Government has previously committed to reviewing its guidance by the end of 2026.

Stephanie Callaghan: I will ask specifically about recommendations 2 and 23. Does the cabinet secretary agree with recommendation 2, which says:

“Data on sex should be collected by default in all research and data collection commissioned by government”?

She has already commented on recommendation 23, which includes the suggestion from the OSR that the Scottish Government’s 2021 guidance for public bodies on the data collection and publication of sex, gender identity and trans status should be reviewed. How might the Scottish Government support public bodies to confidently collect accurate and legally compliant data on both sex and gender identity?

Shirley-Anne Somerville: In my previous answer, I mentioned the work that is continuing in the office of the chief statistician. I add that the Scottish Government is committed to reviewing its guidance, and that office is engaged with wider United Kingdom work on the topic. The Government statistical service harmonisation team is currently developing harmonised standards for collecting data on sex and gender identity. The office of the chief statistician is contributing to that work and will consider its output as part of its review of the chief statistician’s guidance.

Tess White (North East Scotland) (Con): As we have heard before, biological sex has been erased in data collection across our public institutions. However, this is not just about integrity of statistics—it is about safety. Recommendation

12 of the Sullivan review called for the national health service to stop allowing people to change their gender marker—especially children, as the review said that that poses a “serious safeguarding risk”. Shockingly, the Scottish National Party Government has already confirmed in writing that there are no plans to stop that practice. Will the cabinet secretary accept that the Government must now hit the brakes and commit to working with the Minister for Public Health and Women’s Health to urgently implement that recommendation?

Shirley-Anne Somerville: I recognise the work that was undertaken to produce the independent report—the Sullivan review. I have already pointed to the work of the office of the chief statistician and the wider UK work that is being undertaken. On particularly sensitive subjects such as this, I welcome the fact that, across the UK, statisticians are looking at the issue exceptionally seriously and are continuing with that work as we speak. It is important that we allow those statisticians to carry on with that sensitive work.

The Presiding Officer: We are only halfway through the questions, and time is moving on, so I would be grateful for concise questions and responses.

School Examination Season Stress (Support for Parents, Carers and Pupils)

5. Clare Adamson (Motherwell and Wishaw) (SNP): To ask the Scottish Government what support is available to parents, carers and pupils to help with stress during the exam season. (S6O-04596)

The Cabinet Secretary for Education and Skills (Jenny Gilruth): I recognise that the exam diet can be a stressful time for pupils, and I wish our young people across Scotland the very best of luck as they sit their exams, particularly those in Ms Adamson’s constituency of Motherwell and Wishaw.

Importantly, opportunities should be available throughout the school year for every young person to discuss any stress that they may be feeling as they prepare for examinations and to discuss the support to manage that best. Pupils with concerns about their exams should contact their school in the first instance. The Scottish Qualifications Authority has published the “Your Exams” booklet, which contains helpful information on how to prepare for exams and what to expect.

Clare Adamson: I thank the cabinet secretary for her answer—I, too, wish every pupil well and hope that they achieve their ambitions. Does she agree that there is no single path to success and that it is important to recognise the many routes that exist into careers and fulfilling ambitions,

including modern apprenticeships, vocational courses and tremendous colleges, such as New College Lanarkshire in my constituency, which offer articulated routes into career choices?

Jenny Gilruth: I agree that, as the member said, there is no single path to success. It is important that we recognise and support the many and various routes into fulfilling careers, whether it is through modern apprenticeships, vocational training or further and higher education.

The Scottish Government continues to invest in those pathways, including through supporting colleges such as New College Lanarkshire in the member's constituency and high-quality apprenticeship opportunities. In this financial year alone, we are investing £185 million to support foundation, modern and graduate apprenticeships.

Our commitment to providing breadth of choice in the senior school phase is reflected in the ongoing growth in the numbers of school leavers who achieve one or more vocational or technical qualifications at Scottish credit and qualifications framework level 5 or better and in the fact that 35 per cent of 2023-24 school leavers gained a vocational or technical qualification at or above SCQF level 5.

The new pathways have a vital role in equipping learners with the skills that are needed in today's workforce. They help to ensure that every learner, regardless of background, has a chance to succeed.

Accommodation (Standards)

6. Richard Leonard (Central Scotland) (Lab): To ask the Scottish Government what steps it is taking to ensure everyone living and working in Scotland lives in accommodation that meets an adequate standard. (S6O-04597)

The Minister for Housing (Paul McLennan): All homes in Scotland must meet a tolerable standard and, when a home is rented, it must meet either the repairing standard for private rented properties or the social housing quality standard for social rented homes. In a previous discussion with Mr Leonard, we recognised that there is a gap in protection for some seasonal workers' accommodation. Officials were tasked to carry out scoping work to better understand the full context and consider potential solutions that could be used. I am grateful to Mr Leonard for feeding into that scoping work, and I would be happy to meet him to discuss the work further.

Richard Leonard: It took agitation inside and outside the Parliament last year around the Agriculture and Rural Communities (Scotland) Act 2024 before the Government committed to reviewing the regulation and oversight of tied accommodation for seasonal agricultural workers.

Now that it has done so, when will the Government publish that review? What urgent and immediate action is the Government taking on the ground for the 2025 season, which is now under way, to ensure that seasonal workers' accommodation in Scotland is safe and habitable?

Paul McLennan: Some standards are already in place for seasonal workers' accommodation. Currently, accommodation is inspected by farms and industry through the audit system, which involves farms submitting extensive evidence online, as well as site visits from auditors that include the inspection of accommodation. Further engagement with the industry will be required in order to understand how it deals with the issues that have been raised with it and how we can improve the situation. I happy to pick up the issues with Mr Leonard when we meet again soon.

People with a Learning Disability (Health Passport Scheme)

7. Emma Roddick (Highlands and Islands) (SNP): To ask the Scottish Government what it is doing to support and raise awareness of the health passport scheme for people with a learning disability. (S6O-04598)

The Minister for Social Care, Mental Wellbeing and Sport (Maree Todd): There is currently no national health passport scheme in Scotland for people with learning disabilities. Some of the organisations that the Scottish Government funds have developed their own version of a passport—for example, PAMIS has pioneered its digital passport.

We are continuing work to progress the development of proposals for a learning disabilities, autism and neurodivergence bill. That includes the development of provisions on statutory strategies, guidance and mandatory training, which could be used to support the introduction of a passport scheme for people with learning disabilities.

Emma Roddick: I recently joined L'Arche Highland for a cup of tea as part of its power cuppas series, through which people with influence come to speak and listen to those with learning disabilities. Attendees told me that, when a health professional pays attention to their passport, the experience is great, but if they are rude about the passport or make a big deal about how much of a hassle it is, that makes a stressful situation worse. It was very important to the attendees that I raise the problem directly with the minister. What more can be done to raise awareness of existing schemes and make sure that people with learning disabilities, and their passports, are always treated with the respect that is deserved in health and social care settings?

Maree Todd: We know that implementation and uptake are key barriers to the effectiveness of passports. In addition to the on-going work in relation to the LDAN bill, NHS Education for Scotland and organisations funded by the Scottish Government to support people with learning disabilities—such as PAMIS—can help health and social care professionals to develop knowledge and understanding and to support such implementation. I will ask my officials to pick the matter up with the relevant people.

The Presiding Officer: That concludes general question time.

First Minister's Question Time

12:00

Oil and Gas Production

1. Russell Findlay (West Scotland) (Con): This week, Scotland's only oil refinery ceased operations. Hundreds of workers at Grangemouth have lost their jobs and now face an uncertain future. Scotland has vast oil reserves, but we will now need to import all our petrol, diesel and other fuels. That is the price of the Scottish National Party's and Labour's hostility towards oil and gas production. Before more damage is done, will John Swinney drop his Government's presumption against new oil and gas exploration?

The First Minister (John Swinney): First, I express my support for and solidarity with all those in the Grangemouth workforce who face the prospect of losing their employment as a consequence of Petroineos's decision to stop refining there. The company itself has come to that decision. As Mr Findlay will know from what I have said previously, I judge the decision to be premature, because there is an on-going need for refining activity. Indeed, such activity will take place in other parts of the United Kingdom, despite the issues that Grangemouth faces.

As we have been doing with Unite the union, the Scottish Government will continue to work closely with the workforce at Grangemouth to support the individuals who are affected. In collaboration with the UK Government and Petroineos, we will progress our work to explore alternative business ideas for developing the Grangemouth site so that it could contribute to our net zero agenda. An early decision on the Acorn carbon capture and storage project would help us to advance those efforts significantly.

Russell Findlay: The SNP used to say, "It's Scotland's oil." Now, it wants to just stop oil. Nicola Sturgeon opposed the development of Cambo oilfield, and Humza Yousaf opposed Rosebank even though such opposition will result in higher energy prices and greater reliance on foreign imports. John Swinney personally brought the Greens into government. These dangerous fanatics want to shut down all oil and gas production. *[Interruption.]*

The Presiding Officer (Alison Johnstone): Mr Findlay, I remind you of the need for us to treat other members with courtesy and respect.

Russell Findlay: Okay, I will try again. These dangerous cranks want to shut down all oil and gas production. *[Interruption.]*

The Presiding Officer: Mr Findlay, we have many questions to get through today. I ask you to remember the need to adhere to our standing orders.

Russell Findlay: These dangerous ideologues want to shut down all oil and gas production. The Grangemouth refinery is gone. Both Governments share responsibility for that, but greater blame lies with the Government that turned its back on Scotland's world-leading and innovative oil and gas industry. If John Swinney does not support businesses, how can he act all surprised when they fail?

The First Minister: The first point that I will make in response to Mr Findlay is that we must recognise the climate emergency that we face and the necessity of adapting to that reality. I know that the Conservatives are involved in a pivot on net zero. In fact, they want to deny the climate challenges that we face.

However, the underpinning point, which is at the heart of the Scottish Government's approach to consideration of further development in the North Sea oil and gas sector, is that any such decision must be the subject of a climate compatibility assessment. That is what the courts have now said is required to take place. The judgments that have been issued, which have led to the United Kingdom Government's having to revisit parts of its process for determining such applications, have underlined the importance of carrying out such an assessment.

We cannot deny the realities of what we as a society face, and the Government will support industry to transition to that reality. The best thing that we can all do in this Parliament is to argue for the approval of the Acorn carbon capture and storage project, which the Conservatives refused to authorise when they were in office. The quicker we get Acorn approved, the better for Scotland's climate strategy.

Russell Findlay: We are being honest with the public about the cost of net zero, but the SNP is not—that is the difference. Instead of learning lessons from the SNP's harmful approach to oil and gas, the Labour Government is copying it. Even senior Labour figures and the trade unions can see it. Tony Blair says that Labour's approach is "doomed to fail", and the GMB says:

"Just switching off investment in the North Sea is absolute madness."

John Swinney expresses solidarity with Grangemouth workers, but Unite the union says:

"John Swinney and Anas Sarwar will face the wrath of voters for their broken promises to the workers and the people of Grangemouth."

Labour's copycat approach will cost more Scottish jobs, increase bills and do more to harm the environment by requiring energy to be imported from overseas. Does John Swinney agree that Labour should in fact do the very opposite of what the SNP is doing?

The First Minister: Mr Findlay talks about honesty. In November of last year, Mr Findlay voted for carbon reduction targets in this Parliament, but when his United Kingdom Government leader questioned their merits—not just questioned but actually suggested that those targets be dumped—Mr Findlay called that refreshingly honest. I call it barefaced dishonesty in front of the people of this country to vote for climate change targets one minute—[*Interruption.*]

The Presiding Officer: Let us hear the First Minister.

The First Minister: —and press this Government to act on those targets and then, on the instructions of the Conservative leader, desert the field when the going gets tough.

The Scottish Government's budget, which Mr Findlay did not support, has made available financial support and assistance for the delivery of projects under the project willow umbrella, which will secure the future of the Grangemouth site. I return to my fundamental point that the quickest and best thing that can happen is approval of the carbon capture and storage project at Grangemouth. I hope that Mr Findlay will make up for the failure of the Conservative Government by supporting my call for that today.

The Presiding Officer: I remind all members of the need to treat one another with courtesy and respect and to be very careful about the language that they use to describe other members.

Russell Findlay: I will tell you what—it is quite something to be lectured by a career politician about barefaced dishonesty when he has built a career on it.

The Presiding Officer: Mr Findlay, please have a seat. We have many important questions that members wish to ask in this session. I am not going to ask again—can we please treat one another with courtesy and respect? Let us focus on the business of the day.

Russell Findlay: I assumed that the phrase "barefaced dishonesty" was reasonable and allowed, given that the First Minister has just used it.

The Presiding Officer: Mr Findlay, I have addressed that comment. I have reminded the First Minister and all members of the need to treat one another with courtesy and respect. Let us carry on our session in that manner.

Russell Findlay: People in the real world know that using Scotland's oil and gas is plain common sense. They also know that we need a mix of energy sources for a stable supply and to cut costs for families and businesses. A new generation of nuclear power stations could be part of that mix, and a new poll shows that most SNP voters agree.

Nuclear energy is green and clean. It produces a reliable and steady supply, and it would bring down people's bills, but John Swinney is intent on inflicting self-harm on Scotland by blocking all new developments. That is nonsensical, impractical and irresponsible, but he is blinded by ideology. Nuclear energy makes sense for our economy, and it makes sense for our environment, so why does it not work for John Swinney?

The First Minister: It is for lots of reasons—not least that the cost of nuclear power will not bring down energy prices for householders in this country. Mr Findlay wants me to press ahead with the development of new nuclear power stations. The Hinkley Point C project—a nuclear power station—was due to be completed in 2025 at a cost of £34 billion. On current estimates, it is now expected that it will cost £46 billion and be delayed until 2031. If it was supposed to cost £34 billion but will now cost £46 billion, how will that bring down fuel bills in this country?

I say to Mr Findlay that we have a very developed strategy—[*Interruption.*]

The Presiding Officer: Let us hear the First Minister.

The First Minister: We have a very developed and successful strategy for attracting investment to develop renewable energy capacity in Scotland. We have achieved significant decarbonisation of our electricity networks through the development of renewable technology. A few weeks ago, the Deputy First Minister and I, along with the Acting Cabinet Secretary for Net Zero and Energy, led an investment conference in Edinburgh, which brought hundreds of investors into Scotland to invest in renewable energy. That is the future for this country—clean, green energy that will lower fuel bills. People will get that from an SNP Government.

Mental Health Support (Children and Young People)

2. Anas Sarwar (Glasgow) (Lab): This week, statistics that have been revealed through freedom of information requests have shown that young Scots are being shockingly failed by the Scottish National Party Government. All over Scotland, children and young people who are at crisis point and in desperate need of mental health support are having to wait not just months, but years, for

treatment. One young person in NHS Lothian was forced to wait six years for mental health treatment. That is scandalous. Why, on John Swinney's watch, are people's sons and daughters, nieces and nephews, waiting six years to get the treatment that they need?

The First Minister (John Swinney): I am very happy to address the particular case that Mr Sarwar raises with me and to say—which he knows from my previous answers—that, in general, we are working to reduce waiting times for individuals to access treatment across the health service in Scotland, and we are making progress in a number of areas in relation to that objective. He will also know that the Government has delivered increased investment in mental health support to expand capacity to meet young people's developing needs. I want to ensure that our investments are well targeted in order to address the issues that Mr Sarwar has raised. That is why we increased the funding for mental health support, and that is why we are putting in place assistance around the country.

Anas Sarwar: The situation is so bad that today's *Daily Record* reports that Rod Stewart has offered to step in and pay for a young Scot to access the care that he needs.

The SNP claims that it is meeting its target for 90 per cent of children and young people to start mental health treatment within 18 weeks, but we can reveal that it is fudging the numbers and that things are much worse than it is letting on. Some health boards are now counting an initial assessment as treatment when, in fact, young people may still be waiting for months or years for their actual treatment to start, and health boards are now removing diagnoses of autism and attention deficit hyperactivity disorder from child and adolescent mental health services waiting lists. The SNP is fiddling the figures. Why does John Swinney think that it is acceptable to mislead the public about our young people and their mental health treatment?

The First Minister: That is not what we are doing. We are focusing on ensuring that support is in place in communities the length and breadth of the country.

It is often the case that CAMHS is simply not the correct service for children who are seeking a diagnosis for a neurodevelopmental condition such as autism or ADHD, unless they have a co-existing mental health condition. That is the key point that I need to get across to reassure parents, who will be anxious about the issues that Mr Sarwar raises. As he knows, we have made progress on the CAMHS waiting lists in the past year. The overall CAMHS waiting list decreased by 20.9 per cent in the previous year and that progress has continued in the latest quarter.

The Government will be focused on ensuring that the support that is necessary for individual young people is available to them, and that the right pathway is put in place to meet the needs of every young person in Scotland. That is the commitment that I give to Parliament today, and that is the foundation of the Government's approach in that respect.

Anas Sarwar: Let us talk about one of the parents. Michael Gregori is a father from Dumfries. His son Iain was one year old when a health worker told Michael that Iain could be autistic and recommended a national health service diagnosis. Three years on, Iain is still non-verbal and is still waiting on a diagnosis. Michael was a member of the Scottish National Party and campaigned for it to be in government, but he told me that it should now hang its head in shame, as it has let Scotland down. Speaking of his son, he said:

"Everyone's saying he needs this diagnosis, he's autistic. Everyone's sure of it but at the same time he needs an official NHS diagnosis to get the resources he needs."

Rod Stewart heard that heartbreaking story and has stepped in to pay for Iain's diagnosis. Others will not be as lucky. Why, on John Swinney's watch, do young Scots have to rely on the charity of a rock star to get the treatment that they need?

The First Minister: It is not the case that a diagnosis is necessary for young people to get support. It is absolutely critical that I make that point to Parliament today, because there are pathways that are available other than those involving a diagnosis for ADHD or a neurodiversity condition that enable young people to attract the support that will assist them in meeting the challenges that they face. It is vital that I convey that message at First Minister's question time today, so that parents can be reassured that there is support available to meet the needs of individual young people.

The Government is making a range of interventions. We are expanding mental health support and supporting the development of community interventions, and we are working to ensure that young people get support at the earliest possible opportunity. A variety of pathways enable that to be the case, and ministers will continue to focus on delivering the services that young people need in our country.

Car Use (Reduction)

3. **Lorna Slater (Lothian) (Green):** As with its climate targets, the Scottish Government is not on track to meet its targets to cut car use. It sounds like, instead of putting forward a practical solution for success, its preferred solution is to drop the target altogether.

We urgently need to cut car use to tackle the climate emergency. We need cheaper trains, buses and ferries to drive up passenger numbers. We need better connections for rural communities, and we need public ownership of bus services, so that they are run for the people who use them, not for private profit.

Will the First Minister confirm that the Scottish Government is scrapping the car-use reduction target?

The First Minister (John Swinney): As is well understood, there are significant challenges in our meeting the car-use reduction target, and that issue is being considered by the Government at this time.

It is important that I set out the range of other measures that the Government is taking to invest in supporting the use of public transport, which is our way out of the challenges that we face on the issue. One of those investments is the support for the concessionary travel scheme, which is now much more extensively available, since we expanded it—with the support of our colleagues in the Green Party—to under-22s. We have also invested significantly in active travel, with support sustained in the Government's budget, which attracted support in Parliament earlier this year, to ensure that we address the necessity of changing the priorities of individuals.

The Government has examined and explored a range of different options to support the development of our policy. We will continue to do that as we work, as part of our climate agenda, to reduce car use and to increase the reliance of members of the public on public transport.

Lorna Slater: Scotland simply cannot afford any more broken promises on climate issues. Economists have found that, if we do not act now, Scotland could be up to £140 billion poorer by 2035. Through their soaring energy bills, people have been paying the price for a lack of progress on insulating our homes and moving away from expensive gas heating.

There is no route to net zero by 2045 that does not involve making our homes warmer and cheaper to heat by insulating them and replacing gas heating systems. Bold action is needed on climate to get Scotland back on track. What new action will next week's programme for government contain to reduce our sky-high energy bills and achieve the rapid cut that is needed in the use of fossil fuels?

The First Minister: Obviously, the details of the programme for government will be set out next Tuesday, but we have already given a commitment to the introduction of the heat in buildings legislation, which will be introduced in

this parliamentary session to support us in our efforts.

We have also committed to investing, in this current budget year, £300 million in the heat in buildings programmes, which will increase energy efficiency and provide financial support to do exactly what Lorna Slater has put to me. That comes alongside more than £1.63 billion of funding through our heat in buildings schemes in this parliamentary session so far.

I simply say to Lorna Slater that I understand—and share—her passion and determination to make progress on the climate agenda, and that it is at the heart of the Government's priorities. However, we must also recognise the formidable financial commitments that have been made to decarbonise heating systems in the homes of our constituents and ensure that, through that mechanism, we contribute to reducing their effect on the climate. That will be at the heart of the Government's agenda as we move forward.

Economic Growth (Implications of EY ITEM Club Spring Forecast)

4. Jackie Dunbar (Aberdeen Donside) (SNP):

To ask the First Minister what assessment the Scottish Government has made of any implications for its work to grow Scotland's economy of the EY ITEM club spring forecast, which downgraded expectations for United Kingdom output over the next two years. (S6F-04049)

The First Minister (John Swinney): The EY ITEM club forecast reflects the negative impacts that global trade disruption and uncertainty will have on the economy, highlighting the need to commit ourselves to Europe and its single market.

We will continue to do all that we can to support businesses and households through those challenges. Our programme for government will focus on delivery, including targeted initiatives to boost Scotland's economic prospects now and for the long term, particularly sustainable and renewable energy resources, to draw in new investment and create rewarding and well-paid jobs.

Jackie Dunbar: It is becoming increasingly clear to the Chancellor of the Exchequer that we cannot cut our way to growth, and the Labour Government must urgently abandon its tax on jobs and the austerity fiscal rules under which it is operating. Does the First Minister agree that abandoning those measures is key to unlocking greater investment in our economy, and can he speak to the actions that his Government is taking to stimulate growth?

The First Minister: The United Kingdom Government has taken on fiscal targets that it

inherited from the Conservatives and which are enormously damaging to a growth agenda, and it has compounded that error with the increase in employer national insurance contributions, which will be a further depressant on growth in the economy. The conflict and contradiction between the rhetoric on growth and the reality of decision making is becoming ever more apparent, because of the global economic challenges that we face.

The programme for government will set out additional measures that the Scottish Government will take to build resilience in the Scottish economy, to support our economy to have an international focus and outlook, and to make sure that we support and encourage innovation in the Scottish economy, which is the route to success for Scotland.

Murdo Fraser (Mid Scotland and Fife) (Con):

One of the key issues that is holding back economic growth is the high cost of energy, which we have already discussed today. Last year, the Scottish Government was very enthusiastic about the idea of zonal pricing of electricity. Is that still its view?

The First Minister: There has to be a careful assessment of the impact of zonal pricing on a variety of factors. For example, will it bring down energy prices for householders, which is the absolutely critical and urgent priority? Will it secure the necessary investment in the future of our energy systems? Will it enable us to contribute towards the economic growth and economic development agenda? I notice that Mr Fraser asks me this question while being associated with a party that presided over sky-high energy prices in this country and did absolutely nothing about the problem.

Neurodevelopmental Assessment Services (Report on Tests of Change)

5. Edward Mountain (Highlands and Islands)

(Con): To ask the First Minister, in light of the reported high demand for neurodevelopmental assessment services, when the Scottish Government plans to publish the report on the work that it funded on the five "tests of change" across Scotland, which concluded in March 2024. (S6F-04036)

The First Minister (John Swinney): Following development of the neurodevelopmental specification, which aims to ensure that children and families receive timely support that meets their needs, the Scottish Government has provided £1 million of funding across Highland, Fife, East Lothian, Aberdeen city and Forth Valley for projects to test and support implementation. A report on the five tests of change will be published this summer.

Edward Mountain: Not imminently, then.

In the Highlands, we have a situation in which the health board has a neurodevelopment assessment waiting list of 1,958 young children—four times greater than it was three years ago. NHS Highland says that some children will have to wait in excess of five years even to get an assessment, and that it will take some 15 years to fully clear the existing waiting list. Does the First Minister consider it acceptable that some children will go through their entire school career waiting for an assessment, or that parents will have to fund private care to ensure that their children get the most from their schooling?

The First Minister: As Mr Mountain will know, NHS Highland was supported with funding for a time-limited test of change, which has concluded, as I said earlier. A new neurodevelopmental pathway is in development with local partners to address exactly the issues that Mr Mountain has put to me. I encourage NHS Highland to progress that work, using the £7.1 million of funding that it receives as part of the overall funding given to national health service boards by the Scottish Government to support neurodevelopmental services.

I would stress the importance of seeing a range of different interventions, some of which are assisted by the counselling services in schools that the Government has funded. We continue to provide £16 million a year to local authorities to ensure that there are counselling services in every secondary school in Scotland, and we are maintaining financial support through the mental health assistance that we have in place. All those factors are contributing to addressing the issues that Mr Mountain has put to me.

