

Regional Action Plan Kronoberg Sweden



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Part I: General information

General information

Project	POTEnT – Public Organisations Transform Energy Transition
Partner organisation(s) concerned:	Energy Agency for Southeast Sweden (ESS)
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Part II – Policy context

- The Action Plan aims to impact:
- ☐ Investment for Growth and Jobs programme
 - ☐ European Territorial Cooperation programme
 - ☒ Other regional development policy instrument

Name of the policy instrument(s) addressed:

The Regional Development Strategy for Kronoberg County 2015-2025:

Green Kronoberg and its Plus Energy County 2050 goal

In Kronoberg County in the south of Sweden, through the POTEnT project, we aim to put the local authorities at the heart of the energy transition away from use of fossil fuels and an increased share of renewables. By devising strategies, action plans and concrete steps we aim to address the sustainability challenges all regional and local authorities are struggling with.

Through addressing the regional policy instrument *Green Kronoberg 2025* and its *Plus Energy County 2050* goal we aim to initiate, foster, and implement dialogues and concrete actions in Kronoberg. The plus-energy goal is defined as:

“Production of renewable energy and biofuels is higher than the total consumption in the county leading to Kronoberg being self-sufficient and able to export renewable energy.”

How to reach this goal is however not detailed in the policy, but something POTEnT will contribute to do. The result from POTEnT action plan will then be incorporated in the next generation of *Green Kronoberg* that will be ready in 2025.

The owner of the policy is Region Kronoberg, an organisation lead by an elected regional council. Main responsibilities for Region Kronoberg are health care, public transportation, and regional development.

To reach the Plus Energy goal there are many pieces that needs to fall in place. The most important components are removal of fossil fuel use and more regional production of renewable electricity. Removal of fossil fuels are closely linked to transforming road-based transportation (cars, buses, and trucks) as well as working machines (haulers, fork-lifts, tractors etc) to use sustainable fuels such as biomethane, green hydrogen and electricity produced by low carbon sources. Some smaller amount of fossil fuels is also used in industry. The private and public heating sector is almost free from fossils since some decades.

The replacement of the remaining fossil use will lead to a higher demand of electricity and hence the sub-goal of more regional electricity production will be even more important to focus on. Since new electricity production will at a large share come from variable sources such as wind- and solar power, the strain on the electrical grid will increase and storage of electricity will be more important.

When creating this Regional Action Plan focus has therefore been directed into two areas:

1. Hydrogen as a sustainable fuel for transportation. There is a large interest for production and use of green hydrogen in Kronoberg. This is initiated by the regional industry actors in the heavy transportation sector. Also, the municipalities in Kronoberg have started to take concrete actions to support the use of hydrogen.
2. A robust electrical system to enable an increased use of electricity. Production of electricity must be built out in parallel with new and smarter grids. Storage solutions and user flexibility are other key components in the electrical system. Price for renewable electricity must be competitive to replace fossil fuels at a high enough pace to reach the climate goals. More decentralised electricity production (mainly solar PVs) is built and connected to the system.



Part III - Details of the actions envisaged

ACTION 1:

Create a Roadmap for green hydrogen in Kronoberg based on electrification commitments

1. **Relevance to the project**

Hydrogen as an enabler and key component in the energy transition is recognized by the EU in many ways, for example through “A hydrogen strategy for a climate neutral Europe” of June 2020. When the strategy was presented also support mechanisms of 430 B€ to investments in hydrogen were announced.

Hydrogen can be used for many purposes; as a fuel in transport sector, to replace coal, coke, and other fossils in industry processes and to replace fossil fuels in heating sector. Hydrogen can also be used for storing energy and to equalize load in the electrical grid.

When discussing hydrogen with project partners it was found that especially the City of Ostrava has made a comprehensive plan for using hydrogen for example as a fuel for the city’s buses. This was demonstrated in detail at a virtual site visit arranged by POTEnT on August 19, 2021. Directly after the site visit a regional Kronoberg stakeholder meeting was held by ESS where learnings from Ostrava were discussed.

