Submission by Good Energies Alliance Ireland

to the

Support Scheme for Small-Scale Generation (SSG)

Consultation on Proposed Design features

From Department of the Environment, Climate and Communications

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Background

Good Energies Alliance Ireland (GEAI) is an environmental NGO, founded in 2011, situated in County Leitrim in Northwest of Ireland, who aims to ensure the wellbeing of people and communities on the island of Ireland and elsewhere through the protection and sustainable development of our environment, natural resources and our communities.

Our main objectives are:

- To carry out the activity of promotion of environmental and climate protection and monitoring of energy production and use on the island of Ireland and its territorial waters and elsewhere and any other related activities.
- To establish, promote and operate programmes and services with a view to fostering the economic, personal, cultural, recreational, and social well-being of the communities of Ballinaglera and wider areas and develop Ballinaglera Community Hall as an environmental and community resource centre.

Being one of our main objectives developing a more sustainable energy system for the green transition, GEAI sees Renewable energies, such as wind and solar, playing a central role in this transition to sustainable lifestyles and we believe in their transformative and community cohesion potential. For that matter, GEAI works towards doing renewable energies in a way that benefits everyone at the same time is respectful with the environment.

Solar energy is a renewable energy source with the ability to reduce greenhouse gas emissions and dependency on energy imports. There is no up-to-date data on the use of solar energy in Ireland, as its usage is very residual. In 2018 Ireland had an installed solar PV capacity of 29MW, and although there has been exponential growth in its use, it still accounts for 0.2% of total renewable electricity[1]. Renewables occupying the top positions are wind and bioenergy, including solid biomass, biogas and bioliquids, among others. We see SSG like this one as opportunities for communities to develop their own renewable projects at the same time as the notational capacity for renewables improve.

Some of the submissions in which GEAI already participated in are the Design of a new Renewable Electricity Support Scheme (RESS) launched in September 2017; the Public Consultation on the National Adaptation Framework on climate change on December 2017 to the Department of Communications, Climate Action and Environment; among others. This year, 2022, two Public Submissions have been already sent on Energy Poverty and a Green Hydrogen Strategy for Ireland.

[1] Sustainable Energy Authority of Ireland [SEAI] (2020). Renewable Energy in Ireland – Update 2020. Link.

Community Aspects of the SSG

Question 9: Respondents are invited to offer suggestions as to how projects owned by Renewable Energy Communities may be supported under the SSG. Please provide evidence to support your suggestion.

Focus: advisory hubs, improve national capacity, agrovoltaics.

There are multiple ways to fund community-led projects, but to be understood for proper implementation, other areas of action beyond funding must be expanded and explored.

Create an EU-like consultative platform[2] (Advisory Hubs alike) that supports key stakeholders such as citizens or local authorities, by providing targeted technical and administrative support for the promotion and implementation of such projects. These hubs can also be places to share best practices and connect with communities that want to develop projects or have already implemented them. It is a multi-dimensional space where communities, stakeholders and authorities interact. One of the positive aspects of the initiative is the collection of reliable and straightforward information on which action and support frameworks are better suited for future programmes, and what changes to current regulations should be made to benefit rural communities.

Conduct workshops and webinars to improve the nation's ability to rapidly create community-led solar projects. In addition to partnerships and peer-to-peer exchanges, focusing on community projects and their impact on vulnerable groups among their community. The aim is to share as much information as possible on the resources available for such projects to increase the capacity of the implementing team in terms of financial, material resources and community impact. If the wider community is to develop such a project, it is crucial to be accompanied by a clear strategy for engagement and building trust. People will not apply for such programs without overcoming myths and fears about the energy system and the benefits community programs can bring to implementing groups and their communities.

The agri-food sector is one of Ireland's most important indigenous manufacturing sectors. Figures from the Central Statistics Office show that this sector (which includes agriculture, food, beverages, tobacco and wood processing) represents about 7% of total GVA, with primary agriculture, forestry and fishing being about 1.6% of Ireland's total revenue value added[3]. To encourage the use of solar energy at the local and rural level, *agrivoltaics* can be promoted. This strategy aims to address competition for land use and increase the income of landowners, by integrating solar panels on active farms. This will remove the separation between energy and food production. In fact, data show that under agrivoltaics land productivity increases by 35% to 73% on farms that integrate these systems into their crops and also, reduce competition for land, since generates renewable electricity without taking away arable farmland resources for food production[4, 5, 6].