Pam Duncan-Glancy (Glasgow) (Lab): The First Minister has set out the factors that are addressing the issue, but there are currently 9,000 school-age children awaiting a diagnosis in Glasgow. At the same time, the cuts to the integration joint board in Glasgow mean that planned attention deficit hyperactivity disorder pathways have been shelved and vital pilot programmes have been cancelled. The First Minister can say that there are pathways, but those 9,000 children are stuck waiting, some of them for years.

What does the First Minister say to the 9,000 people who are on the waiting list in Glasgow? Exactly what pathways are available to them, and when can they expect to get their diagnosis?

The First Minister: I come back to one of the points that I made to Mr Sarwar in my earlier response, which is that not all of those young people require a diagnosis to make progress in addressing the circumstances that they face.

Therefore, we must have available a range of community-based interventions, supported by some of the financial assistance that I have set out, to ensure that the needs of those young people are met at the earliest possible opportunity.

As a consequence of that, the Government is working to ensure that we have those mechanisms available in all localities so that young people can access those services. That is what the funding that I set out in my response to Mr Mountain is designed to achieve.

Council Housing Allocations (Suspension)

6. Mark Griffin (Central Scotland) (Lab): To ask the First Minister what the Scottish Government's response is to reports of local authorities suspending council housing allocations. (S6F-04032)

The First Minister (John Swinney): I am aware of the City of Edinburgh Council's recent announcement on the issue. The emergency measure taken by the council will redirect all available council-owned housing stock to people who are experiencing homelessness, with the exception of those with a disability with gold priority for housing or those who are awaiting discharge from hospital.

It will be essential to monitor the impact of that temporary measure, as the council seeks to fulfil its legal responsibilities as well as reduce the use of unsuitable temporary accommodation in the city. The Government will continue to deliver our investment of £768 million in affordable housing this year, the majority of which will be for social rent.

Mark Griffin: The reality of the housing emergency in Scotland is that local authorities such as the City of Edinburgh Council have been left in an impossible position. They are routinely breaching their legal obligations and are now having to take emergency measures, and all of that is having huge impacts on families in desperate need of an appropriate home.

The Scottish Government has been reviewing the affordable housing supply programme target for more than a year, instead of focusing on building those houses. Will the Government commit to building those 110,000 homes in the final programme for government, as it did in the first? Does he recognise that a lack of supply across all tenures is driving the housing emergency? Will he look at the action being taken by a United Kingdom Labour Government, and which is now being proposed in Canada, Australia and other parts of the world, to really drive up housing supply?

The First Minister: Let me reassure Mr Griffin that the Government is not spending all its time

reviewing the affordable housing supply programme target; it is spending its time making sure that more houses are available for occupation by individuals in temporary accommodation or facing homelessness. The actions of the Cabinet Secretary for Social Justice and the Minister for Housing in making more resources available to local authorities to tackle void accommodation are having an impact on the availability of accommodation in the city of Edinburgh as we speak. We have pivoted in our policy to ensure that more accommodation can be available.

Also, over the lifetime of this Government, we will have built more houses per head of population than in any other part of the United Kingdom, by a country mile. We have invested £768 million in the affordable housing supply programme for the current financial year, which will be spent and will support the increased supply of housing. Mr Griffin and his colleagues never voted for that, and he has a bit of a brass neck to come here and complain to me about housing when he is not prepared to vote for the money that is being given to make something happen about it.

Ben Macpherson (Edinburgh Northern and Leith) (SNP): It is deeply concerning that the City of Edinburgh Council has decided to suspend council housing allocations, especially when so many people in my constituency and others are already waiting to be housed.

Labour has been in power in Edinburgh for around 35 of the 40 years of my life, and it is clearly a statement of fact that, over decades, its Labour-run administrations have not invested enough in the city's social housing stock. Will the First Minister, in contrast, outline what additional steps the Scottish Government is taking, has taken and will take to play its part in tackling Edinburgh's acute housing emergency, and what additional actions are being considered with partners to help address that very serious situation?

The First Minister: I will address Mr Macpherson's point directly, because he makes substantial points about the record of the Labour Party.

Since we declared the housing emergency last May, we have prioritised working most urgently with five local authorities, including the City of Edinburgh Council, and we are accelerating and accentuating the interventions in Edinburgh to address the very significant issues that Mr Macpherson has put to me. We have also, as I said in my response to Mr Griffin, reshaped investment to ensure that we can support local authorities in tackling void accommodation, and we have increased support for adaptations in properties to enable people to be supported in their housing.

I appreciated the opportunity to discuss those issues with Mr Macpherson when we visited the former Granton gasworks site some weeks ago. The Government has invested £16 million to enable development of that site, which will lead, if my memory serves me right, to the creation of more than 800 affordable homes in the city of Edinburgh. That is the type of targeted action that the Scottish Government is taking to address the housing emergency, and it will be the underpinning of our housing programme in the years to come.

The Presiding Officer: We move to constituency and general supplementary questions.

Reinforced Autoclaved Aerated Concrete Crisis (Funding)

Liam Kerr (North East Scotland) (Con): The *Press and Journal* has reported as part of its trapped by RAAC campaign that the crisis in Aberdeen caused by the use of reinforced autoclaved aerated concrete is leading to unremitting and inescapable negative health consequences for homeowners. My solution, which is to use the unspent £20 million housing fund promised to Aberdeen by the Government in 2016, is being widely reported today. Does the First Minister support that, and will he commit his Government to doing everything that it can to help the Torry homeowners?

The First Minister (John Swinney): I have every sympathy with the homeowners in Torry and the issues that they face. I understand that ministers are meeting residents and homeowners tomorrow to discuss those issues, and I am sure that the suggestions that Mr Kerr has made will be part of that conversation.

PA Scotland (Staff Cuts)

Rona Mackay (Strathkelvin and Bearsden) (SNP): Given that Scotland's media relies on PA Scotland's output, I am sure that the First Minister will share my concern about its planned cuts to staff that were reported this week. Those cuts could have considerable impact on news operations in Scotland, particularly in the year running up to an election. Will the First Minister join me in calling on PA Media's management to reconsider the cuts in order to protect impartial journalism and preserve the important role of media scrutiny in our democracy?

The First Minister (John Swinney): I join Rona Mackay in indicating support for the important role that the output of PA Media and PA Scotland plays in reporting events and political discourse in Scotland. PA staff are an integral part of the authoritative and reliable reporting of events and political engagement, which is essential for our

democracy and supports the availability of information to news organisations the length and breadth of the country. I have written to PA Media, urging it to reconsider the proposals, and I hope that the organisation is able to take a different approach and ensure the independence, long-term sustainability and resilience of news reporting in Scotland through it.

Alcohol Harm

Carol Mochan (South Scotland) (Lab): Alcohol harm continues to be a key concern in Scotland. In East and South Ayrshire, an area that I represent, a combined total of 50 lives were lost to alcohol in 2023. Today, a briefing signed by more than 70 organisations has been published, which calls for urgent action on alcohol harm. It states that the current Scottish Government action is not proportionate to the scale of the problem and it makes a range of recommendations around early diagnosis for liver disease and funding for recovery treatment and support services. Will the First Minister consider that important briefing's proposals as he prepares to publish the programme for government next week?

The First Minister (John Swinney): Those issues and representations will be taken very seriously by the Government. We engage and support that effort through the alcohol and drug partnerships around the country; Carol Mochan will be familiar with those in the communities that she represents.

We have taken a number of measures to tackle alcohol harm in our society, and we will continue to consider what further measures we can take. I recognise that the measures that we have taken so far have not addressed all the circumstances that we face, and we must be open to some of the suggestions that are made. There is space for us, as a Parliament, to find areas of common ground to try to make progress on this agenda, because it requires long-term intervention and action—a combination of public awareness and healthcare and support services to meet individuals' needs.

Renewable Energy Supply Chain

Audrey Nicoll (Aberdeen South and North Kincardine) (SNP): This week, Scottish Renewables published its latest supply chain impact statement, which showcases a diverse range of businesses working across Scotland's renewable energy supply chain, including Apollo, GQS and Ternan Energy in Aberdeen. Will the First Minister join me in welcoming the report, which represents nearly 10,000 jobs? Will he also outline how the Scottish Government is supporting the renewable energy supply chain to capture economic benefits for Scotland?

The First Minister (John Swinney): I join Audrey Nicoll in welcoming the report. The Government has a long-standing commitment to support supply chain developments in renewables—indeed, that was very much a focus of the investment conference to which I referred earlier. We are investing up to £500 million over five years to anchor our offshore wind supply chain in Scotland. We have also been successful in securing major investments such as Sumitomo at Nigg, the investments at Ardersier by Haventus and a number of other projects that are in active development to secure supply chain benefits for Scotland from the significant opportunity of renewable energy.

Antisocial Behaviour on Buses (Under-22s Concessionary Pass)

Sue Webber (Lothian) (Con): At this week's Net Zero, Energy and Transport Committee meeting, Sarah Boyd from Lothian Buses made it clear that there is a link between the increase in antisocial behaviour on the Lothian Buses fleet and the under-22s concessionary bus pass. Will the minister provide an update on progress to find a mechanism to remove the under-22s concessionary pass from those who persistently engage in antisocial behaviour?

The First Minister (John Swinney): Work is under way to develop that mechanism. If we were to take that step, there is the likelihood that secondary legislation would be required to enable the mechanism to be put in place. The Government is actively considering those issues. For completeness, I should also say that the under-22 bus travel initiative has been enormously successful. It has attracted a huge amount of participation and it has increased the mobility of young people. The overwhelming majority of young people exercise their participation in the under-22s scheme wisely, thoughtfully and effectively. We have to be prepared to tackle unacceptable behaviour, but we also have to applaud young people for the positive contribution that they make to our society.

CitizenCard Identification

Foyso Choudhury (Lothian) (Lab): I was contacted by a constituent with epilepsy, who is not eligible for a driving licence. For identification, they use the CitizenCard, which is part of the proof of age standards scheme. However, they find themselves refused service from many places that have a blanket policy for ID. Does the First Minister share my concern that my constituent is being unfairly treated due to their condition? Will he direct ministers to improve acceptance of the CitizenCard for those people who do not have a driving licence?

The First Minister (John Swinney): It is not a point with which I am familiar, but I will look at it on Mr Choudhury's behalf, if he could supply me with more details about the specifics to enable me to do so.

Various mechanisms are available to individuals, not least the under-22s concessionary scheme—although I am not sure of the age of the constituent whose experience Mr Choudhury puts to me. If he would like to write to me, I will certainly consider those issues.

Employer National Insurance Contributions

Kenneth Gibson (Cunninghame North) (SNP): Fraser of Allander Institute research has found that almost half of Scottish firms are hiring fewer staff because of the increase to employer national insurance contributions that was imposed by the United Kingdom Labour Government. That tax on jobs takes a wrecking ball to the Scottish Government's ambition of growing Scotland's economy. What discussions have ministers had with their UK counterparts regarding the impact of Labour's unwanted tax hike? Has the Labour Government shown any sign of listening to the concerns of Scottish businesses, charities and the public sector?

The First Minister (John Swinney): The Cabinet Secretary for Finance and Local Government has raised that issue on a sustained basis with the United Kingdom Government. I agree with Mr Gibson's analysis and commentary that the increase in employer national insurance contributions will deflate employment opportunities in Scotland, which I very much regret, as it will be another impediment to the agenda of delivering economic growth in Scotland.

Given the enormous external challenges that we face, the Government's focus is to ensure that we do all that we can to support economic growth. It would assist us enormously if the UK Government changed its position on employer national insurance contribution rises.

Probationary Teachers

Douglas Ross (Highlands and Islands) (Con): This week, Scottish Teachers for Permanence published its 2025 report on the views of probationary teachers. It makes grim reading: 80 per cent of those who were surveyed are set to end their probationary year without a permanent job, and more than 75 per cent say that they are not feeling supported during the time when they should be supported most. Those highly trained teachers are telling us—these are their own words—that once they have qualified, they are being “thrown onto” the supply pile and are scrambling for scraps of work with no security and no permanent role, and, in some cases, are not

even guaranteed supply work. The Scottish Government has said that supply is a choice, but that is not true. If the First Minister's Government truly values education, why is it abandoning the next generation of teachers at the very start of their careers?

The First Minister (John Swinney): We are not doing that. The Cabinet Secretary for Education and Skills met Scottish Teachers for Permanence in November and discussed many of the issues that Mr Ross has raised. We have seen an expansion in the number of schoolteachers in post since 2014, and the number of permanent posts has remained stable at more than 80 per cent over the past 10 years.

Decisions about the employment of teachers are taken by local authorities, and the Government works closely with them to ensure that we increase levels of permanence in the teaching workforce so that the investment that is made in training high-quality teachers can be used for the benefit of pupils around the country.

Youth Violence

Paul O'Kane (West Scotland) (Lab): Earlier this month, in my West Scotland region, two young girls were brutally assaulted by other teenagers during two horrific incidents just days apart. The incidents were recorded and shared widely on social media. I am sure that the whole Parliament will agree that such incidents are completely unacceptable and will join me in the concern that there is now an increasing list of similar incidents across the country.

The Government's answer to the wider problem so far seems to have been that the Cabinet Secretary for Education and Skills has led a number of summits on the issues. However, surely an important part of the Government's response must be more safe places and local facilities to support young people. What decisive action will the Government finally take to tackle these issues? Will it reverse years of cuts and closures to youth centres, youth clubs and programmes due to its chronic underfunding of local authorities, or will the First Minister simply instruct the education secretary to hold yet another talking shop?

The First Minister (John Swinney): I drew together a gathering as a consequence of the initiative that was started by the *Daily Record* and some of the families affected by the unacceptable violence that Mr O'Kane refers to. I was pleased to host that summit on 13 January with cross-party representation. If memory serves me right, Pauline McNeill from the Labour Party attended and made a constructive contribution to the discussion, in which members of all parties and ministers

participated and listened to the voices of young people.

Let me say at the outset that what Mr O’Kane recounts to the Parliament is completely unacceptable. We are taking a number of measures through our various awareness campaigns, such as the mentors in violence prevention programme, which is delivered in more than 200 schools in local authorities across the country; the work of the cashback for communities programme; the work of fearless, the youth arm of Crimestoppers; and the work of the Scottish Violence Reduction Unit. All those measures are aimed at creating a culture in which the things that were set out by Mr O’Kane do not happen to young people. We invest in facilities around the country through a variety of interventions that are set out in the Government’s budget, which has delivered a real-terms increase to local authority funding and supports third sector interventions to meet the needs of communities around the country. We will continue to do that.

The Presiding Officer: That concludes First Minister’s questions. The next item of business is a members’ business debate in the name of Emma Harper. There will be a short suspension to allow people to leave the public gallery and chamber.

12:46

Meeting suspended.

12:49

On resuming—

World Asthma Day 2025

The Deputy Presiding Officer (Liam McArthur): The next item of business is a members’ business debate on motion S6M-17073, in the name of Emma Harper, on world asthma day 2025. The debate will be concluded without any question being put. Members who wish to participate should press their request-to-speak buttons now.

Motion debated,

That the Parliament welcomes World Asthma Day 2025, which takes place on 6 May; recognises that the theme for World Asthma Day 2025 is “Make Inhaled Treatments Accessible for ALL”, which is set by the Global Initiative for Asthma (GINA); understands that around 360,000 people are living with asthma in Scotland, including 72,000 children, and that it is the most common respiratory condition impacting people of all ages; notes the support for efforts to improve asthma diagnosis and treatment, including receiving the basic elements of asthma care, which are an annual review, inhaler technique check and written action plan; regrets, however, that only 24% of people with asthma reported receiving all three basic elements, according to Asthma + Lung UK’s Life with a Lung Condition survey; notes that new asthma guidelines were launched in 2024 by the Scottish Intercollegiate Guidelines Network (SIGN), National Institute for Health and Care Excellence (NICE) and British Thoracic Society (BTS); understands that 2023 saw the highest number of asthma deaths recorded in Scotland in over 30 years, and notes the support for the campaigns and advocacy from charities such as Asthma + Lung UK Scotland to improve asthma prevention, diagnosis, treatment and care across the country, including in the South Scotland region.

12:49

Emma Harper (South Scotland) (SNP): I thank colleagues for signing my motion, which has allowed us to bring the subject of world asthma day to the chamber. I thank Asthma and Lung UK Scotland for all its work as secretariat to the cross-party group on lung health, which I co-convene with my colleague Alexander Stewart, and for the briefing that it provided ahead of today’s debate. I also thank Chest Heart and Stroke Scotland for its briefing.

Asthma and Lung UK Scotland has campaigned, advocated and made great efforts that have been crucial in driving improvements in asthma care. As we approach world asthma day, which falls on 6 May this year, it is important to reflect on the progress that has been made in asthma care and on the challenges that remain.

This year’s theme from the Global Initiative for Asthma—GINA—is “Make Inhaled Treatments Accessible for ALL” and emphasises the need to ensure that everyone, regardless of their global location or socioeconomic status, has access to

inhaled medications that they need both to control the underlying disease and to treat asthma attacks. That is one reason why having the right inhaler and the right inhaler technique feature in the advice for treatment, which I will come to.

Asthma is a pervasive condition that affects approximately 360,000 people in Scotland, including 72,000 children, although it was interesting to read a recent study in *The BMJ* that estimated that the prevalence in Scotland could be as much as 720,000. Asthma is the most common respiratory condition impacting individuals of all ages and its management requires a comprehensive and co-ordinated approach.

As someone who is still a nurse and has a sister who was a respiratory nurse consultant during her time in the national health service, I recognise the critical importance of providing the basic elements of asthma care, which are an annual asthma review, inhaler technique check and written asthma action plan. Those elements empower individuals to manage their condition effectively. Asthma and Lung UK reported that 30 per cent of asthma patients received all three of those essential components in 2025, which is an increase from the 24 per cent figure that was stated in my motion and came from 2024. It is good to see that that number is increasing.

The 30 per cent figure highlights the need for concerted efforts to improve the delivery and accessibility of basic asthma care. I know a number of the clinicians who are involved in taking forward work on lung health improvement. Dundee's Dr Tom Fardon led the creation of the respiratory care action plan and that work is now being delivered by the centre for sustainable delivery. In November 2024, significant strides were made with the launch of new asthma guidelines by the National Institute for Health and Care Excellence along with the British Thoracic Society and the Scottish intercollegiate guidelines network, which is known as SIGN. Those guidelines are a collaborative effort to update practice in asthma management.

One key aspect of the asthma pathway is diagnosis, and the pathway includes recommendations for initial clinical assessments and objective tests to diagnose asthma in adults, young people and children. Testing recommendations include the use of fractional exhaled nitric oxide, which supports the diagnosis and management of asthma by measuring nitric oxide levels in exhaled breath. Elevated FeNO levels can indicate airway inflammation, which is a hallmark of asthma, and can help to guide treatment decisions. The pathway also includes monitoring, which is important in adjusting treatment plans and making interventions.

The new guidelines from SIGN and the BTS cover managing chronic asthma by using pharmacological and non-pharmacological strategies, with inhaler device selection and strategies for improving adherence to prescribed inhalational medication, and the management of acute asthma, with recommendations for those managing exacerbations.

The pathway includes the management of difficult and severe asthma with specialist therapies and has specific management guidelines covering issues during pregnancy and labour or while breastfeeding, as well as asthma in adolescence.

I hope that I have covered enough of those guidelines, which I know are detailed and complex.

I will now touch on the environmental impact of inhaler devices and the reduction of environmental harm. One inhaler manufacturer is transitioning its pressurised metered-dose inhalers—PMDIs—to a new propellant called HFO-1234z, whose global warming potential is 99.9 per cent lower than those of the propellants that are used in conventional inhalers. That change of propellant for multidose inhalers aims to reduce the environmental impact of respiratory medicines.

We must also consider the recycling potential of inhalers. Some do not have a lot of components and are relatively easy to recycle, but some have multiple plastic components that are glued or fixed and some are manufactured thousands of miles away from the end user.

Although the new guidelines offer a road map for improved asthma care, challenges persist.

I turn to deaths from asthma. In 2023, Scotland recorded the highest number of asthma deaths in over 30 years, which is a sobering reminder of asthma's potential severity. That situation underscores the need for continued vigilance and dedication to improving asthma prevention, diagnosis, treatment and care across the country, including in NHS Dumfries and Galloway and NHS Borders.

There is a lot to cover, and in the few minutes that I have in this debate I cannot do justice to all the work that expert national health service clinicians do every day to support their patients. However, I thank them for that.

I look forward to hearing an update from the minister. She has been excellent in engaging with the cross-party group on lung health and she has kindly provided us with much of her time at the health events that I have hosted in Parliament, including those on asthma.

This year's world asthma day is an opportunity to recommit ourselves to ensuring that everyone

with asthma has access to the care, treatment and support that they need to live life as fully and healthily as possible.

12:56

Maurice Golden (North East Scotland) (Con): I thank Emma Harper for securing this debate on world asthma day 2025. I, too, thank Asthma and Lung UK for the incredible work that it does on asthma and respiratory conditions in general. It quite rightly campaigns for lung health to be treated as a national priority, and it is not hard to understand why when we look at the numbers. The motion refers to figures from Asthma and Lung UK that show that around 360,000 Scots are afflicted with asthma, although a recent study that was published in the *British Medical Journal* estimates that the actual number could be up to double that.

Although asthma is manageable for many, we should not underestimate the seriousness of the condition. Since 2014, more than 1,000 Scots have died from asthma attacks, with the figure for 2023 being the highest in more than 30 years. Many such deaths are preventable, but only if we take the right action, such as providing the basic treatment steps that are outlined in the motion. They consist of a patient action plan, education on proper inhaler technique and an annual review. That is a vital combination, because asthma requires daily attention, even if someone otherwise feels well, in order to mitigate the risk of asthma attacks.

It is therefore deeply concerning to see what the research from Asthma and Lung UK says about that. Last year, just 30 per cent of Scots received all three of the basic elements of treatment, which was slightly behind the rest of the UK, for which the figure was 32 per cent. We need more progress to be made, so it is obviously a concern that the respiratory care action plan appears to have been shelved. Perhaps we will hear from the Scottish Government today on the possibility of a new lung health strategy to allay those concerns.

I also hope that we will hear more about the action to tackle air pollution, because many people with asthma readily say that it makes their condition worse. Common complaints include feeling breathless or wheezy and having symptoms triggered. In that regard, I note the case of one of my constituents, which has been reported in the press. Audrey Glenn from Dundee has raised the impact that localised air pollution from coal fires is having on her. She sees her garden fill up with smoke, which triggers coughing and forces her to reach for her inhaler. She makes the perfectly reasonable point that house coal fires are not suitable for built-up residential areas in this day and age.

Emma Harper: Does the member agree that low-emission zones will help to contribute to cleaner air in our cities, which might benefit people who have asthma—especially those who might be triggered by poor air quality?

Maurice Golden: It was clear from yesterday's debate that we need the data to confirm that, and the effectiveness of low-emission zones as a mechanism for improving air quality needs to be verified. We need to see the data, and there has to be an evidence-led approach. We could have air pollution monitors to ensure that the data is correct, particularly in areas such as schools, and not just focus on specific areas in city centres. A lot of work can be done in that area, but I was speaking about domestic coal heating.

Domestic coal heating is a major problem for air quality. However, in England, the sale of house coal was banned two years ago. To be fair, in Scotland, the cleaner air for Scotland 2 strategy proposed such a ban, but there has been little or no action from the Scottish Government to implement it. That seems like an obvious move to make. Consumers and householders would not be disadvantaged, but air quality would certainly benefit.

Scotland has some catching up to do, both on the treatment and prevention fronts. I urge ministers to take the advice of Asthma and Lung UK to treat asthma and respiratory conditions as the national priority that they are.

13:01

Clare Adamson (Motherwell and Wishaw) (SNP): I, too, thank Emma Harper for bringing the debate to the chamber, and for her continued dedication to everything about lung health.

The subject is timely. Spring brings welcome warmer weather, but increased pollen levels can lead to flare-ups of respiratory issues, including asthma. With asthma being the most common respiratory condition, and given that it affects people of all ages, it is disappointing to hear that only 24 per cent of people who live with asthma report receiving the three basic checks for asthma care. The three checks are an annual review, inhaler technique check and written action plan. If people take one thing away from the debate, I want everyone to know that, if they are living with asthma, they can speak to clinicians, their general practitioner or those in front-line services about the basic checks.

Asthma is a relatively well-understood condition and it is common, but—as Maurice Golden said—that does not mean that it should be treated lightly. As the motion notes,

“2023 saw the highest number of asthma deaths recorded in Scotland in over 30 years”.

That speaks to the seriousness with which we should all treat the basic checks and the importance of advocacy of the global initiative for asthma and charities such as Asthma and Lung UK.

We are taking respiratory health more seriously. Air pollution is now getting much-needed prominence in public policy, and it has been a recurring subject of the cross-party group on accident prevention and safety awareness, which I have the privilege to convene. The group tends to raise it in the context of child safety. Planning proposals around schools and nurseries need to be cognisant of the danger that air pollution presents for children, in particular.

Members may remember the awful case of Ella Adoo-Kissi-Debrah. Ella died following an asthma attack in 2013, with an inquest later finding air pollution as a material contribution to her death in London. That was the first time in the UK that air pollution was recognised as a factor in such deaths. The levels of nitrogen dioxide—which Emma Harper talked about—near Ella’s home had exceeded World Health Organization and European Union guidelines.

