

Enabling Framework for Renewable Energy Communities

Financing Renewable Energy Community Generation Projects



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May 2023

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SEAI is funded by the Government of Ireland through the Department of Environment, Climate and Communications.

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Guide overview

How to use this guide

→ This toolkit is designed to be used online. Links are [highlighted in blue](#) and denoted with this symbol:  Click on the highlighted text to activate the link.

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Guide overview

→ This guide aims to support community groups seeking to develop and invest in Renewable Energy Community (REC) Generation Projects in Ireland. It outlines several sources of finance available to consider when making an investment decision and where to obtain further information when considering the investment.

The guide is part of the Community Enabling Framework and, besides this guide, there are other relevant guidance documents and tools available on the Sustainable Energy Authority of Ireland (SEAI) website www.seai.ie/community-energy/ress/enabling-framework/ .

Background to renewable support schemes

Ireland has set a target of 80% renewable electricity, and an EU-wide renewable energy target of 32%, by 2030. The Renewable Electricity Support Scheme (RESS) promotes investment in renewable energy generation in Ireland through a series of regular auctions. This guide focuses on community scale projects between 0.5 MW and 5 MW in scale; however, communities may embark on projects of a much smaller or larger scale.

RESS has been designed to promote investment in renewable energy generation in Ireland. There have been two RESS auctions to date – RESS-1 and RESS-2. RESS-1 launched in July 2020 (with an average subsidy price awarded of €104.15/MWh for community-led projects) and RESS-2 launched in April 2022 (with the average subsidy price awarded being €116.41 for community-led projects).

In RESS 1 and RESS 2, community-owned projects between 0.5 and 5 MW can apply to a dedicated community category for support under RESS which is separate from the ‘all projects’ category of the auction which is for larger projects generally.

Small-scale Generation (SSG) is defined as renewable electricity generation technologies with an electricity output greater than 50 kW, but smaller than typical commercial generators. A new support scheme for SSG is in development (expected to launch during 2023) which aims to provide an easier route to market for community projects. It is anticipated that SSG could roll out supports to renewables for installations of up to 6 MW and that this would be on a technology agnostic basis. Currently, there is a Micro-generation Support Scheme (MSS) which is rolling out supports to renewables for installations below 50 kW.

Grant and other financial supports

SEAI grants and other public sector grants are generally provided to projects to fund a particular service or activity. There are several restrictions associated with the grant and how it is used. It is important to clearly understand the terms and conditions of the grant and under what conditions the funder may want the grant to be returned. If the project requires additional debt finance, debt providers will want to fully understand the terms of the grant. Please refer to SEAI grant and other financial supports in this guide for further details.

Debt financing

A community organisation seeking to use debt as an option for funding must consider the different aspects of debt including terms, seniority rank of debt, security, fees, creditworthiness and other elements underpinning a potential loan agreement. Please refer to Debt financing section for further details relating to debt specifics and advantages and disadvantages of using debt as a financing option. SEAI recommends communities seek independent financial and other relevant advice before deciding on the financial options available.

Equity financing

Equity from the community organisation is often monies contributed by the community members themselves. The 'profits' on the equity injection are normally used for a 'community dividend' (subject to any objects clause restrictions and compliance with REC guidelines). Those investing equity in the project are at greatest risk, as they may lose initial investment should the project fail. Please refer to Equity financing for further details relating to equity specifics and advantages and disadvantages of using equity as a financing option.

Documentation requirements

This guide also includes an illustrative checklist outlining documentation requirements that are key to success when seeking to obtain funding from grant providers, external debt providers or other types of stakeholders involved in the development and construction of projects. Please refer to Example checklist of documentation in this guide.

A summary of the potential sources of funding in Ireland to fund the development and construction stages of projects is in Potential sources of funding.

Included in the Appendices of this guide are illustrative explanatory notes relating to company structure, key onshore and solar project model considerations.



