Solar Energy Scotland Manifesto

November 2025

Josh King, Chair of Solar Energy Scotland

The global shift toward clean power may have started as a climate mission, but it has evolved into one of the greatest economic opportunities of our time. Renewables, and in particular solar, have put us in the position where we don't have to choose between clean and cheap power.

Over the past decade, clean energy technologies have outpaced expectations – globally, renewables now generate more power than coal. Global investment in solar is expected to reach $450bn in 2025, and energy storage investments too are climbing rapidly. Scotland's energy journey is at a critical juncture. As we electrify heat, transport, and industry, demand for electricity will soar. We must be ready to meet this demand with clean, homegrown energy, and capitalise on solar's opportunities.

This manifesto sets out an ambitious vision: 9 gigawatts of solar in Scotland by 2035 - a big step up from where we are now, but in line with the rest of the UK and other nations across the world. We're asking for action to unleash rooftop solar, reform grid connection rules, accelerate planning and invest in skills and affordable finance. These are not just technical fixes, they are enablers of prosperity.

While there is more debate over how to secure energy and bring consumer bills under control, I believe we are all in agreement on one thing: we cannot be led by ideology. Solar is the cheapest form of energy, we need more domestic generation, and a secure mix is a diverse mix. A renewable-based economy, including system and storage costs, is cheaper than one based on fossil fuels[1]. To deliver cheap and secure energy, we need to build the sources of cheap energy here, and have the systems in place to allow our industry to deliver.

The next Scottish Government has the chance to make a huge impact on energy, and we urge all parties to recognise solar's role and value, and to adopt our policy recommendations in their manifestos for the coming election in Scotland in May 2026.

1. Set a clear ambition for 9GW of solar and 10GW storage by 2035
2. Unleash rooftop solar
3. Unlock affordable finance for solar and storage
4. Level the playing field for grid connections with the rest of the UK
5. Plan for delivery, not delay
6. Build Scottish solar skills through Green Skills Hubs

Josh King,
Managing Director, Gensource & Chair of Solar Energy Scotland

Set a clear ambition

Scottish solar power can help secure our energy future—cutting bills, creating 11,000 jobs by 2030, up from less than 1,000 in 2023, and boosting nature recovery[2,3]. The UK Government's Green Jobs Plan targets over 400,000 new jobs in clean energy in the UK by 2030 – and Scottish solar employment is an area ripe for growth[4].

Our manifesto sets out some practical and impactful steps the next Scottish Government can take to unlock hundreds of millions of pounds of investment in solar energy. Good for business, good for consumers, and good for nature – there is an open goal waiting for the next Scottish Government, and we call on all Scottish parties to recognise solar's role in our energy mix.

Set a clear ambition for 9GW of solar, and 10GW storage by 2035

The clearest way to demonstrate ambition and encourage investment is to set a target for deployment. This target should cover solar at all scales – on both rooftops and ground-mounted solar farms. We encourage all parties to commit to maintain the current Scottish Government's 4GW minimum target by 2030, and to go further to commit to a 9GW target for 2035. In 2025 the total deployment is still under 1GW, so there is much room for growth.

The previous 2030 targets outlined by the Scottish Government represented a 'fair share' for Scotland. 9GW represents 10% of what the UK industry believes can be deployed by 2035. Demand for electricity is due to at least double in the coming years as heat, transport and industry are further electrified and other demands such as data centres are expected — all can be powered with clean Scottish renewable energy and storage.

We also need energy storage to accompany this build out. More storage capitalises on renewable generation and plays a role in reducing curtailment. Domestic batteries also help families take advantage of rooftop solar, allowing them the cleanest, and cheapest way of running their homes.

The Scottish industry is relying on the Scottish Government to send a strong signal to the UK Government, and electricity network managers Ofgem and the National Energy System Operator (NESO), to ensure solar and storage are planned for and deployed at scale in the coming decade. This is more than just climate change – high deployment means good jobs and economic prosperity.

Unleash Rooftop Solar

Installing solar on rooftops is an overwhelmingly popular policy, and a compelling way to build further support for the energy transition. Not only is it common sense, it is the most direct way to demonstrate the savings of clean energy to Scottish businesses and households.