Her mother, Rosamund, understandably could not describe her settlement as a win in that situation, given the unimaginable tragedy that was inflicted on her family, but it puts a stark emphasis on the importance with which policy makers and legislators should treat clean air strategies. Rosamund’s sobering words, after a mammoth legal saga, were that

“The fact that in 2024 children continue to die from asthma is not acceptable.”

Ella’s death was preventable. Indeed, according to the Global Initiative for Asthma, most of these deaths are preventable. Asthma is one of the most common chronic non-communicable diseases. It affects more than 260 million people and is responsible for more than 450,000 deaths each year worldwide.

Managing the condition and managing attacks is often a matter of basic accessibility to inhaled treatments. That brings the focus of this year’s world asthma day theme into sharp relief: “Make Inhaled Treatments Accessible for ALL”.

I thank Emma Harper and other members who have contributed to the debate. I hope that it will go some way to raise the importance of the management of asthma among those who watch the debate.

13:05

Carol Mochan (South Scotland) (Lab): I, too, thank Emma Harper for bringing this important debate to the chamber. I know that she has great

knowledge and skills in this area, and I praise the on-going work that she is committed to carrying out in the Parliament and beyond.

Scottish Labour welcomes world asthma day 2025 and recognises this year’s theme, which, as members have said, is “Make Inhaled Treatments Accessible for ALL”. As we have heard, that is important, because two out of three asthma-related deaths are preventable.

Asthma is one of the most common chronic non-communicable diseases and, today, we are reminded of its prevalence in Scotland. Although there is no cure, most people can control their symptoms well with asthma inhalers and other medicines, which improve their overall quality of life and outcomes. That is why this year’s theme is so important. It emphasises the need to ensure that all sufferers can access inhaled medication and appropriately manage the disease, which is crucial in reducing the frequency and severity of attacks.

However, the 2025 Asthma and Lung UK survey found that only 30 per cent of sufferers reported receiving all three basic provisions of asthma care. That is deeply worrying, and I know that everyone in the chamber will be concerned about it, because the three basic elements of care ensure that the disease is effectively managed and controlled and, importantly, that deaths are prevented.

I turn to inequalities. We know that, in many cases, women have far worse health outcomes than men, and that is no different in respiratory health. Women are more likely to have asthma, to have more severe symptoms and to die from their asthma. Many women experience a worsening of symptoms during menstruation and are at risk of potentially fatal asthma attacks every month, yet there is very little research on or understanding about that.

During last year’s world asthma day debate, I raised a point about data and the lack of

“an accurate collection method or an agreed reporting system across health boards”

in Scotland. Following that, I asked whether the Government would consider gathering greater data on the impact of gender on asthma outcomes to help us to better understand that inequality. Perhaps the minister might have some words on that that she could feed back to us in her closing remarks.

On the data point, in last year’s debate, I noted that the Government pointed to on-going work

“with Asthma and Lung UK and other key partners on commissioning a full national audit programme for respiratory conditions.”—[*Official Report*, 8 May 2024; c 119, 121.]

I know that the minister recognises the importance of that and, as Emma Harper said, attends many of the related events. The minister knows that improving patient treatment outcomes is important, so any information that she has on that would be gratefully received.

I would like to raise concerns about the Government's progress on the respiratory health policy. At First Minister's question time last week, I highlighted Chest Heart & Stroke Scotland's concerns that the Government is "stagnating" in its delivery of the respiratory care action plan. I take the opportunity to re-emphasise those points and urge the Government to make progress on respiratory health, which often receives less attention than other conditions.

There is much that we can do, and I know that the minister will be keen to move the situation forward. Respiratory outcomes in Scotland remain comparatively worse than those in other European countries. Without action on the issue and raising awareness in the chamber, asthma and respiratory health will continue to remain a persistent public health problem. I know that nobody in the chamber wants that, so working together is really important. Again, I thank Emma Harper for bringing the debate to the chamber.

13:09

Gillian Mackay (Central Scotland) (Green): I, too, thank Emma Harper for securing this important debate to recognise world asthma day, which this year takes place on 6 May. I echo the contents of her speech and recognise the importance of the points that she and other members have made.

Despite its being considered a relatively common condition, asthma can be hugely debilitating and, for some people, life limiting. Its impact on sufferers' ability to exercise, and the mental load of their having to be on constant watch for triggers and to avoid areas that are particularly polluted or have strong smells, illustrate the huge importance of highlighting the challenges of everyday life for people with the condition.

As Emma Harper and Maurice Golden have highlighted, the number of deaths from asthma recorded in Scotland in the past few years shows how serious the condition can be. If it might help to break their deadlock over the impact of LEZs on health issues, I highlight a study that the University of York conducted in 2022, which said:

"LEZ decreased the probability of having health problem that limits activity by 1.2 percentage points. Compared to the baseline mean, this corresponds to a 7% reduction in the health problems."

Although that study related to LEZs in England, I thought it worth noting from my very quick search.

As we have heard, the theme for world asthma day 2025 is "Make Inhaled Treatments Accessible for ALL". That should serve as a strong reminder that getting the right medications should never be a luxury. Inhaled treatments are vital for managing asthma every day and for reacting quickly to dangerous attacks. Too many people still face obstacles, ranging from limited availability of treatment to prescribing issues, misdiagnosis and lack of follow-up care.

That is especially the case in the UK, where lung conditions kill more people than they do anywhere else in western Europe. In Scotland, that trend tends to affect the most deprived households disproportionately. An estimated 2.3 per cent of the population who are registered with a GP—roughly 360,000 people—have a diagnosis of asthma. That serves as a further reminder of the importance of doubling down on our efforts to raise awareness.

Several organisations, such as Chest Heart & Stroke Scotland, and Asthma and Lung UK, have been in touch with me to pass on valuable data and pressing concerns. I will briefly highlight some of the urgent actions that they wish to see.

In 2021, the Scottish Government published its respiratory care action plan, with a vision to improve prevention, diagnosis, treatment and support for people with asthma and other respiratory conditions. As we have heard, the plan included 12 commitments, with a particular focus on the transition from child to adult services, providing better access to pulmonary rehabilitation, and making improvements to the gathering of data on respiratory conditions.

Four years on, progress on much of that has been slow. That is not to say that there have not been some positive developments, such as the introduction of restrictions on selling tobacco and vapes, and steps towards improving care for young people who are moving into adult services. However, it is undeniable that the plan's implementation has stalled.

A crucial factor is that we now face the loss of clinical leadership in the area. Without such specialist leadership, it will be much harder to make progress on vital aspects such as data collection and pulmonary rehab. Moreover, the national centre for sustainable delivery has developed its own plan, but its implementation is on hold because of unresolved funding issues. We must not lose sight of the importance of properly funded research and services that lead to better treatments and wider access for everyone.

In previous debates on world asthma day, I have raised the issue of the environmental impact

of inhalers. Many of them, in particular the older types, use propellants that contribute to increased emissions. Like Emma Harper, I was encouraged to see the innovations that are coming in that space. The new medicines that we are seeing are likely to launch soon. Some of them are treatments for chronic obstructive pulmonary disease that can be transferred to asthma care. They mark a major step towards reducing the environmental impact of inhaled medicines while ensuring that patients, especially the most vulnerable, still get the treatments that they need.

Allowing patient choice is hugely important. Not everyone wants to, or is able to, use a powder inhaler, for example. Some will have used a conventional inhaler for a long time. Encouraging companies to consider the environmental impact of their medicines is in everyone's interests.

It is essential to recognise the on-going challenges that people who live with asthma face. More investment in research and better support for innovative treatments are crucial to improving lives. It is time to commit to stronger action to protect the health of those who are affected and for us to invest in a healthier future.

13:14

Alexander Stewart (Mid Scotland and Fife) (Con): I thank Emma Harper, my fellow co-convenor of the cross-party group on lung health, for bringing her members' business debate to the chamber. As the motion states, the theme of this year's world asthma day, which takes place on Tuesday 6 May, is "Make Inhaled Treatments Accessible for ALL." Asthma charities have long called for that. They encourage the use of preventer inhalers for everyone with asthma, emphasising their importance in preventing airway inflammation and reducing the risk of asthma attacks. They also promote alternative reliever inhalers, which appear to be safer and more effective options than the traditional blue ones.

If we take a look at the detail of the recommendations, it becomes apparent why they make such good sense. Asthma and Lung UK highlights the evidence that shows why prevention is important: it manages inflammation and reduces the risk of asthma attacks.

We have heard about the difficulties that individuals have to manage because of air quality. Asthma and Lung UK advocates for moving away from the common blue reliever inhalers in favour of anti-inflammatory reliever inhalers or maintenance and reliever therapy inhalers, which offer real benefits to individuals.

The importance of correct inhaler technique cannot be stressed enough; it is vital to ensure that the medication reaches the user's airways

correctly and provides the most benefit. We have heard from patients, consultants and healthcare professionals about the techniques that require to be supported.

There are support groups in my region of Mid-Scotland and Fife, such as Breathe Easy Clackmannanshire Community Group and the breathe easy groups in Dunfermline, Glenrothes, Leven and Kirkcaldy. All those groups support people who have asthma or COPD, and offer support, encouragement and coaching for people in using their inhalers, to make sure that they are effective, which is important.

It is also essential that access to treatments is discussed. The subject has been brought up time and again at our cross-party group meetings by patients and health professionals, and the Minister for Public Health and Women's Health has been present to discuss that. However, some individuals still struggle to obtain access to even the most basic of treatments in some parts of the region. We have heard about the FeNO test, which needs to be looked at and progressed. I look forward to hearing what is being consulted on.

I strongly agree with many of the recommendations. The Scottish Government must, as a basic duty of care, ensure that the pathways are available for everyone. We have touched on pathways, but not all areas of Scotland have the same pathways, as has been reported. It is vital that we deal with that.

In 2023, we saw the highest number of asthma deaths recorded in Scotland in more than 30 years. That is a major issue. We have talked about air quality, people's living conditions and people's attitudes, but there needs to be clarity on how we manage the issue across our regions. It is clear that the matter should be urgently tackled. I look forward to hearing from the minister about positive work that the Scottish Government has attempted to do when she sums up, but many areas require progress.

The cross-party group has been doing exceptional work, and I again pay tribute to my co-convenor Emma Harper and Asthma and Lung UK, because we are challenging this on a regular basis. We continue to move things forward. It has been inspirational to meet and discuss the issue with clinicians, professionals and the individuals who suffer from these conditions, because they tell us about the real world that they live in day to day. It is vital that we take on board all their concerns.

13:18

The Minister for Public Health and Women's Health (Jenni Minto): I, too, thank Emma Harper for lodging this important motion, and I welcome

the opportunity to respond to the debate on behalf of the Scottish Government.

I put on record my thanks to those who support people living with asthma in Scotland, including NHS staff and third sector organisations such as Asthma and Lung UK. I also recognise, as a polite agitator of the group, the important work of the cross-party group on lung health, which is chaired by co-conveners Emma Harper and Alexander Stewart. I am always pleased to attend those meetings.

The debate has been valuable, and I thank everyone who has contributed for recognising that, across all parties, we share the desire to raise awareness of asthma and ensure that the people who live with it receive the best possible care.

Last night, I was pleased to join a round-table event on interstitial lung disease, which was hosted by Colin Smyth. One of the attendees at that session reminded me, and everyone in the room, of the importance of listening to those who are living with respiratory conditions when we are shaping policy; members have commented on that in the debate.

Although asthma is not directly a cardiovascular disease, it can increase the risk of developing such diseases. Yesterday, I had a conversation with the chief medical officer, who had hosted a webinar for about 1,000 GPs on respiratory disease. A lot of work is constantly going on in the background.

I will touch on a couple of points that have been raised by Emma Harper, Maurice Golden and others. They are right—the statistics on asthma deaths are alarming; that was the preamble to my conversation with the chief medical officer yesterday. The Scottish Government is absolutely committed to preventing avoidable harm, and I thank members for continuing to highlight the risks.

We know that most people with asthma are treated by their GP or practice nurse, and we have committed a greater proportion of new NHS funding to primary and community care so that GPs and services in the community will have the resources that they need for their essential role in managing conditions such as asthma.

Maurice Golden and Carol Mochan both highlighted the Government's respiratory care action plan. We continue to support a number of projects via NHS partners, and the action plan is still being supported. However, as I am sure that members from all parties are aware, we are consulting on a long-term conditions framework. The consultation runs until 20 July. As I said at the event last night, I see that framework as being very similar to our cancer framework, in which there are common areas across different cancers

that are joined up and specific strands of work for outcomes on specific cancers. I encourage everybody who is living with asthma to respond to the consultation so that the perspectives of people with respiratory conditions are properly reflected in the consultation.

Carol Mochan correctly raised a point about the importance of data. In 2023, as she will know, the Scottish Government provided Public Health Scotland with funding to undertake a scoping exercise to develop a respiratory audit programme. I absolutely recognise the importance of having that meaningful data, and we are considering what the best way forward is with that work.

World asthma day allows us time to reflect on the progress that has been made in respiratory care, and on the challenges that we face. We know that care and treatment for asthma are not always where they need to be; that is reflected in the concerning statistics on asthma deaths last year, as many members have mentioned. The Scottish Government is committed to improving services across the country in order to meet people's needs through the implementation of the respiratory care action plan.

The theme of this year's world asthma day, as many members have said, is "Make Inhaled Treatments Accessible for ALL". We know that around 360,000 people in Scotland have a diagnosis of asthma and that it is the most common respiratory condition impacting people of all ages. Most people living with asthma are supported well by their GP and practice nurse. However, we recognise that there is a way to go to ensure that everyone gets the care that they need at all stages of their life. That, too, was highlighted in the discussion at the round-table event last night. We were also reminded by Emily Kennedy, of the Royal Pharmaceutical Society, of the support that community pharmacies can also provide.

Over the past year, a major milestone in asthma care has been the publication of a new guideline on asthma diagnosis, monitoring and management, as Emma Harper laid out. That guidance was a collaboration between the British Thoracic Society, NICE and SIGN, and signals a shift in asthma care. It aims to improve the accuracy of diagnosis and to help people to control their asthma and reduce their risk of asthma attacks.

We know that diagnosis of asthma is a key area for improvement, and the guideline recommends a change in investigations to simplify the diagnostic pathway. As Alexander Stewart mentioned, changes include using FeNO breath tests and blood investigations alongside traditional tests, such as spirometry and peak-flow measurements.

We hope that that directs us towards standardised, evidence-based care that will improve outcomes for everyone living with asthma. We will now work with key stakeholders across health and social care to ensure that those guidelines become a reality for clinical professions and those who live with asthma.

A key part of that will be continuing to promote the quality prescribing guide for improvement in respiratory conditions, which was published last year. The guide aims to keep people at the centre of their treatment and promotes safe and sustainable evidence-based prescribing. It highlights the importance of people with asthma having access to personalised asthma action plans. As Emma Harper mentioned, the guide also highlights that each person should receive training on how to use their inhalers properly.

We understand that, for those who are living with asthma and other conditions, environmental factors play a huge role in their daily lives, as Clare Adamson laid out so well when she referenced the sad death of Ella in London. Our vision is for Scotland to have the cleanest air in Europe, and we are committed to protecting people from the effects and harms of poor air quality. For example, the introduction of low-emission zones in our four largest cities from 2022 was a key initiative to further improve urban air quality. I note a number of members' points about air pollution monitors in other locations, and I will speak to Government colleagues with regard to that.

As Gillian Mackay noted, Scotland also has in place a range of world-leading tobacco control measures. We are committed to creating a tobacco-free Scotland by 2034, and we welcome the reintroduction of the UK-wide Tobacco and Vapes Bill, which will help us to achieve our ambitious target as smoking rates continue to decline. That suite of prevention measures will help people to better manage their condition and support us in our work to prevent respiratory disease in future generations.

I close by reiterating our commitment to ensuring that everyone who is living with asthma in Scotland receives the best possible treatment, care and support. We know that there is still more to do in respiratory care, and we can improve by better understanding the needs of people who are living with asthma, as I was so eloquently reminded at the round-table event last night.

The Deputy Presiding Officer: That concludes the debate.

13:27

Meeting suspended.

14:30

On resuming—

Portfolio Question Time

Net Zero and Energy, and Transport

The Deputy Presiding Officer (Annabelle Ewing): Good afternoon. The first item of business this afternoon is portfolio question time, and the portfolio today is net zero and energy, and transport. As always, I call for succinct questions and answers in order to get in as many members as possible.

Question 1 has been withdrawn.

Public Transport Connectivity (South-west Scotland)

2. **Sharon Dowey (South Scotland) (Con):** To ask the Scottish Government what steps it is taking to improve public transport connectivity in south-west Scotland. (S6O-04601)

The Cabinet Secretary for Transport (Fiona Hyslop): We continue to work with local authorities in south-west Scotland regarding the powers around partnership working, franchising and running their own bus services. Furthermore, the new bus infrastructure fund provides local authorities with the opportunity to improve the connectivity of buses, making them more attractive to passengers.

We are investing more than £1 billion in rail infrastructure and its maintenance. Examples of recent investment in the region include the £1.9 million upgrade of the Stranraer line, which involved replacing more than a kilometre of track at Laggansarroch viaduct near Girvan, and the provision of step-free access at Dumfries station.

Sharon Dowey: Although I welcome any steps to improve public transport in the south-west, the reality for many communities in rural Ayrshire is that options remain severely limited. I recently joined the Cumnock and Mauchline railway stations action group to back its campaign to reopen both stations, which closed in 1965, and I saw at first hand the strength of community support.

I appreciate that the cabinet secretary wrote to me this morning to point out that a Scottish Government study in 2022 did not back those plans and that there is no money in this year's budget for them. With that in mind, does the cabinet secretary believe that the campaign has any chance of succeeding next year or beyond?

Fiona Hyslop: The constituency member, Elena Whitham, and other campaigners have also contacted me. I welcome the campaigners'

enthusiasm in supporting transport interventions that could bring benefits to the Mauchline area.

New local rail proposals are considered subject to the development of a strong business case with clear alignment to the Scottish Government's priorities, with the affordability of such proposals being set out. I note that the evidence that has been provided to date is not in line with Transport Scotland's published guidance, with a transport appraisal using the Scottish transport appraisal guidance still to be undertaken. That is required in order to inform a robust strategic business case for transport projects.

My officials have recently written to the campaigners to note the points that have been suggested. They have suggested that, as other campaigners have done, they should discuss their proposals with their local council or Strathclyde Partnership for Transport, their local regional transport partnership, and determine how to take forward the necessary appraisals.

I should note that the study that Sharon Dowe referred to was the strategic transport plan for the whole of Scotland. It was not just a study on one issue; it covered the whole of Scotland.

Emma Harper (South Scotland) (SNP): Transport connectivity is important for people in the south-west of Scotland. How many free bus journeys have been made to date by young people in the south-west of Scotland as a result of the action of the Scottish National Party Government?

Fiona Hyslop: The Scottish Government's launch of the young persons free bus travel scheme has most definitely improved connectivity, particularly for young people. As of 30 April 2025, through the young persons free bus travel scheme, 3 million journeys have been made in Dumfries and Galloway, 3.1 million in South Ayrshire and 5.4 million in East Ayrshire. The figures refer to smart journeys that are recorded and are attributed to the local authority in which the card was issued. Therefore, some of those journeys will have been undertaken outwith the local authority areas that I mentioned, and figures are subject to change due to late data being received. However, the figures represent a brilliant result for young people. The scheme is making those connections more affordable and, I hope, helping to develop positive travel patterns for young people.

Emission and Energy Cost Reductions (Support for Households)

3. Elena Whitham (Carrick, Cumnock and Doon Valley) (SNP): To ask the Scottish Government whether it will provide an update on the measures that it is taking to support

households to reduce emissions and energy costs. (S6O-04602)

The Acting Minister for Climate Action (Alasdair Allan): We have committed to investing more than £300 million in our heat in buildings programme in 2025-26. That funding will be spent on reducing emissions from heating and improving energy efficiency in homes and other buildings across Scotland, as well as on developing heat networks.

We will continue our successful warmer homes Scotland and area-based schemes, which are aimed at people in fuel poverty, as well as our generous Home Energy Scotland advice, grants, loans and funding for social homes. Householders who want to take action should contact Home Energy Scotland, which can help those who are interested to navigate the available support.

Elena Whitham: The minister will be aware that large rural areas of Scotland, such as my constituency, have unique challenges that can make decarbonisation financially prohibitive for many home owners, be that due to the age and fabric of their home or their home being positioned in a conservation area where options such as solar panels are not allowed. Does the minister agree that citizens who live in such homes must be supported to find a balance between reaching net zero and reducing fuel poverty? Can the Scottish Government assist them in that?

Alasdair Allan: The balance that Ms Whitham mentions is crucial. Balancing the delivery of our net zero objectives with tackling fuel poverty is important, and there are significant opportunities to address those aims in tandem.

Through the investment that we are making, we can reduce poor energy efficiency, which is a driver of the fuel poverty that Ms Whitham described. Our schemes provide additional funding for households in rural areas in recognition of the additional and higher costs that they face. Last year, we amended planning rights to allow solar panels to be installed in properties in conservation areas without the need for a planning application, subject to specific restrictions.

Maurice Golden (North East Scotland) (Con): Zonal pricing will discourage investment in net zero in Scotland but will lower Scottish consumer bills. Does the minister support zonal pricing?

Alasdair Allan: That issue came up at First Minister's question time. It is important that we get zonal pricing right. The current wholesale electricity market in Great Britain is not fit for the delivery of our net zero ambitions. The Government and I recognise the trade-offs and complexities that exist in the debate on zonal pricing, and we continue our conversations with the United Kingdom Government to ensure that

the voices of industry and community are heard in that debate. Any reforms or policy interventions from the UK Government must reduce costs for Scottish consumers and businesses while protecting investment.

Paul Sweeney (Glasgow) (Lab): For too many of my constituents, poor-quality housing remains the norm. Lack of proper insulation can lead to damp and mould, which causes health problems, as well as to higher energy bills and greater emissions. The problem will only get worse as rainfall increases and temporary weather extremes become more common due to climate change.

Will the minister give his assurance that the Government will act swiftly to support those who are living in poor-quality housing and to capture pockets of excellence, such as the work that Loco Home Retrofit co-op is doing in Glasgow, to ensure that we level things up and make such excellence the norm for the nation rather than the exception?

Alasdair Allan: I recognise the work that is being done by the community organisation that Mr Sweeney mentioned. I also recognise the issue that he points to, which is that climate change will, ultimately, make the problems more complicated to solve.

The Scottish Government provides a range of support to address some of those issues. I mentioned the £300 million investment. More specifically, we are seeking to ensure that landlords in the private rented sector are in a position to make life better for their tenants, and we are supporting the social housing rented sector.

2045 Net Zero Target

4. **Pam Gosal (West Scotland) (Con):** To ask the Scottish Government what its position is on whether its 2045 net zero target is still credible. (S6O-04603)

The Acting Cabinet Secretary for Net Zero and Energy (Gillian Martin): We remain fully committed to meeting the target of net zero emissions by 2045, which every party in the Parliament voted for and is now enshrined in law.

This month, we will receive carbon budget advice from our independent advisers, the Climate Change Committee, which will advise us on a pathway to net zero by 2045. Thanks to the action of this Government, Scotland is already halfway to net zero and we continue to decarbonise faster than the UK average.

Pam Gosal: With the Scottish National Party Government ditching so many climate targets, let us be honest: it looks highly unlikely that Scotland will achieve net zero by 2045. Instead of setting

ambitious targets with no plans for how to achieve them, will the cabinet secretary be honest with the public and confirm that the Scottish Government will deliver a sensible and affordable transition that will not come at the cost of jobs or through rising bills for households and businesses?

Gillian Martin: What is not credible are parties that vote for targets and then turn their backs when the action to meet those targets is taken forward. We have subsequent climate change plans in place that have a credible pathway to 2045. We are working on our next climate change plan as a result of the new carbon budgeting system, which is the system that the UK and Welsh Governments work to.

What is also not credible is the suggestion that a drive to net zero will be a negative thing. There are massive economic opportunities for the people of Scotland, particularly in relation to our technologies and natural resources, which will get us to 2045.

Sarah Boyack (Lothian) (Lab): We know that our constituents are already being impacted by extreme weather, such as forest fires and flooding. Will the Scottish Government accept that it needs to up its game to support people and businesses to decarbonise, given the Royal Scottish Geographical Society report, which highlights:

“Climate change is already costing Scotland billions a year.”

If left unchecked, by 2050, those costs could rise to 5 to 20 per cent of gross domestic product, which is £11 billion to £45 billion a year. Do we not need to take the action that the cabinet secretary talks about now rather than dump our targets?

Gillian Martin: Until she said the last phrase—no one is dumping any targets; we are committed to 2045—I was 99 per cent in agreement with everything that Sarah Boyack said. She points to a danger in the discourse around net zero. All of a sudden, people, including the representatives of the Conservative Party at Westminster, are changing their tack on whether we should be trying to get to net zero.