[2] Examples: Energy Cities Hub; Energy Poverty Advisory Hub; Eu Science Hub; Energy Efficiency - European Energy Hub.
[3] Agriculture and Food Development Authority – Teagasc.
[4] Pascaris, A. S., Schelly, C., Burnham, L., & Pearce, J. M. (2021). Integrating solar energy with agriculture: Industry perspectives on the market, community, and socio-political dimensions of agrivoltaics. Energy Research & Social Science, 75, 102023. doi: 10.1016/j.erss.2021.102023

There is a Case Study, Heggelbach in the Lake Constance region, Southern Germany, where 720 bifacial PV modules were installed with an installed capacity of 194 kilowatts peak (kWp) and land use efficiency increased from 60% to 84%. Another case study is the APV-RESOLA project, which demonstrated improved agricultural resilience and yields[7].

Barriers to Small-Scale Generation

Question 10(a): DECC welcomes the views of respondents as to any financial, regulatory, technical or other barriers to the uptake of small-scale renewable electricity generation in Ireland. Are there specific barriers impacting Community projects, or projects in agricultural, rural or island settings? How can these barriers be overcome? Please provide evidence to support your answer.

Focus: procedures, community, connectivity, technical support, investment.

The development of renewable energy and small-scale electricity generation in rural areas of Ireland faces great barriers that undermine the possibilities of developing renewable energy projects and future expansion of existing projects. Rural areas need special attention when implementing renewable electricity generation projects since numerous difficulties are present.

Developing renewables in rural areas of Ireland is a complex process, where procedures and time frames are not aligned, three basic requirements for renewable projects are needed to make sure projects are successful: planning, grid connection and a Feed in Tariff[8]. The length of the project can place a considerable strain on community resources and most times, developers have to report to a number of different bodies at different stages[8].

- Administrative Burden: Community energy initiatives spend 90% of their time ensuring the survival of the organisation and only 10% on developing the project[9].
- Burden on Drivers of Community Projects: Community projects are often driven by a dedicated individual with support from others. Those involved often work on a voluntary basis.

Plus:

- <u>Insufficient support structures</u>

Many communities do not have the capacity or organisational experience to empower themselves to take full advantage of renewable energy opportunities that arise. In addition, a community may not have the necessary specialist skills to develop a project[8]. There's a need for mentoring in the

[5] Fraunhofer (2017). Harvesting the Sun for Power and Produce – Agrophotovoltaics Increases the Land Use Efficiency by over 60 Percent. Link.

[6] Metsolar (2021). What is agrivoltaics? How can solar energy and agriculture work together? Link.

[7] Fraunhofer (2020). Agrivoltaics: Opportunities for Agriculture and the Energy Transition - October 2020. A Guideline for Germany. Link.

[8] Comhar. (2011). Community Renewable Energy in Ireland: Status, barriers and potential options. Comhar SDC policy papers. Link.

[9] Hielscher, Sabine, Seyfang, Gill and Smith, Adrian. (2011). Community Innovation for Sustainable Energy. CSERGE Working Paper 2011-03. University of East Anglia, UK.

process. Technical leadership and guidance to develop the renewable projects; scope, goals and needed partnership. Without specialist support, it is likely that expensive mistakes will be made[10].

Many countries also face the challenge of intermittent grid connectivity because the demand for energy often exceeds the capacity of existing power generation sources[11]. Tension over electricity supply: Renewable energy sources such as wind, solar and hydropower supplied 20% of Ireland's electricity in July, according to EirGrid. The presence of large multinational companies and the rapid expansion of data centres -- which are big energy consumers -- is exacerbating tensions over electricity supply in Ireland. Regulator proposals to compel reduced consumption in peak demand periods have sparked anxiety over shortages, according to IDA, Ireland's inward investment agency which supports over 1,700 multinationals in Ireland. According to EirGrid (Shaping our Electricity Future), there are four options in the development of Ireland's electricity grid:

The four approaches in Shaping Our Electricity Future comprised the following:

1. *Generation-Led: Government policy would influence where renewable energy is generated – favouring locations where the grid is already strong*
2. *Developer-Led: In this approach, we continue to connect new sources of renewable electricity as requested in any location*
3. *Technology-Led: This approach uses technical solutions to make the grid more resilient so it can better handle the variable nature of renewable energy*
4. *Demand-Led: Government policy determines where large energy users locate in Ireland*

In our view, if we want to facilitate communities to participate in Small Solar projects, the best option is Developer-Led, with adequate supports put in place that allow communities to operate like developers. Government policies must support such developments and ensure that all areas in Ireland can benefit from in establishment of community energy generation.

- <u>Access to finance</u>

The capital requirements for renewable projects are considerable and the payback period is long-term. Access to upfront capital is essential for communities to meet both relatively small costs. Significant investment is required to move from a feasibility study to an investable project, and funding for this phase is difficult to attain[8].

