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Local Energy Communities

LECo handbook (Sweden): Accelerate community energy transition.

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Local Energy Communities

The project LECo – Local Energy Communities - supports small municipalities and communities in the partner regions of Finland, Ireland, Norway and Sweden to implement energy initiatives. This handbook intends to guide energy initiatives from the idea to conclusion. It includes links to important sources and recommendations for citizen engagement with policy development.

This information has been developed by LECo project partner LTU. Adaptations for Sweden have been made by project partner Jokkmokk municipality.

MAKE YOUR PROJECT WORK

Energy efficiency and small-scale renewable energy projects are typically started by an association of energy users or producers in a community in order to either save energy or provide energy that involves lower and stable energy costs and the possibility of additional future income.

A common feature of these initiatives is that they somehow favor the community and create economic cycles where the money does not unilaterally flow out of the area.

Get your project started

Linking your energy efficiency or renewable energy project idea with energy strategies of the country and region will ease permitting and funding procedures. A clear vision on how your project benefits households, local enterprises and the community increases interest and ensures active participation of community members. Engaging members with activities including public meetings, interviews of and discussions with key people in the community and visiting similar initiatives of other communities can lay the foundation for a new community owned and led organization, which in Sweden typically takes the form of an economic association (Sv=ekonomsik förening).

Once the idea is launched, community members and all stakeholders are on board and organized, the acceptance of the general public is attained, aims and objectives agreed upon, expectations clarified, roles and responsibilities in the organization and in the project management assigned, the next step is to make the first project work.

Planning permissions and land use

Acquiring regulatory consents, such as building permission, grid connection permit or environmental impact assessment (EIA), can be exhausting, time-consuming and costly. The municipality´s technical office shall be the first point of contact for information about permission and registration requirements. Depending on the chosen technology, capacity, visual design, existing detailed and land use plans, and other factors the planning officer can determine which regulations to apply and if more extensive permissions from the County Administrative Board are required.

The municipal energy advisor / local energy agency / energy utility and/or experienced installers are also familiar with required permissions for energy projects.

In Sweden most changes on existing buildings, including insulation and replacing heating systems, require registration only *(Sv=bygganmälan)*. Significant changes of the building´s appearance – including rooftop solar systems require permission *(Sv=bygglov)* in areas where detailed planning exists.

For wind energy projects, detailed step by step guides are available on *https://www.vindlov.se/*. Whether permits or only registrations are required depends on the size of the turbine(s).

Small hydropower projects – all activities affecting river bodies require permission according environmental legislation (Miljöbalken).

Getting legal advice for land issues: In case the energy project is a greenfield project, as e.g. installation of ground-mounted solar systems or wind turbines, full legal rights need to be required on the intended land use, which could involve leasing or purchasing the land.

Financing the project

A project plan, a functioning organization structure and project management, references from previous successful projects are important elements in a funding application.

Investigate in which funding options are available from ongoing programmes for your project type and size and rank them after best match of funders criteria. Funding can also be secured from initiatives for rural development, EU structural funds, regeneration of areas, improvement of housing, charitable trusts and foundations, the lottery and private sector finance. The Swedish Energy Agency, the Swedish EPA and the Swedish Growth Agency (Sw = tillväxtverket) administrate several support programs, including:

Swedish Energy Agency – support for renewable energy: Energy storage, Solar PV and Electricity Certificate System: *http://www.energimyndigheten.se/fornybart/stod-och-bidrag-pa-fornybartomradet/*

Electricity certificate system *(Sv=Elcertifikatsystem)* - The energy sources entitled to be awarded electrical certificates are wind power, some hydropower, some biofuels, solar energy, geothermal energy, wave energy and peat in combined heat and power plants. *http://www.energimyndigheten.se/fornybart/elcertifikatsystemet/*

Klimatklivet - *http://www.naturvardsverket.se/klimatklivet* - provides investment support for climate-smart measures that reduce carbon dioxide emissions at local level.

Tax exemptions on labour costs for investments in a residential building (ROT-avdrag: 30% of labour costs) - *https://www.skatteverket.se/privat/fastigheterochbostad/rotochrutarbete/rotarbeten*

Others (please google the term for details): Klimatsynk, Energisteget, Energilyftet, Industriklivet, Elfordonspremie, Solcellsstöd, Vindkraftspremie, Stöd för energikartläggning i små och medelstora företag, Gröna fonden, Regional investeringsstöd, Landsbyggdsprogrammet, Stöd samlingslokaler, EIBs InnovFin Energy Demo Projects, etc.