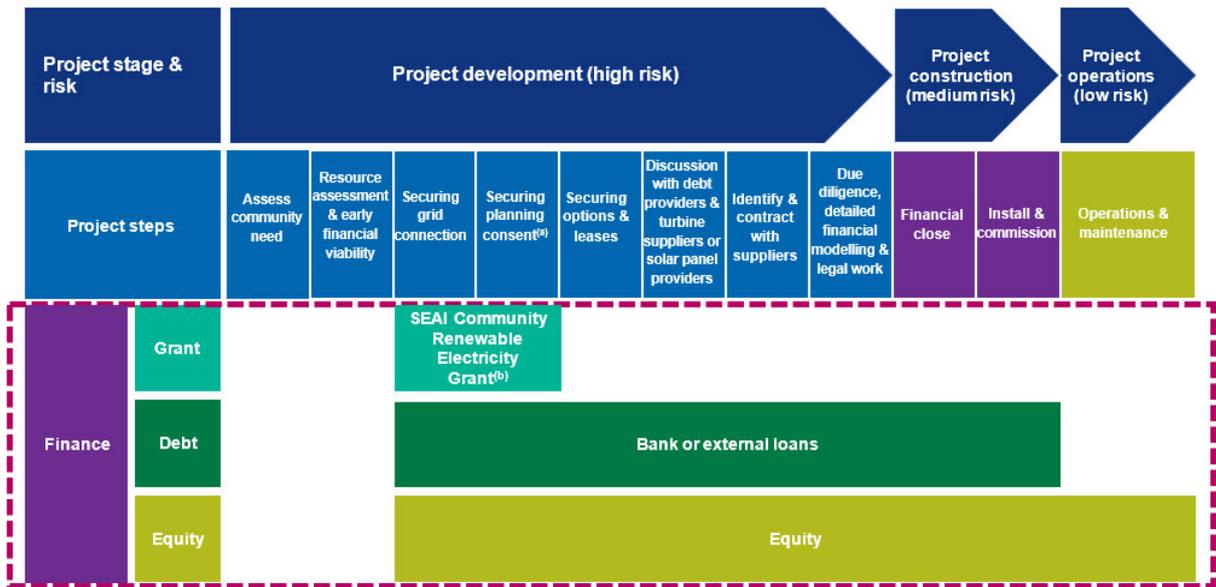
Key message

It is recommended that communities seek independent financial and any other relevant professional advice before deciding on the financial options available.

Funding each stage of development

Figure 1 shows the development risk and sources of funding that are available at each stage of the project development cycle. Sources are split into grants, debt, and equity. This includes where SEAI grants may apply. Information on these is available in SEAI grant and other financial supports and Sources of finance in this guide.

Figure 1: Project stages and financing options at each stage of the project cycle



Focus areas of this guide

Note^(a): Communities can currently make applications into an Enduring Connection Policy (ECP) batch C without securing planning. However, there is then a two-year window to secure planning approval.

Note^(b): SEAI supports communities to assess need and carry out feasibility assessments free of charge through the trusted advisor support. Once feasibility studies are complete, and the outlook for the project is deemed to be positive, communities can apply for grant support.

SEAI grant and other financial supports

SEAI grant and other financial supports

→ Overview

Table 1: Overview of financial supports

Overview	
Community-led renewable energy projects	<p>To qualify for specific community targetted support schemes your project must meet the definition of a Renewable Energy Community. Under RESS the main eligibility requirements for an REC were:</p> <ul style="list-style-type: none"> • Application must be made with a Sustainable Energy Community (SEC) • Project size must be between 0.5 MW and 5 MW • Fully (100%) owned by an REC • Community group must be based on open and voluntary participation • Participation based on local domicile <p>You must apply for a community-led project with a SEC. The SEC must be identified in the Declaration of a community-led project, together with a description of the relationship between the applicant and the SEC.</p>
Overview of Community Renewable Electricity Grant	Primary purpose is to support community groups interested in developing a renewable energy project during the design and permitting stage.
Grant available	80% of eligible costs up to a maximum of €180,000
Grant Framework	<ul style="list-style-type: none"> • Early-stage support (entity formation, land control, project design and planning costs, meteorological mast (wind)) up to €75,000. • Mid-stage support (portion of grid costs and development costs) up to €130,000 minus any drawdown from early stage. • Late-stage support (remaining grid costs, costs related to developing project financing) up to €180,000 minus any drawdown from early and mid-stage.
Feasibility stage	Entry to the grant framework is predicated on successful completion of feasibility stage conducted by an SEAI appointed Trusted Advisor (TA) service provider.
Milestones	You can draw down grant funding in €25,000 tranches on completion of key milestones.
Public engagement event	A public engagement event must take place before drawing down the second tranche to ensure the project is suitability socialised within the local community.

Note: The table above presents the key criteria in relation to the SEAI Community Renewable Electricity Grant. This list is not exhaustive, and there may be other conditions to consider that are specific to each project.

Note^(a): Please note at the date of this guide, the general consensus at present from the DECC and wider stakeholders is that most community projects eventual route to market is likely the support scheme for SSG expected to launch during 2023. References to this effect are contained within the current public consultation for RESS-3. Community Enabling Supports for RESS are likely to be expanded to also cater for SSG. The proposed scale of export-only projects for communities and small and medium enterprises (SMEs) in SSG is likely to be from 1 MW to 6 MW, respectively.

Note^(b): <https://assets.gov.ie/204273/4766c91a-0f55-48ad-b5b1-cf8b7a4087ca.pdf> 

Table 2: SEAI Community Renewable Electricity Grant - eligible costs

SEAI Community Renewable Electricity Grant – eligible costs	
External professional services	External professional services directly related to the delivery of the project, such as: <ul style="list-style-type: none"> • Survey and design services • Preparation and submission of planning application • Preparation and submission to secure route to market • Preparation and submission and fees for grid connection application • Grid stage payments • Fees in relation to the securing of land access • Costs related to the establishment of appropriate corporate structure and governance • Environmental studies, meteorological mast costs • Financial modelling and advisory services (including arrangement fees) • Any advisory services required to complete grid connection process • Advisory services needed to achieve financial close
Direct costs	Direct costs associated with achieving planning and support scheme compliance.
External project management costs	External project management costs (with a maximum daily rate €500, up to a maximum of 7% of total eligible costs).
Internal staff costs	Internal staff costs (with a maximum daily rate of €400, up to a maximum of 10% of total eligible cost).

