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Start-Up Package for Energy Communities

From Idea to Action

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Project StartSun - Start-Ups for Solar Energy Communities

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Introduction

Energy communities allow people, businesses, housing associations, municipalities and other local organisations to work together around the production, use and sharing of renewable energy. They can help reduce energy costs, increase the use of locally produced renewable electricity, strengthen local cooperation and keep more of the benefits of the energy transition within the community itself.

At the same time, creating an energy community is not only a technical project. It involves people, legal and organisational choices, financing, permits, grid connection, ownership, decision-making, maintenance and long-term community management. The exact solution will also depend on the country, local circumstances and the people involved. The StartSun experience shows that successful energy communities are built step by step: starting with a real local need, checking what is technically and financially possible, agreeing how people will work together, and only then moving towards investment and implementation.

This guidebook is designed as a "practical start-up package" for people who want to create or support an energy community. It brings together the main lessons, tools and approaches developed through the StartSun project and its pilot activities in Estonia, Latvia, Finland and Sweden. The guide follows the full lifecycle of an energy community: from the first idea and engagement of potential members, through legal establishment, financing and construction, to everyday management, maintenance, social sustainability and future development.

Who is this start-up package for?

The guide is intended especially for "non-experts" who need clear and practical guidance rather than highly technical instructions. It can be useful for:

- residents and local community groups interested in producing renewable energy together;
- housing associations and housing companies considering shared solar energy;
- municipalities and public institutions that want to support or participate in energy communities;
- local businesses, farms and SMEs interested in joint energy solutions;
- cooperatives, associations and other local organisations;
- energy agencies, advisors and other organisations supporting community-energy initiatives.

You do not need to know in advance which legal form, technical model or ownership structure is right for you. The guide presents several possible energy-community models and explains how to move from a general idea towards a solution that fits your members, location, consumption patterns, legal framework and available resources.

How to use this start-up package?

This guide is not intended to be read as a strict set of instructions that every community must follow in exactly the same way. Energy communities differ greatly, and national rules also differ between Estonia, Latvia, Finland and Sweden. Instead, use the guide as a "roadmap and practical reference".

Start with the sections that match your current situation. If you are only exploring an idea, begin with the chapters on needs, members, possible models, engagement and initial financing. If your group is already established, the later chapters on ownership, business models, technical maintenance, social community management and long-term development may be more relevant.

The stages will sometimes overlap. You may, for example, speak with the grid operator while still recruiting members, or revise the technical solution after completing financial calculations. Going back and adjusting the plan is normal.

The most important lesson running through the whole guide is simple:

Start with the people and the need, check what is possible, keep the project manageable, and develop it step by step.

The StartSun pilots showed that energy communities are built through cooperation, learning and adaptation rather than through perfect plans.



10 commandments for energy communities

Based on the main advice and lessons throughout the StartSun start-up package, the following ten principles capture the most important guidance for starting, establishing and running an energy community:

1. Start with a real need, not with the technology.

First agree what problem the community wants to solve, who should benefit and why working together makes sense.

2. Build trust before building infrastructure.

A strong core group, existing local cooperation and clear communication are essential foundations for joint investment and long-term commitment.

3. Check feasibility before you invest.

Test the technical, financial and legal reality early: consumption, site conditions, grid capacity, permits, costs, sharing rules and available financing.

4. Do not buy equipment before checking the grid and permits.

Grid capacity and approval conditions can change the size, design and cost of the project. Resolve these issues before procurement.

5. Keep the first project manageable.

Start small enough to understand, finance and manage. Use real operating experience before deciding on expansion.

6. Make roles, ownership and decision-making clear.

Agree who owns the organisation and assets, who decides what, who manages daily tasks, who pays and who is responsible for maintenance and communication.

7. Bring in the right expertise early.

Use technical, legal, financial, procurement and community-engagement experts when the necessary knowledge is not available within the group.

8. Keep members informed and involved.

Communicate regularly, explain costs and benefits transparently, create opportunities for participation and collect feedback throughout the whole lifecycle.

9. Plan for the whole lifecycle, not only construction.

Think ahead about maintenance, monitoring, reserves, component replacement, social continuity, expansion and eventual decommissioning.

10. Keep the goal but adapt the path.

Energy communities rarely develop exactly as first planned. Be prepared to change the technical solution, financing model, membership or timetable when new information appears.

In one sentence: **Start with people and needs, check reality early, keep the project clear and manageable, and build the community step by step.**

1. Planning for an energy community

Every energy community starts with an idea, but turning that idea into a workable project requires careful preparation. This chapter helps you define the purpose of the community, choose a suitable model, involve the right people, check whether the idea is technically, financially and legally feasible, and identify possible funding sources. The aim is to make sure the project has a solid foundation before moving into formal establishment and investment.

1.1 What is an energy community?

Definition of energy communities in Estonian, Latvian, Finnish and Swedish law

The EU Renewable Energy Directive[1] and the Electricity Market Directive[2] create the legal obligation to recognise and enable energy communities. Furthermore, Article 15(3) of the Renewable Energy Directive[3] requires our governments to create an enabling framework for ECs, and Article 25(6) of the Energy Efficiency Directive requires larger municipalities to assess the role of energy communities in updated local heating and cooling plans.

When planning to create an energy community it is important to understand the legal background of ECs in your country.

All four StartSun pilot countries allow people and organisations to cooperate around locally produced energy, but their legal approaches differ. The following table gives and overview of how energy communities are defined in the legislation of Estonia, Latvia, Finland and Sweden (in September 2026).

Estonia and Latvia have relatively broad legal definitions of energy communities. Finland currently defines a narrower "local energy community", mainly designed for participants behind the same electricity connection. Sweden does not yet have a national legal definition of an energy community and therefore relies largely on existing organisational forms and the EU definitions.

Following table gives an overview of difference in definitions. Please note that these are simplified definitions. Official definition is presented in the referenced law and in the national Start-Up plans published by the project.

Country	Simplified definition in national law	Main legal source	Key differences from EU definition
Estonia	A legal entity where people/ organizations cooperate around energy to create environmental, social, or economic benefits—not profit.	Electricity Market Act §12[2]; Energy Sector Organisation Act §32[6]	Estonia explicitly defines **two types** of communities (general and renewable-specific) and ties them to **legal persons**. The renewable energy community is **location-specific** (near projects).
Latvia	A legal organization where members jointly produce, use, share, or provide energy services (mainly renewable) for community benefits, not profit.	Energy Law §17[1]	Latvia's definition is **broad and explicit**, covering **multiple energy activities** (e.g., EV charging, demand response). It distinguishes between **renewable** energy and **electricity** communities.

[1] Renewable Energy Directive (EU) 2018/2001 – RED II, amended by Directive (EU) 2023/2413 – RED III

[2] Electricity Market Directive (EU) 2019/944

[3] Energy Efficiency Directive (EU) 2023/1791 – EED

Finland	A legal group that jointly produces/ uses energy **within the same property or grid connection**, primarily for member benefits – not profit.	Government Decree 767/2021, §3 Electricity Market Act (588/2013)	Finland's definition is **narrower**: it requires **geographical/electrical proximity** (same property/grid connection), making it less flexible than the EU's broader concept.
Sweden	There is still no specific legal definition of an energy community in Swedish national legislation. EU definitions are therefore commonly used as reference points.	No national statutory definition as of Sept. 2026	Sweden **lacks a national definition** and relies on **EU concepts (REC/CEC)** or existing legal forms. New energy-sharing laws (effective 2027) do not yet create a general definition.

1.2 Models for energy communities

There is no single standard model for an energy community but there are plenty of role models. Energy communities differ in their members, location, ownership, technical setup and way of sharing the benefits. Here we give short overview of four models that can act as starting points rather than fixed categories, therefore these models can serve as inspiration. More detailed overview of possible types of energy communities can be found in the StartSun guidebook "Energy communities in StartSun countries"[4] published in 2025.

Model	How it works	Typical participants	Main advantage
1. Remote prosumers	People or organisations buy or rent a share of a solar park located somewhere else. Their share of production is linked to their electricity consumption through contracts and accounting.	Households, companies, municipal energy-company customers	People can benefit from solar energy without having panels on their own roof.
2. Solar electricity for public buildings	Solar panels are installed on municipal or other public buildings, or public roofs/land are made available for community projects. Electricity is used by public buildings or shared through contractual arrangements.	Municipalities, public institutions, companies, sometimes citizens	Uses public assets and daytime electricity demand effectively.
3. Collective self-consumption in multi-apartment buildings	Residents jointly use electricity produced by solar panels on their building. Production first covers common or building-level consumption and, where regulations allow, can also be distributed among apartments.	Housing associations and apartment residents	Residents collectively reduce purchased electricity and share the benefits of one installation.
4. Renewable energy for remote communities	Residents and local organisations in rural or remote areas cooperate to produce, consume and sometimes store energy locally. A cooperative or similar organisation may own the installations.	Residents, SMEs, farms, local organisations and municipalities	Supports local development and can help overcome weak or constrained electricity grids.

The models can also overlap. For example, a rural community could use municipal roofs, install a community battery and allocate electricity virtually among several members. The actual solution therefore depends on national legislation, grid rules, available buildings or land, consumption patterns, financing and the people who want to participate.

[4] https://interreg-baltic.eu/project/startsun/

Checklist for types of energy communities:

Where will the energy be produced and who will use it?

No suitable roof? → consider a remote prosumer/community solar park model.

Municipal buildings available? → consider a public-building model.

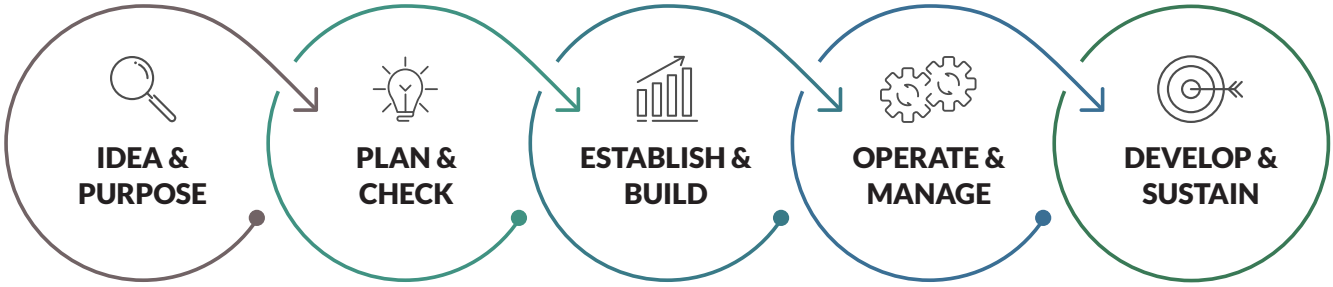
Living in an apartment building? → consider collective self-consumption.

Living in a village or rural area? → consider a local/remote community model.

1.3 Stages of establishing an energy community

Creating an energy community is a process rather than a single decision. StartSun materials show that the process can be organised into a few clear stages: first understanding the need, then preparing a workable solution, formally establishing the community, putting the energy project into operation, and finally managing and developing it over time.

The energy community journey at a glance:



The stages overlap. For example, you may already start talking with the grid operator while you are still recruiting members or revise the technical solution after completing the financial calculations. **Going back and adjusting your plan is normal, even recommended.**

Note on the Finnish context: In Finland, most local energy communities are formed within existing housing companies (*taloyhtiö*). For these communities, no new legal entity needs to be established; instead, decisions are made within the existing corporate structure and registered with the local distribution system operator (DSO).

Stage 1. Start with the need and the people

Ask first: *Why do we want an energy community?*

A successful energy community usually starts with a **real local need or opportunity**, rather than with a particular technology. The StartSun Estonian pilot experience highlights this needs-based approach: before deciding what to build, clarify **what problem the community wants to solve and for whom**.

Your starting point could be:

- high or unpredictable electricity costs;
- an available roof or piece of land suitable for solar panels;

- a wish to use more locally produced renewable energy;
- an opportunity to share electricity between several buildings;
- a need to improve local energy security;
- interest from residents, businesses or the municipality in investing together.

Your first tasks

Identify a small **core group** of motivated people who can move the idea forward. Discuss:

- What do we want to achieve?
- Who should benefit?
- Who could become members?
- Who could lead the process?
- What skills do we already have?
- Who else should we involve?

Potential participants can include residents, housing associations, SMEs, farmers, municipalities, public institutions and local organisations, depending on national rules and the type of energy community.



Output of Stage 1: A simple shared statement: **"We want to create an energy community because…"**, together with an initial group of interested people.

Stage 2. Check whether the idea can work

This is usually the most important preparation stage. **Do not buy equipment yet.**

The aim is to turn the initial idea into a realistic project.

A. Involve potential members

Talk openly with people who may participate. Find out:

- Who wants to join?
- What do members expect?
- How much time or money could they contribute?
- How should benefits and responsibilities be shared?
- Are there concerns that need to be addressed?

Different StartSun pilots used working-group meetings, direct discussions and stakeholder mapping to build the community before formal establishment. The national materials repeatedly stress that technical potential alone is not enough; local engagement is also essential.

B. Check the technical possibilities

A first technical assessment should answer practical questions such as:

- Where could the solar panels or other equipment be located?
- Is the roof structurally suitable?
- How much electricity do potential members use, and when?
- How large should the installation be?
- Is there enough grid capacity?

- How could electricity be shared between members?
- Would battery storage be useful?
- Are there planning, environmental, heritage or fire-safety restrictions?

