

# Bioenergy uptake through national energy funds in Småland

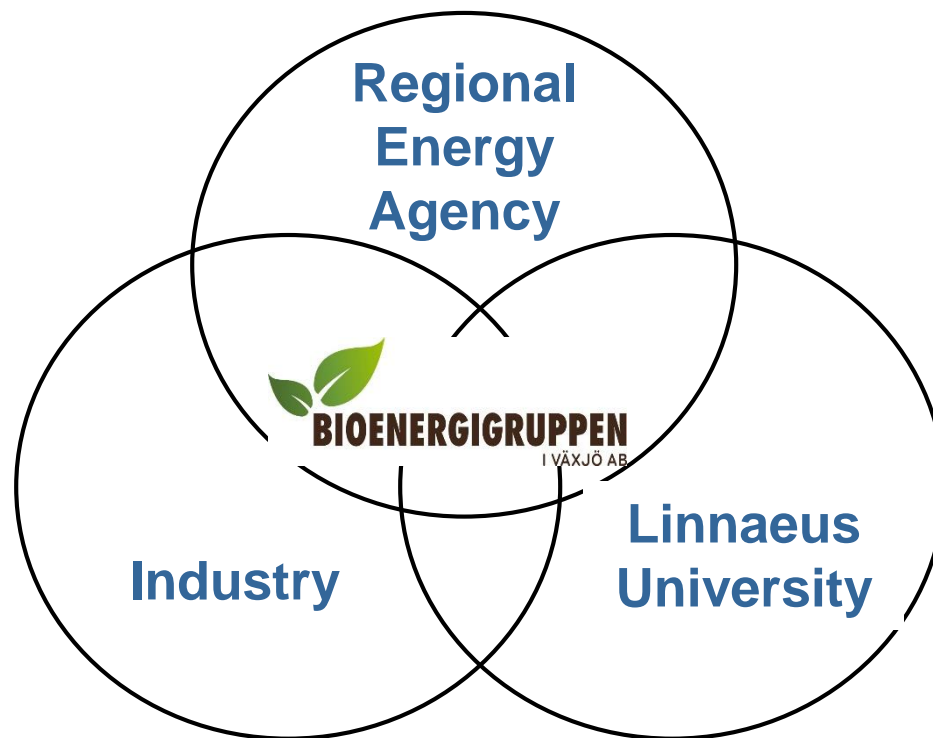
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Funded by the European Commission  
Horizon 2020  
grant agreement no. 646457  
01/04/2015 – 31/07/2018

# Bioenergy group of Växjö



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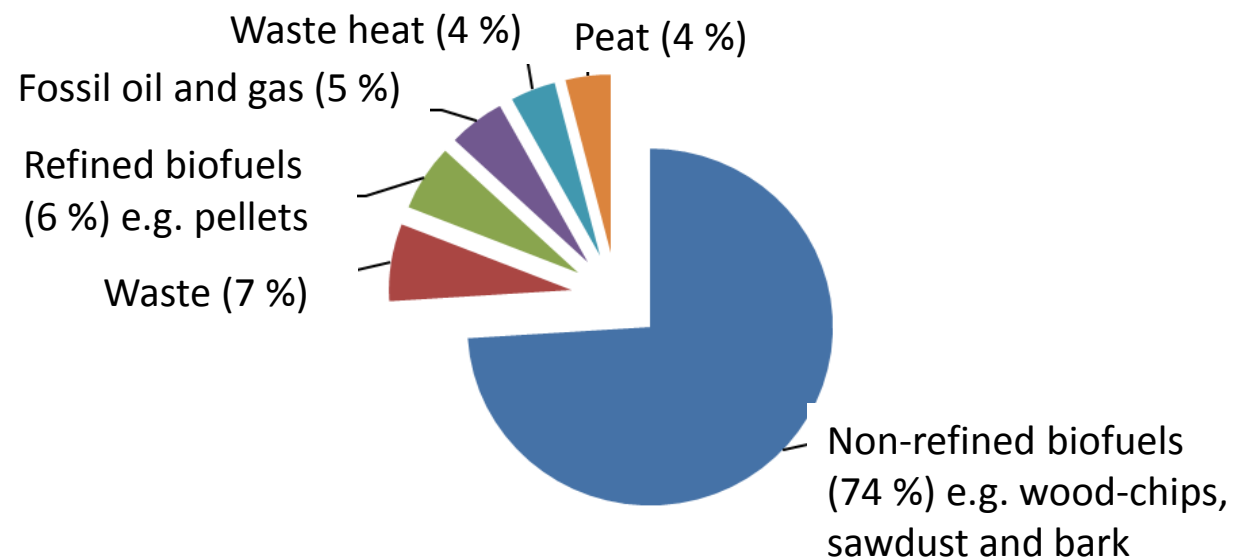


### Purposes:

- To increase the share of bioenergy in the region
- To cooperate for better effectiveness in all steps, and between the steps, of the value chain
- To foster relevant research at the Linnaeus University



### Share of various fuels for production of district heating in Kronoberg



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# KLIMAT KLIVET

”Klimatklivet” is a national funding scheme with the purpose to decrease the emissions of GHG.