Implementing and completing the project

All permissions and registration requirements are fulfilled. A suitable qualified installer is selected and awarded with the project contract. The company delivers and competently installs the system. Ideally it also provides comprehensive documentation of the system, training for operation and maintenance, which can be carried out by community members. The system is tested and commissioned. Evidence of completion is submitted to funding providers. Milestones and finalization have been celebrated and communicated.

The project and all the experiences with it are evaluated and documented in a final project report. Highlighting lessons learned, expected and unexpected problems and benefits, achievements and other – hopefully mostly positive experiences - is important for the community and the members of the cooperative.

After successful implementation of the first project, new ideas will evolve and new projects will follow.

ORGANISATIONAL FORMS FOR SMALL-SCALE ENERGY PROJECTS

Such projects are typically owned and operated by a cooperative or a community enterprise, which in Sweden takes the legal form of an economic association *(Sv=ekonomisk förening).*

- **Information on economic associations:** *http://bolagsverket.se/fo/foreningsformer/ekonomisk*
- **Support for cooperative economic associations:** *https://coompanion.se/, https://www.verksamt.se/fundera/starta-kooperativ*
- **Sveriges Ekokommuner:** *http://www.sekom.se/*
- **Information on other business types:** *http://bolagsverket.se/fff/foretagsformer*

TECHNOLOGIES AND PROJECT TYPES

Table: Projects for energy efficiency, renewable electricity and heat, and bioenergy supply:

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<tr><th>Renewable electricity</th><th>Renewable heating/ cooling</th><th>Renewable fuels</th><th>Energy efficiency</th></tr>
<tr><td>Wind energy (onshore)</td><td>Domestic solar thermal heat (hot water and heating)</td><td>Biodiesel</td><td>Improving building envelopes</td></tr>
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<tr><td>Small hydropower</td><td>Water heat-pumps (lakes, rivers, ocean)</td><td>Peat for District Heating boilers; peat for residential use.</td><td></td></tr>
<tr><td>Biogas electricity or CHP.</td><td>Air heat-pumps</td><td></td><td>Street lighting</td></tr>
<tr><td>Wood-fired micro CHP.</td><td>Wood-fired boilers
Peat-fired boilers</td><td></td><td></td></tr>
<tr><td>Local district heating CHPs:
• Biogas-CHP
• Wood-fired-CHP
• Peat co-fired-CHP</td><td>Biogas, biodiesel-fired boilers</td><td colspan="2" rowspan="2">Transport sector:
Focus on walking, cycling, and public transport.
Biogas for busses, etc.
Electric vehicles, charging stations</td></tr>
<tr><td>Micro-grid and electricity storage:
• Behind the meter
• On the grid</td><td>Local district heating boilers:
• Biogas
• Wood-fired
• Peat co-fired</td></tr>
</table>

Improving building envelopes and replacing heating systems.

- **Boverket - Bygg och renovera energieffektivt** *https://www.boverket.se/sv/byggande/bygg-och-renovera-energieffektivt/*
- **Swedish Energy Agency** *http://www.energimyndigheten.se/energieffektivisering/*

Hydropower:

- **Föreningen Sveriges Vattenkraftskommuner och –regioner (FSV) – URL:** *http://fsv.nu/*
- **Svensk Vattenkraftförening** *http://svenskvattenkraft.se/om/*
- **Vattenkraftens vänner** *https://vattenkraftensvanner.wordpress.com/*

Solar energy:

- **Svensk Solenergi** *http://www.svensksolenergi.se/*
- **ETC EL - Solar PV parks** *https://www.etcel.se/vara-solparker*
- **Solelkommissionen** *http://www.solelkommissionen.se*
- **Solar thermal systems** *https://www.svensksolenergi.se/fakta-om-solenergi/solvaerme/*
- **Solar District Heating** *http://solar-district-heating.se/*

Wind energy:

- **Svensk Vindenergi**
  http://svenskvindenergi.org/
- **Svensk Vindkraft förening**
  https://www.svensk-vindkraft.org/
- **Nätverket för vindbruk**
  https://www.natverketforvindbruk.se/
- **Wind energy permissions**
  *https://www.vindlov.***se/**

