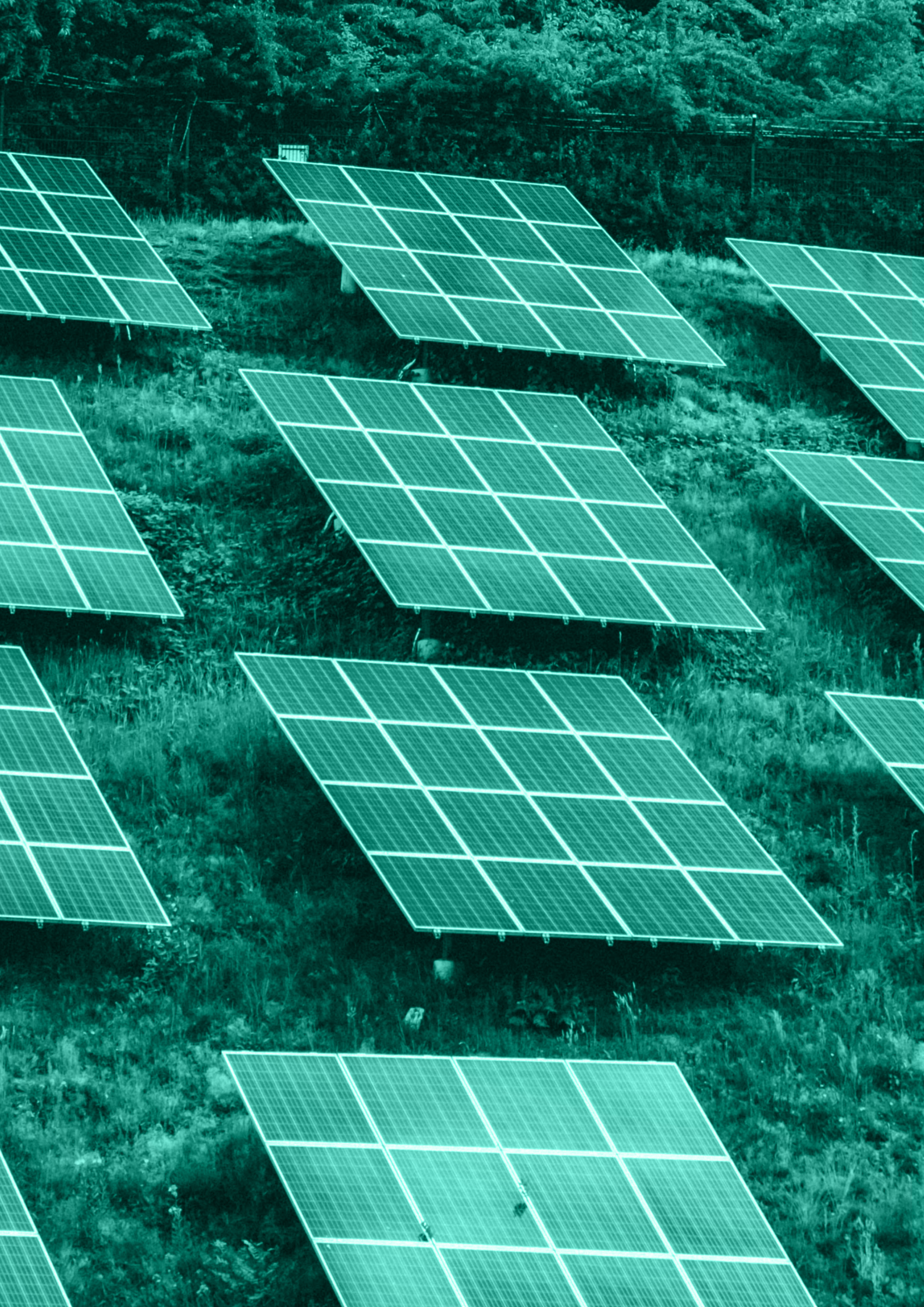


MAXIMISING OUR SOLAR POTENTIAL



Darren O'Rourke TD and Senator Lynn Boylan



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Introduction

The International Energy Agency (IEA) highlights that over 90 minutes, enough sunlight strikes the earth to provide the entire planet's energy needs for one year.¹ With the right policies, the IEA proposes that Solar Power has the potential to have the largest share of the world's cumulative power capacity, outstripping all other fuel sources amongst both renewable and fossil fuels.²

In 2022, Solar PV generation demonstrated the largest absolute generation growth of all renewable technologies globally, surpassing wind for the first time in history.³

In this, Ireland is no exception. With increased investment and determination, as well as decisive action to address grid capacity, planning and regulation challenges, Sinn Féin will not let this opportunity pass our island by.

This is because the abundance of solar energy here means it has great potential to become a significant component of our energy mix. In fact, solar power has emerged as Ireland's fastest growing energy power source.