Learnings from the Ostrava “visit”:

- Ostrava has defined a “Hydrogen region” and want to create a complete value chain including production, storage, distribution, fueling and end users. It is important to have a complete value chain, an “H2-ecosystem”, in place if you want to introduce a new energy system.
- Ostrava has an integrated approach and try to link different sub-projects to each other.
- The city has made a comprehensive mapping of the regional stakeholders and they were found to be quite many.
- Ostrava are focusing on using hydrogen for decarbonization of freight, buses, ships, trains, and local transportation. Existing infrastructure for production and transmission (piping) can be used.
- Hydrogen is an important component when making Ostrava’s strategic city plan.
- At an initial stage Ostrava will use hydrogen produced from natural gas reforming (grey hydrogen) as fuel for public city buses.



Learnings to import to the Hydrogen Roadmap action in Kronoberg:

- Focus in Kronoberg will also be to create a complete value chain, where the users are seen to be the critical link. Production of hydrogen is a more standardised procedure, but quite expensive at an initial stage.
- Most stakeholders in Kronoberg are probably known today thanks to POTEnT project. The stakeholder map made in Ostrava will be used to identify possible more stakeholders.
- A component in the roadmap action will be a review of the Kronoberg municipalities SECAPs. The municipalities with large interest in hydrogen shall have a SECAP that reflects this. If not, this is the case, an updated SCAP shall be made.
- In Sweden, including Kronoberg, only hydrogen produced from renewable sources (green hydrogen) will be accepted by the market. Producing hydrogen from non-renewable sources could be considered for a shorter period as in Ostrava if a netto CO2 reduction is proven.

Examples of measures inspired by POTEnT are:

- Ljungby municipality's decision to plan for a local hydrogen fueled local bus.
- Tingsryd municipality has decided to investigate the possibility to produce hydrogen in the vicinity of a local hydro power plant.
- The regional council's decision to assign a task to the department for regional growth to support the introduction of a hydrogen value chain in Kronoberg. Action 1 (described below), a Roadmap, will be first part in this support.

The Energy Agency for Southeast Sweden (ESS) has in their POTEnT stakeholder group several organisations interested in hydrogen, one example is the municipality owned energy company Växjö Energi AB. Thanks to POTEnT several regional organisations with interest in hydrogen could at a short notice be summoned to sign Electrification commitments when these were asked for by the Swedish government initiative Fossil Free Sweden. The commitments focus on electrification of heavy transport using hydrogen as an enabler.

The regional council has in their plan and budget for 2022 assigned a task to make a roadmap for the use of hydrogen in Kronoberg. The POTEnT project has paved the way for this roadmap through organising network meetings and webinars on the theme Hydrogen. The stakeholders attending these meetings then formed the basis of the organisations signing the Electrification commitments. This step has been done, as the document mentioned has been sent to the Swedish government authorities and officials in May 2021. Based on the commitments made in all regions in Sweden the Government in December 2021 published a national action plan for electrification of main roads in Sweden.

2. Nature of the action

The action will be to create a Hydrogen roadmap. This will be based on a follow up and detailing of the regional electrification commitments.

The roadmap will focus on strengthening the market of hydrogen gas and biogas in the transport sector in Kronoberg. This action revolves around the electrification commitments made by the local authorities and companies in the county of Kronoberg signed in May 2021.

The benefits with a roadmap will be to create a structure for the regional work, give an overview of the various hydrogen initiatives, and to see possible synergies between projects. The roadmap can show strengths and weaknesses in the hydrogen value chain. It will also inspire new initiatives and facilitate funding opportunities. A detailed stakeholder mapping inspired by Ostrava will also be part of the roadmap.

This roadmap based on concrete initiatives will then be an important document when creating the next version of the Green Kronoberg policy in 2025.