From making sure new homes and warehouses are built with solar panels, to helping to put solar and storage in existing buildings, our recommendations are below.

Ensure our buildings are built with solar generation

By installing solar during construction, a new build homeowner can save up to £2,120 per year on energy bills[5]. Measures to increase rooftop solar deployment are being taken across Europe, and recently the UK Government has set out its intention to require solar on new builds through the forthcoming Future Homes and Future Buildings standards in England.

Scotland should match this, and could go further by adopting the European Solar Standard which requires solar to be installed:

- On all new commercial and public buildings from 2026.
- By 2027, this will extend to renovated non-residential buildings.
- On all new residential buildings by 2029.
- On all existing public buildings by 2030.

What is the European Solar Standard?

The European Solar Standard is a new set of rules adopted by the EU as part of the 2024 Energy Performance of Buildings Directive (EPBD).
Its goal is to make solar energy a standard feature on buildings across the EU and take advantage of microgeneration to drive energy bills down.

What are the Future Homes and Future Buildings Standards?

The last UK Government consulted on these standards, which are aimed at making new buildings in England more energy efficient and built with low-carbon solutions in mind.

Both standards will introduce an effective mandate to install solar panels on all new buildings. The UK Government consultation on its Future Homes Standard estimates that homes built to maximise solar potential would save between £910-£2,120 on their annual energy bills.

Current work on Scotland's Heat in Buildings Strategy and Passivhaus standard rightly emphasise heat and fabric efficiency — but risks overlooking the vital role of on-site generation. Solar PV is the simplest, most cost-effective way to cut running costs and make low-carbon homes truly affordable to provide heat and power.

There is no reason why new Scottish homes and businesses should be built without solar installed as standard. It is a move that automatically unlocks hundreds of megawatts of renewable energy capacity, eases demand on the grid and crucially drives consumer bills down by hundreds, if not thousands per year.

The next Scottish Government needs to bring Scotland in line with the rest of Europe and update building standards to include solar and make sure all new homes are equipped to deliver lower energy bills.

Unlock Affordable Finance for Solar and Storage

While the deployment of utility scale renewables reduces reliance on expensive gas markets, energy bills are still high and a major strain on the finances of families and small businesses. In England and Wales this is being addressed through the Warm Homes Plan, which is bringing forward measures to improve access to renewable energy and energy efficiency measures to homes and businesses. The Scottish Government already provides targeted grants for those most in need through Warmer Homes Scotland but we are asking for wider measures to boost uptake of low carbon technology.

Scotland led the UK on heat-pump installations while interest-free loans for solar and batteries were available, helping households cut running costs and invest in clean heat. Data from the Microgeneration Certification Scheme (MCS) indicates that since those loans were withdrawn in mid-2024, that trend has reversed — in the first half of 2025, heat pump installations in Scotland fell by 10% compared with the same period in 2024, while UK-wide installations grew by 21%.

Solar and Fuel Poverty: Powering Affordable Homes

Solar gives households control over their energy use, cutting bills and tackling fuel poverty head-on. By generating and storing their own power, families can save hundreds of pounds a year — and even more with a battery, which stores cheap off-peak or otherwise-curtailed wind power for use when prices are high.

By shifting energy use away from peak times and using Scotland's excess renewable power, solar and battery homes don't just save for themselves — they save the whole nation money, easing pressure on the grid and reducing costs for everyone.

Affordable finance drives affordable clean heat, empowering families and businesses to generate their own power, store it, and bring down electricity bills - making electricity and decarbonised heat more affordable.

Alongside the introduction of the UK Government's Warm Homes Plan, the next Scottish Government should ensure that low-cost sources of finance, including low-cost or interest-free loans, are made available for solar and batteries.

Level the playing field

Level the playing field for grid connections across the UK

To deliver on climate and energy goals, the system for grid connections is going through crucial reforms, with NESO putting together plans to accelerate delivery of the electricity network needed for the clean energy system.

It's critical that these plans recognise the valuable role which onshore renewables have to play in delivering cheap, reliable power quickly. Backing solar and storage projects will ensure that clean power targets are met, at lowest cost.