It is expected that 1GW of solar power will be connected to the network by the end of 2023. However, it is clear that a significant increase in investment is urgently needed to accelerate the delivery of solar PV to meet our 5GW solar target for 2025 and 8GW target for 2030 and crucially, to ensure the roll-out maximises long-term social and economic benefits for all in Irish society.

Sinn Féin's proposals would accelerate the renewables transition by delivering even more ambitious solar programmes while also prioritising new interventions to substantially enhance accessibility and affordability. It is needed – ordinary workers, families and communities must not be locked out of Ire-



1 Solar Power can be divided into Solar Thermal (radiation exploited for solar heat) and Solar Photovoltaic for electricity Production.
2 Solar - IEA
3 Solar - IEA

land's solar revolution. Unlike successive Fianna Fail and Fine Gael led governments, Sinn Féin's vision for the decarbonisation of our economy and society places fairness at the heart of our proposals. The transition must be just or it is no transition at all.

Sinn Féin's Vision for a Solar Revolution

Solar Photovoltaic panels, solar PV, convert the sun's radiation into electricity and offer us a huge opportunity to harness the power of the sun in our attempts to mitigate climate change.

When the sun shines onto a solar panel, energy from the sunlight is absorbed by the PV cells in the panel. This energy creates electrical charges that move in response to an internal electrical field in the cell, causing electricity to flow.

According to the IEA, Solar PV has become the cheapest form of new electricity generation in many of countries across the globe⁴, with costs having decreased by 89% between 2010 and 2022.⁵

It is affordable, clean, predictable and also abundant. Solar PV can be deployed from the rooftops of homes, schools, businesses and farms; beside roads, motorways, car parks and railway lines - meaning that there is ample scope for an innovative and ambitious approach to solar power.

Fossil fuels are finite tangible commodities and must be produced, treated, and transported, racking up emissions as they are burned. In contrast, solar PV is a renewable technical innovation that involves silicon cells converting sunlight into energy at a highly efficient rate. It helps us to reduce our emissions. It is a technology that will continue to improve over time.

Advances in this field have made this technology more reliable and more readily deployable than ever before. This has empowered individuals and communities to produce their own green energy while reducing their energy bills and contributing excess energy to the grid.

Sinn Féin want to maximise this potential as part of a just transition. We want to see solar PV panels installed on homes, businesses, schools, community/sports buildings, and farms across Ireland to help cut our carbon emissions and deliver savings for citizens and communities.

According to the Commission for the Regulation of Utilities, the average home in Ireland uses about 4,200 kWh of electricity per year. Installing Solar PV can generate 40% of the annual electricity needs of a household. It is estimated that solar PV could generate around 40% of the average annual electricity demand of an individual Irish home. This could result in savings of well over €500 per year based on average annual prices in November 2023, bringing much needed relief from Ireland's inordinately high energy costs.

Harnessing our solar potential will help Ireland to cut emissions by reducing our dependence on fossil fuels. It will also bring us closer to our goal of an energy independent Ireland, whereby natural resources can be translated into national wealth for all, rather than being concentrated in the hands of the wealthy.

Sinn Féin would double the funding allocated for solar PV grants, restructure the funding of grant support to make solar panels a realistic option for those on lower incomes, install solar PV on every school in the state, empower local communities to pursue solar for community buildings and work with farmers to make solar energy a part of sustainable family farms.

4 Solar - IEA

5 Solar energy in the EU (europa.eu); Infographic: Renewable Power Generation Costs Continue to Fall Despite Inflation (irena.org)



A Solar Revolution at Home

Double the funding for the Solar PV scheme: €35.5 million

Solar PV and microgeneration can play an important role in Ireland's energy transition. Households harnessing the energy from the sun will reduce their carbon emissions, cut their electricity bills, and allow people to sell excess electricity back to the grid.⁶

According to the Sustainable Energy Authority of Ireland (SEAI), a home solar PV system sized at 20 sq. meters (~3kW) and well located would generate over 40% of the average annual electricity demand of an individual Irish home and bring considerable savings in household energy bills.

In a study of every rooftop in Ireland, UCC's MaREI's Research Centre found that more than 1 million homes have the roof space and orientation suitable for solar panels.

Since 2020, the SEAI has supported the installation of domestic Solar PV systems for nearly 32,000 homes. There has been a substantial uptick in domestic solar PV in the last 18 months with installations reaching over 10,000 in 2022, rising to 14,984 by September 2023.⁷ Yet even government's increased pace of delivery is not enough.

Sinn Féin recognise that much more needs to be done to realise our solar potential at the pace, scale and level of diversity necessary. We would do this by significantly ramping up investment in solar PV, while transforming the structure of grants to ensure that supports are more accessible to all.