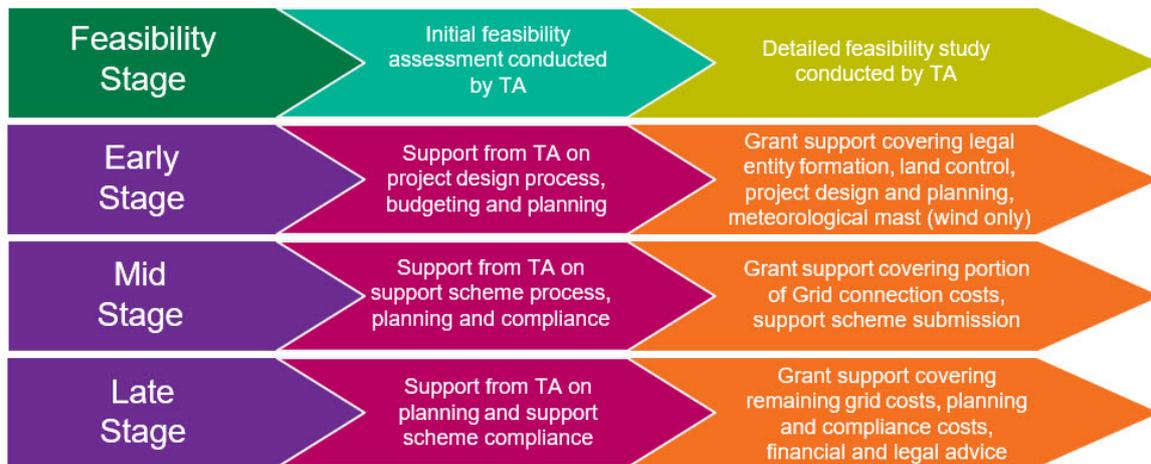
Table 3: SEAI Community Renewable Electricity Grant - ineligible costs

SEAI Community Renewable Electricity Grant – ineligible costs	
Retrospective costs	No retrospective costs (costs already incurred by the project prior to grant letter of offer).
Unrelated costs	Any costs not directly related to the proposed project are likely to be ineligible for payment.
Further costs	Costs that may be incurred after an Eirgrid / RESS Letter of Offer is revoked.
Administration costs	Administrative costs, overhead costs and subsistence costs.

Note: The table above presents a range of eligible and ineligible costs in relation to the SEAI Community Renewable Electricity Grant. This list is not exhaustive, and there may be other costs to consider that are specific to each project.

→ Grant and Trusted Advisor support stages

Figure 2: Grant and Trusted Advisor support stages



Note: The graphic above presents an indicative outline of each stage of the grant support and TA process. This is not exhaustive, and there may be factors to consider that are specific to each project.

Sources of finance

Debt financing

→ Overview

Financing part of a community development initiative through debt is a fairly common approach. Based on the terms agreed, you must repay the outstanding amount. Also, the terms usually specify what interest the loan will accrue over the period it is being serviced, as a percentage of the principal amount.

Loans can be differentiated by seniority (i.e. classified as senior or junior loans). Senior debt providers have the lowest level of risk, as they are paid back first and, if the project was to fail, would take ownership of the asset. Therefore, their interest rates are generally the lowest. Junior loans are second to be repaid (i.e. in each period they are only repaid if the operating costs, taxes and senior loan providers have been paid). Junior loans can also be known as subordinated debt or sometimes mezzanine finance.

Secured debts involve a repayment promise, as well as collateral. Securing a debt means providing an asset so that in the event a borrower defaults, it can be sold to recover the money that was lent out. Unsecured debt (debentures), on the other hand, does not involve collateral. However, if you do not repay the loan, the debt provider can institute charges at a court of law to recover the amount loaned. Debt providers use creditworthiness to assess your repayment potential.

Debt financing can be used in the following stages of a project's cycle:

1. **Development:** Development loans fund development work (which is riskier than construction financing or long-term project debt), meaning the cost of debt is higher.
2. **Construction:** Construction loans help buy equipment and pay for the installation of the equipment. This type of debt has much lower interest rates than development debt because there is usually physical collateral for the loan.