The Swedish StartSun experience particularly emphasises checking location, grid access, electricity transport and metering before settling on the final project design.

C. Check the finances

Prepare a simple financial overview covering at least:

Investment

- solar panels and installation;
- grid connection;
- batteries, if relevant;
- design and professional services.

Running costs

- maintenance;
- insurance;
- accounting and administration;
- equipment replacement.

Benefits and income

- electricity used directly by members;
- reduced electricity purchases;
- sale of surplus electricity;
- membership fees or other income, where relevant.

Also investigate possible financing: member contributions, loans, public support, grants, or other funding sources.

The financial guidelines published as part of **StartSun Sustainability plan** and the **Feasibility calculator** are great guiding materials for this. Both are easily accessible on StartSun website.

D. Check the legal framework

Before deciding on the final model, find out:

- What counts as an energy community in your country? See previous chapters.
- Who is allowed to participate?
- Does a separate legal entity have to be created?
- Which legal forms are possible for the energy community?
- Which permits and registrations are needed?
- What agreements are required with the grid operator and electricity supplier?
- What rules apply to electricity sharing, taxation and accounting?
- What would be the members indicative contribution?

These requirements differ significantly between countries, so this part of the Start-Up Package needs to lead users to the relevant **country-specific guidance**.

Output of Stage 2: A basic feasibility plan showing **members + technical solution + financial model + legal route**.

Stage 3. Establish the community. Moving from planning to implementation

Once the potential members understand and support the project, the technical solution is feasible and the finances are realistic, you can move from planning to implementation.

The StartSun national start-up packages' describe this stage as the point where the energy community is legally created, permits are secured, the technical project is implemented, and the energy installation is built. Please note that in Finnish case a new legal entity does not have to be created.

See more in chapter 2.

Typical activities include:

» Create the organisation
» Depending on national legislation:
» choose the legal form;
» prepare statutes or articles of association;
» agree governance and voting rules;
» appoint the board or responsible persons;
» hold the founding meeting;
» register the organisation.

Members should also agree clearly on:

- ownership of the installation;
- member contributions;
- distribution of costs and benefits;
- responsibilities;
- rules for joining and leaving;
- decision-making.

Obtain permits and agreements

The national StartSun packages include examples of founding and registration documents as the exact list varies by country and community type. Depending on the project, these may include:

- grid-connection approval;
- building or planning permit;
- electricity purchase or sharing agreement;
- land or roof-use agreement;
- environmental or heritage approvals;
- other national registration requirements.

Procure and install the equipment

Only after the main approvals are clear should you:

- prepare procurement or request quotations;
- compare suppliers;
- select the technical solution;
- sign contracts;
- install the system;
- complete inspections and commissioning;
- connect the installation to the grid.

STARTSUN EXAMPLE

Practical StartSun lesson: Avoid making a large investment before checking permits and grid conditions. Changes made after equipment has already been ordered can be expensive.



Output of Stage 3: A **legally established community with an approved and operational energy installation**.

Stage 4. Run the energy community

Installing the solar panels is **not the end of the project**. It is the beginning of the community's normal operation.

Once the community has been established, responsibilities shift towards governance, administration and maintenance. Combine this with Stage 5. See more details in chapter 3.

Agree who does what

- Someone needs to take responsibility for:
- community management;
- member communication;
- accounting;
- payments and invoices;
- communication with the electricity supplier and grid operator;
- technical monitoring;
- maintenance and repairs.

Not every community needs employees. Many tasks can be performed by members or purchased as external services.

Keep members informed

Regularly communicate:

» how much energy has been produced;
» how much has been used by members;
» financial results;
» technical problems;
» upcoming decisions;
» opportunities for new members or new investments.

Transparency is particularly important because an energy community depends on **continued cooperation and trust between its members**.

Look after the equipment

Set up routines for:

- monitoring electricity production;
- detecting faults;
- scheduled maintenance;
- safety inspections;
- warranties;
- insurance;
- eventual replacement of inverters, batteries or other components.



Output of Stage 4: A community that is not only producing energy, but is **well managed, financially transparent and technically reliable**.

Stage 5. Plan for the future

A good energy community should be able to continue after its first project and its first year of operations. StartSun's Supporting Guidelines provide more details and recommend looking beyond the initial installation and considering **technical, financial and community sustainability**. See more also in chapter 3.

After the first period of operation, and later regularly, ask:

- Is the system performing as expected?
- Are members satisfied?
- Is the community financially stable?
- Could more locally produced electricity be used directly?
- Should we add new members?
- Should we install more solar panels?
- Would batteries, smart charging or other flexibility solutions help?
- Do we have reserves for future repairs and replacement?
- Are responsibilities clear if key people leave?

The Swedish pilot experience suggests that gradual development can work particularly well: **start with the first installation, allow the community to stabilise and collect real data, then expand when there is evidence to support the next investment.**

One important principle: Start with a manageable project and leave room to grow.

STARTSUN EXAMPLE

Several StartSun cases caution against trying to solve everything at once. An oversized or overly complicated first project is harder to finance, explain and manage. A smaller first installation can provide actual production, consumption and financial data that helps the community make better decisions about its next step.

Your simple checklist

Before moving from one stage to the next, check that you can answer these questions:

Stage	Before moving forward, can you answer…?
1. Idea	Why are we doing this, and who is interested?
2. Preparation	Is it technically, financially and legally possible?
3. Establishment	Have we agreed the rules, obtained approvals and secured financing?
4. Operation	Who manages the money, members and equipment?
5. Future	How will the community remain healthy and develop over the coming years?

1.4 Planning and preparing: Finding initial funding for your energy community

Funding is often one of the first practical challenges an energy community faces. StartSun experience shows that **there is no single best funding model**. Most projects can combine several sources: members' own contributions, public grants, loans, crowdfunding or support from a municipality or another partner. The right mix depends on the size of the investment, who the members are, and how much financial risk the community is prepared to take.

"How do we put together the money needed for our first project?"



A useful rule is:

First calculate what you need → then calculate what you already have → finally look for funding to close the gap.

a) Start with a simple investment plan

Before approaching funders, estimate the full cost of the first project. This should include not only the solar panels, but also installation, design, permits, possible grid connection costs, storage, professional services and other start-up expenses.

The Estonian StartSun package recommends preparing an initial financial plan covering both the investment and expected running costs over the lifetime of the community.

At this point, ask:

- How much will the first project cost?
- How much can members contribute themselves?
- Is a municipality or another partner willing to contribute?
- Are public grants available?
- How much money would still be missing?
- Can the community realistically repay a loan from future savings or revenues?

The amount still missing is your **funding gap**. You can then look for the most suitable way to fill it.

Main funding options

Funding source	How it works	Main advantage	Watch out for
Member contributions	Members invest their own money in the project	Builds local ownership and reduces dependence on outside funding	Members may have very different financial capacities
Shares / equity	Participants invest in return for an ownership share	No loan repayment is required	Ownership and control are shared
Grants and subsidies	Public programmes cover part of the investment	Reduces the amount the community must finance itself	Calls are competitive and may have conditions
Bank or green loan	The community borrows and repays over time	Allows investment without collecting the full amount upfront	Interest and repayment create financial risk
Crowdfunding	Many people contribute relatively small amounts	Raises money while building community participation	Requires a clear offer and good communication
Municipal or partner support	Municipality or another organisation provides money, assets or project support	Can make an early project possible and increase credibility	Depends on legal and budget rules
Leasing / instalments	Equipment is paid for gradually rather than upfront	Reduces the initial cash requirement	Total costs and ownership conditions must be checked

The StartSun Guidebook (2025) identifies equity financing, loans, crowd investment, grants and municipal support among the main financing approaches used for energy communities.

b) Member contributions: start with your own community

One of the most straightforward approaches is for the members to finance some or all of the investment themselves.

This may take the form of:

- a joining contribution;
- equal investments by each member;
- different investment amounts depending on the number of shares purchased;
- additional contributions for a particular project.

STARTSUN EXAMPLE

The Estonian StartSun package explicitly lists **financing the project with support from the members** as one of the basic options. In its example model, the first solar installation combines StartSun project funding with members' own contributions.

Member financing has an additional benefit: the people who will use and benefit from the project also become directly involved in it.

However, decide early how contributions relate to benefits. For example: *Does someone who invests twice as much receive twice the financial benefit? Or does every member have equal rights?*

These rules should be transparent and agreed before collecting money.

c) Grants and public support: useful for getting started

Grants are particularly attractive because most of the money normally does not have to be repaid. The StartSun Guidebook provides examples from existing cases, where grants have often been a preferred way to finance pilot and demonstration energy-community projects.

Possible sources mentioned across the StartSun materials include:

- EU programmes;
- national renewable-energy or climate programmes;
- regional or local development programmes;
- rural-development programmes such as LEADER;
- municipal support.

STARTSUN EXAMPLE

The Latvian Start-Up Package, for example, recommends checking possible state support programmes and EU funds and programmes alongside member co-financing and bank loans. The Estonian start-up package similarly identifies funding programmes such as LEADER as one possible route.

A previous Latvian energy-community demonstration in Mārupe shows how powerful this can be: **85% of the investment came from an EU project and 15% from national financing**.



Do not build your whole business model around a grant

A grant can make the first investment possible, but the community still needs to know:

- who will pay maintenance;
- who will pay insurance and administration;
- how future equipment replacement will be financed;
- whether the project can continue after grant support ends.

Think of a grant as a **launching mechanism**, not automatically as a long-term business model.

d) Loans: invest now and repay over time

If the project is financially viable but the community does not have enough capital upfront, a bank loan may cover part of the funding gap.

With debt financing, the community keeps ownership of the project but must repay the borrowed money, usually with interest. The StartSun Supporting Guidelines therefore stress that loans create additional financial risk: repayments must be made even if the project performs less well than expected.

Some financial institutions also offer green loans, intended specifically for environmentally beneficial investments. These may offer more favourable terms than conventional financing. Check with your local banks.

Before taking a loan, calculate whether expected savings and revenues comfortably cover:

loan repayment + interest + normal operating costs

Do not base repayment on the most optimistic assumptions about electricity prices or solar production.

e) Equity or shares: raise capital by sharing ownership

Instead of borrowing money, an energy community can raise capital by allowing people or organisations to invest in ownership shares. The advantage is simple: the invested capital does not need to be repaid like a loan.

It can also help attract committed local investors who bring knowledge, contacts or other resources. The disadvantage is that ownership and potentially some financial benefits are shared with investors.

This approach fits particularly naturally with energy cooperatives and other models based on **collective investment**. The StartSun Guidebook (2025) notes that shares and other forms of collective investment have already proved successful in energy community projects.

f) Crowdfunding: use funding to build the community

Crowdfunding allows many people to contribute relatively small amounts towards one project.

For an energy community, crowdfunding can do two things at the same time:

raise money + involve local people

The supporting StartSun materials therefore identify crowdfunding as particularly relevant for community energy. Contributions can take several forms:

» people lend money to the project;
» people buy shares;
» people contribute, in exchange for another benefit;
» people simply support the project without expecting a financial return.

Crowdfunding can be organised through an online platform, although the StartSun experiences suggest that energy communities may deliberately focus on local residents, SMEs and municipalities rather than seeking investors worldwide.

A crowdfunding campaign works best once the project is concrete enough to explain:

"We need €40,000 to install solar panels on this building. The community already has €20,000 and we are inviting local people to finance the remaining €20,000."

That is much easier for potential supporters to understand than simply asking them to "support renewable energy".

g) Municipalities and other partners can contribute more than cash

Funding support does not always mean transferring money directly.

A municipality or another partner could potentially contribute:

- a roof or land;
- staff time;
- technical expertise;
- preparation of feasibility studies;
- procurement support;
- access to premises;
- direct investment.

The StartSun Guidebook (2025) includes municipal support among the financing options for energy-community development. This can substantially reduce the amount of cash the new community needs to raise.

h) Leasing or paying in instalments

Another possibility is to avoid paying the entire equipment cost at once.

The Estonian Start-Up Package includes paying for equipment in instalments among possible financing approaches. The Supporting Guidelines also identify leasing as an option for keeping capital available for other investments.

This can reduce the initial funding requirement, but compare:

- total payments over the contract period;
- interest and fees;
- who owns the equipment;
- who carries maintenance responsibilities.

Examples and practical solutions for funding



You do not necessarily have to choose only one option. A first energy-community investment could, for example, be financed as follows:

30% member contributions + 40% grant + 30% bank loan

Another project might use:

municipal roof + crowdfunding + members' investments

Or:

grant for the first installation + member contributions now + bank financing for later expansion

This combined approach is consistent with the StartSun pilots. For example, the Estonian model combines **project funding and member contributions**, while bank financing is considered for later projects.