Therefore, we would **double the funding for the solar PV scheme** by investing an additional €35.5 million. This would see significantly more homes fitted with solar panels in 2024.

As it stands, Solar PV is not available as part of the government's Warmer Homes scheme. This means that the very few who are entitled to the government's Warmer Homes scheme - often the poorest and coldest homes - are excluded from access to Ireland's fastest growing renewable technology.⁸

⁶ Solar PV can also provide electricity to heat water via a diverter.

⁷ Environmental Schemes: 25 Oct 2023: Written answers (KildareStreet.com)

⁸ Environmental Schemes: 25 Oct 2023: Written answers (KildareStreet.com)

This adds an additional barrier to unlocking further benefits of Solar PV via microgeneration for lower income households, whereby households can sell unconsumed electricity to the grid.⁹

It is not just those who qualify for the Warmer Homes scheme who miss out.

Due to the high initial upfront cost of installing solar panels, even with the current grant of €2,400, this option remains unaffordable for many other lower- and middle-income households. In other words, the existing financial barrier specifically excludes those who would benefit most from lower electricity bills.

Therefore, we recognise that increased investment is not sufficient in itself. Sinn Féin would radically overhaul how the government's current scheme is funded, targeted and delivered.

Sinn Féin would restructure grant funding for Solar PV by tiering supports, ranging from 100% to 10% of the cost depending on household income. Our proposals therefore not only aim to considerably increase the number of Solar PV installations in 2024 to further our environmental and energy security objectives but also to ensure that the roll-out is more equitable. Tiering support would make Solar PV an option for thousands more households who cannot currently afford it, helping to bring down both energy bills and emissions.

By ensuring that lower income households are included rather than excluded due to an inaccessible high upfront cost, this reform would better reflect our vision for a just transition, wherein economic and social benefits are distributed more equitably.

To make the roll out of solar PV more efficient, we would rely less upon the current demand-led, disjointed approach and transition to a more area-based, plan-led approach. For example, the government's incoherent, one at a time delivery model is debilitated by labour and time inefficiencies. By adopting targeted strategies that focus delivery more on specific geographical areas, Sinn Féin proposals are more robust to such constraints. Our reforms will deliver more than just efficiency gains, however. Sinn Féin's proposals will target scarce resources where they are most needed. We would target these homes through a variety of means.

Sinn Féin would deploy a number of metrics to help identify households to participate in our Solar PV scheme. These could include, for example, household energy usage, costs and income. This would make our scheme more adept at alleviating the pressure of soaring bills while simultaneously helping us to cut emissions.¹⁰

Sinn Féin also recognise that schemes can often be most effective when they are informed by bottom-up approaches. Therefore, we recognise the value of information produced at a local level to design policies and processes.

As part of our alternative budget for 2024, we proposed the establishment of a local energy advisor service; advisors would provide additional support to households to navigate the Irish energy market. The service is intended to bridge the gap between supporting ordinary workers and families with immediate energy needs and enabling them to access longer term solutions such as Solar PV grants to reduce their energy needs in the future.

In a rapidly changing energy market, this will be a vital tool to target supports for Solar PV where they are most needed. By engaging at a local level, lived experiences will be central and new banks of local knowledge will be established. New opportunities for co-production of programmes and policies will

9 Microgeneration is the generation of green electricity from renewable technologies, such as solar panels, micro-wind, micro-hydro and micro-renewable combined heat and power (CHP). The Government Microgeneration Support Scheme allows households with a registered microgeneration device to sell any excess electricity back to Ireland's electricity grid. This payment is called a Clean Export Guarantee (CEG). Most Electric Ireland microgenerators have solar PV installed on their roof.

10 We could also produce what are known as heatmaps which have proven to be effective tools across EU member states to cut household emissions while simultaneously reducing costs. Heatmaps are valuable regarding the urban and energy planning of a geographical area; it helps locating energy sources and needs and connect them, designing infrastructures, plan the refurbishment in some areas.



therefore emerge, further enhancing our ability to deliver a just energy transition, helping everyone, not just those with the most means, to access new renewables opportunities.

Solar Power at Home: Solar Power for Social Housing

Establish a dedicated Solar PV scheme for local authority homes: €1.5 million

For Sinn Féin, a truly just transition will translate into long-term social and economic benefits for everyone. We want to deliver a more just and equitable energy system so that low and middle households can benefit from more affordable energy and the benefits of the transition are better retained and recirculated in the state.

Unlike the current Government's approach that treats solar power as the exclusive domain of the wealthy, Sinn Féin would ensure that our social housing stock is included in Ireland's solar revolution.

Those in social housing are more likely to be at risk of energy poverty and therefore in greater need of home energy upgrades. The state should be leading by example and improving the energy efficiency of these homes to reduce heat loss and help people save on their energy bills. We will allocate the necessary resources to scale up the retrofit of social homes, to ensure that the environmental benefits of retrofits go hand in hand with alleviating social deprivation.