→ Advantages and disadvantages of debt financing

Table 4: Advantages of debt financing

Advantages	
Establish and build up creditworthiness to reduce future costs	Good creditworthiness is crucial when seeking low-cost, long-term debt funding. This is particularly important for projects that have lives of c.10-20 years and where there is opportunity to refinance at a lower interest rate during the life of the project.
Potential tax deductions	The amount paid in interest is normally tax deductible, effectively reducing net tax obligation. <i>(Please note this guide does not constitute any form of tax advice. This should be considered and discussed with your legal and tax advisors.)</i>
Easier planning	You will know well in advance exactly how much principal and interest are payable each month. This makes it easier to budget and make financial plans.
Free up cash for community group members	Borrowing instead of using own funds allows community members to deploy cash for other uses such as other investments etc.
May secure bundle deals	The provider that you secure lending from may also offer other banking and credit services such as insurance. This could be cost effective compared to acquiring these services individually (if equity financing is used).
Community group ownership after debt repaid	There is no residual obligation once funding is repaid, meaning you are entitled to 100% of cash flows generated and the project asset(s) fully owned.

Table 5: Disadvantages of debt financing

Disdvantages	
Due diligence requirements	Debt providers require due diligence assessments and for the community to have the necessary documents in place to be 'lender ready' (which may require external advisors assisting in preparing relevant documents). While this process may be time consuming and costly, it is likely to help build lender confidence and ensure you have a robust financial plan.
Security pledges	<p>Communities are likely to have few assets that they can use as security for a loan. Banks and other debt providers normally provide non-recourse finance where the debt is secured against the actual physical assets and the future cash flow stream from the renewable energy project. It should be noted that this would also be common practice where the lender is a commercial developer.</p> <p>Therefore, in the unfortunate case where the project doesn't perform as well as expected and the community cannot repay the debt, the debt provider may take ownership of the asset and try to reclaim some of its monies. It is non-recourse debt, as the debt provider cannot try to claim money from other projects the community may have.</p> <p>Where there are several debt providers to a project and they are not co-lending on identical terms, the debt providers are likely to have different rankings of seniority. This is the ranking of the security that a debt provider has in a project. In a worst-case scenario where the project fails, this is the order in which any outstanding value within the project is repaid to investors.</p> <p>If the community owns a piece of land, they might take out a loan against the value of the land to invest in the project. This would not prevent the community from using the land, but it would prevent them from using the land to raise finance for other projects.</p>
Fees	The debt provider is likely to charge an arrangement, commitment and exit fees (depending on facility type). In addition, charges such as legal fees and the cost of undertaking the due diligence exercise are also likely to be incurred.
Interest rate	The rate of interest is built up from the interest rate European banks can lend between themselves (called 'EURIBOR') and a margin to cover the risk inherent in a project. EURIBOR is variable in nature, which could rise significantly over the life of a project, especially in a rising interest rate environment.
Potential cash flow issues	Using debt to finance project operations can cause cash flow issues when revenue is not stable (i.e. fluctuations driven by seasonality and changes in weather conditions etc).
High initial fixed costs	Historically, debt providers have appeared to be less willing to lend to smaller renewable projects. This is in part due to the high fixed costs in arranging finance, which therefore favours larger projects requiring larger investments.

Note: The above list of advantages and disadvantages is not exhaustive and there may be other factors which relate to debt financing. SEAI recommends that communities seek independent financial and any other relevant professional advice before deciding on the financial options available.

→ Key financial covenants

The following financial covenants are common and usually implemented as part of loan agreements and may be strict in nature depending on the riskiness of a particular project.

- **Debt to equity ratio:** Also known as loan-to-value ratio. Usually, senior debt providers are likely to provide up to a certain percentage (for example, c.60-75% depending on the debt provider) of the debt and require the remainder to come from equity or from junior loans/ subordinated debt/ mezzanine finance.
- **Debt service cover ratio (DSCR):** The ratio of cash available for debt service divided by the loan interest and loan principal repayments in that period. The DSCR is a key measure of your group's financial health and its ability to repay its loans. It is widely used by debt providers to understand a company's creditworthiness and prospects.
- **Loan life cover ratio:** The ratio of operating cash flow to debt payments over the entire term of the loan.
- **Debt service reserve account:** Debt providers are likely to require that enough cash is held in reserve to cover debt payments for items over and above loan repayments. For project finance, at least six months' cover may be required, but less for secured finance loans.
- **Maintenance service reserve:** For assets that require periodic refurbishments, or upgrades (e.g. solar panels require the inverters to be replaced after 7 years or so), debt providers often require a reserve account to be built up in the 12 or 18 months running up to the replacement to ensure there is sufficient cash flow to pay for the maintenance.

In a worst-case scenario, failure to comply with financial covenants could result in the community group defaulting on its debt and the debt provider taking ownership of the project (i.e. assets and cash flows).



Key message

The list above is not exhaustive and there may be other covenants a finance provider may deem necessary. SEAI recommends that communities seek independent financial and any other relevant professional advice before deciding on the financial options available.

Equity financing

→ Overview

Typically, projects are funded by a mixture of debt and equity. Equity finance is funding that comes from project owners. Debt finance is funding that is received from third parties, such as a bank (see [Debt financing](#)  for further details).