Combining funding sources is often the practical solution

Before accepting funding, ask: *Who provides the money? What do they receive in return? Who owns the equipment? Does the money need to be repaid? How much will it cost over time?*

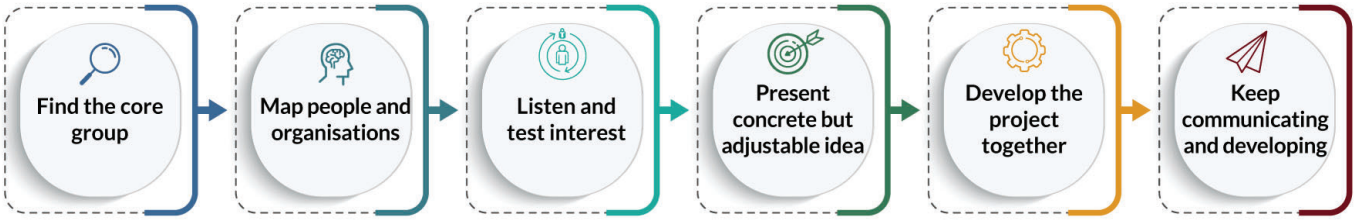
STARTSUN EXAMPLE

StartSun lesson: funding follows a credible project

Finding funding becomes easier once you can clearly explain **what will be built, how much it costs, who will use the energy, how the community will benefit and how the project will operate financially**. The StartSun experiences place preparation of the financial plan and identification of possible funding sources already in the preparation stage of the energy community, that will be updated in later stages.

1.5 What are potential engagement approaches to take?

Engaging current and future members of your community should be treated as an ongoing process rather than a one-off information campaign. The StartSun experiences proved that successful energy communities combine a small, committed core group, broader stakeholder involvement, targeted communication, opportunities for discussion, and continuous feedback.



Following table provides an overview of engagement approaches and why it benefits the energy community in different stages.

Engagement approach	How to use it in practice	Why it is useful
1. Start with a core group	Bring together a small group of motivated people who are willing to lead the process, organise meetings and move the idea forward. Later, gradually widen participation.	The Obinitsa and Kääpa pilots in Estonia used this approach: a core group acted as initiators and coordinators before engagement was expanded to the wider community. It gave the project clear leadership while still allowing new people to join later.

2. Map potential members and stakeholders	Ask: *Who could be interested? Who will be affected? Who has useful knowledge, resources or influence?* Consider residents, businesses, municipalities, associations, public institutions, grid actors and other interested organisations.	Not everyone involved in planning needs to become a formal member. Supporting stakeholders can still contribute knowledge, legitimacy, networks or practical help.
3. Involve the municipality early	Invite municipal representatives to discussions even when the municipality will not necessarily become a member.	The Estonian experience showed that early municipal involvement can strengthen credibility, provide practical support and communication channels, and make later procedures, like permitting, easier because the municipality already understands the project.
4. Use existing local networks	Work through local associations, neighbourhood groups, cooperatives, congregations, business networks and existing community events.	Existing organisations already have relationships and communication channels that can help spread information and identify interested participants.
5. Use personal communication in small communities	Talk directly with potential members, especially where the number of participants is small or people already know each other.	The Estonian guide suggests that personal communication can be the simplest and most appropriate approach for small or clearly defined groups.
6. Conduct surveys or questionnaires	Ask residents or organisations about their interest, needs, concerns, investment capacity and expectations. Give enough background information for respondents to understand the idea of the energy community.	Surveys can help estimate how many people may participate and what problems the energy community should address before more intensive engagement begins.
7. Organise kick-off meetings and public discussions	Introduce the idea, explain possible benefits, answer questions and identify people who want to become more actively involved.	Latvian materials recommend kick-off meetings, discussions and regular meetings as practical ways of identifying and engaging potential members. They also suggest using surveys, local media and social media alongside meetings. Same approach was used in Estonia.
8. Meet people where they already are	At the beginning, go to community events, workplaces, neighbourhood meeting places or other places familiar to the target group rather than expecting people to come to a formal project meeting.	The StartSun Supporting Guidelines recommend meeting initial stakeholder groups on their own territory – for example at community marketplaces, local gatherings or business events.
9. Use several communication channels	Depending on the audience, combine existing networks, social media, newsletters, websites, face-to-face meetings and local media.	The Swedish case first identified which channels are available and tested several approaches, particularly when the potential membership is broad and you want to engage different actors.

10. Tailor the message to different groups	Explain those benefits that matter most to each target group. For example, emphasise costs and expected returns for financially motivated participants, and environmental impacts for people mainly concerned about climate or sustainability.	StartSun experience showed that different people have different motivations and therefore communication should be targeted rather than identical for everyone.
11. Give people something concrete to discuss	Before intensive recruitment, prepare at least a simple project concept: possible location, rough technical solution, preliminary costs or benefits, or a visual scheme.	The Estonian experience warns that completely abstract ideas can generate uncertainty. Some concrete information makes it easier to answer questions and build confidence in the plan.
12. But do not present a finished project	Present an initial scenario or proposal and invite people to influence it rather than asking them merely to approve a completed plan. This enables people to become more invested and more committed.	The Supporting Guidelines describe further how starting with completely finished project idea can actually reduce engagement. Early meetings should first explore problems, resources and possible ideas together.
13. Create space for questions, concerns and disagreement	Actively ask what participants are worried about and include negative feedback in stakeholder mapping.	The Supporting Guidelines explicitly advise not avoiding negative opinions. Resistance can reveal livelihood concerns, environmental concerns, communication barriers or differences in understanding that need to be addressed from the beginning.
14. Hold regular working meetings	Once an interested group forms, meet repeatedly to develop the idea, review calculations, prepare management rules and documents, distribute tasks and make decisions.	In Obinitsa, regular working-group meetings were used throughout preparation. The Swedish experience also recommends frequent meetings to maintain involvement and distribute responsibilities.
15. Share responsibilities	Give participants real tasks—for example communications, financing, legal questions, technical assessment or member recruitment.	Shared responsibilities build ownership and reduce dependence on one person. The Swedish pilot material emphasises both the need for a driving actor and meaningful participation by others.
16. Build knowledge together	Use workshops, information sessions and educational activities to improve understanding of energy communities, technologies, finance and energy use.	StartSun's sustainability guidelines provide more info on mapping information channels, holding workshops with community representatives and developing educational activities based on identified needs.
17. Keep financial information transparent	Clearly explain investment needs, expected benefits, costs, risks and funding possibilities. Both in planning and implementation phase.	The Obinitsa experience indicates that a transparent and workable financial model strengthens trust and willingness to participate.
18. Keep membership and future participation open where possible	Allow interested people to join later and communicate opportunities for future expansion.	The Obinitsa case study considers continued openness important because new members can bring investment capacity, ideas and wider regional impact.

19. Collect feedback continuously	Ask members and interested people whether their needs, expectations or concerns are changing and adjust the project accordingly.	Feedback is an important engagement tool because being able to express an opinion increases participation and interest and may also highlight overlooked challenges or possibilities.
20. Continue engagement after establishment	Keep members informed, organise meetings, educational activities and recruitment campaigns, and periodically assess participation and satisfaction.	StartSun's sustainability guidelines provide more information on why and how to monitor participation, satisfaction and communication. The Latvian Start-Up package proposes seminars, meetings, information campaigns and consultations to attract new members over time.

STARTSUN EXAMPLE

A particularly important lesson from the StartSun materials is to avoid both extremes. **Do not approach the wider community so early that you cannot explain the purpose, basic costs or possible benefits; but do not wait until every decision has already been made either.** Sharing an undeveloped idea can undermine confidence, while engaging people only after the project is finished can undermine trust and make recruitment difficult.

The Swedish pilot adds another important lesson: **local engagement can be just as important as good technical conditions.** Where local interest was weak, progress was difficult despite promising technical possibilities. The materials therefore recommend broad stakeholder mapping, a core group with a range of competencies, and gradually widening participation as the project becomes more concrete.



In short: Start with a few committed people, listen to the wider community, give people something concrete to discuss, and keep them involved as the idea becomes a real project.

2. Establishing an energy community. First steps.

Once the idea has been tested and the main participants are on board, the next step is to turn the plan into a functioning organisation and energy project. This chapter covers the practical steps of establishment, including legal form, required documents, permits, agreements and the physical development of the solar installation.

2.1 Recap of practical aspects of establishing an energy community

As described in more detail in chapter 1, the practical establishment of an energy community can be organised around a few key tasks:

» **Define the purpose and members.** Agree why the community is being created, who should benefit, and who can participate. A small core group should take responsibility for moving the process forward.

» **Check the technical solution.** Assess available roofs or land, electricity consumption, grid capacity, possible solar PV size, storage needs, metering and electricity-sharing options.

» **Prepare a financial plan.** Estimate investment and operating costs, expected savings or income, and decide how the project will be financed through member contributions, grants, loans or other sources.

» **Choose the legal and organisational form.** Decide how the community will be governed, how decisions will be made, who owns the equipment, and what rights and responsibilities members have. The exact legal form depends on national legislation.

» **Obtain permits and agreements.** This may include grid-connection approval, building permits, land or roof-use agreements, electricity sales or sharing contracts, and registration of the energy community.

» **Procure and install the equipment.** Compare offers, select suppliers, install the system and complete the required inspections and commissioning. StartSun materials repeatedly recommend checking permits and grid conditions before ordering equipment.

» **Set up everyday management.** Before operation starts, agree who will handle accounting, member communication, payments, technical monitoring and maintenance.



A useful rule for potential energy communities is: **first agree who and why, then check whether the idea is technically, financially and legally feasible, and only after that move to investment and installation.**

2.2 Legal form of your energy community: Main requirements and establishing principles arising from the national law.

Although the legal frameworks differ, the StartSun experience shows several common principles: participation should be open and voluntary, the community should provide environmental, economic or social benefits rather than focus mainly on profit, and members should retain their normal rights as

energy consumers. The biggest differences are in how formally energy communities are recognised and registered.

Country	Main legal requirements and principles
Estonia	Energy communities must be established as a legal person. Estonian law recognises both Renewable Energy Communities (REC) and Citizen Energy Communities (CEC). Participation is voluntary and the main aim should be community benefits rather than monetary profit. For RECs, members are mainly individuals, SMEs and municipalities located near the renewable-energy project; participation must not be the primary commercial activity of participating companies. **Energy communities (*energiaühistu*) may produce, consume, store, sell and share energy. In StartSun practice, a commercial association/cooperative is commonly used because it supports democratic decision-making.**
Latvia	**An energy community must be a recognised legal entity, such as an association, foundation, cooperative, partnership or company, and must be registered.** Members may include individuals, SMEs, municipalities and, for electricity energy communities, other public entities. Participation must be open, voluntary and independent. The legal process generally includes establishing the legal entity, installing and connecting the generation equipment, and then registering the energy community in the national Energy Community Register. **Electricity sharing requires agreements between members, a sharing contract with an electricity trader and connection through the same distribution system operator.**
Finland	The most developed practical model is the local energy community within one property or group of properties. Members' electricity-use points and production must normally be behind the same grid connection for credit-calculation based sharing. **The community informs the distribution network operator about participating consumption points, allocation shares and the method of distributing surplus electricity; the network operator registers the information in Datahub**. A housing company acts as the legal entity, while a group of active customers may operate through contractual agreements without creating a separate legal person. Grid-connection approval and an agreement for surplus electricity are also needed.
Sweden	Sweden currently has no specific national legal definition or registration system for energy communities comparable to Estonia or Latvia. **Energy communities can nevertheless be established using existing organisational forms and general legislation. StartSun materials therefore emphasise choosing an appropriate legal form, preparing statutes and agreements, obtaining necessary permits and grid agreements, and ensuring that participation remains open and democratic.** EU principles for REC and CEC are used as the main reference: voluntary participation, community benefit, member control and protection of consumer rights.

What does this mean in practice?

Before formally establishing an energy community, check four things in your country:

Who can become a member? → What legal form is required? → How can electricity legally be shared? → What registrations, permits and contracts are required?

You can find more guidance in the StartSun national start-up packages.

The most important difference is that Estonia and Latvia have explicit national energy-community provisions, Finland currently relies strongly on the local/property-based energy-community model and Datahub arrangements, while Sweden mainly uses existing association, company, energy and permitting legislation without a separate national energy-community status.

2.3 Relevant documentation for establishing EC in four countries.

Mandatory documents for the establishment of an energy community may differ between countries. Check the StartSun tailored country start-up packages for details and templates. Following section gives a general overview what to consider and use.

Mandatory documents: what should an energy community prepare?

The StartSun materials show that there is **no single document list that applies to every energy community**. The required documents depend on the country, legal form, technical solution and whether the community is installing and sharing electricity. Still, most projects need documents in four groups: **founding documents, registration documents, energy-market agreements, and technical permits**.

Document group	Typical documents	Why is it needed
1. Founding and governance	Founding decision, minutes of the founding meeting, statutes/articles of association, board-member consents	To formally create the organisation and define its rules
2. Registration	Application to the relevant business/association register and, where required, energy-community register	To obtain legal status and official recognition
3. Electricity and grid agreements	Grid-connection application/permit, agreement with the distribution network operator, electricity purchase or sharing contract	To connect generation, sell surplus electricity and/or share electricity
4. Technical permits and approvals	Building permit/notification, technical design, structural assessment, commissioning inspection	To ensure that the installation is legal and safe

2.3.1 Founding documents

Where a separate legal entity is required, StartSun pilot experiences identified the following:

- founding decision or memorandum of association;
- minutes of the founding meeting;
- articles of association/statutes;
- appointment and, where required, consent of board members;
- application for registration.

The statutes are especially important because they normally define the purpose of the community, membership rules, decision-making, member contributions, governance and distribution of benefits.

STARTSUN EXAMPLE

In Estonia, for example, the memorandum and articles of association are listed as core documents for registration of an energy cooperative.

2.3.2 Documents for official registration of the legal body

Registration requirements differ considerably:

In **Estonia**, an application to the Commercial Register together with the memorandum and articles of association must be submitted.

In **Latvia**, establishment first requires registration of the chosen legal form. Registration as an energy community then requires an application, a decision by the members to establish and register the energy community, and a copy of its articles of association.