The regional commitments are

ESS, The County Administrative Board (CAB), Miljöförordn Sverige (MS) and Region Kronoberg (RK) intend to implement knowledge and competence-enhancing initiatives and coordinate the work carried out to increase the pace of electrification of heavy vehicles. Some examples of this work are:

- RK will be leading the work creating the hydrogen roadmap.
- CAB are taking the lead in developing a test case for a hydrogen value chain.
- MS have been granted ERDF-funding for a pre-study on SMEs need for low carbon fuels. ESS are in the POTEnT project developing an action plan (this document)

Uppvidinge Vätgas AB will build a facility to produce hydrogen outside the village of Älgshult, in eastern part of Kronoberg including a stationary filling station for hydrogen fuelled vehicles located in Älgshult. The hydrogen will be produced by electrolysis using green electricity from a wind turbine owned by the company. The initiative has been granted 70% funding by the Swedish government. The hydrogen will be offered mainly to heavy transportation test cases or used at a nearby industry.

Volvo Construction Equipment in Braås, intends to take an active part in building a filling station for hydrogen in the vicinity of their production site. Additionally, the regional and local authorities and organisations, including ESS commit to arrange activities to raise awareness and knowledge on electrification of heavy vehicles.

Volvo sees hydrogen as a promising fuel to use instead of diesel in their future products.

The company has studied the technology for some time and are following the development close. If the company decides to start producing articulated haulers run by hydrogen, they need regionally produced green hydrogen for their testing and production. A filling station close the factory will then be an important part of the regional hydrogen value chain.

GreenCharge Infra AB intends to contribute with payment solutions for electricity and hydrogen refuelling at public fuel stations for hydrogen-powered vehicles.

A reliable and easy to use payment system is important to gain acceptance for a new fuel. GreenCharge has experience of similar systems for electrical chargers and can use this when public filling stations for hydrogen are established in Kronoberg.

Ljungby municipality intends to coordinate and implement initiatives that facilitate location of electric charging and filling stations for hydrogen. The municipality will also investigate the possibilities to have a local public bus line with hydrogen fuelled busses. The municipality wants to be a front runner in the regional hydrogen eco system. Both on political level, and among the local companies there are an interest and will to contribute to the energy transition.

The municipality are enabling for a filling station by dedicating an area for a station in their city plan. The municipality has also given instructions to their local energy company to engage. The energy company are now preparing for building wind turbines close to Strandmöllens facility (see below) location where hydrogen will be produced. The turbines are needed to supply the electrolysis with green electricity.

Markaryd municipality intends to coordinate and implement initiatives that facilitate location of electric charging and filling stations for hydrogen.

In Markaryd the local industry, for example heat pump producer Nibe, has supported local initiatives on hydrogen. The municipality has for example a cooperation with the EU funded NHC-project. This project will build several hydrogen filling stations along larger roads in Sweden. It is not yet decided a station will be built in Markaryd, but negotiations are ongoing.

Småländska bränslen AB intends to establish public filling stations for hydrogen-powered vehicles adjacent to the company's biogas stations, primarily in Markaryd and Växjö.

Today the company operates several filling stations for biogas in Kronoberg and adjacent counties. The leap to also supply hydrogen is then short and natural. Some of the existing filling stations are already prepared to complete with equipment needed for hydrogen. The decision to also supply hydrogen will be based on a demand from the market and a belief in a profitable business.

Strandmöllen AB operates, together with Ljungby Energi and Ljungby municipality, one joint project on hydrogen as a fuel, with intended production and filling station in connection to Strandmöllen's facility in Ljungby (and close to E4 road).

The company are today supplying hydrogen to industry in Sweden. This hydrogen is imported from the company's facility in Denmark where it is produced. The company now believe that the use of hydrogen will increase in Sweden and are therefore preparing to meet this demand. The production itself by hydrolysis is well-known to the company.