However, as Sarah Boyack rightly points out, we are already seeing the impacts of climate change in our communities in Scotland. It is not something that is just happening in the global south or that will just happen in the future—it is happening now. We have had wildfire warnings, we have had water scarcity in Scotland over the summer periods and we have had extreme weather events. It is incumbent on us all to consider all the actions that we can take. As a Parliament, we must recognise that we all voted for the 2045 target and we must now work together to vote for the actions that will get us there.

Rosebank and Jackdaw Developments

5. Fergus Ewing (Inverness and Nairn) (SNP): To ask the Scottish Government what discussions the net zero secretary has had with ministerial colleagues regarding the potential impact on Scotland of the Rosebank and Jackdaw oil and gas developments not proceeding, including on jobs, gross domestic product, tax revenue and funding for public services from the United Kingdom Government. (S6O-04604)

The Acting Cabinet Secretary for Net Zero and Energy (Gillian Martin): Across Government, we are all clear on our support for a just transition for Scotland's oil and gas sector, recognising the maturity of the North Sea basin. At the heart of our approach is ensuring that just transition for Scotland's valued and highly skilled oil and gas workforces to a net zero future. As the member will be aware, offshore oil and gas licensing and consenting and the associated fiscal regime are all matters that are currently reserved to the UK Government.

Fergus Ewing: That does not really get to the heart of what I am asking. The risk is that Scottish funding might reduce by several hundred million pounds if Rosebank and Jackdaw are not consented. The reason is very simple: those companies have invested around £2,000 million because they have obtained the necessary consents and have complied with all the regulations, but they now find that the process is being changed mid-case and the goalposts might be moved. If that happens, there will be a fiduciary duty on the directors of all the companies to recover their losses, which will amount to the money that has been paid out—£2 billion—plus loss of profits.

If that happens, is the Scottish Government not worried that it is inevitable, whether through Barnettisation or otherwise, that the Scottish taxpayer will pay a heavy price? Therefore, should we not support Rosebank and Jackdaw to avoid those catastrophic consequences and gain the enormous economic advantages that the projects will deliver?

Gillian Martin: Fergus Ewing rightly points out that a lot of the regulatory challenges, including the court cases, involve the UK Government, because it has responsibility in that area. However, the Scottish Government's stance on future licensing warned that the UK Government would have to be robust in how it assessed licences with regard to climate compatibility, because not doing so would open it up to criticism. Indeed, there have now been quite a few cases of court action.

We continue to call on the UK Government to approach decisions on offshore oil and gas in a

rigorously evidence-led, case-by-case way, in which robust assessment of climate compatibility and domestic energy security are key considerations.

Recent court judgments mean that specific projects that the member refers to are subject to further consenting decisions from UK ministers. Those decisions will be based on enhanced environmental assessments of their climate impacts.

It would have probably been a good idea to listen to the SNP Government on this and ensure that robust processes were in place. If everyone knows the playing field, they can react to what is set out.

Liam Kerr (North East Scotland) (Con): The draft energy strategy, with its disastrous presumption against oil and gas developments proceeding, was released more than two years ago. Last year, Aberdeen lost around 18,000 jobs, due in part to the uncertainty that was created. This year, BP, Apache, Hunting Energy Services and Chevron have announced further job losses.

I ask the minister for a straight answer to a straight question. When will the finalised energy strategy be published, and will that presumption be removed?

Gillian Martin: I have answered that question from Liam Kerr and from his colleagues over quite some time. I am still working on the energy strategy in the light of some of the developments that have taken place over the past year. Some of the developments that have been referred to—in particular, by Fergus Ewing—as well as other court decisions, have meant that we need to have another look at our energy strategy.

Beatrice Wishart (Shetland Islands) (LD): Gas from the Rosebank development will be exported through the west of Shetland pipeline system to Sullom Voe, ultimately ending up in the UK grid and contributing to the nation's energy security.

Does the cabinet secretary recognise the importance of Rosebank to my constituency? Does she agree that it will be important for jobs in Shetland, where there are skilled workers and knowledge that has been gained from decades of working in North Sea energy developments?

Gillian Martin: No one has to remind me, as a north-easter at the heart of the oil and gas industry in Scotland for many decades, of the importance of oil and gas workers, and not just in terms of managing an industry that has served Scotland and the whole of the UK very well. I recognise that Shetland has had a very significant footprint.

The skills that are associated with oil and gas are so transferable that there will be energy

workers who will work between all the developments that are part of the energy mix that comes on stream. Shetland is home to many renewable energy projects, for which that workforce is ideally suited.

Caledonian Maritime Assets Ltd (Meetings)

6. Neil Bibby (West Scotland) (Lab): To ask the Scottish Government when it last met Caledonian Maritime Assets Ltd and what issues were discussed. (S6O-04605)

The Cabinet Secretary for Transport (Fiona Hyslop): The Scottish Government continues to meet CMAL on a regular basis. The most recent meeting was held on 24 April, when I discussed our strategic investments, including the delivery of the four new Islay-class vessels, the small vessel replacement programme procurement and other live ports projects.

Neil Bibby: GMB Scotland has been clear that future work for the Ferguson Marine shipyard is vital for its future. However, we have recently seen the offshoring of Scottish Government contracts to Poland, despite the Port Glasgow yard having a strong track record of delivering smaller vessels. Now it has lost out on the Western Ferries contract, too. The workforce should not have to pay for the Scottish National Party's incompetence—it is the Government's job to clear up the mess that it has presided over.

What is the Scottish Government's plan to secure future work for the yard? Why do the Scottish Government and CMAL not insert minimum social value weighting into their ferry contracts, as is done in other parts of the United Kingdom?

Fiona Hyslop: The principles of what the United Kingdom Government refers to as social value are already embedded in Scotland. The Scottish Government has been increasing the scope of public procurement for two decades now, and we have complementary policies and legislation to encourage local business participation, growth and development as well as secure opportunities for and investment in jobs, skills and so on. I would point out that we operate under the Procurement Reform (Scotland) Act 2014.

The member will be fully aware that direct award of public contracts is possible only in strictly limited circumstances under public procurement rules. Shipbuilding is a competitive global market and a designated sensitive sector under the United Kingdom Subsidy Control Act 2022. Any direct award of a public contract must comply with that act and must be capable of withstanding legal challenge. Unless the member is suggesting that the UK Government is about to abandon the UK

Subsidy Control Act, he knows that there are limits to what we can do currently.

Kenneth Gibson (Cunninghame North) (SNP): Can the cabinet secretary confirm that CMAL is working hard to ensure that Ardrossan harbour is purchased at a fair price for the Scottish taxpayer, while being proactive in engaging with community organisations such as save Ardrossan harbour and Arran for Ardrossan harbour? Will she also confirm that, without the 49.2 per cent increase—a whopping £78.2 million—in the ferry service's capital budget, which was delivered by this Government this year, and which Labour did not vote for, the purchase and redevelopment of Ardrossan harbour would not be possible?

Fiona Hyslop: We are investing not only in vessels but in our ports and harbours across Scotland, and Ardrossan is key in that respect. With regard to the on-going negotiations, I am pleased that, in my meeting with them last week, Mr Gibson and colleagues Alasdair Allan and Jenni Minto, in their constituency capacity, were able to represent the strong views of their constituents but also recognise that negotiations, particularly on Ardrossan Harbour, are at a key stage. With regard to ensuring that we can invest in Ardrossan harbour, there is provision and support not only to purchase it but to do some of the initial work that is needed immediately.

Having secured that additional funding for our ports and harbours, I find it deeply disappointing that the Labour Party, of all parties, did not vote to support the investment in our ferries, ports and harbours.

Sue Webber (Lothian) (Con): Key vessels owned by CMAL, such as the MV Isle of Mull, are currently operating with passenger restrictions after failing a safety check. It is expected that the MV Isle of Mull will return to full capacity next month, but how is the cabinet secretary working with CMAL to ensure that all vessels in operation pass the safety requirements?

Fiona Hyslop: I will perhaps take the opportunity to ask CalMac Ferries, which is responsible for the safety aspects of the current vessels and how they are operating, to provide the member with a briefing. The member referred to the MV Isle of Mull; I met with the South Uist community, and certainly four—now possibly five—of their asks for help to support them through that difficult time will happen. However, I will ask CalMac to provide the member with a briefing on maintenance issues, particularly when incidents happen and vessels have to be put into dry dock for repair.

The Deputy Presiding Officer: I can take a supplementary question from Paul Sweeney if he is very brief.

Paul Sweeney (Glasgow) (Lab): The minister mentioned that shipbuilding is competitive, but other countries use their state investment banks to provide credit guarantees, and Spain provides a tax leasing arrangement. That is why we are not winning this business. Will the minister look at those other countries and compete properly on the same basis?

Fiona Hyslop: I certainly will. With the powers of independence, I would love to have the same powers and capabilities as other countries to do exactly what the member says.

Deer-related Road Accidents (Central Belt)

7. Collette Stevenson (East Kilbride) (SNP): To ask the Scottish Government what estimate it has made of the number of road accidents involving deer in the central belt, including around the East Kilbride constituency, in the last five years. (S6O-04606)

The Cabinet Secretary for Transport (Fiona Hyslop): The Scottish Government does not currently have data on road traffic accidents involving deer specifically in the central belt or for the requested five-year period. Transport Scotland is aware, from Police Scotland records, that 11 accidents involving deer in 2024 were recorded across all roads in Scotland where personal injury was sustained.

Collette Stevenson: Estimates suggest that the deer population in Scotland has doubled in the past 35 years. In addition to the issue of road accidents, deer negatively affect biodiversity, so there is a need for more deer management to avoid collisions and protect the environment. Does the cabinet secretary agree that increased deer management is required? Will she meet with me and my constituent David Quarrell to discuss the Scottish Gamekeepers Association's proposal for more pilot projects to expand that capacity while reducing road accidents in South Lanarkshire and the east end of Glasgow?

Fiona Hyslop: I agree with the member about ensuring that there is support for and incentivisation of deer management. Transport Scotland is working in partnership with NatureScot and the trunk road operating companies to better manage the issues relating to deer and road users, to improve road safety and to protect the welfare of deer. I will ask the appropriate officials to meet the member's constituent, as they will be better placed to explain some of the challenges that they are facing and how the issue might be managed.

John Mason (Glasgow Shettleston) (Ind): I accept that food management and so on is not part of the cabinet secretary's remit, but can she assure us that there will be some cross-

Government thinking and a cross-Government approach to the deer issue, as it is both a traffic and a food issue?

Fiona Hyslop: I am pleased to point out that my ministerial colleague Jim Fairlie has responsibility for both agriculture and connectivity, so I assure John Mason that cross-Government work is taking place on the issue across a number of areas. It is a very serious matter, as anyone who has been involved in an accident with a deer will know. Obviously, with the increased number of deer, there is continuous vigilance on the issue.

The Deputy Presiding Officer: Humza Yousaf is joining us remotely.

Climate Debt (Global South)

8. Humza Yousaf (Glasgow Pollok) (SNP): To ask the Scottish Government whether it will provide an update on what actions it is taking to help tackle climate debt in the global south. (S6O-04607)

The Acting Cabinet Secretary for Net Zero and Energy (Gillian Martin): Growing unsustainable debt puts pressure on countries in the global south, diverting resources away from investment in climate action and from broader public services. The Scottish Government recognises the need for good-quality, genuinely affordable climate finance, and we have consistently advocated for other countries to follow our example of giving funding for loss and damage as grants, not loans, which means that countries in the global south can recover from extreme climate events without taking on additional debt and that they are in control of how that money is spent most effectively. We will continue to champion that approach, including at forthcoming international events.

Humza Yousaf: I thank the cabinet secretary for her comprehensive response. The loss and damage fund is a great example of how Scotland has shown global solidarity with the global south, which has shouldered the heaviest impacts of climate change.

The cabinet secretary might be aware of the Scottish Catholic International Aid Fund's call for debt cancellation, a new debt framework and a debt justice law, so that some of the poorest countries in the world can spend their money on making their countries more climate resilient, not on debt payments to wealthy creditors. Although I appreciate that direct responsibility for that matter might lie with other ministerial colleagues, will the cabinet secretary commend SCIAF for its excellent cancel debt, choose hope campaign? Will she ensure that the Scottish Government meets SCIAF and explores what action Scotland can

take to ensure that debt does not continue to cripple the world's poorest?

Gillian Martin: We recognise the huge pressure that escalating debt levels are putting on countries in the global south, particularly when compounded by the impacts of the climate crisis. There must be a fair, effective and long-term resolution to the global debt crisis, so that resources can be freed up to invest in health, education, climate action and the economies of those countries.

Scottish Government officials have had an initial meeting with SCIAF to discuss its jubilee 2025 campaign, and I look forward to meeting it again in the coming weeks to explore how Scotland can best play a role. I would point to Scotland's important role in all the international events, such as the United Nations climate change conferences of the parties and the various environmental comings-together of countries, and our use of our soft power to influence other countries in taking a more sustainable approach to debt and the global south and to how we recompense those countries for the situation in which they find themselves as a result of climate change.

The Deputy Presiding Officer: That concludes portfolio questions on net zero and energy, and transport. There will be a brief pause before we move to the next item of business to allow front-bench teams to change position, should they wish.

Scotland's Hydrogen Future

The Deputy Presiding Officer (Annabelle Ewing): The next item of business is a debate on motion S6M-17399, in the name of Gillian Martin, on Scotland's hydrogen future. I invite members who wish to speak in the debate to press their request-to-speak buttons.

I call the Acting Cabinet Secretary for Net Zero and Energy, Gillian Martin, to speak to and move the motion. You have up to 12 minutes, cabinet secretary.

14:59

The Acting Cabinet Secretary for Net Zero and Energy (Gillian Martin): Colleagues, today's debate on Scotland's hydrogen future is important, and I am pleased to open it. Hydrogen stands as a critical pillar of Scotland's route to net zero by 2045. Alongside the development of offshore wind capacity, it is one of Scotland's greatest industrial opportunities since the discovery of oil and gas in the North Sea. I will set out some of the progress that we have made to further develop the sector, the challenges that we still face and need to overcome, and why collaboration across Governments, sectors and borders will continue to be absolutely essential if we are to realise our hydrogen ambitions for Scotland and those for the whole of the United Kingdom.

As I have said many times, Scotland is committed to the target of reaching net zero by 2045. That ambitious target reflects our determination not only to lead by example in the UK and Europe in our response to the climate emergency, but, critically, to harness the vast economic opportunities that an energy transition presents for Scotland. The global shocks that we have experienced since 2022—geopolitical instability, energy market disruption caused by Russia's illegal invasion of Ukraine and the urgent drive towards energy security in Europe—have only underscored the need to work together in Scotland, across the United Kingdom and with our international partners, particularly in continental Europe, to bolster our energy security.

A just transition remains at the heart of our approach. We are determined that no community—particularly not the ones that have powered our economy for generations—will be left behind as we move away from the burning of fossil fuels towards a low-carbon energy system. We are working to build a hydrogen economy in which the benefits of our energy transition are shared and that harnesses the full potential of our skilled workforce and world-class industries, both of which are the envy of neighbouring countries, as

well as the natural resources that Scotland is so lucky to have.

Our hydrogen action plan offers a pathway to decarbonising hard-to-abate sectors. It can balance our power system, improve our energy security and, at the same time, secure high-quality jobs in our communities. Our hydrogen action plan and green industrial strategy dovetail to set out clear actions that will establish a thriving hydrogen economy in Scotland. Despite changing global conditions, we are firmly in delivery mode. We are not wavering from that ambition, and we have already made significant progress. We have a growing pipeline of more than 100 hydrogen production projects that are at varying stages of development, the majority of which are green hydrogen production projects. Those projects provide confidence in the future growth of the hydrogen economy in Scotland.

The UK Government's hydrogen allocation rounds—HARs—are a vital mechanism for supporting low-carbon and renewable hydrogen production across the UK and providing revenue support to bridge the gap between clean hydrogen and fossil fuels. The first hydrogen allocation round—HAR1—delivered funding to two early Scottish projects—Cromarty hydrogen project and Whitelee wind farm—both of which are targeting production in 2026. A further eight Scottish projects, which were shortlisted last month in the HAR2 funding round, provide a significant boost to our progress on production capacity. Six Scottish projects have been boosted by capital funding awards from the UK net zero hydrogen fund.

In addition to the UK Government's support, the Scottish Government has invested £30 million in the hydrogen sector. That includes £7 million in grants to 31 projects across Scotland via the hydrogen innovation scheme. That has been driving advances in renewable hydrogen production, storage and distribution and the innovation that is associated with that. A £3.1 million grant to Storegga's Speyside hydrogen project in Moray is developing clean energy to help to decarbonise the whisky industry. I am immensely proud that our iconic whisky industry is one of the first movers in adopting that technology, which I think we will see happening at pace. Via the just transition fund, £6 million is also going to HydroGlen, which is a green farming pilot in Aberdeenshire. Additionally, the H100 project in Fife, a hydrogen for home heating trial that is run by Scotia Gas Networks and is the first of its kind in the world, is soon to commence. It is supported by £6.9 million in Scottish Government funding.

Patrick Harvie (Glasgow) (Green): The cabinet secretary began by talking about hydrogen's role in helping to decarbonise "hard-to-abate" sectors of the economy. Why is she now talking in positive

terms about using it to decarbonise an easy-to-abate sector such as home heating?

Gillian Martin: I think that H100 is a proof of concept. We will have to look at multiple opportunities to decarbonise heating. Some areas in Scotland, such as the western and northern isles, will probably produce more green electricity than could even be put into a grid system. If the H100 project can prove the concept in the houses to which it supplies hydrogen, can do that safely and can then be rolled out to other areas, so that we are using green electricity to provide hydrogen, I see no problem in trialling that. It is being trialled by a company that is putting a tremendous amount of money into proving the concept when we are having to look at all the alternatives for fossil fuels as we work to decarbonise every aspect of our society.

Daniel Johnson (Edinburgh Southern) (Lab): Patrick Harvie raises an important point, because hydrogen is not an uncontroversial choice. It is not as energy-dense as gas, so there has to be a judgment about whether it is a sensible choice for some uses. I agree that we need to trial it, but does the cabinet secretary acknowledge that we must make a very careful judgment as to whether hydrogen is a sensible alternative to natural gas and a better choice than straightforward electrification, which is more direct and therefore more efficient, above all else?

Gillian Martin: This sort of debate can sometimes be frustrating, because some people are very keen on particular types of technology when there is a myriad of technologies. If SGN wants to prove the concept by investing in that project, for which we have given it a small amount of assistance, there will be learnings not only for Scotland but for the whole of the UK and for Europe, which is no bad thing.

I will talk about some of the other areas of work that we have given funding to. Projects in Orkney, Dumfries and Galloway, and Perth and Kinross are among 11 to be awarded a share of £3.4 million to develop the hydrogen supply chain. Further Scottish and UK Government investment, alongside private capital and privately funded innovation, continue to drive the establishment of a thriving hybrid sector and should mean that we will see fruits.

However, certainty and pace are also key to seizing the benefits of hydrogen, and, if we are to maintain momentum, we really need to see the UK Government setting out a clear timetable for the future hydrogen allocation rounds, because many projects want to bid for those. We must also confirm how GB Energy and the national wealth fund will help to boost hydrogen development across the whole of the country, so I am grateful

for the conversations that I have been having with the UK Government on both of those points.

It is increasingly clear that realising Scotland's hydrogen potential and delivering a balanced decarbonised system will require a national hydrogen network with integrated storage infrastructure and a national market for nitrogen, along with recognition of the international market for hydrogen. There is uncertainty about how, where and when network and storage infrastructure will be supported, which is one of the barriers hampering private sector investment in green hydrogen production.

Once built, a national hydrogen network is likely to deliver significant advantages for hydrogen producers located close by. The strategic spatial energy plan that is being developed by the national energy system operator—NESO—will identify the optimal locations for future energy generation and storage, as well as hydrogen infrastructure across the whole of Great Britain. That important work will be completed as soon as possible.

Scotland's natural resources are not only vital to our own transition, but can and will contribute, and are contributing, significantly to energy security and decarbonisation goals in the UK and Europe. One important context, which I alluded to earlier, is that Europe's largest manufacturing economy, Germany, is going through a massive energy shift from gas to hydrogen but is unable to produce hydrogen domestically at the scale that it requires and will need to import it from nearby or further afield. Germany is very interested in what is happening in Scotland and among our near neighbours, so we share a huge potential for the production of hydrogen and could play a significant role in helping our neighbours to decarbonise.

Sarah Boyack (Lothian) (Lab): Will the cabinet secretary take an intervention?

Gillian Martin: Do I have time, Deputy Presiding Officer?

The Deputy Presiding Officer: There is time in hand, cabinet secretary.

Sarah Boyack: I will not make my intervention too long. I very much understand the concept of exporting hydrogen, but we have to build the infrastructure. Professor Jim Skea, who leads the Government's Just Transition Commission, said that he did not see evidence to justify where the export markets are going to be. Have work and research now been done to look at the costs and the opportunities?

Gillian Martin: The Scottish Government produced its own hydrogen export plan, which looks into exactly that, but it is not something that

Scotland could do alone. We need to be working with the UK Government on it. We need to look at how we can partner with those who want to buy hydrogen that is produced in these isles to get it over there, and Germany is the biggest market for that at the moment. Since the election of the new Government, or in the embers of the previous Government, a great deal of borrowing has been taken on for infrastructure development, and it is critical that the UK Government is in the room with the German Government to talk about how we can improve the infrastructure that is associated with the export of hydrogen.

First, however, we need to be very clear that we need to use our hydrogen domestically, particularly to decarbonise our industry. If we get signals that a market in Germany will take on hydrogen as we produce more and more, that will mean that we have confidence in hydrogen being used domestically on a smaller scale in the meantime.

I am probably running over my speaking time. I have set out a lot of the things that we are doing. A lot of the challenges are well known. It is important for us not to delay on this. We need to speak with one voice, and I hope that we can do so, putting aside our disagreements about where hydrogen is best used. I hope that we can all agree that there is an opportunity for Scotland to capitalise on the fact that we will produce far more green electricity than we can get into our grid, even with the grid upgrades; that that represents a significant opportunity to show that Scotland is a world leader in hydrogen production; and that we must work with other nations on solutions for decarbonising industry. On my party's benches, we are being consistent on that. I hope that we can also be consistent as a Parliament in driving that ambition forward.

I move,

That the Parliament acknowledges that Scotland has the potential to be a leading hydrogen nation and is fully committed to helping the Scottish hydrogen sector to develop and grow as part of a wider European and international network; notes that, following the successful shortlisting of Scottish projects in the recent UK Hydrogen Allocation Round, Scotland is creating a hydrogen economy that will provide economic benefit and a renewable and low-carbon source of energy to help meet its net zero ambitions; supports efforts to ensure that hydrogen is supported via continued investment, and calls on the Scottish Government to continue taking steps to deliver the hydrogen sector export plan.

15:12

Graham Simpson (Central Scotland) (Con): I welcome this debate because, amid all the hoo-hah about net zero, just transition, affordable transition or whatever we want to call it, if we asked people whether they would like to be able to

use a fuel that gives off nothing but water to power their homes and vehicles, most would say yes. That is, in essence, what hydrogen can deliver, and here in Scotland we can be at the forefront of developing the technology to do just that. It is a great opportunity, as the cabinet secretary said.

As ever, however, we need to get on with it, because, as ever, we are not doing well enough. I will give a small example of that. For all the cabinet secretary's warm words, it remains true that, although a £100 million hydrogen action plan was announced in 2022, when she was at the Net Zero, Energy and Transport Committee on 14 January, she could not say how much of it had been spent. Having said that, I do not want this debate to be a point-scoring exercise, which that committee session was in parts, because I think that we all want pretty much the same thing. That is why we support the Government's motion, why the amendment in my name is so relentlessly positive—as you would expect from me, Deputy Presiding Officer—and why everyone should support both it and the motion.

The Government has done some good stuff—we must recognise that. There was the £7 million in-year funding for grants to support strategically important green hydrogen projects. Four applications for that were submitted in December. There was another £7 million for the hydrogen innovation scheme, which supported 31 projects. In January, Ms Martin could not say what that had achieved, so I was hoping that today would be the day for that information, and it almost was—she gave us a little bit of detail in her speech.

There was £6 million from the just transition fund to HydroGlen, which is the green hydrogen farming pilot. Another £15 million went to the green hydrogen hub in Aberdeen, with some going to the Storegga green hydrogen project in Speyside, which is working to decarbonise whisky distilling and is working with the local authority to potentially provide green hydrogen for fleets of vehicles. That is all well and good, but the story so far is one of the country having great potential but not quite getting over the line yet.

Gillian Martin: I am grateful to Graham Simpson for listing all those projects. Cumulatively, there are quite a lot of projects, and because I took so many interventions, I did not quite land the point that we are also working with Scottish Enterprise to deliver even more funding to 11 projects, which are being awarded a share of £3.4 million, so he can add that to his list.

Graham Simpson: I am not here to do the cabinet secretary's job for her, but I am happy to assist on this occasion.