The first call was opened 2015.

Annually four calls for applications.

Criterion for granting is reduction of GHG-emissions per invested SEK.

Investments that can be supported are concrete climate initiatives in areas such as transport, industry, residential, commercial, urban development and energy. Schemes may involve, for example, replacing fossil oil with biofuel or construction of filling stations for renewable fuels for vehicles.



# KLIMAT KLIVET

The scheme may finance up to 70 %  
of the investment.

The calls are open for public actors  
as well as private actors.

Since 2015, the Swedish  
Environmental Protection Agency  
has granted funds to close to 2000  
actions.

Most of the actions, and more than  
70 percent of funds go to private  
companies.



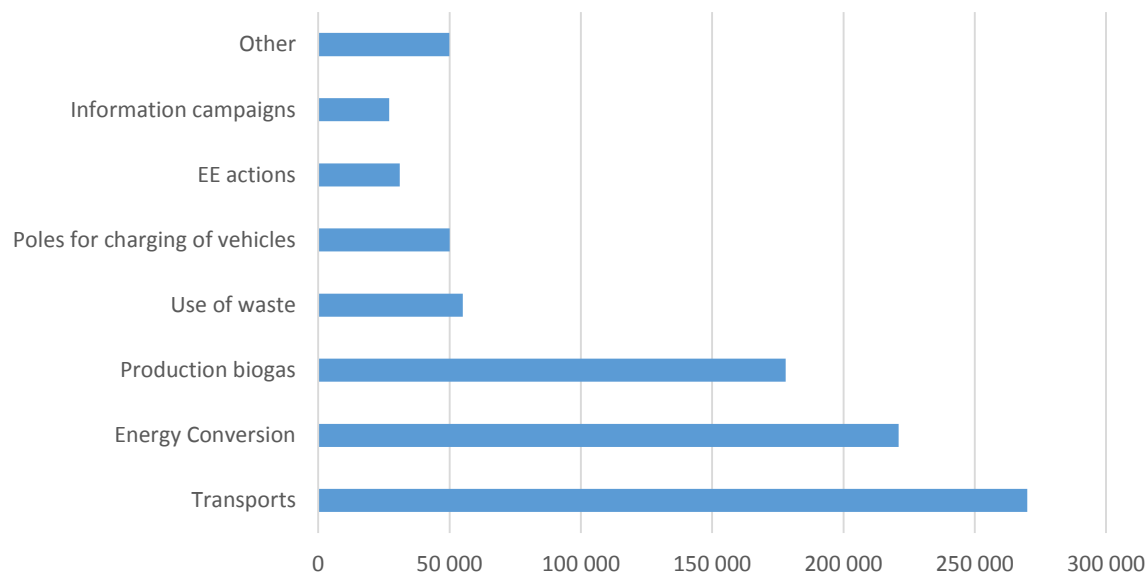
# KLIMAT KLIVET

Actions have been granted so far for 300 MEURO. It corresponds to investments to a total value of 700 MEURO.

And the scheme has been extended to 2020 for new applications.