The challenge in Kronoberg is to ensure supply of green electricity to the process. Solar PVs will be built on the company's land, but they will not produce enough electricity, especially during winter period. The company is then depending on Ljungby Energi and their plans to build wind turbines close to the Ljungby facility. A positive aspect is that the company is located close to one of the heaviest trafficked roads in Sweden – E4. Heavy trucks are seen as one of the best suited types of vehicles for hydrogen as fuel. A filling station close to Strandmöllen and E4 will then be an excellent location with a large number of trucks passing each day.

Uppvidinge municipality intends to coordinate and implement initiatives that facilitate location of electric charging and filling stations for hydrogen.

The municipality started some years ago a pre-study on combining solar PVs with hydrogen for storage of energy in a new rental housing. That study did not lead to a concrete installation but built knowledge on hydrogen.

Initiatives in the municipality such as Uppvidinge vätgas needs support for example when applying for building permits. A permit for a filling station also needs cooperation and acceptance from the local rescue service (a responsibility under the municipality). A hydrogen filling station needs a robust electrical grid connection to work properly. This is a parameter that coincide with requirements for e-vehicle charging stations. A cohesive planning of infrastructure for hydrogen and electrical chargers is then of great benefit and in line with this promise.

Växjö municipality intends to coordinate and implement initiatives that facilitate location of electric charging and filling stations for hydrogen.

Växjö municipality is known for its extensive work with decarbonisation of Växjö through a biofuelled district heating program. Sandviksverket a CHP-plant, operated by VEAB AB, produce renewable heat and power to the city.

In cooperation with Linneus University the possibility to also produce hydrogen at the plant was investigated. Although production is not yet started VEAB, and the municipality have built knowledge on hydrogen and its possibilities. As for Uppvidinge municipality filling stations are planned in Växjö and need support to be realized. Coordination of hydrogen and e-charging infrastructure is also here important for the same reasons as for Uppvidinge.

3. Stakeholders involved

Region Kronoberg, department for regional development will be responsible for developing the roadmap. The organisations that signed the electrification commitments will contribute to the content in the roadmap. The main stakeholders involved are listed below:

Stakeholders

- **ESS**, is owned by the 25 municipalities and the three Regions in southeast Sweden. ESS mission is to support its owners in setting, monitoring, and reaching the environmental goals with focus on energy.
- **The County Administrative Board**, is a governmental organisation with one of its tasks to support, coordinate and lead the energy transition regionally.
- **Miljöfordon Sverige** is a non-profit organisation supporting municipalities in reducing the CO2 footprint from their internal transports.
- **Uppvidinge Vätgas AB** is today owning a wind turbine located in Älgult and produce renewable electricity. The company has a vision to also supply hydrogen that will enable fossil free heavy transports for example within the forestry sector.
- **Volvo Construction Equipment** in Braås, is the world's leading supplier of articulated haulers. These vehicles, today driven by diesel, are hard to decarbonize and using hydrogen as fuel is seen as the most promising technology to enable this.
- **GreenCharge Infra AB** provide payment solutions for electricity and hydrogen refuelling at public fuel stations for hydrogen-powered vehicles.
- **Småländska bränslen AB** is a leading regional provider of biogas (bio methane) and operates several public filling stations for this fuel in southeast Sweden.
- **Strandmöllen AB** operates a gas production facility in Ljungby. They are today supplying hydrogen produced in Denmark to Swedish customers but intend to start production of green hydrogen in Ljungby.
- **Ljungby Energi** is a municipality owned Energy company that today produce heat and electricity from waste incineration, biofuels, and hydro power. They also operate a district heating network and are the local grid operator.
- **Ljungby, Markaryd, Uppvidinge and Väckjö municipalities** are four out of eight municipalities in Kronoberg county. These are the municipalities with the highest interest in hydrogen and want to act as fore runners.