Until a project has secured a site and all consents, it is not normally feasible to use debt financing as an option because there is nothing of substance to finance. Therefore, equity finance may cover the costs involved in taking a project from concept to where it can potentially draw down debt finance against the demonstrated value of the project.

However, equity can also be invested at the point of construction. The greater the amount of equity in a project, the less debt financing that is required.

The community may already have money from other sources it is investing on its own account, or there may be a few local community individuals investing. This would be classed as equity.

It is important to note that some form of equity is also likely to be required. This is because funders want to ensure that community owners have a good incentive to make the project a success. As a condition for most debt finance, you must be prepared to contribute a certain percentage of the total project finance (this can differ across different debt providers and project types).

→ Advantages and disadvantages of equity financing

Table 6: Advantages of equity financing

Advantages	
Higher rewards	A greater level of equity funding results in a higher level of dividends in the initial years of the project.
No reporting requirements	Having no external debt from debt providers (such as banks) would limit reporting requirements, such as covenant reporting, which can be time consuming and requires a certain level of financial expertise.
No security pledged	No security would have to be provided as you are not borrowing funds from an external debt provider.
Greater cash flows	Interest is a cost of borrowing. If a community group does not borrow from an external debt provider, there is no principal (capital) or interest repayments. This results in higher cash flows being generated from project operations.
No due diligence requirements	If a community group uses its own funds, there are no due diligence requirements, which can be time consuming and costly.

Table 7: Disadvantages of equity financing

Disdvantages	
Greater risk	As there is no guarantee that a project will progress from concept to operation, equity finance is always provided at risk of gaining no return.
Potential losses	The return derived from investment in the project can go down as well as up. Additionally, the entire investment made by the community owners could be lost.
Committed investment	Investments have to be committed for 20+ years for some technologies.
Expertise required to set up legal vehicle	For community owners to invest in a project, it is a likely requirement to set up an appropriate shared ownership structure (a community vehicle ^(a)). It is important to understand exactly what the offer is, as it influences the legal framework under which the community group would incorporate itself and the opportunities for raising finance.
Unlikely to receive dividend payments in early years	If community owners are using loans to finance part of their contribution (rather than equity contributions), this can delay any dividend payments as obligations to repay debt providers are likely to begin shortly after operations commencement.
Opportunity cost to community members	There is an opportunity cost for community owners as their capital is tied up in the project investment. Borrowing externally can free cash to be deployed to other investments/uses.
Project overspend	The risk of project overspend (which is quite common in renewable energy projects) falls solely with the community group, which could rise significantly compared to initial investment targets.

Note^(a): To access sources of finance, you must set up an incorporated structure called a community vehicle. This provides community owners with the legal status required to issue shares, receive grants or secure loans. Examples of the structures that a community vehicle may adopt include a private company limited by shares, private company limited by guarantees, community interest company or a registered society.



Key message

The above list of advantages and disadvantages is not exhaustive and there may be other covenants a finance provider may deem necessary. SEAI recommends that communities seek independent financial and any other relevant professional advice before deciding on financial options available.

Example checklist of key documentation

Example checklist of documentation

→ *The following lists of documentation are not exhaustive and are for illustrative purposes only. Documentation requirements may differ on a project-by-project basis.*

Project documentation

Documentation requirements relating to the **operational aspects** of a project may include:

- Project programme of work
- Project summary guide
- Map showing location of project
- Site feasibility report
- Site surveys including access, telecoms and geotechnical reports
- Environmental surveys
- Site design drawings
- A reputable technical advisor resource yield report, outlining P50 and P90 estimates of available resource
- Reference project for project suppliers and contractors

Legal documentation

Documentation requirements relating to **legal aspects** of a project may include:

- Copies of all existing loan agreements or grant awards
- Planning approval guide (including conditions)
- Offer of grid connection
- Lease agreement or option to lease
- Supply agreement
- Civil works contract
- Electrical works contract
- Operation and maintenance (O&M) contract
- Power Purchase Agreement (PPA)
- Appropriate licences
- All relevant constitutional guides (e.g. memorandum and articles of association, limited liability partnership (LLP) agreement if relevant)
- Construction documents must comply with relevant REC requirements

Financial documentation

Documentation requirements relating to **financial aspects** of a project may include:

- Breakdown of development costs
- Project development plan
- Breakdown of project finances
- Financial review, including financial projections

- Indicative offer from bank
- Three most recent year-end accounts (if required for credit assessment purposes)

Community documentation

Documentation requirements relating to **community and risk aspects** of a project may include:

- Community development plan
- Community benefits plan
- Community fund investment plan
- Evidence of community consultation
- Evidence of stakeholder consultation
- Project risk register
- Justification for public funding

Potential sources of funding

Potential sources of funding

→ The table below outlines a small number of examples of potential sources of finance that may fund various stages of your community group’s involvement in a renewable energy project. The stages discussed are as follows:

Development (D) of a renewable project

The development of a community-owned renewable project can incur substantial costs and grants and/or other loans are available to fund this development.