There are promising projects. I am grateful to Green Cat Hydrogen for letting us know about the

Creca hydrogen facility next to Chapelcross, the Binn Ecopark project, the Strathallan hydrogen facility, which could be operational by 2027, and the Hammers Hill development in Orkney.

I mentioned how hydrogen could be used in heating. That would help us to decarbonise and increase our energy security, if we make the hydrogen in Scotland. The H100 project in Fife, which has already been mentioned, should tell us a great deal about how feasible that roll-out would be.

Patrick Harvie: Will the member take an intervention?

Graham Simpson: Is there time in hand, Deputy Presiding Officer?

The Deputy Presiding Officer: There is.

Graham Simpson: Jolly good. I will take Mr Harvie's intervention.

Patrick Harvie: The member talked about energy security. In what way does it assist energy security to power home heating with something so massively inefficient as hydrogen, compared with the extremely high level of efficiency that comes from direct electrification? That will undermine the country's energy security rather than help it.

Graham Simpson: I am mystified by the Greens' approach to hydrogen. It is a fuel that gives off nothing but water; I thought that the Greens would be on board with that. Surely the idea of a pilot project is to test the technology to see whether it works. Mr Harvie is shaking his head as though he does not want a pilot project. His position is, indeed, bizarre.

It should be possible to use hydrogen in existing infrastructure and boilers. If there are signals to the market to that effect, it could be a game changer.

Daniel Johnson: As I said before, I think that it is important to pilot this, but hydrogen has about one quarter of the energy density of natural gas. Is it not better to focus on direct powering of domestic heating through electricity rather than trying to substitute it with hydrogen, because it is so much less energy dense?

Graham Simpson: I agree with the cabinet secretary that our energy system should be a mix. That is why I am keen to pilot hydrogen—just to see whether it works. I see Mr Johnson nodding at that point, so I am glad about that. Let us see how it goes. If it does not work, we should not proceed with it, but if it does, it has potential.

It is a little bit concerning that the Scottish Government does not include low-emission heating systems such as hydrogen-ready boilers in its Scottish house condition survey data. In response to a written question, Alasdair Allan said:

“these forms of heating will be considered for inclusion in future surveys when they become more prevalent in the Scottish dwelling stock.”—[*Written Answers*, 9 January 2025; S6W-32993.]

I say gently to Dr Allan that we need to know the state of play now, and not sometime in the future, so he might want to reconsider that.

I turn to transport, which is the biggest carbon-emitting sector but the one with the most potential for using hydrogen. There is a lot going on in transport. In November last year, the cross party group on aviation heard from Jane Golding of Sustainable Aviation Test Environment, who spoke about delivering sustainable regional aviation and improved connectivity for the Highlands and Islands. She told us that HITRANS is looking at a number of projects, including a nine to 19-seater inter-island aircraft powered by hydrogen, which HITRANS hopes will be ready for 2027. The aviation sector in general is looking at hydrogen as a future fuel.

Those MSPs who follow my contributions will no doubt have picked up on my keen interest in European Union regulation 2023/1804 on the deployment of alternative fuels infrastructure. I see no nods of recognition, so I will refresh members' collective memory. This will be of interest to all those members who are desperately keen to keep pace with EU regulations. The regulation says that, by the end of the year, there should be one recharging pool at least every 37 miles on the main road network in the EU. Imagine if we had that here—it would be transformative. Mr Golden, who is sitting to my left, might be happier to have an electric car than he is, and refuseniks such as me might consider getting one. On hydrogen, the regulation says that publicly accessible hydrogen refuelling stations must be deployed, with a maximum distance of 124 miles between them. That is why, across the EU, you can see hydrogen filling stations popping up.

I note from your look, Presiding Officer, that you might want me to conclude, despite having a little bit of extra time. I will finish by mentioning Grangemouth, which is in my region. We have known about the potential to make lots of hydrogen there since well before project willow. It is for the UK and Scottish Governments to turn warm words into action and make it happen. In general, however, there ought to be consensus on the issue. I am happy to support the motion in Gillian Martin's name, and I hope that she will support my amendment.

I move amendment S6M-17399.1, to insert at end:

“, and further calls on the Scottish Government to work with the UK Government on developing plans for hydrogen to be part of Scotland's energy mix, and to set out how it can play a role in transport and heating.”

15:22

Sarah Boyack (Lothian) (Lab): We need a constructive debate, because this will affect us right across the country. It is important in terms of our environmental and economic ambitions. It is about ensuring that we can develop opportunities now to deliver jobs and a sustainable and greener future tomorrow. It means action now. In the first two speeches, we have heard that the amount of research and technology development that is happening is an on-going issue.

The amendment that I have lodged is an add amendment—I did not do a delete-all-and-insert type of amendment. It is important that we work constructively together, but I wanted to emphasise the need for joined-up thinking, not just about the production of hydrogen but about how we use it. From talking to different sectors, I know that that is absolutely critical.

The UK Government's recent announcement of 27 new hydrogen-powered projects across the UK under HAR2 should be celebrated, as 30 per cent of those projects are in Scotland. Projects such as those in Cromarty and Whitelee will produce green hydrogen, which will be used by local industry, transport and distilleries. We know that it can be made to work.

Scottish Labour is in full support of the expansion of green hydrogen projects in Scotland, as it is the most sustainable on-going opportunity for hydrogen projects. However, we need a clear strategy that links hydrogen to the green industrial strategy and the long-awaited energy strategy, which is why, in my amendment, I call on the Scottish Government—

Patrick Harvie: I am grateful for the opportunity to intervene. I note and welcome the fact that Sarah Boyack is specifically referencing green hydrogen. I was a little confused by the fact that the Labour amendment talks about “low-carbon opportunities”. Will Sarah Boyack clarify whether she agrees that neither Government should be giving any support to hydrogen production from fossil fuels?

Sarah Boyack: There is a hierarchy in maximising the lowest-carbon opportunities for hydrogen. I know that there is an argument for using blue hydrogen, which I will reflect on at the end of my contribution. However, most of my focus will be on green hydrogen. Blue hydrogen potentially has a place, but it is CO₂ emitting so the carbon capture and storage aspects would need to be pulled together. The solution will be to pursue the most effective low-carbon opportunities, and that is what I will focus on.

Our strategy must address how we intend to use the green hydrogen that we will produce in Scotland. Reference has already been made to

transport. We can potentially use green hydrogen for various types of transport. Buses do so already. There are also opportunities in the rail and heavy goods vehicles sectors, but those would need a joined-up approach. We must consider which sectors we can work with, and we need to get the regulations right for private companies. There are huge numbers of opportunities. As I flagged in my response to yesterday's statement on Grangemouth, sustainable aviation fuel must be part of the mix, too.

Given what is happening at Grangemouth, we should consider the implementation of the project willow report, which highlights the need for action and investment now. We must form links to potential opportunities for using green hydrogen and to sustainable aviation fuel, which takes us back to transport. We must examine the various types of transport and decide where the various fuel types could be used most appropriately as changes emerge over the next couple of decades.

The RWE project at Grangemouth is really important, so we must ensure that its work, together with that on project willow and the Just Transition Commission's report from two years ago, will be acted on. Our approach should not be to wait until something bad happens but to plan ahead.

Gillian Martin: Will the member give way?

Sarah Boyack: Can I just keep going on this point?

The key factor about the situation at Grangemouth is that it is not just about increasing the supply of green hydrogen; we also need the demand and the market to supply it to. That involves encouraging industry growth in the private sector, as well as exploring how public investment could unlock existing opportunities, and linking them with our key renewable energy sources.

I am keen to see our Governments working together. I noted the positive aspects of the cabinet secretary's speech. We need a clear approach to new onshore and offshore wind resources to ensure that the electricity that we will generate across our homes, our transport and our economy will be used where we need it. We are already seeing the development of pumped hydro storage and battery storage, so factoring in how we will supply electricity to deliver green hydrogen will be key. Last year, constraint payments made to wind farm operators reached the level of £380 million for curtailing 4.3 terawatt hours of wind energy. That is bonkers, and it is why I am articulating the need for a joined-up approach.

Hydrogen production could use that extra electricity, lead to lower network costs and help to bring down bills for individuals and businesses.

However, we must also ensure that we have the grid capacity to supply that electricity where it is needed. Where sites are due to be developed for green hydrogen, we must ensure that they have electricity supplies.

Earlier in the debate, members discussed where we can do that, but we must also do it for our industrial and transport sectors. I mentioned buses, transport, rail and heavy goods vehicles. We must decide the locations across the country where the best opportunities sit. The Scottish Government needs to do some work on thinking strategically about locations, and we must consider how we prioritise the opportunities. As we look to the future, it is clear that green hydrogen will be a cornerstone of Scotland's renewable energy strategy, which just needs to be joined up. We have had a long history of project commitments, but we have not always seen them being delivered.

If we are to meet our climate targets, support new jobs and see economic development across the country, we need a strategy that maximises the use of our natural resources but also develops industrial sites that could deliver on those opportunities. By investing in cutting-edge technology, we can drive innovation, foster economic growth and protect our planet for future generations. We all need to work together across the parties, but we must also see our Governments doing so. By that I mean not only our UK and Scottish Governments; we need to bring local government in, and think about planning, the supply chains and transport connectivity.

I hope that members will support Scottish Labour's amendment. It aims to be constructive and to ensure that we have a joined-up approach to production, supply and use of hydrogen where it makes most sense, which potentially ticks our climate boxes, creates new jobs and supports our economy. If there were to be support across the chamber I hope that that would give confidence to new investors. It might not be 100 per cent—that would be impossible to achieve in here—but at least there could be positive support for ensuring that we maximise the opportunities in Scotland and get on with them.

I move amendment S6M-17399.3, to insert at end

“; further calls on the Scottish Government to ensure that clear, strategic plans for hydrogen infrastructure are included in its long-awaited energy strategy, and calls on the Scottish Government to deliver joined-up thinking on how to maximise the low-carbon opportunities and efficient usage of hydrogen.”

15:29

Patrick Harvie (Glasgow) (Green): I welcome the fact that we have the opportunity to debate this issue. It should not be seen as a simplistic debate, and there certainly should not be a split between unequivocal hydrogen enthusiasts and hydrogen sceptics. The issue is much more complicated than that. The role that hydrogen could play in Scotland's energy system and in several industries could be very significant. It could become a significant part of our economy, too, if we produce large amounts for export. I would disagree with anyone who suggests that that cannot happen, but hydrogen is not a magic solution for some of the challenging aspects of the transition to sustainability. I would equally disagree with anyone who wants to see hydrogen in the same category as carbon capture and storage, direct air capture of greenhouse gases or foolhardy experiments to dim the sun.

There are, sadly, some people in our society, and too many current and former politicians—as we have seen this week—who want to abandon real climate action in favour of implausible techno-fixes. Hydrogen has the real potential to be seen in the same way, and we cannot afford that. Neither can we afford the same simplistic, unrealistic thinking to affect the way that we develop the hydrogen sector.

Sarah Boyack was right to say that there are two critical questions—how we produce hydrogen and how we use it. The answers to both questions will determine the value that it has for our society and for the transition to sustainability.

First, where does hydrogen come from? The internationally recognised colour code for hydrogen has about as many shades on it as the pride flag does, but fundamentally, most industrially produced hydrogen to date has been made using fossil fuels with no abatement of emissions. Whether that is the most polluting fuels such as lignite, which some countries use to produce hydrogen, or others such as fossil gas, we need to be clear that that approach has no role to play in a transition to sustainability. It should not only be denied Government investment but simply not be permitted.

Then there are people who advocate for blue hydrogen, which is still produced using fossil fuels but with the addition of long-promised carbon capture and storage technology. Even if CCS can ever be made to work at high enough capture rates to result in negligible overall emissions—there is still plenty of doubt about that question—it will always be a huge additional cost, making the production of blue hydrogen dramatically less efficient. If hydrogen is to play any meaningful role, it must be produced using renewable electricity—it must be green hydrogen.

Brian Whittle (South Scotland) (Con): I find myself in the uncomfortable position of agreeing with some of what Patrick Harvie has to say—I am very much an advocate for green hydrogen. Blue hydrogen, however, can be produced from waste. The reusing of waste to deliver blue hydrogen should be considered as a potential alternative.

Patrick Harvie: If I understand the argument correctly, that still depends on the development and efficiency of carbon capture and storage, which has yet to be proven and will always add additional cost.

Green hydrogen is where Scotland has a massive advantage. The potential scale of renewables generation in Scotland is immense, and if we develop that potential fully, we will be producing far more electricity than we need or can export through transmission infrastructure, which means that the production of hydrogen is an obvious opportunity.

Where hydrogen comes from is not the end of the story. We also need to address how it is used. There are still those who cling to the idea that we can simply inject hydrogen into existing energy systems, whether that is the gas grid for heating or transport systems to displace fossil fuels, but there are some fundamental limits that we need to address.

We can generate renewable electricity and use it to produce hydrogen. The hydrogen can then be stored, transported to where it is needed and turned back into useful energy, but at every step in that journey, efficiency is lost, so we end up with less useful energy at the end of the process than was generated at the start. Any use case in which direct electrification can be achieved will always be the better choice when compared with hydrogen, not only with today's technology, but under the laws of physics.

That argument is only stronger for heat, because the technology that some countries have been deploying at scale for decades, and with which Scotland is struggling to catch up, goes far beyond even the theoretical limit of the 100 per cent efficiency that a closed system can reach. Heat pumps do not turn electricity into heat, but rather use electricity to gather heat from the ambient environment. They can produce up to three or four times as much heat output from the electrical input that they run on. Hydrogen can never do that, yet the Scottish Government continues to promote the notion of hydrogen for domestic heating.

Daniel Johnson: Will the member take an intervention?

Patrick Harvie: Do I have some time in hand?

The Deputy Presiding Officer (Liam McArthur): I can give you the time back, Mr Harvie.

Daniel Johnson: I very much agree with Patrick Harvie, who is setting out why we need to consider the issue carefully. If he is right about the physics, there is a point to be made about consumption and chemistry, in that hydrogen is one small atom, whereas natural gas is a one-to-two-chain carbon molecule. The energy density is different—it is a different gas. Would he agree with that point?

Patrick Harvie: Absolutely. The size of the molecule, compared to the atom, also factors into the infrastructure, because leakage would be significant if we do not replace some of the infrastructure.

As recently as February, the First Minister made a speech describing hydrogen heating as a

“shining example of how Scotland is leading the way in finding solutions to tackle climate change.”

He said that it was

“a clear signal of the path that we must take.”

That is absurd. Most of those in the gas industry who have been pushing that nonsense have started to give up on it. The idea is that it is a trial or a proof of concept, but the question is not whether using hydrogen for heating would work. Of course it would work, just as flushing your toilet with sparkling mineral water would work, but it would never be a sensible thing to do.

The Acting Minister for Climate Action (Alasdair Allan): Does the member acknowledge that, notwithstanding everything that he has said about the benefits and preferability of electrification, there may be parts of the country where electrification may be difficult to achieve and, therefore, other solutions such as hydrogen should at least be experimented with?

Patrick Harvie: I will address that in my closing comments.

In presenting its advice on the seventh carbon budget to the UK Government, the UK Climate Change Committee wrote that hydrogen has

“an important role within the electricity supply sector as a ... long-term storable energy that can be dispatched when needed and as a feedstock for synthetic fuels. However, we see no role for hydrogen in buildings heating and only a very niche, if any, role in surface transport.”

I urge the Scottish Government to listen to the UK CCC, which is its own adviser and source of expert advice on climate action, to understand and accept its position, and ensure that our approach to the development of hydrogen focuses on the most efficient use of what could be an important part of our energy system and economy.

I move amendment S6M-17399.2, to leave out from “be a leading” to end and insert:

“play a leading role in developing a green hydrogen industry, both to help decarbonise challenging sectors of the economy, and for export; recognises that hydrogen produced from fossil fuels not only produces greenhouse gas emissions but also risks undermining confidence in the future of the green hydrogen sector; further recognises that the use of green hydrogen needs to be prioritised in areas that are hard to decarbonise in other ways, and that its use for domestic heating can never achieve the efficiency of other clean heat sources, and therefore regrets that the First Minister described hydrogen for domestic heating as ‘the path that we must take’, in February 2025; recognises that the UK Climate Change Committee sees ‘no role for hydrogen in buildings heating and only a very niche, if any, role in surface transport’, and urges the Scottish Government to accept that the value of green hydrogen will be in areas such as hard-to-decarbonise industrial sectors and energy storage.”

15:38

Willie Rennie (North East Fife) (LD): It was a joy to hear from Graham Simpson and to see his cheery disposition as a newborn man next to Maurice Golden, who has new lunch mates on an occasional basis. I am sure that Graham Simpson would benefit from that as well—maybe that is why he is so cheery this afternoon.

We need cheeriness on a Thursday afternoon when we are debating hydrogen, because it is important that we focus on its many upsides. However, it is not just about the upsides and debating the principles—many have strong views in this debate—but about the fact that we need to make it happen. Too often in the Parliament, we pontificate about principles. Plans for delivery tend to be rather dull, but they are incredibly important if we are going to achieve our objectives.

There are incredibly expensive constraint payments that we use regularly in order to cope with issues of supply and demand of electricity. If we can have hydrogen play an important role in minimising those constraint payments, that would be a good thing. It would be supremely logical—this follows on from Sarah Boyack’s contribution—if we did that.

We know that batteries—there is much talk about batteries, and many more planning applications for them than I expected—store energy for only a short period and are, perhaps, not able to cope with wide fluctuations in supply and demand over a longer period of time.

Pumped storage plays an important role in our storage capacity, and new facilities are being developed. However, hydrogen could play an important role in the storage of energy over longer periods of time. I discovered that hydrogen can be stored in salt caverns, which sound like wonderful places, perhaps not just for eastern Russia but for Scotland as well.

The use of hydrogen should be given urgent priority in the production of green steel and the move away from the use of grey hydrogen for the generation of fertilisers and the production of chemicals. We will continue to need chemicals and fertilisers in certain cases, and I want them to be as green as we can make them. Green hydrogen would play an important role in decarbonising steel and chemical production.

The opportunities for hydrogen are really quite positive, which is probably why Graeme Simpson was so positive this afternoon. However, I want to sound a note of caution, because I wonder whether the targets that we are setting are a little bit wild. The global potential for hydrogen production was 1.4GW in 2023. For Scotland alone, the aim is to have 25GW of hydrogen production capacity by 2045. Green Cat Renewables, which has provided us with a valuable briefing, says that its four projects produce 800MW. That is minuscule compared with that target of 25GW. In Scotland, if all the projects that are being talked about go through—not all of them will—that will come to 28GW, and hydrogen will account for 25GW of that.

I am all for big, ambitious targets, but we need to have a plan that works. The figures that I have mentioned require skills development, planning and investment. Reaching that target is not cheap, and it will require a lot of people to make it happen. My question to the cabinet secretary is about how realistic the target is. Green Cat Renewables was diplomatic in its briefing, but I think that it has sounded a note of caution on the extent of the target.

Green Cat Renewables also rightly points out that demand generation is incredibly important. We need to ensure that demand is domestic rather than involving exporting, because we need to have a reliable demand. We know that that will be difficult, because change is hard. For people who have done things a certain way for a long time, change is difficult. There will need to be a lot of investment, skills development and training. Inertia comes into play—people often ask why, if something is already working, we should bother to change it. Therefore, we need to ensure that we have the demand generated locally with the practical measures to make that work.

St Andrews University, in my constituency, is involved in a green hydrogen accelerator project, together with the University of Strathclyde. The project is very positive. It has £13 million of investment, and is led by Professor John Irvine, who has a long track record in that area. The purpose of the project is to set up a world-leading research facility to drive up efficiency, because we should not just think that where we are now is where we need to be. We need to be incredibly

efficient, and the project is looking at energy storage and chemicals, which are the prime areas for the use of hydrogen.

I am coming to the end of my time, so I will close by talking about public acceptance. I have heard a lot of complaints from people who are concerned about battery storage facilities in their neighbourhoods and about solar farms. We know that nuclear power stations are not popular, and that wind turbines are not popular with certain sections of the population. There is no energy source that is universally popular. Hydrogen will fit into that pattern, too, so we need to be ahead of the game on that and provide people with assurance and confidence. If we are going to get to that 25GW target, there will have to be hydrogen facilities in many parts of Scotland. Therefore, let us get ahead of that and build confidence that those facilities are safe in our neighbourhoods. If we do not do that, we have no chance of getting to that 25GW target.

The Deputy Presiding Officer: We move to the open debate.

15:45

Kevin Stewart (Aberdeen Central) (SNP): I believe that hydrogen offers an extraordinary opportunity for Scotland that promises not only to transform our energy landscape but to secure our economic prosperity for generations to come.

As a Parliament, we should be fully committed to helping the Scottish hydrogen sector to develop and grow, including by integrating it into a wider European and international network.

Scotland has a vast capacity for renewable energy production, which gives our nation the potential to become a world leader in renewable hydrogen production and to export at scale. Scotland not only has in abundance all the raw ingredients that are necessary to produce low-cost, clean hydrogen; we are also well placed when it comes to the workforce and industrial base.

Scotland's reputation for excellence in energy, our extensive oil and gas supply chain and our strong onshore and offshore wind sectors will be the key to our achieving a just transition to a low-carbon and, subsequently, net zero age, with hydrogen at the very heart of that transition.

Hydrogen will play a significant part in the decarbonisation of our energy system by being a key component in an integrated energy system. The first key area is green energy storage. That is because hydrogen is an ideal partner for wind energy. When there is too much wind energy to utilise, that energy can be stored as hydrogen and,

when there is not enough wind, that hydrogen can be turned back into clean green energy.

In that partnership, hydrogen has the potential to be the large-scale and long-term energy store to replace or augment the critical balancing and resilience services that natural gas provides to our energy system today.

The growth of renewables and the hydrogen economy are complementary, so we need a strong renewables sector to support the development of a range of green hydrogen projects. That is why I am glad to see that the Scottish Government's ambition for hydrogen production is closely aligned with its ambition for expanding the capacity of both offshore and onshore wind.

Just like natural gas, hydrogen can be stored as a compressed gas or liquid, but there is also the potential for storing hydrogen underground, including in depleted natural gas fields. With its expertise in oil and gas, Scotland should be at the forefront of hydrogen geological storage as well as carbon capture and storage.

We also need to explore the recent discovery of natural hydrogen reserves, where hydrogen produced underground has been trapped, much like natural gas. Although that work is still in its infancy, we should be exploring whether Scotland has hydrogen reserves. The skills base in the north-east is ready to be called into action, at home or abroad, if that discovery bears fruit.

I have touched on the issue of carbon capture, and I do not think that we could have this debate without mentioning Grangemouth. Research has shown that the Grangemouth refinery could have a future in hydrogen production. The UK and Scottish Governments both invested in the project willow study, which identified hydrogen production as one of the key pathways for the cluster's future.

Project willow confirmed that hydrogen production at Grangemouth would be significantly more commercially viable if the Acorn carbon capture project had track 2 status. Ed Miliband has recently announced huge deals for carbon capture in England. It is now time for Scotland's share; it is time that Ed Miliband and the UK Labour Government confirmed track 2 status for Acorn. If Scotland is to realise its vast green energy potential, the UK Government must urgently ensure that resources are put into Acorn so that we can move forward with our ambitions. We have waited far too long. It is now time for those resources to come to Scotland, which will help to boost Grangemouth's potential.

15:51

Brian Whittle (South Scotland) (Con): I am delighted to speak in the debate. As many

members know, I extol the virtues of green hydrogen.

From listening to the debate so far, my concern is that too many of the renewable eggs are being put into the electricity basket. The reality of moving every aspect of our lives that is currently powered by fossil fuels to an electric alternative is that the resources that are required either do not exist or cannot be extracted in a way that is economically or environmentally viable. Studies project that, by 2030, the UK will require up to 40 per cent of current global lithium production and 29 per cent of current global graphite production. That would require us to increase copper mining by 300 per cent and cobalt mining by a staggering 8,000 per cent. Are we really going to support increased strip mining of cadmium in Canada or cobalt in east Africa, or even the coal-powered extraction of lithium in China, just so that we can import those rare metals and be smug and self-righteous? That approach does little for climate change.

A point on which all members broadly agree is that hydrogen has an important role to play in our future energy mix. How big that role will be remains to be seen and will, in no small part, be determined by the Scottish Government's choices in the coming months and years. Too often, our approach to decarbonising the country has been focused on what can achieve the quickest win, or on strategies that are overambitious and unrealistic but generate good headlines, leading to an inevitable ditching of targets.

The reality is that the priority for Scotland should not be how quickly we can decarbonise but how we use the opportunity to sustainably decarbonise, to demonstrate to the world what can be achieved to the benefit of our economy. We are in danger of picking winners too soon before all that research is done. There is no doubt that heat pumps are important to the jigsaw, but they are not the silver bullet that I think Patrick Harvie has tried to make us believe.

Sarah Boyack: There is an issue. It is not just about being ahead of the game but about learning from other countries. Lots of European countries have heat networks that are supplied by electricity. It is not just about inventing new tech; it is about learning from other countries and making that work where possible in our communities.

Brian Whittle: I appreciate that intervention. I will come on to what other countries are doing.