In **Sweden**, where there is currently no separate energy-community registration regime, the documents depend on the organisational form. For an economic association, the StartSun package identifies the invitation to the establishment meeting, minutes, registration application and beneficial-owner notification.

In **Finland**, a typical housing-company energy community is established through a decision of the housing company's general meeting and information is then submitted through the distribution network operator for registration in Fingrid's Datahub.

2.3.3 Agreements with the grid operator and electricity supplier

These are among the most important practical documents.

- Depending on the model, you may need:
- grid-connection application and approval;
- agreement with the distribution system operator;
- electricity purchase agreement for surplus electricity;
- electricity-sharing agreement, where applicable;
- information about participating consumption points and how produced electricity will be allocated between members.

For example, **Finland** requires notification of the production connection, an agreement with the distribution network operator and an electricity purchase agreement before production is connected to the grid.

Latvia additionally requires a mutual agreement between energy-community members and an electricity-sharing contract with an electricity trader for electricity sharing.

2.3.4 Technical and installation documents

If the energy community installs solar PV or other generation equipment, additional documents may be required, such as:

- building permit or building notification;
- structural assessment of the roof;
- technical design and grid requirements;
- environmental or land-use approvals, where relevant;
- electrical commissioning inspection;
- connection permit from the distribution network operator.

Finland for instance, highlights the grid-connection notification and permission, possible building-control approval and a written commissioning inspection protocol. **Sweden** similarly requires building permits, grid notification and other environmental or land-related approvals where applicable.

2.3.5 Useful documents that may not always be legally mandatory

StartSun pilots' experiences showed that several documents are useful for EC management, even when they were not strictly required by law:

- cooperation agreement between future members;
- summaries and attendance lists from preparatory meetings;
- member agreement defining responsibilities and benefits;
- financial plan;
- procurement documents;
- maintenance agreement;
- land or roof-use agreement.

STARTSUN EXAMPLE

For example, the Estonian StartSun package recommends keeping preparatory meeting records and having a cooperation agreement to confirm common goals and willingness to cooperate.

HELPFUL TIPS

Practical tip: Do not start by collecting every possible document. First decide **your legal form, members, technical solution and electricity-sharing model**. These choices determine which documents you actually need.

2.4 Physical establishment of a solar park for the energy community.

First steps from a solar park plan to a functioning installation

Once the energy community has selected the physical location and confirmed that the project is financially feasible, the next stage is to turn the concept into a technical project that can actually be built, connected and operated.

At this point, the main questions are no longer *"Can we afford it?"* or *"Where should it be built?"* Instead, the community needs to decide:

- how large the solar park should be,
- how it will connect to the electricity grid,
- how the electricity will be used and shared,
- whether battery storage should be included,
- what permits and agreements are needed,
- what exactly should be procured,
- and how the plant will be commissioned, monitored and maintained.

A useful rule is to **resolve grid connection, energy-sharing arrangements and permits before ordering equipment**. These decisions can directly affect the size, design and cost of the solar park. StartSun materials from Finland and Latvia explicitly recommend contacting the distribution system operator before purchasing the system, because grid capacity or connection conditions may limit the size of the plant or require additional works.

2.4.1 Confirm what the solar park needs to achieve

The financial analysis may already indicate an appropriate investment size, but the community should translate this into clear technical requirements.

Before detailed design starts, agree on the intended role of the installation:

- Is the priority to maximise electricity used directly by members?
- Is surplus electricity expected to be sold to the grid?
- Will electricity be shared between several buildings or members?
- Is the installation expected to grow later?
- Should battery storage be included now or should the system simply be prepared for adding batteries later?

The size and design of the system should reflect actual consumption needs, available connection capacity and the intended sharing model. The Swedish StartSun material highlights the need to examine both the size of the installation and how electricity will be distributed among members before the final system is designed.

Do not optimise only for the largest possible number of panels. A technically sustainable system should also match consumption patterns, grid limits and future development needs. The Supporting Guidelines emphasise that generation, consumption, storage, grid interaction and monitoring should be considered as one energy system rather than as separate pieces of equipment.

2.4.2 Make grid connection the first technical priority

One of the most important early tasks is to contact the **distribution system operator (DSO)** responsible for the site.

Do this before finalising the solar park specification and before procurement.

The community needs to establish:

- whether the local grid has enough capacity for the planned solar installation;
- how much generation capacity can be connected;
- whether electricity can be exported to the grid;
- where the connection point will be;
- whether existing cables, switchgear or other infrastructure must be upgraded;
- what technical requirements the DSO imposes;
- what meters or measurement arrangements will be required;
- and how long approval and connection are expected to take.

STARTSUN EXAMPLE

Grid capacity can significantly change the project. The **Latvian** StartSun pilot gives an example where the DSO may approve a lower export capacity or even specify **0 kW export**, meaning that generated electricity has to be consumed locally rather than exported.

The **Finnish** case study makes the same practical point: production cannot simply be connected to the grid without the network operator's permission, and dialogue with the DSO should therefore start well before equipment is purchased.

If the grid cannot accept the originally planned capacity, the community may need to:

- reduce the size of the solar park;
- increase local self-consumption;
- develop a local micro-grid and not connect to the main grid;
- add storage or other flexibility;
- accept limited export;
- upgrade the connection;
- or plan development in phases.



Important: Do not finalise the plant size before you know what the grid connection allows.

2.4.3 Decide how the electricity will reach the members

The community should decide the **energy-sharing model before detailed design**, because this affects metering, grid arrangements, contracts and sometimes the physical installation itself.

The main practical question is: **What happens to every unit of electricity generated by the solar park?**

For example:

Solar production → direct consumption by one or more members → electricity shared with other members → surplus exported to the grid.

The Swedish experience highlights several issues that need to be clarified: whether existing public networks can be used, whether a separate internal grid is needed, how electricity will be shared between members, and how production and consumption will be measured.

The community therefore needs to agree on:

- which members or consumption points receive the generated electricity;
- how electricity is divided between them;
- whether sharing takes place physically through a private/internal network or virtually through the public grid;
- what happens when production is lower than members' demand;
- what happens when production exceeds demand;
- who buys any surplus;
- how each member's share is measured;
- and how benefits and costs are allocated fairly.



National arrangements differ. For example, the **Finnish** StartSun start-up package describes a model where the community provides the DSO with information about participating consumption points, distribution shares and the treatment of surplus electricity.

In **Latvia**, the StartSun materials describe electricity sharing through the distribution grid and require relevant agreements with members and an electricity trader.

HELPFUL TIPS

The important principle is:

Design the solar park together with the sharing model. Do not treat electricity sharing as an administrative question to solve after construction.

2.4.4 Decide whether battery storage adds value

Battery storage is not automatically necessary for every solar energy community.

The decision should be based on what problem the battery would solve.

A battery may be useful where the community wants to:

- increase the amount of solar electricity consumed by its members;
- store midday surplus for use later in the day;
- reduce electricity exported to the grid;
- respond to grid capacity restrictions;
- shift consumption between different times;
- or prepare the system for more advanced flexibility services later.

The StartSun Supporting Guidelines recommend considering storage together with other flexibility options rather than assuming that batteries are always the preferred solution. Alternatives may include shifting loads, smart electric-vehicle charging or other forms of flexible consumption.

Ask:

When does the community produce electricity, and when does it consume it?

If solar generation and consumption already match well, battery storage may provide less additional value. If large volumes are regularly exported at one time and electricity is imported again a few hours later, storage may be more useful.

Also consider whether the battery should be:

- included in the first installation;
- installed later;
- or simply allowed for in the system design from the beginning.

Even where storage is postponed, it is useful to check whether the planned inverters, cabling, control systems and physical layout will make future integration possible. The Supporting Guidelines specifically recommend considering compatibility with future batteries and energy-management systems.

2.4.5 Develop the technical specification

Once grid conditions and the energy-sharing approach are understood, the community can prepare the technical specification for the solar park.

This should normally define at least:

- total planned generation capacity;

- panel type and approximate number;
- panel layout and orientation;
- mounting structures;
- inverters;
- cabling and electrical equipment;
- grid connection arrangements;
- meters and monitoring equipment;
- battery system, if included;
- access and safety requirements;
- fire-safety requirements;
- expected monitoring and data access;
- commissioning requirements;
- warranties;
- and maintenance requirements.

For an energy community, the specification should also make clear **who needs access to production and consumption data**. Monitoring is important not only for maintenance but also for transparent allocation of energy and benefits between members.

STARTSUN EXAMPLE

The Swedish case study demonstrated that system design should consider not only panel type and installation size but also surrounding infrastructure, access routes and safety.

2.4.6 Check all permits before procurement

The required permits depend strongly on the country, municipality, size and type of installation.

Possible requirements identified in the StartSun materials include:

- building permits;
- construction notifications;
- municipal approvals;
- grid-connection permission;
- environmental or land-use permissions;
- approval from other relevant authorities;
- electrical installation and commissioning documentation.

The Swedish materials note that restrictions can arise from planning rules, protected nature or cultural areas, agricultural land, defence interests and other public interests.

The Finnish material gives a particularly important practical warning: **do not order panels before checking that the planned installation and installation method are acceptable to the relevant authority.** A permit authority may require changes to placement or design, and equipment already purchased may then no longer fit the approved solution.

This leads to a useful order:

Initial technical concept → grid requirements → permits and approvals → final specification → procurement.

2.4.7 Prepare procurement carefully

The procurement should be based on the agreed technical solution, not simply on a request for “a solar park of X kW”. A good procurement package should allow suppliers to understand the full system the community expects them to deliver.

Depending on the project, the procurement may cover:

- technical design;
- solar panels;
- mounting system;
- inverters;
- battery storage;
- electrical works;
- connection equipment;
- metering and monitoring;
- civil or site works;
- installation;
- testing;
- commissioning;
- documentation;
- warranties;
- staff or operator training;
- and ongoing maintenance.

The Latvian StartSun package describes a sequence that is relevant for municipal-led communities that includes developing technical requirements, preparing procurement documentation, undertaking the procurement, concluding the contract, installing and commissioning the plant, receiving grid connection permission and arranging maintenance.

For municipalities and other public bodies, procurement rules and formal decision-making procedures also need to be followed. The Swedish materials specifically note that public actors need to coordinate energy infrastructure investments with public procurement and their own budgeting and decision-making procedures.

When comparing offers, do not look only at purchase price. Compare also:

- expected energy production;
- equipment warranties;
- inverter and battery guarantees;
- monitoring arrangements;
- technical compatibility;
- installation timetable;
- maintenance obligations;
- responsibility for grid-connection procedures;
- and what documentation the contractor will deliver.

2.4.8 Clarify responsibilities before construction starts

Before signing the installation contract, establish who is responsible for each major task.

For example:

Task	Responsibility should be clear
Detailed technical design	Community / designer / supplier
Grid application and communication	Named community representative or supplier
Permit applications	Community / property owner / contractor
Procurement management	Community
Site preparation	Community / contractor
Installation	Qualified installer
Grid connection	DSO + installer
Commissioning	Installer / authorised professional
Metering and monitoring setup	Installer / DSO
Electricity-sharing contracts	Energy community
Surplus electricity sales agreement	Energy community
Maintenance	Community / service provider
Performance monitoring	Named responsible person

This avoids an otherwise common problem: where everyone assumes another party is taking care of the grid application, meter configuration or permit.

2.4.9 Build, inspect and commission the solar park

Construction should only begin once required approvals are in place.

During installation, the community should ensure that the system being built corresponds to:

- the approved design;
- the procurement contract;
- grid requirements;
- safety requirements;
- and any conditions imposed by authorities.

Commissioning is more than switching on the solar panels. Before accepting the plant, the community should make sure that:

- electrical installation has been inspected;
- required commissioning documents have been provided;
- the DSO has approved connection and operation;
- meters and monitoring work correctly;
- battery control works correctly, if storage is included;
- generation data can be accessed;
- electricity-sharing arrangements work as intended;
- warranties and equipment documentation are handed over;
- and responsibility for maintenance is clear.

STARTSUN EXAMPLE

The Finnish StartSun experience stresses the importance of a **written commissioning inspection protocol**, while the Latvian material similarly places commissioning and final grid-connection permission before the installation becomes fully operational.

2.4.10. Test whether the park works for the community, not only technically

A functioning solar park is not simply one that produces electricity.

After commissioning, check whether it performs according to the purpose agreed by the energy community:

- Is production close to expectations?
- How much electricity is consumed by members?
- How much is exported?
- Is electricity being allocated correctly between members?
- Does battery operation improve self-consumption, if installed?
- Are members able to see or understand relevant production information?
- Are there periods of recurring surplus or shortage?
- Are grid limitations affecting operation?
- Are responsibilities for faults and maintenance working in practice?

StartSun's Supporting Guidelines further recommend using production, consumption and monitoring data to identify whether the main issue is insufficient generation, poor self-consumption, grid constraints or another technical limitation.

STARTSUN EXAMPLE

This first operational period can also inform later expansion. The Swedish pilot experience suggests that phased development can be useful: start with the first installation, allow the community to stabilise and collect real data, and then use that experience for later expansion and recruitment.

HELPFUL TIPS

Key message: *Do not start by buying panels. Start by making sure the planned solar park can connect to the grid, can deliver electricity to the intended members, and can legally be built. Then procure the technical solution that fits those conditions.*

Practical checklist before procurement

Before placing the order, the energy community should be able to answer **yes** to these questions:

□ We know how much generation capacity the grid operator will allow.