4. **Timeframe**

The estimated timeframe for creating the roadmap is March 2022- December 2023. Implementation of the electrification commitments is planned to happen between 2022 – 2025, varying depending on the stakeholder involved. The first realized electrification commitment will be Uppvidinge Vätgas initiative, to be realized in 2022. This will probably be followed by the initiative from Strandmöllen AB in 2023. The timeframe for all stakeholders is not yet finalized, and it is open to undergo some changes and updates as we proceed with the discussions, action steps and activities with the local and regional authorities, organisations, project partners and stakeholders.

5. **Indicative Costs**

The cost depends on the ambition and extent of the roadmap. Estimated cost for a case with high ambition is 100 keuro.

Many of the costs related to the implementation of the electrification commitments are unknown today. An estimate of the cost for the Uppvidinge Vätgas project is approximately 2 M€, while the Strandmöllen AB production of hydrogen facility is estimated to 10 M€. Moreover, costs related to other steps and activities will be indicated and elaborated later as the projects continues.

6. **Indicative funding sources**

Depending on the extent of the roadmap funding could be either an activity in exciting projects/cooperation or funded by ERDF Småland & Islands, Interreg North Sea region, regional funding administrated by the regional council or project financing from the Swedish Energy Agency.

Both Uppvidinge Vätgas and Strandmöllen projects have been granted funding from the National instrument “Klimatklivet”, (loosely translates to climate leap), with up to 70% of the investment cost. The remaining funding will come from each company’s respectively internal financing means and funds. Furthermore, other funding sources related with other possible upcoming activities and steps within the first action and project will be explained and reported later as the initiative continues. For the moment these are the known and expected costs and funding sources for these actions.

ACTION 2

Create a regional cooperation platform to ensure a robust electrical system in Kronoberg

1. **Relevance to the project**

During the years when POTEnT has been running it has been more and more clear that replacing fossil fuels will require a huge amount of climate friendly produced electricity.

In Sweden the usage of electricity is expected to more than double to 2045!

The more fossil fuel each region is using today the more electricity will be needed to replace it. Saving energy and reducing the usage must be priority one, but even so the need for additional electricity will be high. The condition in the POTEnT regions varies and the solutions for production of electricity, regulation, etc will be different. However, the electrical grids are connected all over Europe and electricity produced in Kronoberg can be exported to Poland and used there. High electricity prices in Germany will for example also lead to higher prices in neighbouring countries. A robust electrical system for production, transmission (grid), storage and active end-users are vital to enable an energy transition.

In POTEnT several virtual site visits has dealt with electricity production. New renewable energy directive (EU 2018/2001) is being implemented in the member states now, and this will give increased possibilities for energy cooperatives, local micro grids etc. Local authorities are taken an active role in many initiatives.

In Sweden municipalities has been active in the energy sector for long. Many municipalities (also in Kronoberg) own and run energy companies producing heat and power and being grid owners. In other POTEnT regions local authorities are less experienced in energy matters.

Until recently, developing the plans for the different energy sectors has been a more closed process, where experts, politicians and energy authorities have established their (respective) vision for a common future. The number of electricity producers has historically been limited being mainly larger or medium sized companies. This is now changing, and many more actors are seen on the market. Electricity is also produced locally by private persons, cooperatives, and other energy communities. Production is distributed instead of only happen at few places. The energy transition happens fast with for example electrification of cars and busses. All this changes the conditions for the electrical system and creates new challenges.

Region Kronoberg has realized that a robust electrical system is needed to reach the Plusenergy 2050 goal, and that the Region need to be more proactive. An electrical system with robust supply and competitive cost of electricity is also required to reach the green growth ambitions that the Region has set up.