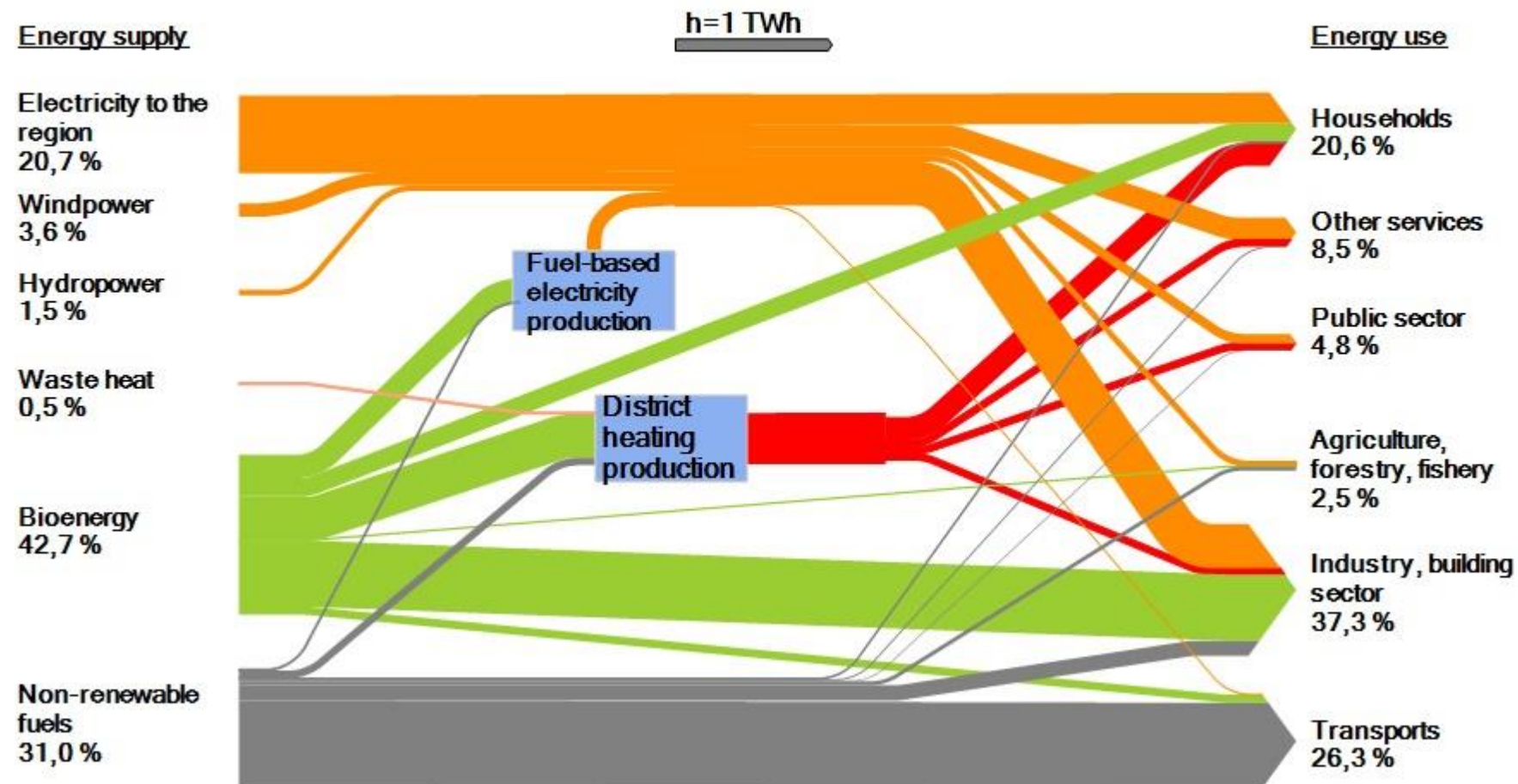


Annual decrease of GHG emissions (tonnes) broken down by category



Total annual savings of GHG emissions: 850 000 tonnes.  
It corresponds to 1,5 % of Swedens total annual GHG emissions.

# Energy use and renewable electricity and district heating production 2013 in 3 counties in Småland: Jönköping, Kalmar and Kronoberg (%)





### Results of the funding scheme

- Less dependence of imported fossil fuels
- Creation of jobs, often located to the countryside
  - Lower emissions of GHG
- Strengthen the development of innovations


*The technology shift, structural changes and innovations implemented in the scheme strengthen the competitiveness of Swedish business. The direct employment from 2015 to 2018, which occurs as a result of Klimatklivet, is estimated to approximately 2 350 fulltime equivalences.*

*Source: Swedish Environmental Protection Agency*



Regional exempel: Värnamo Energi,  
that has been fostered by the SecureChain initiative

The enterprise owns four old fossil oil fuelled boilers in four small communities serving e.g. schools and service apartments for elderly with heat. Värnamo Energi wants to convert to bioenergy, extend the grids and to offer connection to DH to more households and industry.



The boilers in "Lanna" and "Bor" co-funded, 0,85 MEURO (65 % of total budget). The consultants report was used as a base for the application for co-funding. Co-funded by the national fundings scheme, "Klimatklivet".

Later on, the SME wrote an application for extension of the DH grid in "Bor" as a consequence of the previously granted. Granted for 0.4 MEURO (55 % of total budget).

Even later: application for new boilers in "Bredaryd" and "Forsheda". Granted for 3.0 MEURO (82 % of total budget).

*Heat capacity of each of the new bio fuelled boilers in the communities:*

*Lanna: 0.75 MW*

*Bor: 2 MW*

*Bredaryd: 1.5 MW*

*Forsheda: 2.25 MW*



*Excavation for extension of the grid in Bredaryd*



Annual CO2 savings are like 1 000 to 2 000 tonnes, it depends on their successfulness to attract new customers.

The energy mix consisted of 90 % biofuel for the heat deliveries before the investments for conversion from fossil oil was. Now, it will be between 0 and 2 %.



*The new heat plant in Lanna*



*The new heat plant in Bor*



Thank you for your attention

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