The UK Government is taking decisions that could lead to the gas grid being wound down before we know for sure what its potential is for the hydrogen economy. Right now, the gas grid could take blended green hydrogen of up to 10 or 20 per cent, if we had the will to do that. Given that home heating is such a big part of our emissions,

why are we not making that change very soon? We should be encouraging innovation in all aspects of renewables, especially in green hydrogen, given that Scotland's natural resources of wind and water are exactly what the production of green hydrogen requires.

We have a chicken-and-egg situation with supply and demand. Hydrogen companies want to grow and invest significantly but hesitate to do so without a clear demand from offtakers. Potential hydrogen users want to convert to a greener fuel source but hesitate to make that investment without confidence that the supply of hydrogen will be available to them.

All the while, global demand for hydrogen continues to rise. The German federal Government estimates that total hydrogen demand will be up to 130 terawatt hours by 2030, with about 70 per cent of that supply having to be imported. A joint statement on industry co-operation between Danish producers and suppliers of green hydrogen and the Dutch industrial offtake market said that the Dutch offtake of hydrogen of 1.3 million tonnes per year

“is the second largest in Europe and is expected to increase significantly towards 4.5 Mton per year by 2050.”

The International Energy Agency states that Belgium is positioning itself as an “import and transit hub” for hydrogen, with domestic demand estimated to be as much as 6TWh of renewable hydrogen or its derivatives by 2030, potentially rising to 165TWh by 2050.

In 2024, the United States of America exported \$1.8 billion of hydrogen. Despite President Trump stating that the USA would “drill, drill, drill”, hydrogen is still in the top 15 per cent of US exports to Japan, Vietnam, South Korea, Belgium, Mexico, Denmark and even Saudi Arabia. What are we waiting for? Do they know something that we do not?

We are already behind the curve. Why are so many other countries benefiting from hydrogen production? It is increasingly being recognised that, although decarbonising our economy and society remains a crucial long-term objective, the approach that we have taken to meet that goal risks costs becoming too great for too small a gain.

Ultimately, Scotland, or even the UK, reaching net zero will not be the turning point in reducing global emissions. With that in mind, I believe that our approach should focus less on when we reach net zero and more on how we reach it. The shift to decarbonise the world has enormous economic potential for Scotland if it is in a position to make the most of its knowledge and natural resources. When it comes to net zero, we need to consider not only how we decarbonise but, crucially, how

we benefit economically from the decarbonisation of the world.

Deputy Presiding Officer, I realise that I am running out of time. Is there a little bit extra?

The Deputy Presiding Officer: We have exhausted most of the time that we have in hand. I can give you the time back for the intervention.

Brian Whittle: Hydrogen represents one such opportunity to capitalise. Global demand for hydrogen is growing rapidly, as an alternative to natural gas and, in some cases, as an alternative to electrification. Scotland has the well-developed renewable electricity sector that is needed to create hydrogen and significant expertise in working with gas, both offshore and onshore. Crucially, it also has generating capacity, as nearly £1 billion paid to generators in constraint payments shows. Imagine that, instead of paying to switch off generation, we would be able to use that electricity to generate hydrogen for use elsewhere. Not only would we eliminate constraint payments and lower bills, but we would build a new industry that creates jobs and tax revenues that benefit the whole country.

We can continue to tinker around the edges of hydrogen production, only to adopt and import technology as the rest of the world develops and adopts those fast-developing technologies, as we did with wind and solar, or we can buck the Scottish Government trend, be bold and encourage the development of those technologies so that we can lead the world in decarbonisation to the benefit of the economy. That goal is worth shooting for.

The Deputy Presiding Officer: Before I call the next speaker, I confirm that the time that we had in hand has been just about exhausted. Interventions will need to be accommodated within the time allocation.

15:58

Audrey Nicoll (Aberdeen South and North Kincardine) (SNP): It has been an interesting week to have a debate on Scotland's hydrogen future. The week began with Portugal and Spain experiencing major disruption caused by failure of the power system, which underlined the fragility of the way in which we live our lives. It was a week in which crude oil refining ceased at Grangemouth and in which the Climate Change Committee reported that the UK Government has yet to change its approach to effectively tackle climate risks. This is not where we want to be. The window for keeping global warming within the limit of 1.5°C is closing. If we ever needed any more evidence that the world is running short of time to avert catastrophic climate change, this was it.

However, today is about acknowledging and even celebrating the progress that is being made in Scotland's hydrogen industry and about looking ahead to the future, so, in my case, what is needed is less higher chemistry and maybe a bit more higher economics.

Scotland has ambitious climate goals. I have always believed that setting rigorous targets shows that we are prepared to take strong action. That action will be delivered through the just transition targets. Targets focus minds, they remind us that we must always do more and they make us innovate, which is important.

Scotland is a treasure trove of innovators in the energy sector, including companies and investors who are now applying years of experience in the oil and gas industry to support the wind, carbon capture and storage, and hydrogen markets. As the motion outlines, hydrogen represents one of Scotland's greatest industrial opportunities since oil and gas. We have the energy history, skills and experience to be a driving force in the hydrogen sector in Europe and beyond.

As we continue the transition to net zero, green hydrogen will play an increasingly important role, particularly in industry, as organisations decarbonise their operations. Underpinning the development of a hydrogen economy in Scotland is the Scottish Government's hydrogen action plan, which commits £100 million of capital funding for renewable hydrogen projects and enterprise agencies, supporting businesses to access new opportunities. The Scottish Government's hydrogen export plan recognises the opportunities that are arising from countries that are looking to countries that can provide energy from hydrogen at scale. As we have heard, Scotland is well placed to service future export markets for hydrogen, presenting us with a significant industrial opportunity.

Not to disappoint, Aberdeen continues on its journey as a hydrogen city and has a strong track record as an area of innovation, working across European and domestic Governments to develop the working technology for hydrogen vehicles. In addition, the Aberdeen hydrogen hub, a collaboration between Aberdeen City Council and BP, supported by £15 million of Scottish Government funding, is making very good progress. That links to Sarah Boyack's point about hydrogen being an issue right across the Government.

Gillian Martin: As I have been listening to Audrey Nicoll, I have been reminded of the success of Aberdeen City Council in providing hydrogen for various vehicles. Is she aware that Aberdeen has made hydrogen a more attractive prospect for other cities, too? Inverness could be the next place for development, with its

collaboration with Storegga on producing hydrogen and potentially powering its local authority vehicles with hydrogen.

Audrey Nicoll: Yes, I am aware of that. That example goes to show that, although developments in Aberdeen have not been without challenges, they have led the way across Scotland, which is to be commended.

The flagship hydrogen campus in the energy transition zone in my constituency is set to become home to a new green hydrogen test and demonstration facility, a multimillion pound collaboration between Energy Transition Zone Ltd and TÜV SÜD, which will help to drive forward the use of industrial green hydrogen and deliver the energy transition.

This week's Scottish Renewables supply chain impact statement reflects the progress that is being made in green hydrogen, including the European Marine Energy Centre in Orkney, which is pioneering developments in green hydrogen, and a highlight in the form of the Ardbikie distillery becoming the world's first distillery to be powered by green hydrogen.

I note members' comments on transport. At least one business in my constituency is seeking to transition to manufacturing hydrogen pressure vehicles for the renewables sector. However, key to that is funding a cost-efficient and safe option.

Scotland has two Governments in relation to energy, and many of the levers that are required to develop Scotland's hydrogen economy sit with the UK Government. One of those levers is the regulatory framework, without which progress is restricted, so I ask the cabinet secretary for an update on progress on developing the necessary regulations to further develop hydrogen infrastructure, power and storage.

That leads me to my final point. Project willow, which has already been mentioned, has identified hydrogen production as one of the key pathways for the cluster. However, it is more commercially viable if the Acorn carbon capture project has track 2 status. I join business leaders, the Government, colleagues and stakeholders in calling on Scottish Labour to put its shoulder to the wheel and demand that the UK Government provide urgent clarity on the project today.

16:05

Foysoyl Choudhury (Lothian) (Lab): Hydrogen is a key part of our journey to net zero. Although we can decarbonise many parts of our economy through electrification or renewables, hydrogen is necessary in the areas where that is not viable.

The sector has immense potential. The Hydrogen Energy Association has estimated that

hydrogen technologies will be worth £700 billion globally by 2050 and will deliver hundreds of thousands of jobs in Scotland alone. Given our existing knowledge in our energy sector, we should be pursuing those opportunities, and I am glad that there is agreement across parties and Governments on that point.

The shortlisting of eight Scottish sites in the second hydrogen allocation round should be welcomed, particularly that of the Selms Muir hydrogen project in Livingston, which could deliver 6 tonnes of hydrogen a day and fuel the Lothian bus fleet. That would be complemented by Grangemouth hydrogen and a pipeline to Forth Ports in Leith, which could enable exports to other countries. All that would build a cluster of hydrogen knowledge in the central belt.

If we want to be successful, we must build up capacity quickly. However, as we have seen in other areas, the planning system is sluggish and inefficient in introducing new energy infrastructure. We have heard from the Improvement Service that understanding of hydrogen among planners and decision makers is limited and can vary between areas. I welcome the fact that the Scottish Government is establishing a planning hub to improve that situation.

We need knowledge to be embedded in all parts of the system—including local development plans—and a clear pipeline of projects so that decision makers can have clarity. In addition, as with all planning, we need to ensure that there are enough planners working to make decisions.

Public engagement is also key. Some industry figures report public unease regarding hydrogen proposals. Much has been said about community input in energy infrastructure. When people hear the word “hydrogen”, many think of the Hindenburg disaster, so ensuring understanding of the safety of such systems should be a priority.

I come back to skills. With our expertise in oil and gas, Scotland is well placed to enable the hydrogen economy. Those sectors include people with transferable technical skills, such as those in engineering and project management, and people with skills in safety, risk and regulatory compliance. Creating a clear pathway from oil and gas to hydrogen should be on the cards to ensure that workers can adapt and to guarantee them a just transition.

However, ClimateXChange found that skills transfer from industry alone will not be sufficient in the long term to meet the objectives of the hydrogen action plan. Therefore, this is a great opportunity to boost apprenticeships and deliver opportunities for young people across all areas of the country.

That brings me to my last point on infrastructure. Hydrogen is a versatile element. It can be transported in liquid or gas form and by pipeline or boat. Infrastructure to ensure that hydrogen can flow cheaply and easily from where it is produced should be delivered at the same time as investment in green generation so that we do not find ourselves playing catch-up in the years to come.

I again welcome the shortlisting of eight Scottish sites in the latest hydrogen allocation round. That reflects the talent and appeal of Scotland in the hydrogen sector. However, we cannot just hope to be a world leader in green hydrogen. The Scottish Government should tackle the planning and skills issues that I have outlined and develop a clear strategy that ensures that green hydrogen can be used in as many areas of our economy as possible in order to hit our net zero target.

16:10

Clare Adamson (Motherwell and Wishaw)

(SNP): Today’s debate brings to mind a recurring problem that we have in Scotland—one that I have seen across a number of areas, particularly in science. We do not talk up the incredible scientific developments that are taking place here enough. We are all familiar with the country’s rich scientific and engineering legacy. At the height of the industrial revolution, the prodigious Scots practically invented the modern world, but what about more modern developments? What about the genuinely world-leading research in life sciences, our burgeoning renewables industry, our tech sector and our games ecosystem?

I recall a meeting of the cross-party group on science and technology that I chaired that focused on the groundbreaking work in Scotland on quantum tech and semiconductors. Quantum tech, semiconductors, photonics and wireless all have a role to play in healthcare, net zero, communications, financial services and space—you name it. We need to celebrate the work that is going on in Scotland more and recognise just how much research, development and delivery is taking place here.

Last month, my colleague Kenny Gibson hosted an event for Scotland’s critical technologies supercluster in which the following sub-sectors were included: photonics, quantum tech, semiconductors, wireless and sensing technologies—and hydrogen. We do not hear enough about that incredible work. In my research for this debate, I found that the same problem is apparent for hydrogen. I confess that I was not aware of the scale of Scottish hydrogen projects. The Scottish Government has implemented funding schemes to kickstart green hydrogen projects across the country, and such projects will

be an integral part of the energy mix in the transition to a more sustainable society.

Our hydrogen economy is growing rapidly. The Scottish electrolytic hydrogen production market is estimated at 126 terawatt hours. Scotland is one of Europe's largest offshore renewable energy zones, which makes it ideally placed for large-scale hydrogen projects and inward investment, while also giving us the tools that are required to become a major green hydrogen exporter—we heard earlier about the money that would be involved in that. That critical demand for hydrogen looks set to grow.

Let us be clear: hydrogen is not our only green energy market but is part of a mix. We need to work across different sectors and different types of sustainable energy generation, and hydrogen will become a more important player. The need for the energy transition is an existential reality for us in Scotland, because the climate crisis is an existential threat. It is depressing that I feel the need to reiterate that point, but anti-scientific sentiment is rife. Bad faith actors are intent on obscuring the reality of climate breakdown, because many perceive it as a threat to their profit margins or political interests.

The fact remains that we need to shift to sustainable energy sources. The natural disasters that we have become used to seeing in the news cycle are not natural in the true sense; they are the result of accelerated climate breakdown that is caused by human activity. The science is clear on that. Addressing the climate crisis is both an economic and environmental necessity.

Our European allies are pivoting away from reliance on Russian gas in response to Putin's barbaric invasion of Ukraine, and that threat to energy security is also a reflection of the need to move to sustainable energy sources, as an environmental imperative and an economic strategy.

I first became aware of the interest in hydrogen during my first session in Parliament, when I hosted an SGN event. At that point, it was talking about the possibility of using hydrogen in a domestic setting in Scotland. Following the Government's investment of £32 million in the Fife hydrogen hub for H100 Fife, we have seen the first hydrogen-powered homes being opened by the First Minister in February this year. Although I appreciate that some concerns have been raised, we must explore the opportunities, and that proof of concept is the first stage in looking at how we might be able to roll that out around the country. That has gone from being a concept in 2011 to being delivered in 2025, when we see people using that technology in their homes.

The Scottish Government has funded two North Sea energy alliance bilateral Scottish-German research projects to investigate hydrogen pipeline infrastructure between Scotland and Germany. I believe that that will be a crucial part of the future of energy security and energy delivery in Scotland, and I welcome everything that the Scottish Government is doing to support the industry and to create proof-of-concept projects that will let us start rolling out hydrogen across many areas of industry and in our homes. I look forward to seeing that work developing in the coming years and contributing to Scotland's economy.

16:16

Maurice Golden (North East Scotland) (Con): Graham Simpson opened his speech on a positive note, and I shall follow where he leads, because I welcome the Scottish Government's ambition on hydrogen. The Government is absolutely right that Scotland should be leading in this space. It is also right that significant resources are being committed, as we have heard about already today. There is the multimillion-pound investment in strategic green hydrogen projects, support for the Aberdeen green hydrogen hub and the investment in a green hydrogen farming pilot. All of those are welcome, because hydrogen, especially sustainable green hydrogen, offers another useful tool in our efforts to decarbonise our economy and reach net zero.

However, this debate is not only about climate; it is about seizing a significant economic opportunity. The Scottish Government's hydrogen action plan aims for 5GW of production by 2030, which would account for half the UK production target. The target for Scottish production is 25GW by 2045 and there is the potential for Scotland to export 2.5 million tonnes of green hydrogen by that date. That could be exported across Europe, given the estimate that the EU will import around half of its hydrogen by the end of the decade. Because of the uncertainty about energy supplies in the wake of the invasion of Ukraine, that huge market is waiting for a reliable supplier, and Scotland is well able to fulfil that role. In fact, Scotland could supply as much as a third of Germany's demand, so it is encouraging to see that the UK has signed a hydrogen partnership agreement to collaborate with Germany on research, standards and trade.

Behind such trade, there would be new supply chains, new inward investment and, perhaps most importantly, new jobs. That is exactly what a just transition is supposed to mean, especially for my constituents in North East Scotland, who have built their careers on oil and gas and now need long-term opportunities to use their skills in a net zero economy.

Daniel Johnson: The member has done an excellent job in setting out the scale of the opportunity and highlighting the 5GW target rising to 25GW, but the 5GW is to be achieved by 2030 and, at present, as I understand it, we are not producing any green hydrogen at an industrial scale. Does he believe that we are making sufficient progress to realise the targets and the opportunities that he has set out?

Maurice Golden: I do not. I think that we all agree with the ambition on green hydrogen, but it is more realistic to say that we are actually seeing grey or even blue hydrogen. Ultimately, that is an issue. We need to make progress on that, because the case for hydrogen is, in my view, inextricably linked with being green. Ultimately, the business case for net zero changes significantly if we are talking about different ways of producing the said hydrogen.

I also caution that we have been here before on green jobs, with promises being made and then broken. We see the same story repeated across the entire net zero and low carbon portfolio: emissions targets are repeatedly missed, recycling is stalled and net zero policies are watered down or abandoned. Although Government ambition and investment are welcome, we need to be concerned when the Scottish Government cannot say what is happening with its hydrogen action plan or how the investments will ultimately deliver a green hydrogen future. It is delivery that counts.

One place where that delivery is happening is at the H100 project in Fife, which is the first project of its kind to use clean power to provide hydrogen for domestic heating. I was able to visit it recently with colleagues and see its progress for myself, ahead of renewable hydrogen starting to be delivered into hundreds of homes later this year. I can confirm that the pancakes that were made using the hydrogen hob tasted exactly the same as those made using natural gas.

As an aside on transport, I note Graham Simpson's comments on the EU mandating hydrogen refuelling stations every 124 miles, not to mention electric vehicle charging stations every 37 miles. As an EV driver who is frequently frustrated by access to chargers, I can only hope that the Scottish Government learns from such issues when, or if, it develops future hydrogen infrastructure for transport.

Returning to heating, it is important that we have a robust mixture, which will undoubtedly include heat pumps, but we have to acknowledge that heat pumps are not suitable for everyone. Scottish Government estimates suggest that they will not be suitable for about 24 per cent of properties by 2040, even with upgrades. The provision of hydrogen utilising existing grid infrastructure is theoretically possible, but it is certainly not the first

port of call. The most likely scenario is that hydrogen will be used in domestic properties either as part of a blend or where the properties are in proximity to industrial clusters.

I will close with a simple appeal to the Scottish Government. I do not doubt its intentions and there is much in its motion to agree with, but we need it to provide the detail and, ultimately, to help to deliver a green hydrogen future.

The Deputy Presiding Officer: The final speaker in the open debate is Emma Harper.

16:23

Emma Harper (South Scotland) (SNP): Marrying up hydrogen production with the clean renewables of which Scotland has an overwhelming abundance is not just the right thing to do in our quest for a just transition when we are aiming for net zero, but also means smarter and cleaner management of our natural resources, creating better places for our people and making sure that the economic dividends of the hydrogen industry are put to good use right here in Scotland.

The UK has spent decades wasting finite natural resources and putting our energy eggs in one basket, including with the dash for gas of the 1990s. Marrying up renewables generation with the production of hydrogen will provide load balancing across the grid just as pumped storage hydro does for peak demand, but it will do so across much longer periods of time. Using surplus electricity generation to produce and store hydrogen will allow for the reconversion of that stored hydrogen back into electricity and into the grid.

The technology is there, and it has been for decades, but only now is there the political and organisational will to make that a key priority for Scotland's energy future. This cannot involve only the Government; we need business and industry to work collaboratively with the state to drive things forward. That is why last year alone, £7 million-worth of funding was on the table for businesses as seed money for green hydrogen projects

In my South Scotland region, schemes such as the Chapelcross initiative in Annan are repurposing the facilities of the 20th century nuclear power plant and putting in place the technology of the 21st century. It was great to hear colleagues mention Green Cat Hydrogen, at Creca, near Annan. In fact, it was positive to hear the south of Scotland mentioned in the chamber at all during the debate.

Just six weeks ago, Green Cat Hydrogen announced plans for a green hydrogen facility at the new energy transition zone at Chapelcross. If

the plans get the go-ahead, 150 jobs will be created during construction and another 50 long-term, high-skilled jobs would be in place once the plant is complete. That is a large number of long-term, high-skilled jobs, and that amount of jobs is important for our rural region. Schemes like that would not even make it on to the drawing board without the support of the Scottish Government and South of Scotland Enterprise. That is only one example of how the Government's backing of hydrogen is reaping economic dividends for Dumfries and Galloway, South Scotland and the rest of Scotland.

Anyone who knows the history of renewables on these islands and further afield knows of the opportunities for wind generation that the UK missed time after time. Meanwhile, small, independent Denmark was leading the way, and today the Danes remain world leaders in wind tech, which, importantly, has brought high-skilled, high-value jobs to that part of the world. If Scotland gets in early—and that is exactly what the Scottish Government plan for hydrogen aims to do—we can be for the hydrogen industry what Denmark has been for the wind industry for decades: we can be a world leader and an exporter of technology, industrial plants and expertise, with all of that boosting our industrial sectors and our economy.

Scotland has seen more than five decades of the dead hand of Westminster frittering away our energy future. We cannot allow the new energy technologies of the 21st century to suffer the same fate. Our green industrial strategy aims to harness the full benefits of our natural bounty to the betterment of our economy and ultimately the people of Scotland.

I want to highlight the carbon capture and storage work of The Carbon Removers at Crofthead farm, near Crocketford, just off the A75, which is making inroads into carbon capture and the sequestering of biogenic carbon. The cabinet secretary and the First Minister have visited that site to see for themselves the potential of what The Carbon Removers can achieve. That is another fantastic project based in the south-west of Scotland. Part of what it is doing is carbon sequestration of carbon dioxide for the whisky industry, and The Carbon Removers was a crucial business during the pandemic when it provided dry ice for vaccine storage and transfer. That is another project that it is worth us shouting from the treetops about to get Dumfries and Galloway on the map as part of the just transition. I am conscious that we often talk about the north and the north-east, and that is absolutely the right thing to do, but there are also places in the south that are doing a great job as part of the just transition.

Hydrogen is a key strand of the green industrial strategy, and I am delighted that the Scottish Government is taking that seriously rather than kow-towing to the interests of Whitehall and Westminster and the short-termism that was on display only this week from the former Prime Minister Tony Blair. I hope that ministers give his latest outburst all the respect it deserves, and I hope that colleagues will support the motion in Gillian Martin's name at decision time.

16:29

Mark Ruskell (Mid Scotland and Fife) (Green): I very much welcome this afternoon's debate. I would characterise much of it as being about the laws of physics versus magic solutions. I certainly thank Daniel Johnson and Patrick Harvie for reminding us of some of the laws of physics and chemistry in relation to hydrogen and for setting out some of hydrogen's advantages as an energy vector, as well as some of its limitations. We need to start the debate by understanding the facts on what hydrogen can and cannot do.

The cabinet secretary said early in the debate that the Government's focus is on the hard-to-abate sectors. As Greens, we very much see a role for green hydrogen, in particular, in the hard-to-abate sectors such as fertiliser production, heavy shipping, aviation, cement production and, potentially, steel. Willie Rennie talked about the need for us to build up the domestic demand for hydrogen in Scotland. However, as Sarah Boyack pointed out, that can come only through an industrial strategy and just transition planning, for example, at the cement factory at Dunbar, at Grangemouth and at Mossmorran. We need to start with the role of hydrogen in our domestic industrial sector and then build up supply chains and understanding around that.

The cabinet secretary moved on quite quickly to talk about the role of hydrogen in easy-to-abate sectors, which is where the Greens disagree with the Government. It makes no sense to invest in hydrogen in uncompetitive uses such as domestic heating, trains and buses in our cities, which are grossly inefficient uses of hydrogen.

The cabinet secretary talked about the 100 pilot projects around Scotland in which the Government has invested, and a number of Scottish National Party members have spoken about the pilots in their constituencies. How many of those pilot projects are focused on the hard-to-abate sectors, and how many of them are experimenting with uses of hydrogen in easy-to-abate sectors for which we already know the answers?

The cabinet secretary mentioned the H100 project in Leven as a domestic application of hydrogen for heating and there being a need to

prove the concept for that. However, we have already proven the concept of hydrogen heating many times over. Globally, 54 independent studies have been done that have picked up on hydrogen heating projects. The studies have all reported, and not a single one of them—across Europe or around the whole world—has recommended the widespread use of hydrogen heating. That is partly because each of those studies has shown an increase in energy costs as a result of hydrogen heating. On average, the studies show an 86 per cent increase in costs for householders.

Edward Mountain (Highlands and Islands (Con)) *rose—*

Brian Whittle *rose—*

Mark Ruskell: I want to make some progress.

Graham Simpson talked about people out there wanting a wonderful heating system whereby the only thing that is produced at the end of the day is water. That is absolutely fine, but it cannot come at the expense of fuel poverty. If Mr Simpson genuinely wants pensioners and hard-working families to pay astronomically high energy bills because of a hydrogen heating solution, I think that that is wrong and would drive people into fuel poverty. That is exactly why the UK Climate Change Committee has recommended against the widespread adoption of hydrogen for home heating.

Graham Simpson: Will Mark Ruskell give way?

Mark Ruskell: I need my time on this.