□ We know whether and how much electricity can be exported.

□ We know which members will consume the electricity.

□ We have agreed how electricity will be shared and measured.

□ We know what happens to surplus electricity.

□ We have decided whether battery storage is needed now, later or not at all.

□ We have checked the required permits and notifications.

□ The main permits required before construction have been secured or their requirements are known.

□ We have a clear technical specification.

□ Procurement covers installation, commissioning and necessary documentation, not only the panels.

□ Responsibility for communication with the DSO is assigned.

□ Maintenance and monitoring responsibilities have been considered.

□ The design allows for expected future development of the community where relevant.

3. Managing and developing an energy community

Once the energy community is established, the focus shifts to keeping it well managed, transparent and sustainable over time. This chapter covers governance, decision-making, ownership, business models, accounting, technical maintenance, community engagement and long-term development.

3.1 Management of the energy community

The StartSun experiences show that the management structure should follow the energy community model. A small apartment-building community can often use an existing housing-company structure, while a rural cooperative or a community solar park may need its own board, administrator and external service providers. In all cases, roles, decision-making and responsibilities should be clear from the beginning.

Energy community model	Suitable management approach	Who typically manages it?	Main management tasks
Remote prosumers / community solar park	Utility-led or professional management	Municipal energy company, energy cooperative or another professional operator	Operating the solar park, customer contracts, metering and accounting, billing, maintenance
Solar electricity for public buildings	Municipality-led or partnership management	Municipality, municipal company or joint organisation with other partners	Public decision-making, procurement, contracts, energy management, financial reporting and maintenance
Collective self-consumption in multi-apartment buildings	Housing association/ company management	Existing housing association board, property manager or housing company	Member decisions, allocation of solar electricity, payments, communication with grid operator, maintenance
Renewable energy for remote communities	Community/ cooperative management	Energy cooperative or economic association governed by members	Democratic decision-making, membership, finances, technical assets, contracts, community engagement and future development

A. Utility-led management

This approach fits particularly well with the remote prosumer model. In the StartSun examples of Solpunkten in Sweden and Nurmijärvi in Finland[5], the solar parks are managed by municipal energy companies. The professional utility handles much of the technical and administrative work, while participants receive the benefit through contracts and their electricity bills.

This model reduces the management burden on individual participants. It is therefore suitable where the goal is to make participation simple for households or businesses.

Think of it as: *"The professional operator manages the system; members participate and receive the benefits."*

5 Published in StartSun Guidebook (2025)

B. Municipality-led or partnership management

For solar electricity on public buildings, management can be integrated into the municipality or municipal company. Public bodies already often have staff, procurement procedures and energy-management systems that can support operation of the project. The StartSun Guidebook also notes that municipalities can provide buildings, roofs or land and cooperate with other actors through contracts such as leases or power purchase agreements.

A partnership model can also be used where the municipality participates together with citizens, SMEs or another organisation.

Because public bodies are involved, management must normally fit existing municipal requirements for:

- budgeting and financial control;
- procurement;
- decision-making;
- transparency;
- management of municipal assets.

Think of it as: *"The municipality provides the organisational backbone, while partners share clearly defined roles."*

C. Housing association or housing-company management

For collective self-consumption in an apartment building, there is often no need to create a completely new management organisation. The existing housing association or housing company can make decisions and manage the solar installation.

Typical responsibilities include:

- decisions by owners or shareholders;
- appointing a contact person;
- agreeing how solar electricity is allocated;
- communicating with the distribution network operator;
- handling contracts and payments;
- arranging maintenance.

This is particularly suitable where the energy community is limited to one building or property and the participants already share an established governance structure. The Finnish StartSun materials focus strongly on this type of arrangement.

Think of it as: *"Use the organisation you already have."*

D. Cooperative or member-led management

For rural, village or other locally owned energy communities, establishing a cooperative or economic association is a common solution. The StartSun Guidebook (2025) specifically identifies cooperatives and economic associations as suitable structures for remote communities, including the Austerland Energi example.

The community normally has:

Members / General meeting → Board → Daily management

Members make the most important strategic decisions, while the board is responsible for governance and oversight. Day-to-day tasks can then be handled by volunteers, paid staff or contracted professionals.

For example, the Estonian StartSun material highlights democratic governance and notes that in Obinitsa the commercial association gives each member one vote regardless of the size of their contribution This model provides strong local ownership but usually requires more active participation from members.

Think of it as: *"The members own it and collectively decide where it goes."*

Who actually does the daily work?

Whichever management model is selected, the StartSun materials identify a similar set of practical functions that need to be covered. They do **not necessarily require separate employees**; one person may perform several functions, or services can be outsourced.

Typical functions are:

Board or governing body – strategic decisions and oversight.

Daily manager/administrator – coordinates everyday activities and member issues.

Bookkeeper/accountant – manages payments, accounts and annual reporting.

Technical maintenance provider – monitors and maintains solar panels, batteries and other equipment.

Electricity trader/operator – where necessary, handles settlement between production and consumption.

Member/community coordinator – keeps members informed and engaged.

Auditor, where legally or organisationally required.

Small energy communities often begin with only a few people doing these tasks alongside their other work. As the community grows, management can become more professional. The Latvian StartSun material, for example, notes that energy communities often start as small organisations operated by one or several people and later may employ dedicated staff.



A simple principle for choosing your management model --> Ask who already has the capacity to manage the project.

If there is a **professional energy company**, utility-led management may be easiest. If the main participant is a **municipality**, use municipal structures. If all participants are in **one apartment building**, use the housing association. If the project is based on **local citizens or businesses investing together**, a cooperative or association is likely to fit best.

Whatever model is selected, StartSun materials emphasise one principle: **clearly define who decides, who manages, who pays, who maintains the equipment and who communicates with members and external partners.**

3.2 Operating an energy community.

As mentioned previously in current start-up package, main principles of operating the energy community should be planned already in the planning and establishing phase.

3.2.1 Main legal requirements when managing an energy community

The StartSun piloting experiences helped to identify how the day-to-day legal obligations depend strongly on the country and legal form of the energy community. However, several common principles appear across the four countries: governance must follow the organisation's statutes and national law, financial and accounting duties must be fulfilled, contracts with grid operators and electricity suppliers must remain valid, and changes in membership or energy-sharing arrangements must be properly recorded.

Estonia

For an Estonian energy community, the articles of association are the key management document. They should define how the community operates, who makes decisions and how members participate. The board must manage the organisation according to these rules and the legislation governing the chosen legal form.

For the commonly used commercial association:

- » each member normally has one vote, regardless of the size of their contribution;
- » ordinary general-meeting resolutions generally require more than half of participating votes;
- » amendments to the articles of association require a stronger majority;
- » member admission and exclusion must follow the association's rules and applicable law.

The community must also organise its accounting, ongoing administration and required technical services.

Latvia

Latvia has comparatively detailed operating rules for registered energy communities.

A key principle is that the community must remain autonomous and based on open and voluntary participation.

For electricity sharing:

- » participating sharing points must be connected to the same distribution system operator;
- » members must have agreements governing their relationships;
- » the community concludes an electricity-sharing contract with one electricity trader;
- » changes to this agreement must be communicated to the responsible authority.

The Latvian rules also pay particular attention to the community's financial purpose. The community may earn income and make a profit, but the activity must continue to serve the environmental, economic or social interests of members or the local area. Profit is subject to applicable taxation and commercial rules.

Finland

In Finland, the StartSun materials focus mainly on local energy communities in housing companies. Therefore, management is largely integrated into normal housing-company governance.

Decisions depend on the type of investment. For example:

- a normally sized solar plant intended mainly for the housing company's own use can generally be approved by a simple majority;
- a deliberately oversized installation intended to increase electricity sales may require a two-thirds qualified majority;
- where only some shareholders participate as active customers, costs and benefits are allocated to those participants according to the adopted arrangement.

A particularly important practical obligation is keeping information up to date in Datahub. The energy community does not normally update Datahub directly. Its contact person informs the distribution network operator or electricity seller, and those companies update the relevant data.

The community also needs valid agreements concerning grid connection, electricity sales and operation of the installation.

Sweden

The Swedish StartSun experience emphasises that there is currently (in September 2026) no separate comprehensive national legal regime for managing energy communities. Therefore, management depends primarily on the chosen legal form and on general Swedish legislation.

For an economic association, which is the most commonly discussed model, the statutes normally regulate:

- membership and conditions for joining and leaving;
- member investments;
- responsibilities and powers of the board;
- decision-making procedures;
- distribution of any surplus;
- dispute procedures.

The community must also comply with ordinary rules relating to accounting, taxation, electricity-market participation, consumer protection and applicable permits.

A practical rule for all four countries

For everyday management, the community should always keep four areas under control:

Governance – follow the statutes and decision-making rules.

Members – record changes and respect joining and leaving rights.

Money – keep accounts, pay taxes where required and decide transparently how benefits or surplus are used.

Energy operations – maintain valid grid, electricity sales and sharing agreements and keep required technical or Datahub information updated.

HELPFUL TIPS

Once established, your energy community must continue to operate both as an organisation and as an energy-market participant. Keep the organisation, contracts, accounts and member information up to date.

3.2.2 Decision-making models in different energy community types

StartSun experiences suggest that decision-making should follow the organisational form and the type of participants in the energy community. There is no single model that fits all communities. A housing-company energy community can use existing shareholder governance, while a citizen-led cooperative usually relies on democratic member voting. Municipal projects must also fit public-sector decision-making and budgeting processes.

StartSun EC type	Suitable decision-making model	Typical decisions
Remote prosumers / community solar park	**Cooperative member voting or operator-led model**	Membership, investment shares, tariffs/benefits, expansion
Solar electricity for public buildings	**Municipal or partnership decision-making**	Investment, procurement, use of public assets, contracts, expansion
Collective self-consumption in apartment buildings	**Housing association/company general meeting**	Installing PV, allocation of costs and benefits, joining the energy community
Renewable energy for remote/local communities	**Democratic cooperative model**	Membership, investments, use of surplus, new projects and community development

1. Democratic cooperative model

This is the clearest model for a citizen- or community-owned energy cooperative.

The basic principle is:

Members → General meeting → Board → Day-to-day management

The members make the most important decisions at the general meeting, while the board implements those decisions and manages the organisation between meetings.

Ordinary decisions are generally adopted by a majority, while important changes such as amendments to the statutes may require a larger majority.

In the Estonian StartSun start-up package, the commercial association is highlighted as particularly suitable because it allows members to participate on an equal basis: each member has one vote regardless of the size of their financial contribution.

A similar democratic principle is described in the Swedish examples: an economic association gives members equal rights regardless of how many shares they hold.

Suitable for: village and rural communities, citizen-led solar cooperatives and other locally owned ECs.

2. Share-based decision-making

Not every energy community must use the principle of one member–one vote.

The Estonian StartSun start-up package notes that where an energy community is established as a private limited company, voting rights can be linked to the number or size of shares owned by each participant.

For example: **20% ownership → approximately 20% of voting power**, depending on the statutes.

This model may suit an energy community where different participants invest significantly different amounts and want decision-making power to reflect their investment. It is important to note that at the time of publishing current guidelines (September 2026), the EU does not recognise it as a supported energy community type; they rather support organisations with one member-one vote voting systems. However, this is not an issue if there are no plans to apply for EU funding.

However, the governance structure still needs to respect the wider energy-community principles of autonomy and community benefit.

Suitable for: business-oriented or investment-based EC partnerships.

3. Housing association or housing-company decision-making

For **c**ollective self-consumption in apartment buildings, the easiest option is often to use the organisation and decision-making structure that already exists.

In Finland, decisions are generally made at the housing-company general meeting. The StartSun material distinguishes between different situations:

- a normally sized solar installation mainly serving the building's own consumption generally requires more than half of the votes;
- an intentionally oversized system designed to increase electricity sales requires a qualified majority of more than two-thirds;
- where only part of the shareholders form a community of active customers, establishment can generally be approved by a majority, while the costs are allocated only to the participating group.

The Estonian StartSun material similarly notes that an existing apartment association can serve as the organisational basis for collective energy production, without creating a separate cooperative.

Suitable for: apartment buildings and other jointly managed properties.

4. Municipal decision-making

For an energy community involving public buildings or a municipality, decisions cannot be made only by the energy-community members. They must also fit the municipality's formal governance system.

The Swedish and Latvian StartSun experience emphasises that decisions on energy-community investments may need to be coordinated with:

- municipal budgeting;
- political or administrative approval processes;
- management of municipal property;
- public procurement requirements.

Formal municipal decisions may be required both before and after the feasibility phase, depending on the project.

Once an energy community has been established as a separate organisation, it may have its own board and member decision-making system. This therefore creates a two-level structure:

Municipality makes decisions about its own participation

↓

Energy community makes collective decisions about the common project

Suitable for: solar PV on schools, cultural buildings, municipal facilities and municipality-led ECs.

5. Operator-led decision-making

Some of the StartSun Guidebook (2025) examples, especially remote prosumer/community solar park models, are managed largely by an energy company or other professional operator.

In this model, the operator normally makes technical and operational decisions about:

- maintenance;
- grid interaction;
- billing;
- operation of the solar park.

Participants mainly decide whether to join, how many shares or panels to purchase or rent, and whether to remain in the scheme.

This is therefore less participatory than a traditional cooperative model, but it makes participation easier for people who do not want to manage an energy organisation themselves. The StartSun Guidebook's remote-prosumer cases illustrate this utility-managed approach.