As part of our proposals for our alternative budget for 2024, we would establish a dedicated solar PV scheme for local authority homes. This would complement our area-based approach as it would mean local authority homes and tenant purchased homes could be installed with solar PV simultaneously.

Ultimately, Sinn Féin's measures would put in place a more efficient and effective delivery model of solar power, capable of delivering a real transformation of our electricity system and housing stock for all.

Schools as Solar Power Pioneers

Solar Panels for every school over three years: **€32 million**

There are almost 4,000¹¹ primary and post-primary school buildings across the state. They hold huge potential to generate renewable energy through solar PV.

Unfortunately however, Ireland's progress has been severely stunted in this sphere due to the government's refusal to acknowledge that planning legislation was completely outdated up until very recently. A lack of interest from government combined with the financial constraints facing schools prevented them from becoming leaders in microgeneration.

Sinn Féin has recognised the potential for schools to become pioneers in solar power for some time and have long been pushing government for action in this sphere.

In 2019 we brought forward the Solar Panel (Climate Action) Bill to remove planning restrictions on solar. In June 2022 we published the Planning and Development Regulations (Amendment) (Solar Energy for Schools and Community Buildings) Bill 2022, which aimed to remove the restrictions facing schools and community buildings installing solar PV on their buildings.

Under sustained pressure from Sinn Féin, the government finally moved on this issue in October 2022, and published revised planning regulations to remove these planning obstacles. The government also adopted our proposals to fit solar panels on schools as part of their budget 2023.

While we welcome this move to recognise the potential for solar power for schools, it is too little too late.

Over a year has passed since the government's announcement to install solar panels on schools and no progress has been to made date. Yet again, the government set a target with no intention of delivering on it.

Like ordinary workers and households, many schools have been struggling under the weight of high energy bills and cannot afford these indefinite delays to delivery. Never mind the fact that 2030 is fast approaching and that any and all efforts to transition should be made, especially where the advantages are so obvious. This government is failing to capitalise on easy wins.

In Sinn Féin, we are interested in delivering – in doing what we committed to - rather than continually kicking the can down the road.

In our 2024 alternative budget we allocated €32 million as part one of a three-year funding proposal that would see solar PV installed on the roof of every school in the state.

Installing solar panels on school buildings will help reduce emissions, allow schools to save money on their electricity bills, and provide their surplus electricity back to the grid.

Solar for schools would help promote climate education from a young age and establish schools as catalysts for climate action, with an expanded focus on renewable energy, the Green Schools programme, Safe Routes to School programme and the School Transport Scheme.

¹¹ The latest statistics from the Department of Education show there are now 3,095 primary schools and 727 post-primary schools in 2023. That is a total of 3,832.

Delivering for Communities through Solar Power

Increase funding for sustainable energy communities and new funding to help them connect to the grid: **€12 million**

Community-led climate action can play a key role in our transition to a carbon neutral society and the state must support communities in grassroots climate action.

The proliferation of renewable energy communities would allow us to meet climate targets while delivering wider social and economic benefits for workers and communities. These ownership models better retain, recirculate, and reinvest wealth generated within the state and local communities, better than siphoning off profits abroad or to corporate shareholders. We would increase the target of community-owned renewable energy projects to at least 10% of new capacity by 2030.

The SEAI's Sustainable Energy Communities (SECs) programme, empowers local people to make changes that will benefit their community and the environment. Utilising mentoring and grants from the SEAI, locally formed SECs identify changes that should be made in their locality to increase renewable energy production and to help reduce energy use.

Ireland's rich sporting and community traditions means we have thousands of community halls and clubhouses across the island that also hold great potential for community led solar installation. This is something we want to see realised. For example, there are over 2,200 GAA clubs alone across the island, with thousands more soccer and rugby clubs which have buildings on site suitable for solar panel installations.

We welcome the extension of the €2,400 grants for solar PV to sporting organisations since July of this year, but this will still leave the installation of solar panels out of the reach of many local voluntary organisations.

And even if a sustainable energy community manages to meet the upfront cost to install solar PV, they still face the significant hurdle of connecting to the electricity grid. The high-cost associated acts as a barrier to many groups, and often dissuades would be energy communities from committing to a project. This problem is compounded by the fact that the high cost associated with grid connections means many projects are classified as 'unviable', making it impossible for them to secure funding from various sources, including the SEAI's grant scheme.

To address this, in our Alternative Budget for 2024 Sinn Féin proposed an addition of €12 million to increase funding sustainable energy communities, and furthermore to establish a new fund to help them connect to the grid. Unlike the current government, we do not believe the solar revolution should be the exclusive remit of private enterprises and wealthy individuals.

We believe that the green transition can be for everyone.





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