[10] Platt, Reg. (2011). Green Streets: Strong Communities. Institute for Public Policy Research. Link.
[11] Marincola, 2018. Why Is Energy Access Such a Challenging Problem to Solve?. Forbes. Link.

Question 10 (b): Are there specific barriers impacting Community projects, or projects in agricultural, rural, urban or island settings? How can these barriers be overcome and what innovative solutions could be applied? Please provide evidence to support your answer.

Focus: support projects, investment, electrification plan.

GEAI suggests three solutions to barriers impacting Community-led projects:

- Improving support structure

Establishing a support structure for communities that want to invest in renewable energy and develop community projects in rural areas would help communities that do not have the capacity and the expertise to develop energy projects by themselves. This support structure should consider disadvantaged communities, ensure long-term support provided by technical mentors and provide relevant information on natural resources.

- Access to finance

Providing financial options to rural areas where the costs of developing renewable energy projects are difficult and are perceived as a high-risk investment would help communities that sometimes compete with development companies without the resources and knowledge to access to finance. These options could include: Low-interest loans, loans from green banks, tax exemptions and carbon taxes, etc.

- Electrification strategy

Focusing on allowing community projects to connect to the grid more easily. To deliver stable connection to rural areas, a long-term electrification strategy it's needed, including an energy access plan, which should categorize different areas in a country in accordance with the possibility of being reached by the grid at reasonable costs or considering connection to the national grid for communities at no cost to the project.

To avoid problems with planning and delays in projects introducing planning rules specific to small-scale projects in rural and energy-disadvantaged areas can help to speed up projects and lower the cost of obtaining planning approvals.

Question 10 (c): Are there barriers specifically regarding constraints and curtailment that may need to be considered in the SSG design? Please provide evidence to support your answer.

Focus: grid connection, rural areas, electrical costs.

1.3 billion people, mostly in rural areas remain unconnected, 620 million of whom will likely remain out of reach of national power grids due to remoteness, low population densities and prohibitive grid extension costs[12]. Grid expansion costs are generally high in rural areas because these areas are characterised by low population density. This implies that electricity distribution costs must be spread over fewer numbers of households, thus resulting in high unit costs per household. Expansion of coverage through grid extension in rural areas is challenging.

[12] Müller, M., Thompson, S., and Gadgil, A. (2018). Estimating the price (in)elasticity of off-grid electricity demand. Development Engineering, 3, 12-22. doi: 10.1016/j.deveng.2017.12.001

A priority of the Government must be the upgrading of the existing grid together with the establishment of adequate transformer networks allowing communities to connect to the grid without huge costs, as is the case at present. It is fair to say that the greatest impediment to community energy in Ireland is the lack of access to the grid, requiring extraordinary connection costs.

The Renewable Energy Partnership recommend providing connection to the national grid at no cost to the project for all renewable energy projects below a certain size and with a high level of community involvement[13]. The eligibility for such connections needs to be established according to clearly defined criteria.

Question 11 (a): Do you agree that SSG projects should be required to establish a Community Benefit Fund? Should payments under the SSG Community Benefit Fund vary by project type and size (large commercial, agricultural etc.)?

Focus: community-led actions and flexibility.

Yes, every project should have a Benefit Fund, which of course would depend on the capacity of the implementing community.

The primary objective of any fund should be to support the social, economic or environmental development of the community. In addition, this can take many forms, direct funding, supporting projects being developed in the region and incentivizing local small businesses… These should be identified and agreed upon according to the size and type of SSG, especially to provide flexibility for smaller communities and communities in rural and vulnerable areas. In these cases, support and targeted advice must be provided.

Additionally, any action in this regard must be community-led and responsive to its needs.

Question 11 (b): Are there any alternative means of ensuring that projects receiving SSG support benefit the local community, and in particular financially vulnerable customers and those at risk of energy poverty in urban/rural/island settings? Please provide evidence to support your answer.

Focus: monitoring, accountability and inclusion of communities.

Yes, by establishing accountability procedures. Projects under the SSG with the support of the Government, if needed, could present reports on ways they are going to identify vulnerable households to prioritize their access to the Benefit Fund; Work on strategies with local NGOs on the best ways to concede help to these specific vulnerable groups; establish indicators or following-up methods to really monitor if the actions implemented are being effective in this area; Local Authorities can create support frameworks in the form of financial and non-financial schemes to provide the necessary incentives; and finally, by producing impact reports and assigning community leaders to oversee the transparency of the process.

[13] The Renewable Energy Partnership. (2004). To catch the wind. Link.

Final conclusion

GEAI reaffirms its previous position, solar energy is an important renewable heat and power energy source. Ireland's energy policy should focus on stimulation of the use of solar energy to accelerate the transition to a low carbon energy future while ensuring buy-in from communities in the implementation of such policies.