Scotland is being left behind by England and Wales when it comes to small utility scale projects. In May 2025, Ofgem approved NESO's plan to increase the threshold for Transmission Impact Assessments across England and Wales to 5MW. For context, the threshold in Scotland is 200kW – 25x smaller.

What is TIA, and why does it matter?

Transmission Impact Assessments (TIAs) are carried out to look at the impact a project seeking to connect to the grid will have on the wider transmission network.

If a project is below the threshold, it can progress much quicker and does not have to deal with an extra financial and administrative burden.

The next Scottish Government should push the network operators to close the gap that has opened up between Scotland and the other home nations. This will make it easier to install solar on warehouses and large commercial sites, and also for communities to develop their own energy projects.

Planning for delivery, not delay

The race to decarbonise is global and negative market signals make the case for investment in renewable energy projects in Scotland harder, at a time when we need to be scaling up renewables of all types. Uncertainties and delays caused by the current planning system, and proposed changes to it, are causing significant concern and need to be urgently addressed.

Delivering through NPF4

We have concerns about the speed of the current planning process for individual projects. Every delay means Scottish people miss out on the very real benefits that solar can deliver. Ground-mounted solar power is the lowest cost form of energy; it lowers consumer bills, provides new local jobs, invests in rural economies, supports biodiversity and generates clean power.

Scotland needs a planning system that delivers at pace. The National Planning Framework 4 (NPF4) sets Scotland on the right path. Now, it is time for the next Scottish Government to stay the course and go further, faster. The planning system must become a driver of change, not a barrier, so that the benefits of renewable energy flow directly to people, communities, and the environment.

Decisions must be evidence-based, fair, and aligned with national priorities. Clean energy is in the national interest, and Scotland must have the frameworks in place to deliver cheap, clean onshore renewable energy. The priorities and approach of the National Planning Framework should not be diluted by the next Scottish Government. If anything, the intended planning policy to deliver renewable energy and climate action should be strengthened.

Every unnecessary delay to solar applications sends a negative market signal, making Scotland a less attractive place to invest at the very time we need to be scaling up. The next Scottish Government should commit to ensuring local authorities and statutory consultees are supported with resources to speed up their response to clean energy planning applications.

Solar farms and biodiversity: Powering Nature Recovery

Solar is not just a clean source of energy – it is also a powerful tool for restoring and enhancing Scotland's biodiversity.

Well-designed and well-maintained solar farms present a positive opportunity to support biodiversity and nature recovery. The overall infrastructure footprint of a solar farm is typically less than 2% of the total land area. This means the rest of the land is available for measures to actively improve the local environment and provide a range of ecological benefits. For example, establishing wildflower meadows and grasslands for pollinator species; supporting hedgerow growth, and promoting wetland habitats.

The next Scottish Government should require solar farms to maximise biodiversity benefits by adopting Solar Energy Scotland's best practice guidance. NatureScot should be directed to include solar farms as part of a new Scottish Solar Farm Biodiversity network.

Solar land use in Scotland – the facts

As a conservative estimate, one megawatt of solar requires around 4 acres, and as solar technology rapidly develops, it is taking less and less land for the same power[6].

Solar deployment in Scotland is roughly expected to be split between 60/40 ground mounted to rooftop. If Scotland deployed 5.4GW of solar farms in this split, they would take up just 0.11% of Scottish land.