On H100, Brian Whittle and Maurice Golden pointed to what the real driving interest is behind that particular home heating project: it is quite clear that SGN manages a gas grid and wants to continue to put fossil fuel into that gas grid. It wants to blend hydrogen in, but 80 per cent of what will be flowing through that gas grid in future will be fossil fuel gas, which will make us more and not less dependent on fossil fuel heating. Of course, we cannot put carbon capture and storage on millions of domestic boilers in people's homes, so there is a danger that we would lock in emissions if we went down the route of blending hydrogen into the gas grid.

Brian Whittle: Will Mark Ruskell take an intervention on that point?

Mark Ruskell: I would like to make progress.

A number of members have spoken about the role of blue hydrogen in the mix as part of the transition. I recognise Kevin Stewart's enthusiasm for CCS, and a part of me really hopes that CCS works and is effective and efficient, but there are still major concerns about CCS and whether it is deployable at scale. It is not just the Greens who are saying that. Several years ago, the UK Climate

Change Committee advised the Scottish Government to develop a plan B in case the Acorn project does not match the expectations that Kevin Stewart set out earlier. It is not a dead cert that CCS will be available, will be cost effective and will work.

Several members have mentioned potential applications for hydrogen in the transport sector. I can absolutely see its being used for heavy transport and shipping, but not for lighter forms of transport such as coaches, buses, cars or heavy goods vehicles. It was interesting to hear Graham Simpson and Maurice Golden getting so excited about potentially having hydrogen refilling points every 124 miles. To be honest, that filled me with range anxiety, given that I can charge my own EV at home, overnight, for 8p per kilowatt hour. Why would we move towards a hydrogen transport system that would create so much range anxiety?

A strong hydrogen economy in Scotland is in the offing, but it must be focused on the hard-to-abate sectors. That is where we should put in the research and the just transition planning. It is also where we should put in the science and the effort from Government and industry working together, rather than wasting time on applying hydrogen to areas that will be not cost effective and will end up driving up bills for hard-pressed families around the country.

16:36

Daniel Johnson (Edinburgh Southern) (Lab): This has been an important debate. I like debates like this one, when we talk about big topics and there is broad consensus, but there are aspects that we need to navigate.

I begin by reflecting on what Clare Adamson said about rediscovering our heritage of innovation in science. I believe that science can make our lives better. It has the answers to the challenges that are in front of us. Scotland has an enormous legacy in that regard, and I believe that hydrogen has a huge future here.

The cabinet secretary and others, including Kevin Stewart and my colleague Sarah Boyack, set out a compelling case for why we have such a great opportunity in front of us. It is partly a consequence of our huge investment in renewables. As Ms Boyack pointed out, we must ask what we will do with the excess electricity that we will inevitably generate. It is absurd that, right now, we are paying providers to switch turbines off, which in turn simply increases current electricity costs.

Kevin Stewart rightly pointed out that another incredibly important element in Scotland is the fact that, given our history of working in the North Sea, we possess geological knowledge and the ability

to undertake engineering work offshore. Those factors come together to form an extraordinary opportunity, because hydrogen energy will be a very significant part of the world's energy economy in the future.

I very much appreciate Maurice Golden's illustrating that in the context of Germany's ambitions, which it has made very clear. It has huge targets for hydrogen consumption, which require a demand range of between 95 and 130 terawatt hours of hydrogen by 2030 alone, and that figure will double in 2045.

The issue concerns not only our energy economy and our energy security, but what we have to offer the world. Given that we are where we are, and given our incredible geographic opportunities because of our offshore wind potential and the fact that Germany and other parts of Europe lie just across the North Sea, there is extraordinary potential here.

Kevin Stewart: In my contribution, I referred to the possibility of integrating into a wider European and international network. Does Mr Johnson share my view that there should now be discussions right across Europe about establishing such a network, so that we can get our approach right, with a view to achieving energy security throughout Europe and so relying much less on the likes of Russia?

Daniel Johnson: I could not agree more. That is why the UK Government has sought to establish agreements with Germany, and it is why the Chancellor of the Exchequer recently pointed out the importance of Europe as a trading partner.

Willie Rennie was right in saying that, above all else, we need to concentrate on making this happen, but that requires us to have a dose of realism, which is why I very much value Patrick Harvie's contribution. There is some fundamental physics and chemistry to consider. In order to make using hydrogen for energy possible, we need to store it at a compression of 700 times atmospheric pressure and at -253°C . We absolutely can come up with the engineering and scientific solutions to do that, but it is not trivial. I am concerned that we simply think, "We can stop using that kind of gas and start using this kind of gas," when the reality is that the energy density of hydrogen is considerably less than that of natural gas, because of the difference between the hydrogen atom and natural gas, which is made up of ethane, methane and propane. Those are considerably more energy dense, which allows you to do different things.

We need our pilots, and the H100 pilot project is interesting for a number of reasons. The end use is probably the least of it, because we need to explore how we can repurpose our current gas

networks for using hydrogen. Indeed, the cabinet secretary alluded to that point, and projects and pilots such as H100 are part of that.

However, we need to understand a couple of things, and there is one sort of footnote to the issue. As Willie Rennie alluded, this is not just about energy; it is also about the other things that we currently use hydrocarbons for, in which context Grangemouth and project willow are important. We will need hydrogen in order to produce dyes, pharmaceuticals and such things, in combination with biorefining. Hydrogen is critical to that, and we need to get into the detail of that.

Ultimately, to make that happen, we need to recognise that there will be different options, and decisions will need to be taken. This is not about racing for as much hydrogen as possible. There are limitations to hydrogen, whether they are about energy density or the physical requirements.

Brian Whittle: I speak as an industrial chemist by trade. The whole point of using hydrogen is that it is limitless, as opposed to hydrocarbons, which, of course, are not limitless. Extraordinarily, my ambitions on this matter are much higher than the Green Party's ambitions, given that Mark Ruskell would not let me intervene to discuss the matter.

Daniel Johnson: I share that view.

I do not know whether members remember the demonstration that took place at the exhibition stand a couple of years ago, which showed the amazing possibility of producing hydrogen through the electrolysis of water. It was almost like magic.

I say to Mr Whittle, an industrial chemist, that there are physical limitations to what hydrogen can and cannot do. As we pursue hydrogen fuel, we will have to understand where the decision points are. At each one of those decision points, whatever we choose to do, there will be an option that we choose not to do. That needs to be crafted carefully, because we will have to move at such pace, and we have not always been good at delivering at pace. The hydrogen strategy itself was delivered three years late. It is good, but it is also very broad and non-specific.

Let us embrace hydrogen, but let us also be clear about what it can and cannot do, and let us make sure that we maximise our potential.

16:43

Edward Mountain (Highlands and Islands) (Con): I am delighted to speak in this debate on a motion that I broadly agree with. That does not always happen in a Government debate. Before I talk about it in any great depth, I remind members of my entry in the register of members' interests, in which I declare that I have a farming interest. I may talk about fertiliser, and I have an interest in a

fishery on the River Spey that may be affected by a hydrogen plant. I have made that clear at the outset.

I also agree with the Labour amendment. I have been enthralled in the debate by Daniel Johnson, Brian Whittle and one or two others quoting physics and chemistry. I now remember why I did not do those subjects at school and did others instead.

I support most of the Green amendment, until it gets to the bit about heating, then I lose the thread, so I cannot support it. Frankly, I think that the Greens' amendment is disappointing and shows a lack of vision.

Let us be clear: I have had to brush up my knowledge of hydrogen, but I know from my experience on the Net Zero, Energy and Transport Committee that about 40 to 45 per cent of electricity is lost when producing hydrogen and that about another 10 per cent of power is lost when hydrogen is turned back into electricity. A huge amount of power is lost in the process, which means that it is quite an expensive way of producing electricity. I have also found out that 9 litres of water are required to produce 1 litre of hydrogen. The process uses quite a lot of that resource, which I will return to in a minute.

Patrick Harvie: Will the member take an intervention?

Edward Mountain: I will in a minute, Mr Harvie. I just want to make a point.

The production of hydrogen has costs for the environment as well as for the industry. Therefore, we need to send the industry clear signals about the need for hydrogen, which requires us not to talk down all the things that it could be used for.

Patrick Harvie: The member expressed some scepticism about the Green's position on heating and, in the very next sentence, went on to explain how much energy loss is involved in the production of hydrogen. Can he not accept, as the UK Climate Change Committee has advised, that hydrogen is an extremely inefficient way of providing heat for people's homes and buildings in comparison to the forms of electric heating that are already available?

Edward Mountain: I always think that it is good to listen to an argument as it develops rather than jump in at the outset. I have tried to explain to you on numerous occasions why it is important to look at different fuels instead of focusing blandly on energy performance certificates when it comes to housing insulation. You did not listen to me then, so I hope that you will listen to me now.

The Presiding Officer: Through the chair, please, Mr Mountain.

Edward Mountain: I would like the UK Government to give a clear steer to the industry that hydrogen will be important. If we said to the industry that a percentage of the power that it uses has to come from hydrogen, that would encourage investment and reduce the cost of production. Benefits could then be derived from it, which would allow hydrogen to be produced at a level that could make it affordable for use in housing.

Sarah Boyack said that we would not have to pay constraint payments. Would it not be nice if we could develop hydrogen so that we did not have to pay people not to generate power and to have idle turbines? Would it not be nice if battery storage plants did not have to be dumped all over the Highlands in a way that has not been thought out? Would it not be nice if the Highlands did not have to have pylon lines everywhere and we could use underground pipelines? We heard this afternoon that the underground pipeline that is available will become redundant. Emma Harper and one or two other members spoke clearly about how the gas pipeline could be repurposed to transmit hydrogen.

We have to be careful when we are thinking about hydrogen, and I offer a couple of words of warning. Choosing the hydrogen plant sites will be important, as we cannot denude our watercourses and lochs to produce the water they will require. We need to harvest the water used for hydrogen production when there is a surplus of it, and there will not be a surplus of water every summer if temperatures remain high. We also need to think carefully about the by-products that will come about. What will we do with the oxygen from a hydrogen plant? Will there be a role for it, and could there be a subsequent industry? I think so.

I am pleased that we have heard from the Acting Cabinet Secretary for Net Zero and Energy during this afternoon's debate. She is very open minded and wants to see a market being developed.

I was pleased to hear from Graham Simpson that hydrogen fuel gives off only water and that it must be part of the mix.

I agree with Sarah Boyack that hydrogen should be used for transport. Is it not mad that we can transport hydrogen in a lorry but the same lorry cannot be fuelled by hydrogen? There is something wrong with the regulations, and I think they need to catch up.

I have given enough air to Mr Harvie, so I will just say that I do not think that he is on the right track when it comes to domestic heating. *[Interruption.]* You can make lots of noises if you want to, Mr Harvie. I tend not to do that when you are speaking.

The Presiding Officer: Through the chair, please, Mr Mountain.

Edward Mountain: Sorry, Presiding Officer.

I agree with Mr Rennie about the storage of energy and about hydrogen being a resource for that. I note that it is also a resource for the production of e-ammonia, which would be a useful fertiliser for farmers. That is important, because, let us be honest, we do not produce fertiliser anywhere else in the United Kingdom.

Maurice Golden made the point that about a third of Germany's demand could be met from what we have in Scotland.

I could go on, because I agree with most of the speakers. There is only one section of the speakers with whom I do not agree: the Greens. I do not agree that they have got it right. I think that they are missing the point. If they were slightly more open minded, instead of looking just at preconceived ideas, they might well see that there is a role for hydrogen in domestic heating, provided that they do not take a position that puts industry off.

The Presiding Officer: I call Alasdair Allan to wind up the debate.

16:50

The Acting Minister for Climate Action (Alasdair Allan): The tone of today's debate has been constructive. I think that it was Willie Rennie who urged us at one point to keep the tone of the debate cheery. We more or less achieved that, although I might disappoint Mr Rennie by telling him that, unfortunately, there are no salt caverns in Scotland, thanks to the geology that we have.

Willie Rennie: Pessimist.

Alasdair Allan: That is not pessimism; it is just data. However, Willie Rennie is right that there is a great deal to be positive about, and a great deal of room for consensus, in the debate about the hydrogen sector and how we need to help it to develop and grow.

As we have heard throughout today's debate from speakers such as the cabinet secretary, Patrick Harvie and many others, developing Scotland's hydrogen sector presents huge opportunities for Scotland. As the United Kingdom's energy future and economic prosperity are important to all of us, I think that, although we have heard differences of opinion this afternoon, there is common ground on some of the issues.

There has been a surge in momentum on and enthusiasm for hydrogen. I have been able to see that in my role as chair of the Scottish hydrogen industry forum. The opportunities and technical challenges in hydrogen deployment are conveyed

to me whenever I speak to companies that are active in the new sector.

Before going on to anything else, I want to address the issue of hydrogen and domestic heat, as it came up a fair bit in our discussions today, and I listened carefully to what the Greens had to say. At this stage in the debate, it is important to introduce a bit of perspective. The Scottish Government has supported the SGN hydrogen for heating project, which seeks to help us to understand the potential role of hydrogen in this area. It is important that we do that, and that, as we do so, we are mindful of the fact that one of our asks of the UK Government is about the price of electricity. That stems from our recognition that, in many circumstances, the priority is the electrification of heating in houses around the country. I hope that there is not quite as much disagreement about some of those things as has sometimes been the case today.

Patrick Harvie: Without rehashing the disagreement that we have had, I ask whether, if the UK Climate Change Committee presents the Scottish Government with the same advice that it has given to the UK Government, which is that hydrogen does not have a role for home heating and has a limited or niche role for transport, the Scottish Government will accept it.

Alasdair Allan: I am not going to pre-empt any decisions by the Scottish Government, but I will say that the member is right to point out that the same advice applies in both cases.

We want to support the scaling up of hydrogen projects, and we have taken steps to ensure that our planning and consenting regimes are responsive to the growing number of developments that are emerging across the country.

We have taken action to improve capacity and capability in our planning system to enable local planning authorities to respond to the growing number of hydrogen developments across Scotland. That point was picked up today by Sarah Boyack, Foysol Choudhury and others. We have sought to address that. In collaboration with the University of Strathclyde and the University of Aberdeen, we have developed a continuing personal development course that is entitled "An introduction to hydrogen for the public sector". The course, which launched in July 2024, is targeted at local planning professionals. The modules that have been developed for the course are free to access via the Improvement Service website.

A planning hub for Scotland was established in September 2024 and is hosted by the Improvement Service. Its initial focus is to improve consenting speed for hydrogen developments. The hub is working to identify the pipeline for

hydrogen projects and to gain an understanding of the operational barriers to their delivery. Comprehensive planning and consenting guidance for the development of hydrogen production facilities will be published this year.

By developing our domestic hydrogen sector, Scotland, in partnership with the UK Government and our European neighbours, can play a key role in meeting the growing global demand for low-carbon and renewable hydrogen technologies and the skills that will be required in the energy system of the future.

As Audrey Nicoll, Kevin Stewart and others pointed out, the wider situation would be greatly assisted if the UK Government could come to the right decision on Acorn. We have been taking steps to work out a way forward—a reality—by forming international agreements, building relationships and collaborating on research.

Scotland has very strong international relationships, most notably with the EU and individual member states such as Germany, the Netherlands and Belgium. I have seen for myself the strong interest in Scotland's hydrogen capacity that exists in those countries. As Maurice Golden and other members—

Brian Whittle: The minister is talking about the international market. Does he recognise that, while we pontificate in this chamber and decide what we will or will not do with hydrogen, countries around the world are already doing it? There were \$1.8 billion of exports from the United States—hydrogen is in the top 15 per cent of its exports. While we listen to the Greens saying that hydrogen is not for transport and we have this debate, the Chinese have more than a million cars that are powered by hydrogen. Other countries are just doing it, so it is time that we caught up.

Alasdair Allan: Scotland has a great capacity in this regard. Within the constraints of our devolved powers, the Scottish Government is working to forge relationships, overcome many of the barriers and ensure that we respond to the fact that, as other members have alluded to, the German Government expects to import between 50 and 70 per cent of its hydrogen demand by 2030, to name but one opportunity.

As our relationships deepen, we are keen to work with our near northern neighbours—Denmark, Norway and Ireland—as an alliance of producing nations that can supply some of that demand.

I cannot remember who made this point, but we are also keen to meet the demand for hydrogen derivatives such as ammonia.

Last year, we welcomed the signing of a joint declaration of intent on hydrogen between the UK

and Germany. That agreement opens the door for deeper collaboration with our key partners in Germany and other hydrogen markets. The first output of that agreement—a UK-German hydrogen trade feasibility study—was published only this week. The study includes research findings by the Net Zero Technology Centre's hydrogen backbone link project, which is co-funded by the Scottish Government, to assess how Scotland could connect to the European hydrogen backbone and facilitate the export of hydrogen produced in Scotland.

As other members have pointed out, Scotland has a long and proud history of innovation, and hydrogen is no exception to that. A strong evidence base is crucial to the development of the sector. We are, therefore, supporting a range of research initiatives to assist us in laying the groundwork to innovate and build on all of that.

That work includes 31 projects that are funded via our hydrogen innovation scheme, such as the Clyde Hydrogen Systems novel decoupled electrolysis project, which is based at the University of Glasgow, as well as projects by Gravitricity, on geological storage, and by Intelligent Plant and Green Cat Renewables on the development of artificial intelligence-powered decision-making tools.

In November 2024, we published the hydrogen sector export plan. That ambitious plan, which was developed in consultation with industry and international partners, sets out the steps required for Scotland to realise our hydrogen export potential.

Scotland has enormous potential in this area. Hydrogen is not the only answer to Scotland's energy needs, and I say in response to one or two comments that were made today that it is certainly not a magical solution. However, it is part of the answer and it has the potential to benefit our environment and our economy in the years to come.

The Presiding Officer: Thank you, minister. That concludes the debate on Scotland's hydrogen future.

Decision Time

17:00

The Presiding Officer (Alison Johnstone):

There are four questions to be put as a result of today's business. The first question is, that amendment S6M-17399.1, in the name of Graham Simpson, which seeks to amend motion S6M-17399, in the name of Gillian Martin, on Scotland's hydrogen future, be agreed to. Are we agreed?

Members: No.

The Presiding Officer: There will be a division.

There will be a short suspension to allow members to access the digital voting system.

17:01

Meeting suspended.

17:03

On resuming—

The Presiding Officer: We come to the vote on amendment S6M-17399.1, in the name of Graham Simpson, which seeks to amend motion S6M-17399, in the name of Gillian Martin. Members should cast their votes now.

For

Balfour, Jeremy (Lothian) (Con)
 Briggs, Miles (Lothian) (Con)
 Burnett, Alexander (Aberdeenshire West) (Con)
 Carlaw, Jackson (Eastwood) (Con)
 Carson, Finlay (Galloway and West Dumfries) (Con)
 Dowey, Sharon (South Scotland) (Con)
 Eagle, Tim (Highlands and Islands) (Con)
 Findlay, Russell (West Scotland) (Con)
 Fraser, Murdo (Mid Scotland and Fife) (Con)
 Gallacher, Meghan (Central Scotland) (Con)
 Golden, Maurice (North East Scotland) (Con)
 Gosal, Pam (West Scotland) (Con)
 Greene, Jamie (West Scotland) (LD)
 Gulhane, Sandesh (Glasgow) (Con)
 Hamilton, Rachael (Ettrick, Roxburgh and Berwickshire) (Con)
 Hoy, Craig (South Scotland) (Con)
 Halcro Johnston, Jamie (Highlands and Islands) (Con)
 Kerr, Liam (North East Scotland) (Con)
 Kerr, Stephen (Central Scotland) (Con)
 Lumsden, Douglas (North East Scotland) (Con)
 McArthur, Liam (Orkney Islands) (LD)
 McCall, Roz (Mid Scotland and Fife) (Con)
 Mountain, Edward (Highlands and Islands) (Con)
 Mundell, Oliver (Dumfriesshire) (Con)
 Rennie, Willie (North East Fife) (LD)
 Ross, Douglas (Highlands and Islands) (Con)
 Simpson, Graham (Central Scotland) (Con)
 Smith, Liz (Mid Scotland and Fife) (Con)
 Stewart, Alexander (Mid Scotland and Fife) (Con)
 Webber, Sue (Lothian) (Con)
 Wells, Annie (Glasgow) (Con)
 White, Tess (North East Scotland) (Con)

Whittle, Brian (South Scotland) (Con)
 Wishart, Beatrice (Shetland Islands) (LD)

Against

Adam, George (Paisley) (SNP)
 Adam, Karen (Banffshire and Buchan Coast) (SNP)
 Adamson, Clare (Motherwell and Wishaw) (SNP)
 Allan, Alasdair (Na h-Eileanan an Iar) (SNP)
 Arthur, Tom (Renfrewshire South) (SNP)
 Beattie, Colin (Midlothian North and Musselburgh) (SNP)
 Brown, Keith (Clackmannanshire and Dunblane) (SNP)
 Brown, Siobhian (Ayr) (SNP)
 Callaghan, Stephanie (Uddingston and Bellshill) (SNP)
 Chapman, Maggie (North East Scotland) (Green)
 Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)
 Constance, Angela (Almond Valley) (SNP)
 Dey, Graeme (Angus South) (SNP)
 Doris, Bob (Glasgow Maryhill and Springburn) (SNP)
 Dornan, James (Glasgow Cathcart) (SNP)
 Dunbar, Jackie (Aberdeen Donside) (SNP)
 Ewing, Annabelle (Cowdenbeath) (SNP)
 Ewing, Fergus (Inverness and Nairn) (SNP)
 Fairlie, Jim (Perthshire South and Kinross-shire) (SNP)
 FitzPatrick, Joe (Dundee City West) (SNP)
 Forbes, Kate (Skye, Lochaber and Badenoch) (SNP)
 Gibson, Kenneth (Cunninghame North) (SNP)
 Gilruth, Jenny (Mid Fife and Glenrothes) (SNP)
 Gougeon, Mairi (Angus North and Mearns) (SNP)
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)
 Gray, Neil (Airdrie and Shotts) (SNP)
 Greer, Ross (West Scotland) (Green)
 Harper, Emma (South Scotland) (SNP)
 Harvie, Patrick (Glasgow) (Green)
 Haughey, Clare (Rutherglen) (SNP)
 Hepburn, Jamie (Cumbernauld and Kilsyth) (SNP)
 Hyslop, Fiona (Linlithgow) (SNP)
 Kidd, Bill (Glasgow Anniesland) (SNP)
 Lochhead, Richard (Moray) (SNP)
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)
 MacGregor, Fulton (Coatbridge and Chryston) (SNP)
 Mackay, Gillian (Central Scotland) (Green)
 Mackay, Rona (Strathkelvin and Bearsden) (SNP)
 Macpherson, Ben (Edinburgh Northern and Leith) (SNP)
 Maguire, Ruth (Cunninghame South) (SNP) [Proxy vote cast by Rona Mackay]
 Martin, Gillian (Aberdeenshire East) (SNP)
 Mason, John (Glasgow Shettleston) (Ind)
 Matheson, Michael (Falkirk West) (SNP)
 McAllan, Màiri (Clydesdale) (SNP) [Proxy vote cast by Jamie Hepburn]
 McKee, Ivan (Glasgow Provan) (SNP)
 McLennan, Paul (East Lothian) (SNP)
 McMillan, Stuart (Greenock and Inverclyde) (SNP)
 McNair, Marie (Clydebank and Milngavie) (SNP)
 Minto, Jenni (Argyll and Bute) (SNP)
 Nicoll, Audrey (Aberdeen South and North Kincardine) (SNP)
 Robertson, Angus (Edinburgh Central) (SNP)
 Robison, Shona (Dundee City East) (SNP)
 Roddick, Emma (Highlands and Islands) (SNP)
 Ruskell, Mark (Mid Scotland and Fife) (Green)
 Slater, Lorna (Lothian) (Green)
 Somerville, Shirley-Anne (Dunfermline) (SNP)
 Stevenson, Collette (East Kilbride) (SNP)
 Stewart, Kaukab (Glasgow Kelvin) (SNP)
 Stewart, Kevin (Aberdeen Central) (SNP)
 Sturgeon, Nicola (Glasgow Southside) (SNP)
 Swinney, John (Perthshire North) (SNP)
 Thomson, Michelle (Falkirk East) (SNP)
 Todd, Maree (Caithness, Sutherland and Ross) (SNP)
 Torrance, David (Kirkcaldy) (SNP)

Tweed, Evelyn (Stirling) (SNP)
 Whitham, Elena (Carrick, Cumnock and Doon Valley) (SNP)
 Yousaf, Humza (Glasgow Pollok) (SNP)

Abstentions

Baillie, Jackie (Dumbarton) (Lab)
 Baker, Claire (Mid Scotland and Fife) (Lab)
 Bibby, Neil (West Scotland) (Lab)
 Boyack, Sarah (Lothian) (Lab)
 Choudhury, Foyso (Lothian) (Lab)
 Clark, Katy (West Scotland) (Lab)
 Griffin, Mark (Central Scotland) (Lab)
 Johnson, Daniel (Edinburgh Southern) (Lab)
 Leonard, Richard (Central Scotland) (Lab)
 Marra, Michael (North East Scotland) (Lab)
 Mochan, Carol (South Scotland) (Lab)
 O'Kane, Paul (West Scotland) (Lab)
 Rowley, Alex (Mid Scotland and Fife) (Lab)
 Smyth, Colin (South Scotland) (Lab)
 Sweeney, Paul (Glasgow) (Lab)
 Villalba, Mercedes (North East Scotland) (Lab)
 Whitfield, Martin (South Scotland) (Lab)

The Presiding Officer: The result of the division on amendment S6M-17399.1, in the name of Graham Simpson, is: For 34, Against 67, Abstentions 17.