Suitable for: large community solar parks and schemes operated by municipal or commercial energy companies.

Which decisions should members make?

Regardless of the model, the StartSun experiences indicate that the most important strategic decisions should be clearly separated from everyday management.

Members/general meeting should normally decide on:

- objectives of the community;
- statutes and major rule changes;
- major investments;
- admission or exclusion of members;
- distribution or reinvestment of financial surplus;
- major expansion or new energy activities.

Board or management can usually decide on:

- routine administration;
- implementation of approved investments;

- contracts within agreed limits;
- maintenance;
- member communication;
- accounting and operational matters.

The precise division should be written into the statutes or other governance documents before the community starts operating.

The StartSun experience explicitly stresses that governance and operating principles should be agreed before legal registration.

A practical StartSun principle

For potential energy communities, the decision can be simplified to:

Are you using an existing organisation?

→ Use its existing decision-making system.

Are citizens or local businesses creating a new cooperative?

→ Use democratic member governance, preferably one member–one vote.

Is a municipality participating?

→ Combine municipal approval procedures with the EC's own governance.

Is a professional energy company operating the project?

→ Clearly separate decisions made by the operator from those retained by participants.

The key is not to make every decision collectively, but to agree clearly **who decides what, what majority is needed, and which decisions must always remain with the members**.

3.3.4 Ownership

There are many ways how the ownership in an energy community can be divided. The best option depends on who invests, who should control the project, and who should benefit from the energy produced. Following table gives a short overview of different ways and for which EC type they could be suitable for.

Ownership model	How ownership is divided	Suitable for
Member-owned cooperative	The energy assets are owned collectively by the cooperative. Members own shares or membership rights in the cooperative.	Citizen-led, village and rural energy communities

Equal member ownership	Members contribute similar amounts and ownership is broadly equal. Decision-making often follows one member – one vote.	Small local cooperatives
Share-based ownership	Ownership depends on how much each participant invests. A larger investment can mean a larger ownership share.	Investment-oriented ECs, companies and mixed partnerships
Municipality-owned	The municipality or municipal company owns all or most of the energy installation.	Energy communities based on public buildings
Mixed public-private ownership	Municipality, citizens, SMEs or other organisations jointly own the project.	Local partnerships and municipal ECs
Housing association ownership	The housing company or apartment association owns the solar installation on behalf of residents/ shareholders.	Multi-apartment building ECs
Utility/community shared ownership	An energy company owns part of the installation, and a community organisation owns the rest.	Large community solar parks
Separate project company / SPV	The EC creates a separate legal entity to own one specific solar park or other investment.	Larger or higher-risk projects
Third-party ownership / leasing	The EC uses the equipment, but another company retains ownership, at least during the contract period.	Communities wishing to avoid large upfront investment

Looking at these approaches more closely:

1. Cooperative ownership

This is one of the most typical community-energy models in the StartSun pilots. The cooperative itself owns the solar panels or other assets, while individuals or organisations become members of the co-operative.

Members may invest through joining fees, shares or additional contributions. In an Estonian commercial association, for example, governance normally follows one member – one vote, even if financial contributions differ.

Simple example:

20 residents establish a cooperative → the cooperative owns the solar park → all 20 residents are members and collectively control it.

2. Share-based ownership

Ownership can also reflect the amount invested. A participant investing 20% of the project capital could hold approximately 20% of the ownership, depending on the chosen legal form and statutes.

The StartSun Guidebook (2025) gives an example from Wermo in Estonia, where employees were expected to own about 20% of the energy community, while the remaining ownership stayed with the main owner. Employees could invest either upfront or through instalments.

This model can be useful where participants have very different investment capacities.

3. Municipality or public-sector ownership

A municipality can own the energy installation itself, particularly when panels are installed on schools, cultural buildings or other public facilities.

Ownership may be:

100% municipal, or

divided between the municipality and other actors.

The StartSun Latvian experience gives examples such as municipal energy cooperatives where public organisations own and use the installations collectively.

4. Mixed public-private ownership

A municipality, SMEs, residents and other organisations can also invest together.

For example, the StartSun Guidebook (2025) describes the Magliano Alpi case in Italy, where the municipality installed solar panels on the town hall while SMEs and households also contributed funding.

This can be particularly useful where the municipality provides an initial asset, such as a roof or land, while local actors provide part of the capital.

5. Housing association ownership

For apartment-building energy communities, the solar installation is often owned by the housing company or apartment association, rather than by individual residents.

Residents then benefit according to the housing company's rules and the electricity-sharing arrangement.

This is particularly practical because the organisation already exists and already owns or manages the building.

This model is the one piloted in FInland as part of the StartSun project.

6. Utility + community ownership

A professional energy company can own part of a solar park while citizens or companies own the rest through an association.

A clear StartSun example is Solpunkten in Sweden:

about two-thirds of the solar park is owned by municipal energy company C4 Energi;

about one-third is owned by the Solpunkten Economic Association;

individuals and companies can purchase shares in the association.

This model combines professional operation with community participation.

7. Separate project company

For larger projects, an energy community can create a separate legal entity for one specific investment.

The parent energy cooperative may:

own the SPV completely, or

share ownership with investors or partners.

The StartSun Supporting Guidelines note that this can help isolate financial risk: if one project fails, it does not necessarily threaten the other assets of the energy community.

Example:

Energy cooperative

↓ owns 60%

Solar Park Project Company

↑ investor owns 40%

8. Third-party ownership or leasing

The community does not always have to own the equipment.

Under an operating lease, for example, another company can own the solar panels while the energy community pays for their use. Under a capital lease, ownership may eventually pass to the community.

This can reduce the initial investment requirement, but the community has less control while another party owns the equipment.



A useful StartSun principle

Ownership should answer three separate questions:

- Who owns the organisation?

- Who owns the solar panels or other assets?

- Who owns or receives the financial benefits?

These do not always have to be the same parties.

For example, a municipality may own the roof, an energy cooperative may own the solar panels, and residents may own shares in the cooperative.

It is beneficial for communities to make a simple ownership map before establishment:

Land/roof owner → Energy asset owner → EC organisation owners/members → Beneficiaries

This helps to later **prevent misunderstandings about control, responsibility, maintenance and distribution of benefits**.

3.3 Business models and accounting approaches for different types of energy community

The suitable business models and accounting approaches depend both on the type of energy community as well as on the country you operate in. The StartSun experience highlights well the differences at two levels:

- Different energy community types create value in different ways. For example, through self-consumption, sale of electricity, member fees, dividends, or reinvestment.
- Country rules shape how those revenues and costs are measured, distributed, taxed and reported.

The accounting method itself is mostly determined by the **l**egal form and national accounting law, while the business model is determined more by who owns the system, who consumes the electricity and what the community wants to achieve.

3.3.1 Business models for energy communities

Following table gives an overview of the main business models by energy community type analysed in the StartSun project:

EC type	Main source of benefit/income	Typical business model	Accounting focus
Remote prosumers / community solar park	Sale or allocation of electricity linked to members' shares	Members buy/rent shares or panels; benefits are linked to production or investment share	Track member investments, electricity revenues, operator costs and benefits/dividends per share
Solar electricity for public buildings	Reduced electricity purchases; possible sale of surplus	Municipality/public body owns or participates in PV and uses electricity in its own buildings	Record investment, energy-cost savings, surplus sales, maintenance and public-sector costs
Collective self-consumption in apartment buildings	Savings on electricity bills	Solar generation is first used within the building and allocated among participating apartments	Allocation of investment costs and electricity benefits among shareholders; limited external sales
Local/rural cooperative EC	Electricity sales to members or local users, member fees, grid sales	Cooperative owns generation; revenues cover costs and may be reinvested or distributed	Full cooperative accounts: member capital, fees, electricity revenue, operating costs, reserves and possible dividends

1. Self-consumption model

This is the simplest economic model and is especially relevant for **a**partment buildings, public buildings and a local business using energy produced on its own site.

The key economic benefit is not necessarily cash income. It is the **saving from the electricity that members no longer need to buy from the market.**

The StartSun Latvia material emphasises that immediate self-consumption is generally the most cost-effective option: electricity consumed directly avoids buying the same electricity from a trader and may also avoid some system-related costs. Sharing electricity through the grid creates additional distribution and sharing charges.

The Estonian StartSun example similarly describes a 50 kW cooperative PV model where all electricity is initially consumed by a factory or cold-storage building.

Accounting implication: electricity savings should be treated as an important economic benefit even though they do not necessarily appear as separate sales revenue.

2. Member-share or investment model

In this model, members finance the installation by purchasing a share in the project or cooperative.

Benefits may then be linked to:

- the amount invested;
- a defined share of electricity production;
- a dividend;
- or a reduction in electricity costs.

The Swedish StartSun package describes a model where the number of shares can correspond to the amount of produced electricity used by the owners.

A practical Estonian example is Energiaühistu: members pay joining and annual fees, and in the Kärdla project investors can receive dividends from the profit generated by selling electricity to the building owner at an agreed price.

Accounting implication: the community must clearly distinguish between:

- member capital or share contributions;
- normal membership fees;
- electricity-sale revenues;
- operating costs;
- distributable surplus or profit.

3. Electricity-sales model

An energy community can sell:

- electricity directly to a local consumer;
- surplus electricity to an electricity trader;
- or, where national regulation allows, electricity shared among members through the public grid.

The financial model then includes actual cash revenue from electricity sales.

The supporting StartSun materials identify electricity sales to members and to the grid, together with membership fees where applicable, as typical recurring income sources once an EC is operational.

This model requires more detailed accounting because the community must track:

electricity produced → electricity used internally → electricity shared → electricity sold → income received.

4. Reinvestment model

Instead of distributing profits to members, the EC can keep the surplus and invest it in future projects.

The Swedish package describes two closely related options:

- temporarily save income from electricity sales to finance additional solar installations;
- directly reinvest profits in expanding the solar park.

This is particularly suitable for communities whose objective is to grow renewable-energy capacity rather than maximise short-term benefits for individual members.

Accounting implication: reserves and retained earnings need to be clearly recorded, and members should understand why money is being retained rather than distributed.

5. Dividend model

Where the legal form and national rules allow it, surplus income can be distributed to members.

The Swedish start-up package describes a cooperative that pays an annual dividend per share, based on electricity production and electricity price.

The Estonian Energiaühistu example also shows that members who financed a solar installation may receive dividends from project profits.

This model is more investment-oriented than a pure self-consumption model.

STARTSUN EXAMPLE

However, the StartSun experience strongly shows that an energy community's primary purpose should remain **community, environmental or economic benefits for members/local areas rather than simple profit maximisation**.

6. Service-based model

An EC does not necessarily have to earn its income mainly from electricity.

The Swedish start-up package also identifies a model where the community promotes solar technology by helping residents install solar systems on their own buildings. Income may come from services rather than energy generation itself.

Possible services can include:

- technical advice;
- joint procurement;
- energy-efficiency services;
- charging services;
- project development.

This model requires accounting for service income and related personnel or consultancy costs rather than mainly electricity flows.

Basic recommended accounting approach for energy communities

Despite national differences, the StartSun Supporting Guidelines recommend a common minimum approach for a legal EC: **Keep an annual report + maintain a long-term budget + monitor each project's performance separately.**

Annual accounts generally provide information about assets, liabilities, income, expenses and cash flows, although exact legal requirements differ between countries. The materials therefore recommend checking the relevant national accounting rules or using professional accounting support.

For long-term sustainability, the budget should also include:

- electricity income and savings;
- membership fees;
- maintenance;
- insurance;
- accounting and administration;
- loan repayments;
- component replacement;
- reserves;
- planned future investments.



General rule: Your business model explains how the community creates and shares value. Your accounting system shows where that value came from, where the money went, and who is entitled to the benefits.

3.4 Technical maintenance

Once the solar park is operating, maintenance is usually not very intensive, but it must be organised systematically. The StartSun experience recommends combining continuous monitoring, regular inspections and planned servicing, with clear responsibility for who reacts when something goes wrong.

What needs to be maintained?

For an energy community, maintenance covers more than the panels themselves. It should include the whole technical system:

- solar panels;
- inverters;
- electrical connections and cabling;
- mounting structures and fastenings;
- meters and monitoring systems;
- batteries, if installed;
- grid connection and related equipment.

The StartSun Supporting Guidelines provides more detailed information about this and stresses that long-term technical sustainability means actively managing the whole system, monitoring performance and planning for upgrades and end-of-life replacement of components.

Recommended maintenance tasks

Task	What to check
Monitor production	Compare actual electricity production with expected performance and investigate unusual drops
Inspect panels	Look for visible damage, dirt, shading or deterioration
Check inverters	Review alarms, operating condition and software updates
Inspect electrical connections	Check cables, connectors and electrical connections
Inspect structures	Check frames, supports and panel fastenings for looseness or damage
Clean panels when needed	Remove significant dirt or other material only where it is affecting operation
Check batteries, if installed	Monitor condition and performance according to the supplier's requirements
Plan component replacement	Prepare in advance for ageing or failure of inverters, batteries and monitoring equipment

The Latvian StartSun material recommends at least one inspection and maintenance visit each year. Its suggested annual maintenance includes panel inspection, inverter inspection and software updating, checking electrical connections, inspecting frames and fastenings, and cleaning when necessary.

Do not over-maintain the panels

Solar panels generally require little routine cleaning. According to the Latvian StartSun package guidelines, rain and wind normally keep them sufficiently clean, and ordinary dust has little effect on performance. Cleaning may be needed in special locations – for example, near a gravel road or where bird droppings accumulate.