Construction (C) of a renewable project

Funding for construction of a public renewable energy project is generally through external loan finance (debt) or the community’s own funds (equity).

Table 8: Potential sources of funding

Name	Description	Link	D	C
 <p>Difig Fiontair Áitiúil Local Enterprise Office</p>	<p>Local Enterprise Office (LEO) Feasibility Study Grants assist a company or promoter(s) with researching market demand for a product or service and to examine the sustainability of that product or service. The grant helps with innovation costs, including specific consultancy requirements, hiring of specialist expertise, design costs, patent costs and prototype development costs.</p> <p>The Feasibility Grant covers 50% of qualifying expenses (excluding VAT), subject to a maximum LEO Dún Laoghaire-Rathdown contribution of €15,000.</p>	<p>www.localenterprise.ie/DLR/Financial-Supports/Feasibility-Grant/</p>	X	
 <p>WESTERN DEVELOPMENT COMMISSION</p>	<p>The Western Development Commission promotes social and economic development in counties Clare, Galway, Mayo, Leitrim, Sligo, Roscommon and Donegal. The Commission provides funding to social enterprises and community groups involved in a range of projects which improve the socio-economic states of communities within the region.</p>	<p>www.westerndevelopment.ie/investment-funds/community-investment/</p>		X
 <p>Bank of Ireland</p>	<p>Bank of Ireland Green Business Loans offer discounted finance to entities who want to implement green initiatives.</p>	<p>www.businessbanking.bankofireland.com/credit/business-loans/green-business-loan/features/</p>		X
 <p>AIB</p>	<p>AIB provides a range of business finance options to support businesses in financing green initiatives.</p>	<p>www.aib.ie/green-living/green-business#finance</p>		X
 <p>European Investment Bank The EIB bank</p>	<p>The European Investment Bank (EIB) is the lending arm of the European Union. It is the biggest multilateral financial institution in the world and one of the largest providers of climate finance.</p>	<p>www.eib.org/en/about/priorities/climate-action/index.htm</p>		X

Note: The table above presents a range of different sources of finance and highlights which stage of your project they would be appropriate to finance. This list is not exhaustive and is for illustrative purposes only. There may be other sources of finance available other than those outlined above which are likely to be specific to each project. SEAI is not recommending or endorsing any of the above listed institutions.

Appendices

Company structure examples

→ Table 9: Examples of company structures

Company structure	Equity considerations	Debt considerations
Company limited by guarantee (CLG)	As CLGs do not have shares, they cannot raise capital through equity investment. A CLG can seek donations or loans from the public or its members.	A CLG may raise capital by loan finance or by issuing debentures (unsecured loans).
Private companies limited by shares (LTD)	A LTD can allot or issue shares to its shareholders to raise capital. An investor who makes an equity investment into the LTD by purchasing shares will become a shareholder of the LTD.	A LTD may raise capital by external loan finance.
Partnership	Typically, partners use their own finances to establish the company.	Partners could secure finance by a loan secured over the assets of the business or over their personal assets or, in some circumstances, partners may receive unsecured loans.
Designated Activity Company (DAC)	A DAC can allot or issue shares to its members to raise capital. An investor who makes an equity investment into the DAC by purchasing shares will become a member of the company.	A DAC may raise capital by loan finance and can also seek donations and loans from its members and from others.
Co-operatives	Members contribute equitably to, and democratically control, the capital of their co-operative. There are limits placed on the amount of interest that a member may have in the shares of a co-operative.	Co-operatives may raise finance through external loan finance.
Unincorporated association	An unincorporated association does not have shares, so it cannot raise funds by equity investment.	An unincorporated association may raise capital by external loan finance.
Trust	A trust does not have shares, so it cannot raise funds by equity investment.	A trust may raise finance by external loan finance.