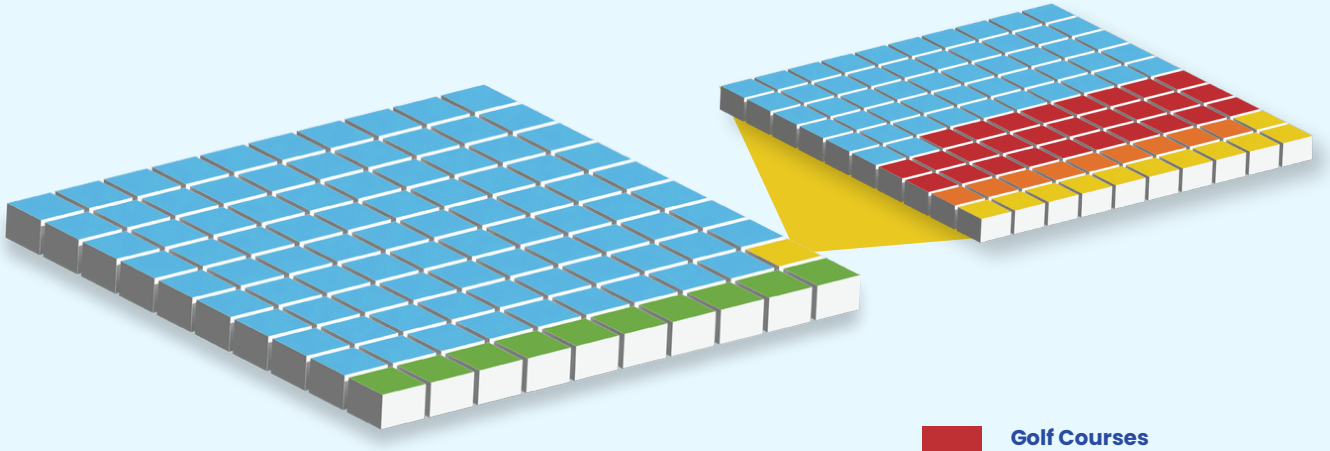
Solar farms can be wildlife havens, especially for pollinators, which is essential for farming and aiding nature recovery. Research from the RSPB backs this up, finding that even solar farms which are not managed for nature recovery attract more birds than nearby arable land[7].

Another common concern is that of food security versus energy security. Solar poses no threat to our food security, for several reasons:

- The land used for solar is less than half that used for golf courses, at 0.11%
- Farmers back solar. It stabilises their business and insulates them from poor harvest years or market shocks. Watch our short film Empowering British Farmers with Solar Energy.
- Grazing can continue between panel arrays. UK Government estimates that 50% of land used for solar is being used for grazing[8].
- Other forms of crop production are emerging all the time in a burgeoning sector called 'agrivoltaics' – as well as powering farm energy needs.

Scottish Land Use

Current and planned solar power land use compared to other uses



Total Scottish Land
80 000 km2

Arable Land 10%
8000 km2

1%
8000 km2

Golf Courses
0.28%

Airports
0.09%

5.4GW Solar
0.11%

Other

The next Scottish Government should make sure the planning system is a catalyst for renewables delivery, not a blocker.

Planning for tomorrow's grid

The UK government has committed to Clean Power by 2030 and intends, through the new National Energy System Operator (NESO), to create a Strategic Spatial Energy Plan (SSEP). This will ensure the electricity grid is built to accommodate the renewable revolution, not just to 2030, but to 2050 and beyond.

As well as a UK-wide plan, there is also a new Regional Energy Spatial Plan (RESP) being created for Scotland – both have a key role to play in reaching UK energy goals. However, this needs to be done in a way that ensures that Scotland's pipeline of renewable energy projects remains investable in a way that does not dilute Scotland's existing planning framework, as set out by the National Planning Framework 4.

There is currently considerable uncertainty being caused by the SSEP and RESP processes, on top of the ongoing grid connection queue reform. There is a risk that, without closer Scottish Government, NESO and industry engagement, these plans will not accommodate Scotland's ambitions for onshore renewables deployment.

The last time a detailed spatial plan was put in place in the UK was in Wales in the 2000s. It aimed to accelerate deployment for onshore wind but caused more delay than progress. The Scottish Government should ensure that the same mistakes are not made again in Scotland. The SSEP and Scottish RESP should allow for flexibility in technology types, project sizes and locations, with development decisions in Scotland ultimately guided by NPF4.