Similarly, routinely removing snow from rooftop panels is generally not recommended based on the StartSun experience. Winter production in our geographical location is low, while accessing snowy roofs can create unnecessary safety risks.

Monitoring is your first line of maintenance

Do not wait for the annual inspection to discover that the solar park has stopped producing correctly. Use the inverter or monitoring platform to follow:

- daily and monthly production;
- unexpected production drops;
- inverter alarms and faults;
- periods when the installation is offline;
- changes in self-consumption and electricity exported to the grid.

The StartSun Supporting Guidelines emphasise that monitoring does not need to be complex. Even monthly production data, electricity bills and inverter monitoring can reveal important changes in system performance.

A useful rule is:

If production changes unexpectedly, investigate why.

This may reveal an inverter fault, damaged component, disconnected cable or another problem before it leads to a long period of lost production.

Use periodic professional inspections

Some problems cannot be identified through monitoring alone. A professional inspection can include more detailed technical checks. Such inspections are particularly useful for larger installations where a small technical fault can result in substantial lost production.

STARTSUN EXAMPLE

The Latvian StartSun package describes the Mārupe example, where maintenance includes:

- visual and technical inspection of panel fastenings;
- checking cable fastenings and connections;
- thermal-camera inspection of solar cells to identify unusual heating, which may indicate panel damage.

Decide who is responsible

The energy community should clearly appoint one person or service provider responsible for technical maintenance.

There are two main options:

» Community-managed: a technically competent member monitors the installation and coordinates professional interventions when required.

» Maintenance contract: the EC contracts the installer or another specialised company to perform inspections and servicing.

StartSun pilot experiences explicitly recommends deciding this early. For a small community, an external service contract is often the simplest option because specialised maintenance is required only occasionally. Such service contract should make clear:

- what is inspected;
- how often;
- who monitors alarms;
- expected response time after a fault;
- which repairs are included;
- who manages warranty claims.

Keep the technical documentation

Do not allow important technical knowledge to disappear when board members or volunteers change. Keep together:

- technical drawings and system specifications;
- commissioning and inspection documents;
- inverter and equipment manuals;
- warranties;
- installer and maintenance contacts;
- maintenance reports;

- records of faults and repairs;
- access information for monitoring systems.

The StartSun Supporting Guidelines specifically recommend retaining technical know-how and documenting responsibility as community members and roles change.

Plan for replacement, not only maintenance

Solar panels can operate for many years, but not every component will necessarily last as long as the panels.

- The energy community should therefore consider:
- when inverters may need replacement or upgrading;
- battery replacement, where storage is used;
- replacement of monitoring or communication equipment;
- repairs to cables and structures;
- eventual panel replacement and end-of-life management.

StartSun's Supporting Guidelines recommend treating this as asset management over the full lifecycle, rather than waiting for equipment to fail.

This should also be reflected financially. The Supporting Guidelines recommend budgeting for annual maintenance, possible repairs and keeping a reserve for unexpected failures such as inverter replacement.

A simple maintenance routine for an energy community

◊ **Regularly:** check the monitoring system and respond to alarms.

◊ **At least annually:** arrange a technical inspection of panels, inverter, cables, electrical connections and mounting structures.

◊ **When needed:** clean panels, repair faults and update inverter software.

◊ **Every few years:** review overall system performance and whether components are ageing or becoming outdated.

◊ **Long term:** maintain a financial reserve and replacement plan for major components.



Practical StartSun recommendation

For a small energy community, there is usually no need for a full-time technician. A practical arrangement is:

one named EC member responsible for monitoring + an external professional maintenance contract + an annual maintenance budget.

The important point is that maintenance should never be an undefined responsibility. **Someone must monitor the installation, someone must be authorised to call for repairs, and the community must have money reserved to pay for them.**

3.5 Managing the social community throughout solar park lifecycle.

A solar park can operate for decades. During that time, members may join or leave, local priorities may change, new technologies may become available, and the community may decide to expand into new activities. For this reason, the social side of an energy community needs active management just as much as the technical installation does. When the members work well together, the management and development of the energy community is a lot easier.

The StartSun communities suggest treating community development as a continuous cycle: **involve people early, keep decision-making transparent, maintain regular communication, create opportunities for participation, monitor satisfaction, and renew the community when interest starts to decline.** Community engagement should therefore continue from planning through construction, operation, expansion and eventual renewal of the solar park.

1. Planning stage: build trust and shared ownership

At the beginning, the priority is to create a credible core group and make sure that potential members understand why the project is being developed.

The community should clarify:

- what problem or need the solar park is expected to address;
- who should benefit;
- who should participate as members;
- who else should be involved as supporting stakeholders;
- how decisions will be made;
- and how members will receive information and influence the project.

The Estonian StartSun pilot experiences point out that engagement should neither happen too early, when the initiators cannot yet answer basic questions, nor too late, when important decisions have already been made. Both can damage trust.

A good starting approach is therefore:

small committed core group → basic project concept → wider discussion → refinement together with potential members.

At this stage, use personal meetings, surveys, workshops and existing local networks to understand expectations and concerns. For larger projects, it is also useful to involve local authorities, associations, businesses and other community organisations, even when they do not become formal members. StartSun materials note that these actors can provide credibility, communication channels, local knowledge and practical support.

2. Development and permitting stage: keep people involved while the project becomes technical

Once technical planning, permits, procurement and grid connection begin, there is a risk that the project becomes dominated by engineers, consultants and administrators. The social community should not disappear during this stage.

Members should regularly receive understandable updates on:

- what has been decided;
- what is still open for discussion;
- changes to the planned solar park;
- delays or permit issues;
- costs or other important changes;
- how electricity will eventually be shared;
- and what the next decision will be.

This is especially important if the technical solution changes from what members originally expected.

Use meetings not only for reporting but also for real participation. For example, members can help discuss:

» how production information will be communicated;
» what benefits should be prioritised;
» future membership rules;
» potential additional services;
» and whether expansion should be considered later.

At this stage, **transparency is more important than presenting everything as successful**. The StartSun sustainability materials emphasise that members should understand important financial and operational developments, especially when new investments or significant changes are being considered.

3. Construction stage: maintain visibility and momentum

Construction is a very visible phase and can be used to strengthen the community.

Practical possibilities include:

- site visits;
- information events;
- short construction updates;
- photos and progress reports;
- explanations of what different components do;
- and opportunities for members to meet installers or technical experts.

This phase is useful for turning an abstract energy project into something tangible.

It is also a good time to reconnect with less active members and potential future participants. The social objective should be to maintain a sense that the solar park is **our shared project**, rather than simply a technical installation being delivered by an external contractor.

4. Commissioning stage: make the start of operation a community milestone

The opening of the solar park should be treated as both a technical and a social milestone.

Consider organising:

- an opening or commissioning event;
- a simple presentation of how the solar park works;

- explanation of expected production and benefits;
- information on how electricity is shared;
- introduction of monitoring tools;
- and recognition of the people and organisations that contributed.

This is also the moment to remind members that commissioning is not the end of the community project. It is the beginning of the operational phase.

5. Operational stage: keep members informed even when "nothing is happening"

Once the solar park is working normally, social engagement can weaken because there are fewer urgent decisions.

This is one of the most important periods for active community management.

Members should continue receiving simple and regular information such as:

- how much electricity was produced;
- how much was used locally;
- how much was exported;
- whether expected savings or other benefits are being achieved;
- important maintenance activities;
- major financial developments;
- and possible future improvements.

The information should be understandable to non-experts. Avoid overwhelming members with raw technical data.

Regular meetings remain useful, but they do not need to be frequent. The key is consistency.

The StartSun sustainability guidelines recommend reviewing social and community indicators alongside technical and financial performance, for example once a year. Suggested areas include participation, diversity, member satisfaction and communication activity.

6. Maintain meaningful participation

Participation should mean more than simply receiving newsletters.

Members can be involved in:

- annual meetings;
- working groups;
- monitoring activities;
- education and awareness activities;
- recruitment of new members;
- discussions about new investments;
- community events;
- or development of new services.

The Supporting Guidelines also suggest involving community members in collecting and analysing sustainability information, where appropriate. This can strengthen understanding and ownership of the project.

However, not every member needs to be highly active. A healthy energy community can include both:

active members who organise and lead activities; and

less active members who participate mainly through membership and decision-making.

The important point is that opportunities to participate remain open and understandable.

7. Monitor member satisfaction and participation

A community should periodically ask whether it is still meeting the needs for which it was created.

Simple questions are often sufficient:

- Are members satisfied with how the community is managed?
- Do they understand what the community is doing?
- Do they trust the decision-making process?
- Do they feel that benefits are distributed fairly?
- Are meetings attended?
- Are new people becoming involved?
- Are particular groups missing from participation?
- Do members still see value in remaining part of the community?

The StartSun Supporting Guidelines recommend monitoring meeting participation and member satisfaction because declining attendance or dissatisfaction may indicate that the community is losing relevance or trust.

A short annual survey can be enough.

8. Keep communication two-way

Strong community communication is not only about sending information.

Members should also have easy ways to:

- ask questions;
- make suggestions;
- raise concerns;
- report problems;
- and propose new activities.

Possible communication channels identified in the StartSun materials include:

- community meetings;
- personal conversations;
- public events;
- local media;
- newsletters;
- websites;
- interviews;
- publications;
- and activities organised as part of other local events.

Using existing local events can be particularly efficient because it reduces the organisational burden and reaches people who might not attend a dedicated energy meeting.

9. Invest in education and energy literacy

The community becomes stronger when members understand the energy system they jointly own or use.

Educational activities can cover topics such as:

- how solar electricity is produced;
- when the solar park produces most;
- how members can increase self-consumption;
- how energy sharing works;
- what batteries can and cannot do;
- how electricity prices affect the community;
- energy-saving opportunities;
- and future technologies.

The StartSun communities recommend mapping the community's information channels, organising workshops and developing educational activities based on identified needs.

Education does not need to mean formal training. Short practical sessions during community meetings may be more effective.

10. Allow new members and new ideas

A mature energy community should not become a closed group.

Where the chosen legal and technical model allows it, keep a clear process for:

- joining;
- leaving;
- transferring shares or participation rights;
- and understanding the financial consequences of membership.

HELPFUL TIPS

Open participation is one of the underlying principles that became clear in the StartSun experience.

The community should also periodically ask whether new groups could benefit from participation, for example:

- nearby households;
- local businesses;
- municipal facilities;
- associations;
- or other organisations.

Growth should, however, remain manageable. The Estonian materials warn that larger membership also means more administration and communication work.

11. Use expansion as a new engagement opportunity

Expansion can renew interest in a community.

Possible future developments may include:

- additional solar capacity;
- battery storage;
- EV charging;
- flexibility services;
- energy-efficiency measures;
- new participating buildings;
- or wider community services.

The StartSun experiences, as described in the Supporting Guidelines explicitly connect long-term engagement with expansion of participation, production, benefits and educational activities.

STARTSUN EXAMPLE

The Swedish pilot experience also recommends phased development: first establish the installation, then stabilise and collect data, and only afterwards expand and recruit further members. Such a gradual approach can strengthen member engagement and make development easier to understand.

12. Manage leadership renewal

A long-lived solar park should not depend permanently on one enthusiastic founder.

The community should gradually develop several people who understand:

- governance;
- finances;
- technical operation;
- member communication;
- and external relationships.

Important documents, contacts, decisions and procedures should also be recorded securely rather than kept only in individuals' personal knowledge. This makes leadership transitions easier and reduces the risk that the community becomes inactive when one key person leaves.

13. Keep benefits visible

Members are more likely to remain engaged when they can see what the community achieves.

Benefits may include more than electricity savings:

- local renewable energy production;
- greater control over energy use;
- reduced emissions;
- increased energy knowledge;
- stronger local cooperation;

» new services;
» improved resilience;
» or opportunities for further community projects.

The Latvian experiences recommend educational activities, seminars, meetings, information campaigns and public consultations both for maintaining awareness and attracting new members.

Communicating these benefits helps remind members why the community was established.

Social community management through the lifecycle

Solar park stage	Social priority	Useful actions
Planning	Build trust and shared purpose	Core group, stakeholder mapping, surveys, workshops
Technical development	Maintain transparency	Regular updates, explain choices, involve members in major decisions
Permitting & procurement	Manage expectations	Communicate delays, changes and responsibilities clearly
Construction	Maintain visibility	Site visits, progress updates, community events
Commissioning	Celebrate shared achievement	Opening event, explain operation and benefits
Early operation	Build confidence	Share production and benefit information, collect feedback
Mature operation	Prevent disengagement	Annual meetings, education, surveys, community activities
Expansion	Renew participation	Discuss new investments, services and new members
Long-term renewal	Preserve continuity	Leadership succession, documentation, training and knowledge transfer



Good to keep in mind: A strong energy community does not emerge automatically from owning a solar park. The technical installation may operate with little attention for years, but the social community needs regular communication, participation, transparency, learning and renewal. The aim is to keep members feeling that they are not simply customers of the solar park, but participants in a shared local energy initiative.

A simple annual community check

Once a year, alongside the technical and financial review, ask:

Participation

- Are members attending meetings and voting?
- Are responsibilities shared or concentrated in a few people?

Trust and satisfaction

- Are members satisfied with management?
- Do they understand how decisions are made?
- Do they consider benefits fair?