Bioenergy:

- **SVEBIO – Svebio's vision is to be the leading representative and an international example for developing bioenergy in a sustainable society.**
  https://www.svebio.se/
- **Pelletsförbundet - PF works to support, strengthen and stimulate the pellets industry.**
  http://pelletsforbundet.se/
- **Bioenergiportalen – Närvärme**
  http://bioenergiportalen.se/?p=6829&m=1733&page=narvarme
- **Energirådgivningen**
  https://energiradgivningen.se/smahus/fjarrvarme-narvarme

Biogas:

- **Energigas Sverige**
  http://www.energigas.se/fakta-om-gas/biogas/
- **Bioenergiportalen – Biogas**
  http://bioenergiportalen.se/?p=1454&m=1379&page=biogas

CITIZEN ENGAGEMENT IN POLICY DEVELOPMENT

Community members with interest and enthusiasm for energy initiatives are encouraged to engage in national policymaking, regional and municipal development planning processes. Such engagement include activities such as participation in public consultation, public hearings, seminars, road-shows, writing submissions to local and central authorities, writing letters to media and contributions in social media forums. Local energy advisors and energy offices are important stakeholders who engage directly with citizens and SMEs. Individual citizens and community organizations are invited to participate in such activities.

Sweden is the only LECo partner country where municipalities are legally obliged to develop and maintain energy plans. Energy efficiency improvements are also legislated. As in all municipal planning, citizens can engage in the development and updates of such local energy plans.

Recommendations for policy adaptations and engagement:

- **Work for a change in the property tax regime.** Currently such property taxes on energy generating facilities are state taxes, which is relatively unique in Europe, resulting in zero direct financial benefit to the exploited municipalities.
- **Engage in mandatory implementation of co-ownership models for e.g. windparks and solarparks** resulting in direct and long-term financial benefits for affected communities and consider applying such legislation on new and existing hydropower stations.
- **Enable ownership of local energy infrastructure** (generation, storage and distribution – smart grids).
- **A general focus on clear and stable legislative frameworks,** which reduce project complexity, cost and risk.

Accelerating energy transition in communities through:

- **Local energy offices and energy advisors provide more support** for small municipalities, SMEs and community energy initiatives towards project identification, proposal writing for financing, project development and implementation.
- **Get local political decision makers and entrepreneurs involved.**
- **Overcome lack of know-how by capacity building and involving experts.**
- **Provision of long-term funding for energy and climate work at each municipality.**
- **Ensure long-term financial and regulatory stability** for community energy projects.
- **Advisory support in organizational development** for the establishment of energy cooperatives.
- **Review and simplify application procedures** to support programs.
- **Design technology neutral financial support** for small-scale energy production and energy efficiency measures for households and SMEs.

OTHER LINKS

- **Swedish Energy Agency:** *http://energimyndigheten.se/sv/*
- **Energy Agencies Sweden:** *http://energikontorensverige.se/*
- **Energy Agency North:** *http://www.energikontornorr.se/*
- **Energy Advisors:** *https://energiradgivningen.se/*
- **County Administration:**
  https://www.lansstyrelsen.se/norrbotten/privat.html
- **Region Norrbotten:**
  http://www.norrbotten.se/sv/Demokrati-och-insyn/
- **Norrbottens kommuner:**
  https://www.norrbottenskommuner.se/
- **Lappland municipality association:** *http://www.lapplands.se/*
- **BioFuel Region:** *http://biofuelregion.se/*
- **Borgmästaravtalet för Klimat och Energi:**
  https://www.borgmastaravtalet.eu/sv/
- **Hushållningssällskapet:** *http://hushallningssallskapet.se/*
- **Landbrukarnas Riksförbund:** *http://www.lrf.se/*
- **REScoop.eu - the European federation of renewable energy cooperatives:** *https://www.rescoop.eu/*

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Project Partners

Centria University of Applied Sciences (Finland),
Western Development Commission (Ireland), Luleå University of Technology (Sweden),
Renewable Energies Agency (Germany)*, Jokkmokk municipality (Sweden),
The Gaeltacht Authority (Ireland), Lohtaja Energy Cooperative (Finland),
UiT – the Arctic University of Norway (Norway)

*Outside the NPA Programme area