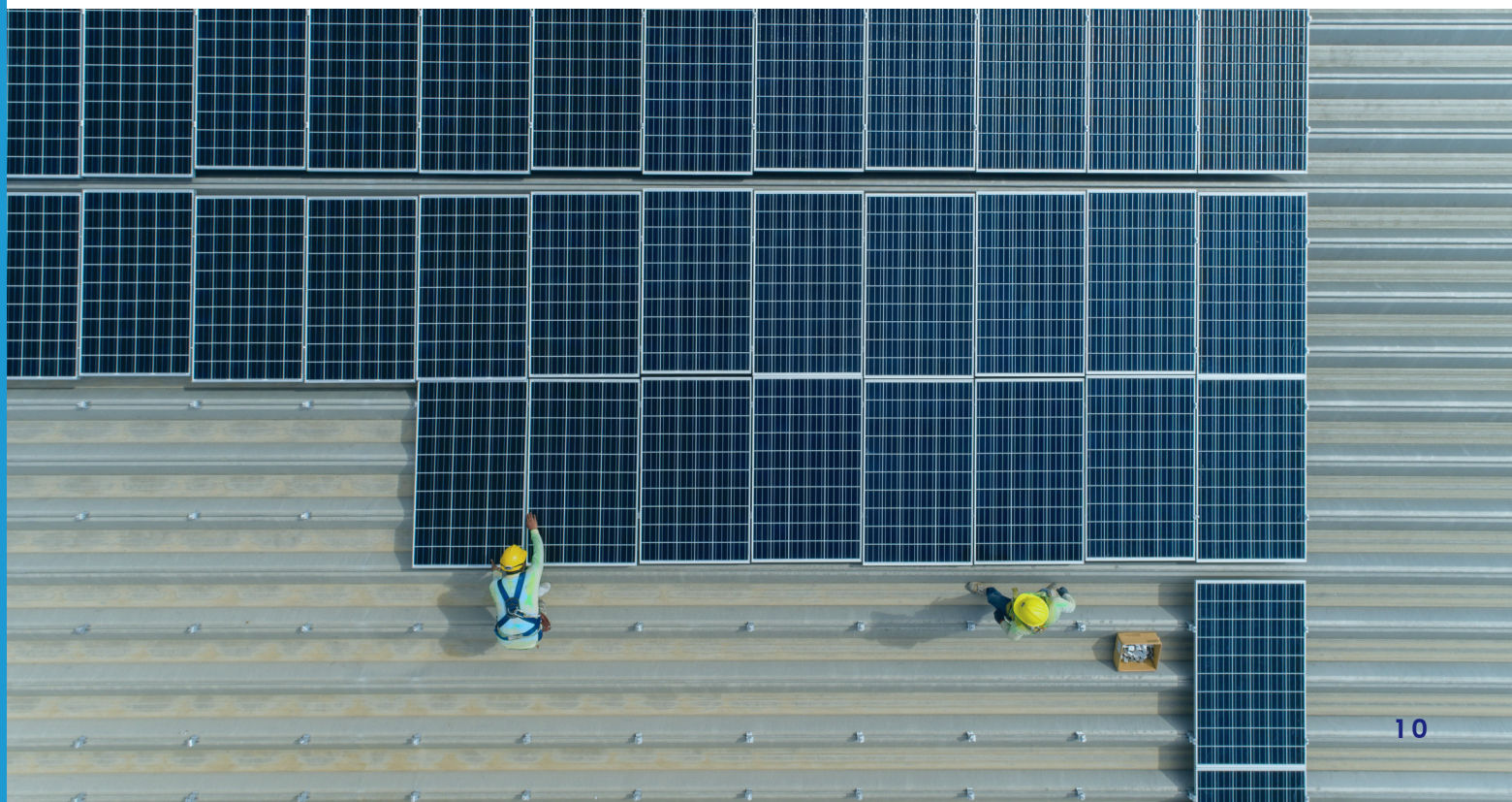
The next Scottish Government can significantly help ease current uncertainties over the progress of the SSEP and RESP by working with industry; to reconfirm its strong support for onshore renewables in Scotland, and by making sure that the SSEP and RESP allow for this ambition. This ambition should include at least 4GW of solar by 2030 and 9GW by 2035.

Resources and Training: Building expertise now and for the future

For Scotland to deliver on its energy and climate commitments the planning system must be properly resourced. At present, local planning authorities and statutory consultees are under significant strain. Planning departments need the tools, knowledge, and capacity to assess applications quickly, robustly, and fairly.

Investment in people and skills is essential. Planning departments need additional funding to recruit, train, and upskill officers, ensuring they have the knowledge and capacity to make timely, well-informed decisions. Expertise is particularly lacking in ecology, biodiversity and archaeology – all areas critical to delivering NPF4's objectives.

The Scottish Government should address these gaps in order to unlock progress and ensure that planning is a catalyst for renewables, not a roadblock.