Communication

- Are members receiving useful information?
- Can they easily ask questions and give feedback?

Inclusiveness

- Who participates actively?
- Who is missing?
- Are new members able to join?

Development

- Have community needs changed?
- Is there interest in new services or expansion?
- Does the original purpose of the community still make sense?

The StartSun experiences suggest that such social monitoring should accompany the technical and financial monitoring of the energy community.

3.6 Environmental sustainability

Managing and mitigating the environmental impact of solar parks

Solar energy has clear climate benefits, but a solar park can still affect land, habitats, wildlife, landscape and local ecosystem services. For an energy community, environmental management should therefore be considered throughout the whole lifecycle of the solar park – from design and construction to operation and eventual decommissioning.

A useful principle, described in greater detail in the StartSun supporting materials, is the **mitigation hierarchy**:

Avoid → Minimise → Restore → Offset

In practice, this means first trying to prevent environmental harm altogether. If an impact cannot be avoided, reduce it as much as possible; restore affected areas where feasible; and only then consider compensating for remaining impacts elsewhere in the local or regional area.

Key principles to follow for better environmental impact

1. Check environmental suitability before construction.

Even when a site has already been selected, verify whether there are restrictions connected with protected nature, cultural landscapes, agricultural land or other public interests. Ground-mounted solar installations may also require specific environmental consultation or permits.

2. Minimise disturbance to the land.

Plan panel layout, cables, access roads, fencing and other infrastructure so that unnecessary soil disturbance and habitat fragmentation are avoided. Ground-mounted solar parks include not only panels but also cabling, transformers, substations, connections and fencing, all of which contribute to the overall environmental footprint.

3. Protect biodiversity and existing habitats.

Solar parks can affect local species through habitat change, fencing, noise, reflection, transmission infrastructure and other disturbances. These effects depend strongly on the location and design of the project.

At the same time, a well-managed solar park can also improve biodiversity compared with intensive land use. StartSun materials note examples where solar parks on degraded or agricultural land supported greater diversity of plants, birds and invertebrates, particularly where the site was managed together with grazing.

4. Look for multiple uses of the land.

Where appropriate, solar production can be combined with other land uses. The supporting materials identify examples of combining renewable-energy production with agriculture, grazing, native vegetation and pollinator-friendly plants. Such approaches can improve soil health, water retention and biodiversity while keeping the land productive.

5. Protect ecosystem services that matter locally.

Environmental impacts are not limited to wildlife. Solar development may also affect grazing, agricultural production, access to land, landscape character and other benefits that local people receive from the area. These local values should be identified and considered when planning mitigation measures.

6. Involve the community in environmental choices.

For an energy community, local environmental priorities should not be decided only by technical experts. The StartSun materials recommend clearly identifying local community priorities when deciding where and how impacts should be mitigated or compensated.

7. Manage the site throughout operation.

Environmental management should continue after construction. Vegetation management, grazing, maintenance access and possible habitat improvements should be reviewed regularly so that the solar park does not gradually create avoidable environmental problems.

8. Plan for the end of the solar park from the beginning.

Environmental impacts can arise during design, construction, operation and end-of-life. Decommissioning and restoration should therefore be considered in advance, including how the site will be restored and how equipment will be removed or dealt with at the end of its useful life.



Key principle: A good community solar park should not only produce renewable electricity. It should be designed and managed so that environmental harm is avoided where possible, remaining impacts are minimised, and opportunities to improve biodiversity and local land value are actively considered.

A simple environmental checklist

Before and during operation, the energy community should ask:

- Have we identified protected habitats, species or landscape values?
- Can any sensitive areas be avoided completely?
- Can roads, cables, fencing and other infrastructure be kept to a minimum?
- Can existing vegetation be retained?
- Can the site support native vegetation, pollinator-friendly planting or grazing?
- Are soil and water conditions being protected?
- Are important local uses of the land being maintained where possible?
- Are environmental impacts checked during operation?
- Is there a plan for restoration and decommissioning?

3.7 Project management in an energy community

Creating and running an energy community is a long-term process involving technical, financial, legal and social tasks. Good project management helps keep these different workstreams connected and prevents delays, misunderstandings and unrealistic expectations.

The StartSun Supporting Guidelines give more detailed overview on how the process can be viewed in stages: **preparation, implementation and day-to-day operation**. Each stage has different tasks, but the same project-management principles apply throughout.

1. Start with a clear purpose and scope

Before detailed work begins, agree what the project is trying to achieve and what is included in the first phase. The project should respond to a real community need and be realistic in scale. StartSun materials emphasise a needs-based approach and warn against making the first project unnecessarily large or complex.

A clear scope also makes it easier to decide what should be done now and what can be left for later expansion.

2. Name a responsible project lead

Someone needs to coordinate the process from beginning to end. This does not mean that one person should do everything, but there should be a clear person or team responsible for keeping an overview of progress.

At the preparation stage, StartSun explicitly recommends answering the question: **Who will lead the process?**

The project lead should make sure that decisions are followed up, responsibilities are clear and communication continues between technical experts, community members, authorities, suppliers and other partners.

3. Divide responsibilities clearly

Energy community projects involve many different tasks, such as:

- member engagement;
- technical planning;
- permits and grid connection;
- procurement;
- financing and accounting;
- contracts;
- communications;
- construction and commissioning;
- operation and maintenance.

Responsibilities should be assigned to named people, working groups or external experts. The Swedish StartSun material recommends setting out clear objectives, timelines and division of labour for active members.

A simple task table with **task – responsible person – deadline – status** is often enough.

4. Work with a realistic timeline and milestones

The whole project should be broken into manageable stages. Useful milestones may include:

community agreement → technical concept → grid approval → permits → procurement → contract → construction → commissioning → operation

Some steps depend on others, so the sequence matters. For example, equipment should not be ordered before important permit and grid requirements are known.

The project plan should also include enough time for external decisions, especially permits, grid connection, procurement procedures and formal community decision-making.

5. Coordinate technical, financial, legal and social work

These workstreams should not be managed separately.

A change in one area can affect the others. For example:

- a grid restriction may change the technical design;
- a larger battery may change financing needs;
- a permit condition may affect procurement;
- a new member may change electricity-sharing arrangements;
- a delayed procurement may affect the investment timetable.

Good project management means regularly checking how decisions in one workstream affect the rest of the project.

6. Use experts where the community lacks knowledge

An energy community does not need to have all necessary expertise internally. The StartSun materials recommend bringing in outside experts where needed and highlight the importance of supportive partners.

External support may be useful for:

- engineering;
- legal matters;
- accounting;
- procurement;
- permits;
- grid connection;
- community engagement;
- or specialised technical questions.

The important project-management task is to know **when specialist advice is needed** and to bring it in early enough.

7. Manage risks and prepare alternatives

Energy community projects can face unexpected regulatory changes, technical problems, grid costs, administrative expenses or market changes.

The project team should therefore identify major risks early and decide how to respond if they occur.

For each important risk, ask:

What could go wrong? How likely is it? What would the impact be? What can we do beforehand? What is our alternative?

The Swedish StartSun material recommends maintaining flexibility and considering a **Plan B or Plan C** so that the project does not stop completely when obstacles appear.

8. Keep decisions and documents organised

Energy community projects generate many documents: meeting minutes, permits, agreements, technical designs, quotations, contracts, financial information and communications with authorities.

Keep them in one organised location and record:

- what was decided;
- when it was decided;
- who approved it;
- what follow-up is required;
- and which version of a document is current.

StartSun materials repeatedly emphasise the importance of formal documents, agreements, permits and records throughout establishment and operation.

Good documentation also makes leadership changes easier later.

9. Communicate regularly and transparently

Project management is also communication management.

Members should know:

- what has been completed;
- what is happening next;
- what has changed;
- whether there are delays;
- what decisions are required;
- and whether costs or risks have changed.

This is particularly important when major investments or significant financial changes are being considered. StartSun materials link transparency directly to long-term member trust and participation.

10. Monitor progress and adjust the plan

A project plan should not be treated as fixed.

Monitor:

- whether milestones are achieved;
- whether spending follows the budget;
- whether permits and procurement are on schedule;
- whether technical assumptions remain valid;
- and whether members remain engaged.

Monitoring is useful only when results lead to action. StartSun's supporting guidelines recommend regularly reviewing monitoring information and updating plans when actual performance or circumstances differ from expectations.

11. Think beyond construction

The project does not end when the solar park is commissioned.

From the beginning, plan for:

- operation and maintenance;
- monitoring;
- responsibilities for faults;
- member communication;
- future investments;
- replacement of equipment;
- expansion;
- and eventual decommissioning.

The Swedish materials specifically recommend taking a whole-lifecycle view from the start rather than focusing only on establishment.



A simple project-management rule

For a community-led energy project, a practical management cycle is:

Plan → Assign responsibilities → Act → Monitor → Communicate → Adjust

The most important principle is to **keep the project understandable and manageable**. A clear purpose, named responsibilities, realistic milestones, good documentation, regular communication and willingness to adapt are usually more valuable than an overly complicated project-management system.

4. Valuable experiences for energy communities

Key lessons learned from the StartSun pilot activities

The StartSun pilots showed that developing an energy community is rarely a straightforward technical project. Success depends just as much on people, cooperation, timing, local conditions and organisational capacity as it does on solar panels, batteries or grid connections. Across the pilots, several common lessons emerged that are useful for future energy communities.

Start with the need, not the technology

One of the clearest lessons was that an energy community should solve a real local problem. In some pilots, proposed renewable-energy solutions were too far removed from residents' immediate concerns, such as poor building conditions, renovation needs or limited financial capacity. In these situations, energy efficiency or renovation may be a more realistic first step than new energy production.

The Marttila experience also showed the value of looking at the whole building and its future needs together. Heating, roof renovation, solar PV, storage and grid connection should be planned as one long-term pathway rather than as separate investments.

Build cooperation and trust before complex investments

Energy communities require people and organisations to share information, make joint decisions and often commit money for many years. Where strong cooperation already existed, progress was faster. In Obinitsa, the energy community grew from a network whose members already had years of experience working and investing together. In other pilots, limited trust or weak local cooperation made discussions about ownership, data sharing and investment much harder.

The pilots therefore showed that **social infrastructure is as important as technical infrastructure**. Where trust is weak, it may be better to start with smaller joint activities and gradually build experience before creating a complex energy community.

Involve the right people at the right time

Early engagement matters, but earlier is not always better. One pilot approached the wider community before the concept, costs and operating principles were clear. People expected concrete answers, and interest declined when these could not yet be provided. The group later continued with a smaller core of founding members and postponed wider recruitment until the concept was more developed.

At the same time, municipal involvement should start early. Experiences from Sweden and Estonia showed that municipal support is strongest when there is both strategic political backing and continuous practical cooperation. Municipalities do not always need to lead an initiative, but they can provide legitimacy, coordination, information and help with procedures.

Bring in the necessary expertise from the beginning

Energy communities combine technical, legal, financial, administrative and social questions. The pilots showed that problems are easier to prevent when the right expertise is available early rather than brought in only after difficulties appear.

In Obinitsa, continuous involvement of a solar-energy expert helped identify technical shortcomings that normal construction supervision did not detect. In the Swedish pilots, involving people from different parts of the municipal organisation improved access to data, contacts and decision-making capacity.

Peer support was also valuable. When the Kääpa pilot lost its main project manager, a representative from the more experienced Obinitsa community provided practical support with establishment and procurement. The lesson was simple: **an energy community that is one or two steps ahead can often provide advice that is more practical than theory alone**.

Check practical reality before finalising the model

A technically attractive idea may still fail because of local constraints. The pilots encountered unsuitable roofs, insufficient grid capacity, long connection delays, inaccessible energy data, unclear legal arrangements and market actors that were not yet ready to offer required services.

Grid capacity was particularly important. In Estonia, limited rural grid capacity constrained possible generation. In Finland, a new heat pump could not be fully commissioned for more than a year because the required grid reinforcement took time. The lesson is to contact the distribution system operator early and include possible connection delays and costs in the project plan.

The pilots also showed that not every technically possible solution is worth implementing. In Marttila, battery storage was dropped after feasibility calculations showed that the expected benefits did not justify the cost and long-term maintenance burden.

Start small and remain flexible

Several pilots found value in developing the energy community step by step. Starting with a smaller number of members, an existing energy asset or one first investment reduces complexity and makes the project easier to manage. Expansion can come later once the community has more experience and better information.

Both Kääpa and Swedish experiences showed that plans need to remain adaptable. Kääpa ended up with fewer members and a smaller PV concept than originally planned, but the community was still established and created a foundation for future development. The experience suggests that success should not be measured only by whether the original plan was followed exactly, but also by whether the initiative can **learn, adjust and continue**.

Keep knowledge in the organisation

Long-term initiatives should not depend on one person. Staff changes in the Swedish municipal pilots created serious gaps because project knowledge, contacts and responsibilities were too concentrated in individuals. Clear documentation, shared responsibilities and simple handover routines are therefore essential.

The same principle applies to energy communities themselves: board members and active volunteers will change over time. Good documentation helps the community continue without repeatedly starting from zero.

Final lesson

The strongest overall message from the StartSun pilots is that energy communities are built through **people, cooperation, learning and adaptation**, not from perfect plans. Local trust, realistic needs, early expert input, municipal cooperation, practical feasibility checks and willingness to change direction all proved more important than trying to implement the most ambitious solution immediately.

Start with what you have, solve a real local need, build cooperation step by step, and adapt the solution as you learn.

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