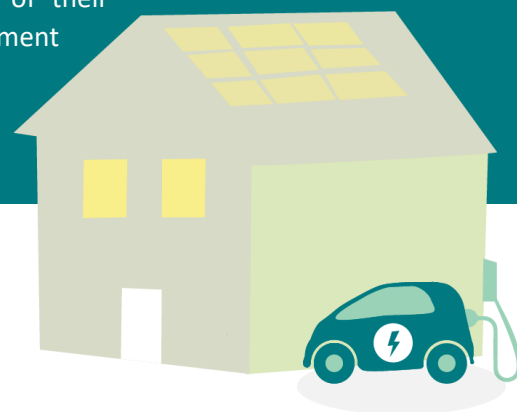
Inspiration for the work to secure the electrical supply in Kronoberg has been found through POTEnT site visits. In Germany/Ettlingen (virtual site visit on September 17, 2021) and

France/Lorient (February 9, 2021) for example cooperative solutions will play a role involving citizens at local level. On May 27, 2021, good examples on energy prosumer initiatives were shown at a “visit” to Spain/Pamplona and Italy/Parma and Bologna.

The discussion and bilateral exchange with Ettlingen have continued during 2022 with a Teams meeting on January 26 as an example.

Learnings from POTEnT activities:

- Much renewable electricity production such as solar and wind power are being planned in POTEnT regions, often in a context of an energy community.
- When creating energy communities, a system perspective is often used including Solar PVs, energy storage, micro grids, and e-car charging. Shown for example at virtual site visit on May 27, 2021 (GECO-project Parma).
- In some regions, energy poverty is a problem with for example cold houses causing health issues (GECO-project Parma).
- A conclusion is that a more distributed energy production with many small producers will lead to a more complex electrical system with many producers and prosumers (energy is produced and consumed by the same person/legal entity).
- In Ettlingen also larger scale cooperative energy systems including ownership by local companies have started recently with a good result.
- The electrical grid will also have to be built out substantially and face challenges since this is traditionally a very slow process. One possibility here is micro grids for energy communities enabled by the new EU renewable energy directive.
- The virtual site visit on May 27, 2021, to Pamplona showed that micro grids and the new renewable energy directive will give opportunities. In Spain you can connect houses within 500 m distance to a common micro grid.
- Coordination will be important and regional authorities can play a role here. Moreover, as an inspiration we looked at the interregional exchange from the Green Energy Community project in Bologna (May 27, 2021). One of their objectives is to foster collaboration between and involvement of citizens, commercial activities, and local businesses.



By initiating a regional platform for cooperation including regional and municipal stakeholders around issues related to the electrical system we intend for the voice of the community to also be heard. This is in line with the goals of POTEnT as the collaboration between private and public stakeholders plays an active role in the energy transition process.

Details from the POTEnT learning that will be implemented in the scope of the regional platform are:

- The cooperation platform shall also include representatives from community energy (CE) initiatives. When the new electricity directives are implemented in Sweden CE is likely to be more popular. CE will then play a more important role in the local and regional energy system and hence important to consider from a technical perspective. CE is also important since it mobilize citizens and increase awareness and knowledge among them. Also involving companies (as in Ettlingen) in CE will be investigated also in Kronoberg.
- The rules for setting up micro grids have recently been changed in Sweden. Examples from POTEnT shows that this has great potential especially in urban areas. Regional initiatives on micro grids shall be identified and supported.
- The recent high electricity price in Sweden has introduced an increased risk for energy poverty also in Kronoberg. Until now this has been an “unknown” phenomenon, but energy prices also from a poverty perspective will be followed by the platform.
- It is important the Kronoberg platform also include the citizen perspective and voice. How this best shall be done in practice is to be decided.

Examples of measures inspired by POTEnT are:

- Meeting place Häradsbäck is planning for a large community energy solar PV facility including energy storage with hydrogen.
- Länstrafiken Kronoberg who operates public busses in Kronoberg will build solar PVs at the new electrical bus charging terminal in Växjö.
- Tingsryd municipality has decided to investigate the possibility to produce renewable electricity from either solar PVs or small-scale CHP fueled by bio waste from forestry.
- Business Region Kronoberg (BRK), an initiative led by Region Kronoberg has energy supply as one of its focus areas. BRK gather enterprise supporting organisations including the municipal developers.