Amendment disagreed to.

The Presiding Officer: The next question is, that amendment S6M-17399.3, in the name of Sarah Boyack, which seeks to amend motion S6M-17399, in the name of Gillian Martin, on Scotland's hydrogen future, be agreed to. Are we agreed?

Members: No.

The Presiding Officer: There will be a division.

For

Baillie, Jackie (Dumbarton) (Lab)
 Baker, Claire (Mid Scotland and Fife) (Lab)
 Balfour, Jeremy (Lothian) (Con)
 Bibby, Neil (West Scotland) (Lab)
 Boyack, Sarah (Lothian) (Lab)
 Briggs, Miles (Lothian) (Con)
 Burnett, Alexander (Aberdeenshire West) (Con)
 Carlaw, Jackson (Eastwood) (Con)
 Carson, Finlay (Galloway and West Dumfries) (Con)
 Choudhury, Foyso (Lothian) (Lab)
 Clark, Katy (West Scotland) (Lab)
 Dowey, Sharon (South Scotland) (Con)
 Eagle, Tim (Highlands and Islands) (Con)
 Findlay, Russell (West Scotland) (Con)
 Fraser, Murdo (Mid Scotland and Fife) (Con)
 Gallacher, Meghan (Central Scotland) (Con)
 Golden, Maurice (North East Scotland) (Con)
 Gosal, Pam (West Scotland) (Con)
 Greene, Jamie (West Scotland) (LD)
 Griffin, Mark (Central Scotland) (Lab)
 Gulhane, Sandesh (Glasgow) (Con)
 Hamilton, Rachael (Ettrick, Roxburgh and Berwickshire) (Con)
 Hoy, Craig (South Scotland) (Con)
 Johnson, Daniel (Edinburgh Southern) (Lab)
 Halcro Johnston, Jamie (Highlands and Islands) (Con)
 Kerr, Liam (North East Scotland) (Con)
 Kerr, Stephen (Central Scotland) (Con)
 Leonard, Richard (Central Scotland) (Lab)

Lumsden, Douglas (North East Scotland) (Con)
 Marra, Michael (North East Scotland) (Lab)
 McArthur, Liam (Orkney Islands) (LD)
 McCall, Roz (Mid Scotland and Fife) (Con)
 Mochan, Carol (South Scotland) (Lab)
 Mountain, Edward (Highlands and Islands) (Con)
 Mundell, Oliver (Dumfriesshire) (Con)
 O'Kane, Paul (West Scotland) (Lab)
 Rennie, Willie (North East Fife) (LD)
 Ross, Douglas (Highlands and Islands) (Con)
 Rowley, Alex (Mid Scotland and Fife) (Lab)
 Simpson, Graham (Central Scotland) (Con)
 Smith, Liz (Mid Scotland and Fife) (Con)
 Smyth, Colin (South Scotland) (Lab)
 Stewart, Alexander (Mid Scotland and Fife) (Con)
 Sweeney, Paul (Glasgow) (Lab)
 Villalba, Mercedes (North East Scotland) (Lab)
 Webber, Sue (Lothian) (Con)
 Wells, Annie (Glasgow) (Con)
 White, Tess (North East Scotland) (Con)
 Whitfield, Martin (South Scotland) (Lab)
 Whittle, Brian (South Scotland) (Con)
 Wishart, Beatrice (Shetland Islands) (LD)

Against

Adam, George (Paisley) (SNP)
 Adam, Karen (Banffshire and Buchan Coast) (SNP)
 Adamson, Clare (Motherwell and Wishaw) (SNP)
 Allan, Alasdair (Na h-Eileanan an Iar) (SNP)
 Arthur, Tom (Renfrewshire South) (SNP)
 Beattie, Colin (Midlothian North and Musselburgh) (SNP)
 Brown, Keith (Clackmannanshire and Dunblane) (SNP)
 Brown, Siobhian (Ayr) (SNP)
 Callaghan, Stephanie (Uddingston and Bellshill) (SNP)
 Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)
 Constance, Angela (Almond Valley) (SNP)
 Dey, Graeme (Angus South) (SNP)
 Don-Innes, Natalie (Renfrewshire North and West) (SNP)
 Doris, Bob (Glasgow Maryhill and Springburn) (SNP)
 Dornan, James (Glasgow Cathcart) (SNP)
 Dunbar, Jackie (Aberdeen Donside) (SNP)
 Ewing, Annabelle (Cowdenbeath) (SNP)
 Ewing, Fergus (Inverness and Nairn) (SNP)
 Fairlie, Jim (Perthshire South and Kinross-shire) (SNP)
 FitzPatrick, Joe (Dundee City West) (SNP)
 Forbes, Kate (Skye, Lochaber and Badenoch) (SNP)
 Gibson, Kenneth (Cunninghame North) (SNP)
 Gilruth, Jenny (Mid Fife and Glenrothes) (SNP)
 Gougeon, Mairi (Angus North and Mearns) (SNP)
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)
 Gray, Neil (Airdrie and Shotts) (SNP)
 Harper, Emma (South Scotland) (SNP)
 Haughey, Clare (Rutherglen) (SNP)
 Hepburn, Jamie (Cumbernauld and Kilsyth) (SNP)
 Hyslop, Fiona (Linlithgow) (SNP)
 Kidd, Bill (Glasgow Anniesland) (SNP)
 Lochhead, Richard (Moray) (SNP)
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)
 MacGregor, Fulton (Coatbridge and Chryston) (SNP)
 Mackay, Rona (Strathkelvin and Bearsden) (SNP)
 Macpherson, Ben (Edinburgh Northern and Leith) (SNP)
 Maguire, Ruth (Cunninghame South) (SNP) [Proxy vote cast by Rona Mackay]
 Martin, Gillian (Aberdeenshire East) (SNP)
 Mason, John (Glasgow Shettleston) (Ind)
 Matheson, Michael (Falkirk West) (SNP)
 McAllan, Màiri (Clydesdale) (SNP) [Proxy vote cast by Jamie Hepburn]
 McKee, Ivan (Glasgow Provan) (SNP)
 McLennan, Paul (East Lothian) (SNP)
 McMillan, Stuart (Greenock and Inverclyde) (SNP)

McNair, Marie (Clydebank and Milngavie) (SNP)
 Minto, Jenni (Argyll and Bute) (SNP)
 Nicoll, Audrey (Aberdeen South and North Kincardine) (SNP)
 Robertson, Angus (Edinburgh Central) (SNP)
 Robison, Shona (Dundee City East) (SNP)
 Roddick, Emma (Highlands and Islands) (SNP)
 Somerville, Shirley-Anne (Dunfermline) (SNP)
 Stevenson, Collette (East Kilbride) (SNP)
 Stewart, Kaukab (Glasgow Kelvin) (SNP)
 Stewart, Kevin (Aberdeen Central) (SNP)
 Sturgeon, Nicola (Glasgow Southside) (SNP)
 Swinney, John (Perthshire North) (SNP)
 Thomson, Michelle (Falkirk East) (SNP)
 Todd, Maree (Caithness, Sutherland and Ross) (SNP)
 Torrance, David (Kirkcaldy) (SNP)
 Tweed, Evelyn (Stirling) (SNP)
 Whitham, Elena (Carrick, Cumnock and Doon Valley) (SNP)
 Yousaf, Humza (Glasgow Pollok) (SNP)

Abstentions

Chapman, Maggie (North East Scotland) (Green)
 Greer, Ross (West Scotland) (Green)
 Harvie, Patrick (Glasgow) (Green)
 Mackay, Gillian (Central Scotland) (Green)
 Ruskell, Mark (Mid Scotland and Fife) (Green)
 Slater, Lorna (Lothian) (Green)

The Presiding Officer: The result of the division on amendment S6M-17399.3, in the name of Sarah Boyack, is: For 51, Against 62, Abstentions 6.

Amendment disagreed to.

The Presiding Officer: The next question is, that amendment S6M-17399.2, in the name of Patrick Harvie, which seeks to amend motion S6M-17399, in the name of Gillian Martin, on Scotland's hydrogen future, be agreed to. Are we agreed?

Members: No.

The Presiding Officer: There will be a division.

The vote is closed.

Collette Stevenson has asked to make a point of order, but I can confirm that her vote has been recorded.

Collette Stevenson (East Kilbride) (SNP):
 Thank you, Presiding Officer.

For

Chapman, Maggie (North East Scotland) (Green)
 Greer, Ross (West Scotland) (Green)
 Harvie, Patrick (Glasgow) (Green)
 Mackay, Gillian (Central Scotland) (Green)
 Ruskell, Mark (Mid Scotland and Fife) (Green)
 Slater, Lorna (Lothian) (Green)

Against

Adam, George (Paisley) (SNP)
 Adam, Karen (Banffshire and Buchan Coast) (SNP)
 Adamson, Clare (Motherwell and Wishaw) (SNP)
 Allan, Alasdair (Na h-Eileanan an Iar) (SNP)
 Arthur, Tom (Renfrewshire South) (SNP)
 Balfour, Jeremy (Lothian) (Con)
 Beattie, Colin (Midlothian North and Musselburgh) (SNP)

Briggs, Miles (Lothian) (Con)
 Brown, Keith (Clackmannanshire and Dunblane) (SNP)
 Brown, Siobhian (Ayr) (SNP)
 Burnett, Alexander (Aberdeenshire West) (Con)
 Callaghan, Stephanie (Uddingston and Bellshill) (SNP)
 Carlaw, Jackson (Eastwood) (Con)
 Carson, Finlay (Galloway and West Dumfries) (Con)
 Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)
 Constance, Angela (Almond Valley) (SNP)
 Dey, Graeme (Angus South) (SNP)
 Don-Innes, Natalie (Renfrewshire North and West) (SNP)
 Doris, Bob (Glasgow Maryhill and Springburn) (SNP)
 Dornan, James (Glasgow Cathcart) (SNP)
 Dowe, Sharon (South Scotland) (Con)
 Dunbar, Jackie (Aberdeen Donside) (SNP)
 Eagle, Tim (Highlands and Islands) (Con)
 Ewing, Annabelle (Cowdenbeath) (SNP)
 Ewing, Fergus (Inverness and Nairn) (SNP)
 Fairlie, Jim (Perthshire South and Kinross-shire) (SNP)
 Findlay, Russell (West Scotland) (Con)
 FitzPatrick, Joe (Dundee City West) (SNP)
 Forbes, Kate (Skye, Lochaber and Badenoch) (SNP)
 Fraser, Murdo (Mid Scotland and Fife) (Con)
 Gallacher, Meghan (Central Scotland) (Con)
 Gibson, Kenneth (Cunninghame North) (SNP)
 Gilruth, Jenny (Mid Fife and Glenrothes) (SNP)
 Golden, Maurice (North East Scotland) (Con)
 Gosal, Pam (West Scotland) (Con)
 Gougeon, Mairi (Angus North and Mearns) (SNP)
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)
 Gray, Neil (Airdrie and Shotts) (SNP)
 Greene, Jamie (West Scotland) (LD)
 Gulhane, Sandesh (Glasgow) (Con)
 Hamilton, Rachael (Ettrick, Roxburgh and Berwickshire) (Con)
 Harper, Emma (South Scotland) (SNP)
 Haughey, Clare (Rutherglen) (SNP)
 Hepburn, Jamie (Cumbernauld and Kilsyth) (SNP)
 Hoy, Craig (South Scotland) (Con)
 Hyslop, Fiona (Linlithgow) (SNP)
 Halcro Johnston, Jamie (Highlands and Islands) (Con)
 Kerr, Liam (North East Scotland) (Con)
 Kerr, Stephen (Central Scotland) (Con)
 Kidd, Bill (Glasgow Anniesland) (SNP)
 Lochhead, Richard (Moray) (SNP)
 Lumsden, Douglas (North East Scotland) (Con)
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)
 MacGregor, Fulton (Coatbridge and Chryston) (SNP)
 Mackay, Rona (Strathkelvin and Bearsden) (SNP)
 Macpherson, Ben (Edinburgh Northern and Leith) (SNP)
 Maguire, Ruth (Cunninghame South) (SNP) [Proxy vote cast by Rona Mackay]
 Martin, Gillian (Aberdeenshire East) (SNP)
 Mason, John (Glasgow Shettleston) (Ind)
 Matheson, Michael (Falkirk West) (SNP)
 McAllan, Màiri (Clydesdale) (SNP) [Proxy vote cast by Jamie Hepburn]
 McArthur, Liam (Orkney Islands) (LD)
 McCall, Roz (Mid Scotland and Fife) (Con)
 McKee, Ivan (Glasgow Provan) (SNP)
 McLennan, Paul (East Lothian) (SNP)
 McMillan, Stuart (Greenock and Inverclyde) (SNP)
 McNair, Marie (Clydebank and Milngavie) (SNP)
 Minto, Jenni (Argyll and Bute) (SNP)
 Mountain, Edward (Highlands and Islands) (Con)
 Mundell, Oliver (Dumfriesshire) (Con)
 Nicoll, Audrey (Aberdeen South and North Kincardine) (SNP)
 Regan, Ash (Edinburgh Eastern) (Alba)
 Rennie, Willie (North East Fife) (LD)
 Robertson, Angus (Edinburgh Central) (SNP)

Robison, Shona (Dundee City East) (SNP)
 Roddick, Emma (Highlands and Islands) (SNP)
 Ross, Douglas (Highlands and Islands) (Con)
 Simpson, Graham (Central Scotland) (Con)
 Smith, Liz (Mid Scotland and Fife) (Con)
 Somerville, Shirley-Anne (Dunfermline) (SNP)
 Stevenson, Collette (East Kilbride) (SNP)
 Stewart, Alexander (Mid Scotland and Fife) (Con)
 Stewart, Kaukab (Glasgow Kelvin) (SNP)
 Stewart, Kevin (Aberdeen Central) (SNP)
 Sturgeon, Nicola (Glasgow Southside) (SNP)
 Swinney, John (Perthshire North) (SNP)
 Thomson, Michelle (Falkirk East) (SNP)
 Todd, Maree (Caithness, Sutherland and Ross) (SNP)
 Torrance, David (Kirkcaldy) (SNP)
 Tweed, Evelyn (Stirling) (SNP)
 Webber, Sue (Lothian) (Con)
 Wells, Annie (Glasgow) (Con)
 White, Tess (North East Scotland) (Con)
 Whitham, Elena (Carrick, Cumnock and Doon Valley) (SNP)
 Whittle, Brian (South Scotland) (Con)
 Wishart, Beatrice (Shetland Islands) (LD)
 Yousaf, Humza (Glasgow Pollok) (SNP)

Abstentions

Baillie, Jackie (Dumbarton) (Lab)
 Baker, Claire (Mid Scotland and Fife) (Lab)
 Bibby, Neil (West Scotland) (Lab)
 Boyack, Sarah (Lothian) (Lab)
 Choudhury, Foyso (Lothian) (Lab)
 Clark, Katy (West Scotland) (Lab)
 Griffin, Mark (Central Scotland) (Lab)
 Johnson, Daniel (Edinburgh Southern) (Lab)
 Leonard, Richard (Central Scotland) (Lab)
 Marra, Michael (North East Scotland) (Lab)
 Mochan, Carol (South Scotland) (Lab)
 O'Kane, Paul (West Scotland) (Lab)
 Rowley, Alex (Mid Scotland and Fife) (Lab)
 Smyth, Colin (South Scotland) (Lab)
 Sweeney, Paul (Glasgow) (Lab)
 Villalba, Mercedes (North East Scotland) (Lab)
 Whitfield, Martin (South Scotland) (Lab)

The Presiding Officer: The result of the division on amendment S6M-17399.2, in the name of Patrick Harvie, is: For 6, Against 97, Abstentions 17.

Amendment disagreed to.

The Presiding Officer: The final question is, that motion S6M-17399, in the name of Gillian Martin, on Scotland's hydrogen future, be agreed to. Are we agreed?

Members: No.

The Presiding Officer: There will be a division.

The vote is closed.

The Minister for Higher and Further Education; and Minister for Veterans (Graeme Dey): On a point of order, Presiding Officer. I am sorry, but my app has that Thursday night feeling. I would have voted yes.

The Presiding Officer: Thank you, Mr Dey. We will ensure that that is recorded.

Annabelle Ewing (Cowdenbeath) (SNP): On a point of order, Presiding Officer. My app did not work. I would have voted yes.

The Presiding Officer: Thank you, Ms Ewing. We will ensure that that is recorded.

For

Adam, George (Paisley) (SNP)
 Adam, Karen (Banffshire and Buchan Coast) (SNP)
 Adamson, Clare (Motherwell and Wishaw) (SNP)
 Allan, Alasdair (Na h-Eileanan an Iar) (SNP)
 Arthur, Tom (Renfrewshire South) (SNP)
 Baillie, Jackie (Dumbarton) (Lab)
 Baker, Claire (Mid Scotland and Fife) (Lab)
 Balfour, Jeremy (Lothian) (Con)
 Beattie, Colin (Midlothian North and Musselburgh) (SNP)
 Bibby, Neil (West Scotland) (Lab)
 Boyack, Sarah (Lothian) (Lab)
 Briggs, Miles (Lothian) (Con)
 Brown, Keith (Clackmannanshire and Dunblane) (SNP)
 Brown, Siobhian (Ayr) (SNP)
 Burnett, Alexander (Aberdeenshire West) (Con)
 Callaghan, Stephanie (Uddingston and Bellshill) (SNP)
 Carlaw, Jackson (Eastwood) (Con)
 Carson, Finlay (Galloway and West Dumfries) (Con)
 Choudhury, Foyso (Lothian) (Lab)
 Clark, Katy (West Scotland) (Lab)
 Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)
 Constance, Angela (Almond Valley) (SNP)
 Dey, Graeme (Angus South) (SNP)
 Don-Innes, Natalie (Renfrewshire North and West) (SNP)
 Doris, Bob (Glasgow Maryhill and Springburn) (SNP)
 Dornan, James (Glasgow Cathcart) (SNP)
 Dowey, Sharon (South Scotland) (Con)
 Dunbar, Jackie (Aberdeen Donside) (SNP)
 Eagle, Tim (Highlands and Islands) (Con)
 Ewing, Annabelle (Cowdenbeath) (SNP)
 Ewing, Fergus (Inverness and Nairn) (SNP)
 Fairlie, Jim (Perthshire South and Kinross-shire) (SNP)
 Findlay, Russell (West Scotland) (Con)
 FitzPatrick, Joe (Dundee City West) (SNP)
 Forbes, Kate (Skye, Lochaber and Badenoch) (SNP)
 Fraser, Murdo (Mid Scotland and Fife) (Con)
 Gallacher, Meghan (Central Scotland) (Con)
 Gibson, Kenneth (Cunninghame North) (SNP)
 Gilruth, Jenny (Mid Fife and Glenrothes) (SNP)
 Golden, Maurice (North East Scotland) (Con)
 Gosal, Pam (West Scotland) (Con)
 Gougeon, Mairi (Angus North and Mearns) (SNP)
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)
 Gray, Neil (Airdrie and Shotts) (SNP)
 Greene, Jamie (West Scotland) (LD)
 Griffin, Mark (Central Scotland) (Lab)
 Hamilton, Rachael (Ettrick, Roxburgh and Berwickshire) (Con)
 Harper, Emma (South Scotland) (SNP)
 Haughey, Clare (Rutherglen) (SNP)
 Hepburn, Jamie (Cumbernauld and Kilsyth) (SNP)
 Hoy, Craig (South Scotland) (Con)
 Hyslop, Fiona (Linlithgow) (SNP)
 Johnson, Daniel (Edinburgh Southern) (Lab)
 Halcro Johnston, Jamie (Highlands and Islands) (Con)
 Kerr, Liam (North East Scotland) (Con)
 Kerr, Stephen (Central Scotland) (Con)
 Kidd, Bill (Glasgow Anniesland) (SNP)
 Leonard, Richard (Central Scotland) (Lab)
 Lochhead, Richard (Moray) (SNP)
 Lumsden, Douglas (North East Scotland) (Con)
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)
 MacGregor, Fulton (Coatbridge and Chryston) (SNP)

Mackay, Rona (Strathkelvin and Bearsden) (SNP)
 Macpherson, Ben (Edinburgh Northern and Leith) (SNP)
 Maguire, Ruth (Cunninghame South) (SNP) [Proxy vote cast by Rona Mackay]
 Marra, Michael (North East Scotland) (Lab)
 Martin, Gillian (Aberdeenshire East) (SNP)
 Mason, John (Glasgow Shettleston) (Ind)
 Matheson, Michael (Falkirk West) (SNP)
 McAllan, Màiri (Clydesdale) (SNP) [Proxy vote cast by Jamie Hepburn]
 McArthur, Liam (Orkney Islands) (LD)
 McCall, Roz (Mid Scotland and Fife) (Con)
 McKee, Ivan (Glasgow Provan) (SNP)
 McLennan, Paul (East Lothian) (SNP)
 McMillan, Stuart (Greenock and Inverclyde) (SNP)
 McNair, Marie (Clydebank and Milngavie) (SNP)
 Minto, Jenni (Argyll and Bute) (SNP)
 Mochan, Carol (South Scotland) (Lab)
 Mountain, Edward (Highlands and Islands) (Con)
 Mundell, Oliver (Dumfriesshire) (Con)
 Nicoll, Audrey (Aberdeen South and North Kincardine) (SNP)
 O’Kane, Paul (West Scotland) (Lab)
 Regan, Ash (Edinburgh Eastern) (Alba)
 Rennie, Willie (North East Fife) (LD)
 Robertson, Angus (Edinburgh Central) (SNP)
 Robison, Shona (Dundee City East) (SNP)
 Roddick, Emma (Highlands and Islands) (SNP)
 Ross, Douglas (Highlands and Islands) (Con)
 Rowley, Alex (Mid Scotland and Fife) (Lab)
 Simpson, Graham (Central Scotland) (Con)
 Smith, Liz (Mid Scotland and Fife) (Con)
 Smyth, Colin (South Scotland) (Lab)
 Somerville, Shirley-Anne (Dunfermline) (SNP)
 Stevenson, Collette (East Kilbride) (SNP)
 Stewart, Alexander (Mid Scotland and Fife) (Con)
 Stewart, Kaukab (Glasgow Kelvin) (SNP)
 Stewart, Kevin (Aberdeen Central) (SNP)
 Sturgeon, Nicola (Glasgow Southside) (SNP)
 Sweeney, Paul (Glasgow) (Lab)
 Swinney, John (Perthshire North) (SNP)
 Thomson, Michelle (Falkirk East) (SNP)
 Todd, Maree (Caithness, Sutherland and Ross) (SNP)
 Torrance, David (Kirkcaldy) (SNP)
 Tweed, Evelyn (Stirling) (SNP)
 Villalba, Mercedes (North East Scotland) (Lab)
 Webber, Sue (Lothian) (Con)
 Wells, Annie (Glasgow) (Con)
 White, Tess (North East Scotland) (Con)
 Whitfield, Martin (South Scotland) (Lab)
 Whitham, Elena (Carrick, Cumnock and Doon Valley) (SNP)
 Whittle, Brian (South Scotland) (Con)
 Wishart, Beatrice (Shetland Islands) (LD)
 Yousaf, Humza (Glasgow Pollok) (SNP)

Against

Chapman, Maggie (North East Scotland) (Green)
 Greer, Ross (West Scotland) (Green)
 Harvie, Patrick (Glasgow) (Green)
 Mackay, Gillian (Central Scotland) (Green)
 Ruskell, Mark (Mid Scotland and Fife) (Green)
 Slater, Lorna (Lothian) (Green)

The Presiding Officer: The result of the division on motion S6M-17399, in the name of Gillian Martin, on Scotland’s hydrogen future, is: For 113, Against 6, Abstentions 0.

Motion agreed to,

That the Parliament acknowledges that Scotland has the potential to be a leading hydrogen nation and is fully committed to helping the Scottish hydrogen sector to develop and grow as part of a wider European and international network; notes that, following the successful shortlisting of Scottish projects in the recent UK Hydrogen Allocation Round, Scotland is creating a hydrogen economy that will provide economic benefit and a renewable and low-carbon source of energy to help meet its net zero ambitions; supports efforts to ensure that hydrogen is supported via continued investment, and calls on the Scottish Government to continue taking steps to deliver the hydrogen sector export plan.

The Presiding Officer: That concludes decision time.

Meeting closed at 17:11.

This is the final edition of the *Official Report* for this meeting. It is part of the Scottish Parliament *Official Report* archive and has been sent for legal deposit.

Published in Edinburgh by the Scottish Parliamentary Corporate Body, the Scottish Parliament, Edinburgh, EH99 1SP

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