Build Scottish solar skills

Solar and battery storage projects provide a meaningful contribution to Scottish employment and productivity levels. In 2024, the average direct and supply chain gross value added per job was £88,800 – £20,000 higher than the UK average[9]. High-productivity jobs, such as those supported by solar and battery storage, are the main source of improved economic performance and living standards across advanced economies.

According to research by Optimat, commissioned by the Scottish Government, by 2030 there could be over 11,000 full time jobs in Scotland for solar alone, through the installation of rooftop projects and construction of solar farms. There is particular demand for electricians, grid connection engineers and construction workers.

It is critical to make sure these good-quality, high-paying jobs can be taken up by Scots – but in order for this to happen, employers must have a good pool of skilled workers to source from.

We are calling for 'Regional Skills Hubs' to be rolled out across the nation, as part of a UK-wide network. These need not be solar-specific and should have a role to play across the green economy, providing training for a suite of renewable energy and low-carbon technologies. It is critical that we remove existing silos between technologies, including those in oil and gas, and that we make the most of transferable skills across technology types. To make sure of a coordinated approach to onshore green skills, we would welcome the establishment of a dedicated green skills working group, convened by the Scottish Government.

Additionally, we agree with Optimat's recommendations[10]:

- **Promote solar careers:** Develop campaigns targeting all education levels and current workers, highlighting solar's sustainability and career opportunities.
- **Create tailored training:**
  - Launch a renewable energy apprenticeship.
  - Integrate solar specialisms into college or university courses (e.g. electrical engineering).
  - Expand vocational graduate apprenticeships to include renewable energy subjects.

The next Scottish Government should ensure Scottish workers have the tools they need to capitalise on the opportunities in onshore renewables – including those in the solar and energy storage sector and should implement the recommendations set out in Optimat's recent report.

Key Asks

Key Asks for the Next Scottish Government

- **Set a Scottish solar ambition:**
  - Commit to deploying 9GW of solar and 10GW storage by 2035, maintaining the goal of reaching 4GW minimum by 2030.

- **Support rooftop solar deployment:**

Adopt the European Solar Standard with phased requirements for solar on new and renovated buildings, including:
  - On all new commercial and public buildings from 2026.
  - By 2027, this will extend to renovated non-residential buildings.
  - New residential buildings by 2029.
  - Existing public buildings by 2030.
  - Update Scottish building regulations to require solar on all new homes and businesses.
  - Ensure solar is integrated into Scotland's heat strategy and Passivhaus standard.

- **Provide financial support for solar and storage:**
  - Re-introduce low-cost or interest-free loans for solar PV and battery systems.
  - Develop a Scottish equivalent to the Warm Homes Plan to support families and businesses.

- **Reform grid connection rules:**
  - Raise the Transmission Impact Assessment (TIA) threshold in Scotland to match England and Wales (from 200kW to 5MW).
  - Ensure fair access to grid connections for small-scale and community energy projects.

- **Accelerate planning processes:**
  - Speed up planning decisions for solar projects to avoid delays and negative investment signals.
  - Strengthen and uphold the National Planning Framework 4 (NPF4) to support renewable energy.
  - Provide resources to local authorities and statutory consultees to improve planning capacity.

- **Enhance biodiversity through solar farms:**
  - Require solar farms to follow Solar Energy Scotland's biodiversity best practice guidance.
  - Direct NatureScot to establish a new Solar Farm Biodiversity Network.

- **Ensure grid planning supports solar growth:**
  - Align the Strategic Spatial Energy Plan (SSEP) and Regional Energy Spatial Plan (RESP) with Scotland's renewable ambitions.
  - Maintain flexibility in technology types, project sizes and locations.
  - Avoid repeating past planning mistakes and ensure development decisions are guided by NPF4.

- **Invest in skills and workforce development:**
  - Establish Regional Skills Hubs to train workers across the green economy.
  - Create a green skills working group convened by Scottish Government.
  - Implement Optimat's recommendations, including:
    - Promoting solar careers at all education levels.
    - Launching renewable energy apprenticeships.
    - Integrating solar into college and university courses.
    - Expanding vocational graduate apprenticeships to include renewables.

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