Policy owner Region Kronoberg has in their plan and budget for 2022 a task to build knowledge on and create conditions to improve the supply and cost of electricity. This is triggered by increased difficulties for companies especially related to grid issues. The work shall be done in cooperation with municipalities in Kronoberg and with adjacent regions.

2. Nature of the action

The second action focuses on the creation and development of a regional platform for cooperation among the stakeholders and actors involved in activities to ensure a robust electrical system in the county of Kronoberg.

Key actors are for example, the grid owners (DSOs), electricity producers, large energy consumers, municipalities, and regional authorities. The purpose of this platform is to exchange and share information and create realistic forecasts regarding the supply, use and demand (need) of electricity and new electrical infrastructure. This can then give early signals about means and actions to take to remove barriers for the energy transition.

The platform will also follow and support the development of more decentralised electricity production and the implementation of the new renewable energy directive. As seen in other POTEnT regions this will be an important part of the electrical system and must be integrated in a good way to achieve a robust system.

The organization and leadership of the platform is yet not decided but the platform shall, when needed, initiate working groups to handle specific challenges. For example, grid development in a municipality, or location of larger electrical charging stations.

Cooperation will be sought with similar initiatives in adjacent regions. The international perspective will be maintained through a continued participation in Interreg and other EU-programmes.

First activity is a close follow-up of the development and creation of similar initiatives (projects, platforms etc) in the neighboring counties, and areas in Sweden with known issues in the electrical system.

- A regional energy balance (Sankey diagram) will be made.
- The implementation of the Renewable energy directive into Swedish law, specifically on the potential and improvements for community energy will be studied.
- A regional platform will be set up and tested. The platform will be an arena for exchange of information on supply, transmission, and use of electricity in Kronoberg. Different solutions for storage of electricity and user flexibility will also be part of the platform's agenda.

3. Stakeholders involved

Potential stakeholders foreseen at this moment to be invited to the platform are:

- **Region Kronoberg and their department for regional development.**
- **The County Administrative Board of Kronoberg (CAB)** - responsible for coordinating energy and climate activities in the county. The CAB is representing the government regionally and shall work for implementing national goals.
- **ESS** will play a role as experts on renewable energy, energy savings and sustainable transportation. ESS also has good knowledge and experience finding funding for projects and other activities.
- **Grid owners** on regional and local level (five organisations) are key since they operate and develop the electrical grid. The regional grid together with a large portion of the local grid is owned by E.ON Elnät AB. There are then four municipality owned local grids in Kronoberg, where Västman Energi Elnät AB is the largest covering more than half of Kronoberg population.
- **The business developers on regional and municipal level** since they at an early stage catches up new industry establishments and other large electrical consumers.
- **Electricity producers.** It is important to balance the need for more electricity with more regional production.
- **Industry/large electricity consumers.** Examples of suitable companies are Stena Aluminium who produce recycled aluminium, Amo Cable AB who produce electrical cables.

The organization of the platform is yet not decided. Possible actors to lead the platform could be Region Kronoberg, the County administrative board, business networks or other interregional networks.

4. **Timeframe**

This action is expected to be initiated in 2022 and continue until the structure of the platform is set.

5. **Indicative costs**

Depending on leadership and other possible initiatives from relevant actors in the field a cost for in depth- investigations and setting up the organisation of the platform and cooperation might require personal resources corresponding to 50-100 % of a yearly fulltime. Depending on ambition the platform could then need an annual funding of 25-50 k€.

6. **Indicative funding sources**

Potential funding for the cooperation platform could be ERDF Småland & Islands, regional funding administrated by the regional council, Interreg North Sea Region or project financing from the Swedish Energy Agency.

Date: Växjö, Sweden 220630 _____

Name of the organisation: Region Kronoberg

Signature of the relevant organisation:  _____

Name and title: Sunny Sandström, Head of Department, Regional Development _____