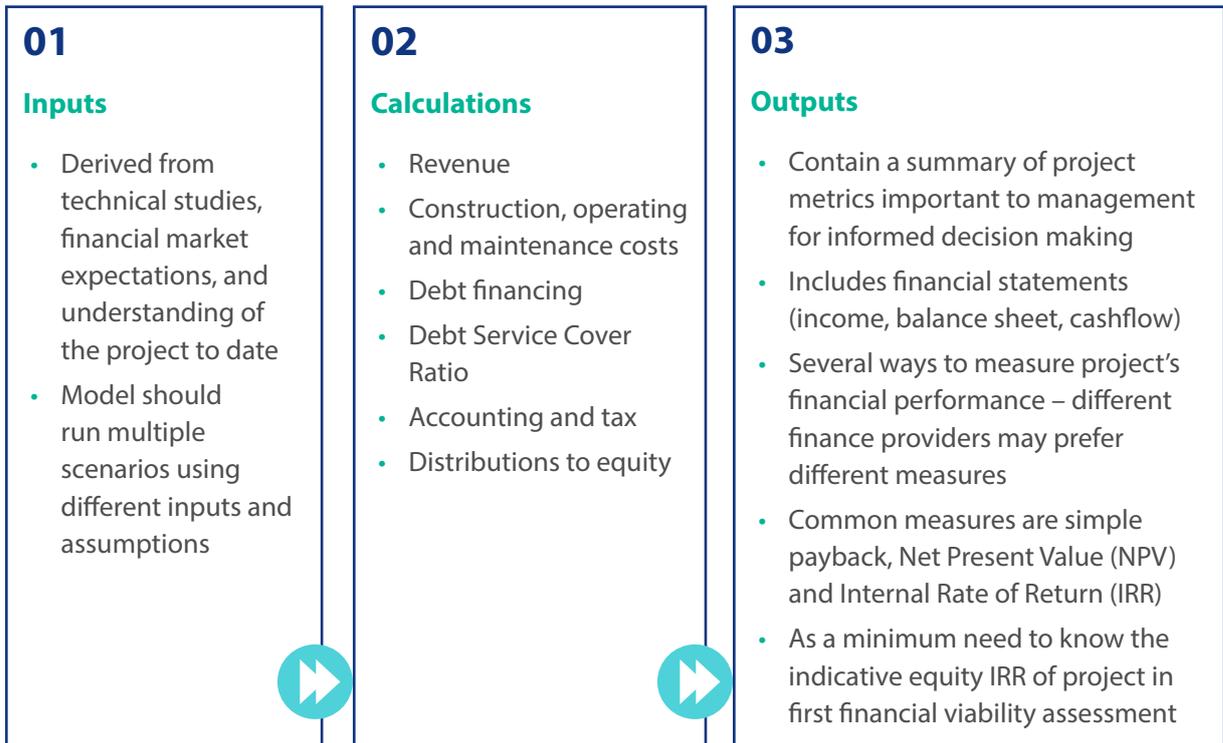
Note: The above list of company structure examples is not exhaustive and there may be other structures which relate to the formation of a legal entity. Users of this guide should seek their own legal and professional advice when forming a legal entity.

Project finance model overview

→ A project finance model (commonly Excel based) is an analytical tool used to assess the risk-reward of lending to, or investing in, a long-term infrastructure project. All financial evaluations of a project depend upon projections or expected future cash flows generated by activities of a completed project, and you will need to build a financial model to analyse this.

You should base your model on inflation-adjusted cash flows, profit and loss (with depreciation), and outline balance sheets for the life of the project. Finance providers expect models to follow standard industry best practices, including the following minimum contents.

Figure 3: Minimum contents for project finance model



Onshore wind project model considerations

→ Finance providers will want to see your completed finance model for an onshore wind project from development through construction to operations. It is important to begin populating and using this model at an early stage.

However, note that finance providers may have their own approach to project appraisal, so use the considerations outlined below as indicators only. By considering the factors below with all the costs associated with project development, construction, operation and maintenance, you will have collected a lot of the information that a finance provider is likely to require before considering the offer of a loan.

Table 10: Example financial considerations for onshore wind model project

Consideration	Description
Asset life	Asset life for most operational onshore wind assets is normally based on how long leases and planning permissions are granted (approx. 25 to 30 years).
Baseload energy prices	The baseload power price is the price for baseload power, which is the electricity demand required continuously. Historically, the industry has utilised the latest central energy price forecast from either Afry, Baringa (or more recently Aurora).
Capture discount rate (e.g. Afry (afry.com/en), Baringa (baringa.com/en/) etc.)	As energy prices fluctuate throughout the day, a capture discount/premium is typically applied to the average daily price to reflect the price that a particular technology receives. For example, onshore wind projects often receive a lower average price than the base load energy prices, as the wind blows most prominently at night when energy prices are at a lower average price. The capture discount rate is typically provided with the baseload energy price curves from a third-party provider.
Curtailement and constraints	Curtailement is the reduction in electricity generation below what a system of well- functioning wind turbines can produce. Curtailement is a key feature of the Irish market. Ideally, for consistency, the curtailement rates should be taken from the same energy curve(s) that were used when determining the energy price and the capture discount rates. A constraint is where a project is reduced due to a local system reason (such as congestion on transmission lines) meaning output cannot be above a certain level. The System Operator imposes this limit, which should be forecast based on the location of a project.
Balancing costs	Balancing costs generally refer to costs that projects must incur associated with maintaining system balance caused by renewable energy. It is typically a cost charge on a €/MWhr.
Business rates	Rates charges can vary as they are based on the location of the operational asset. Rates are usually charged on a €/MW installed basis and the level of rates is determined by the relevant local authorities.
Use of system (UoS)	The UoS charge comprises network charges (for the use of the transmission system infrastructure for the transportation of electricity) and system services charges (the costs arising from the operation and security of the transmission system).
P50 and P90 load factors	The P50 (P90) figure is the average level of generation, where the output is forecasted to be exceeded 50% (90%) over the project's life. When developing a wind farm project, it is important to collect on-site wind measurements over a minimum of one year. As no one can predict future wind movements, the data measured at the meteorological mast over a short-term period are extrapolated to the future, using historical data. Load factors are highly site-specific, but values are generally increasing as hub heights increase and technology improves.
Inflation	European Commission forecasts provide inflation projections.

Consideration	Description
Discount rate	The interest rate used to determine the present value of future cash flows in a discounted cash flow (DCF) analysis. This helps determine if the future cash flows from a project are worth more than the capital outlay needed to fund the project in the present.
RESS price (MWh)	The onshore wind category price determined in each auction.
Capital expenditure	This comprises the initial costs of building, installing, acquiring land, obtaining any necessary permits, Grid costs and any other costs.
Leverage	The percentage that finance providers will lend up to 100% of project build cost.

Note: The above list of considerations is for indicative purposes only. Other factors may need to be considered on a project-by-project basis. SEAI recommends community groups engage their own professional advisors.

Solar project model considerations

→ Finance providers will want to see your completed finance model for a solar project from development through construction to operations. It is important to begin populating and using this model at an early stage.

However, note that finance providers may have their own approach to project appraisal, so use the considerations outlined below as indicators only. By considering the factors below with all the costs associated with project development, construction, operation and maintenance, you will have collected a lot of the information that a finance provider is likely to require before considering the offer of a loan.

Table 11: Example financial considerations for solar model project

Consideration	Description
Asset life	Asset life for most operational solar assets is normally based on how long leases and planning permissions are granted (approx. 25 to 30 years).
Baseload energy prices	The baseload power price is the price for baseload power, which is the electricity demand required continuously. Historically, the industry has utilised the latest central energy price forecast from either Afry (afry.com/en), Baringa (baringa.com/en/) etc. or, more recently, Aurora (auroraer.com/).
Capture Discount Rate	As energy prices fluctuate throughout the day, a capture discount/premium is typically applied to the average daily price to reflect the price that a particular technology receives. The capture discount rate is typically provided with the baseload energy price curves from a third-party provider (e.g. Afry, Baringa etc).
Curtailement and constraints	Curtailement is the reduction in electricity generation below what a system of well- functioning solar assets can produce. Curtailement is a key feature of the Irish market. Ideally, for consistency, the curtailement rates should be taken from the same energy curve(s) that were used when determining the energy price and the capture discount rates. A constraint is where a project is reduced due to a local system reason (such as congestion on transmission lines) meaning output cannot be above a certain level. The System Operator imposes this limit, which should be forecast based on the location of a project.
Performance ratio	For any solar power plant, the performance ratio is the main key performance indicator (KPI) for evaluating the plant performance and it is used to evaluate the efficiency and productivity of the power plant.
DC / AC ratio	The ratio of how much DC capacity (the quantity and wattage of solar panels) is installed to the inverter's AC power rating.
Capacity	Capacity factor is a measure of how much energy a project produces compared with its maximum output.
Capital expenditure	This comprises the initial costs of building and installing the solar project. This includes the cost of purchasing and installing solar panels, inverters and other equipment, as well as the cost of acquiring land, obtaining any necessary permits, and engineering, procurement and construction (EPC) contractor and Grid costs.
Support scheme strike price or tariff	The solar category price determined in each auction.
Degradation	Solar panels degrade slowly when in use. The rate varies partly on the severity of the conditions under which the panels operate.
Balancing costs	Balancing costs generally refer to costs that projects must incur associated with maintaining system balance caused by renewable energy. It is typically a cost charge on a €/MWhr.
Rates	Rates charges can vary as they are based on the location of the operational asset. Rates are usually charged on a €/MW installed basis and the level of rates is determined by the relevant local authorities.

Consideration	Description
Discount rate	The interest rate used to determine the present value of future cash flows in a discounted cash flow (DCF) analysis. This helps determine if the future cash flows from a project are worth more than the capital outlay needed to fund the project in the present.
Inflation	European Commission forecasts provide inflation projections.
Leverage	The percentage that finance providers will lend, up to 100% of project build cost.

Note: The above list of considerations is for indicative purposes only. Other factors may need to be considered on a project-by-project basis. SEAI recommends community groups engage their own professional advisors.

Glossary

→	CLG	Company limited by guarantee
	DAC	Designated Activity Company
	DCF	Discounted cash flow
	DECC	Department of the Environment, Climate & Communications
	DSCR	Debt service cover ratio
	ECP	Enduring Connection Policy
	EIB	European Investment Bank
	EIIS	Employment and Investment Incentive Scheme
	EPC	Engineering, procurement and construction
	KPI	Key performance indicator
	LEO	Local Enterprise Office
	LLP	Limited liability partnership
	MSS	Micro-generation Support Scheme
	REC	Renewable Energy Community
	RESS	Renewable Electricity Support Scheme
	SEAI	Sustainable Energy Authority of Ireland
	SEC	Sustainable Energy Community
	SME	Small and medium enterprises
	SSG	Small-scale Generation
	TA	Trusted Advisor
	UoS	Use of system



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