



August 2019

## Folkecenter News

### International Conference on Sustainable Agriculture

Sustainability does not only mean renewable energies: there are many fields we can (and we should) work on to achieve the 17 UN's Sustainable Developments Goals; one of them is agriculture, which, according to the World Resources Institute, accounts alone for 13% of the global greenhouse gases emissions (second emitter, just after energy).

This was the background for Folkecenter to host the 9th ICSA conference (International Council for Sustainable Agriculture), an international event which gathers every year experts from all over the world to discuss how can the agricultural sector become more sustainable.

The title of the conference was: "Reliable Renewable Energies for Off-Grid: Empowering Rural Habitats" and there were seven main topics: (1) Energy, Food and Water Security & policies; (2) Green Renewable Energy Systems; (3) Usage of Small Wind Turbines for Agricultural Applications; (4) Energy, Environment in Industry and Environmental Impact; (5) Sustainable and Eco-friendly Agriculture; (6) Smart Farming Technology; (7) Value Added Zero Waste Processing Technology.

As it can be seen from the list, a wide variety of topics were covered, because the emission problems should be solved by looking from different angles: we need everything, from grandfathers' techniques, to modern technology.

The event, which was held between the 25th and 29th of August, saw the participation of 35 experts coming from different parts of the world (Denmark, India and the Middle-East just to mention some); they presented their studies and showed some possible solutions on how nature can help us in reducing our environmental impact (**Did you know that waste water cleaning can be done by using plants?**).

The conference was organized by the Nordic Folkecenter, the Danish Test and Resource Center for Small Wind Turbines, the International center for Renewable Energy (IFEED), the International Council for Sustainable Agriculture (ICSA), the Food and Agricultural Organization (FAO) and the University of Technology of Baghdad and it was sponsored by Xmire, Thisted municipality and Miljø-og energifonden.

The book of abstracts and the presentations can be found [here](#).



DANISH TEST AND RESOURCE CENTRE  
FOR SMALL WIND TURBINES  
Small Wind Test and Lab

### Folkecenter Starts a New Project in East Africa

Folkecenter is proud to announce the launch of a new project in East Africa. The project, named East African Civil Society for Sustainable Energy & Climate Action (EASE & CA) will run up to 2022 and it is carried out in collaboration with INFORSE, INFORSE East Africa, Tanzania Traditional Energy Development Organization (TaTEDO), Sustainable Environmental Development Watch (SusWatch), Uganda Coalition for Sustainable Development (UCSD) and JEEP Folkecenter Uganda. The countries involved are Uganda, Kenya, Tanzania and Denmark and the aim of the project is to empower poor, rural communities to get access to clean energy and improved livelihoods in an economic and climate friendly way. The project actions will be on a local, regional, national and international level. You can follow the project updates [here](#).



Opening meeting, July 2019

# Folkecenter Testing On-Grid Inverters with Small Wind Turbines

VANNHANDEL, a Norwegian supplier of small wind turbines since 2004, is currently collaborating with Folkecenter for testing of on-grid inverters with small wind turbines. At the Folkecenter test field, the LE-450 and LE-600 small wind turbines, mated with different inverters which feed the energy into the electrical grid, have been deployed for data collection and optimization. Consumers wishing to supplement their electric energy with power from the wind, or gain experience with a small wind turbine connected to the grid, can benefit from these entry-level systems. Small wind turbines are also a great learning tool for schools and universities.



## PV System at Folkecenter

Energy production by module (kWh)



★ Best Producing Module

### Nordisk Folkecenter

Month to date energy 1,190.73 kWh (DC)

Year to date energy 5,294.24 kWh (DC)

Lifetime energy 62,523.81 kWh (DC)

### Environmental Impact

According to the United States Environmental Protection Agency, your PV system's lifetime production of solar energy so far has the following Carbon Dioxide Equivalents:

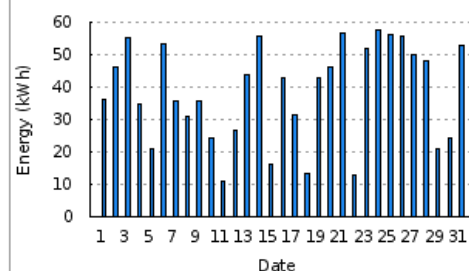


Carbon sequestered by 54 acres of forests in one year.



Green house gas emissions saved from 9 passenger vehicles driven in one year.

### August Daily Energy Production



## E-Mobility in Folkecenter

Vehicle	Km	Regenerated energy	Kg CO2 saved
Nissan e-NV200	7,536	16% (1,206 km for free!)	1,032
Streetscooter	9635	-	1,320

# Meet the Trainee

## Valentin Heusgen

Valentin Heusgen (22, Germany) came as trainee from the end of February to the middle of July. Currently enrolled in the Renewable Energy course of the Technical University of Regensburg, he decided to come to Folkecenter to learn more about renewable energies, to try to apply the theoretical knowledge achieved during his studies and, in general, to get more involved in the field.

Valentin did not have a particular interest in a specific technology: he rather wanted to concentrate his attention on the connection of the different energy systems and on how these can be used in the best way, both from the technical and the social point of view; furthermore, he wanted to understand what are the limitations of each technology, to make sure that each is applied in the right context.

His first task during the internship was to make a report on geothermal energy, which was a more theoretical study; the goal of this was to learn about the current state of development of this technology and about what are the benefits and risks to it connected. Next, he started to work on a smart charging system for electric vehicles, work which he left a little on the side in favour of smaller projects (e.g. Building a wooden blade for a small wind turbine); he was sorry not to have enough time for the project of the charging station, and he would like to come back in the future to continue working on it.

“During my period in Folkecenter”, he says, “I have learned a lot of practical details you normally don’t think about when studying the topics theoretically, such as what are the costs, but also that if you have an idea you should not think too much and try to realize it...and if it goes wrong, well, at least you tried!”. Valentin thinks that the time in Folkecenter will affect a lot his future career and decisions, because he will start looking at renewables in a more complete way, always evaluating their pros and cons.

Moving to the social part, Valentin liked a lot the atmosphere at the center: one of the things he enjoyed most was the part of living together with people coming from different background but also from different generations, and that all these people were united by a common idea: that renewable energies are the solution for the future!

Another aspect he enjoyed a lot was the freedom given: doing things in the workshop, discussing potential solutions with the engineers or studying the topics he felt more interesting, all this was possible; this freedom, according to him, helps to develop a self-discipline.

Overall, Valentin was very satisfied of his period in Folkecenter, to the point that he is planning to come back in the future; meanwhile, he has already started to spread the voice about Folkecenter and, thanks to him, one new trainee from his university already come and one more is on the way.

You can find Valentin’s report on geothermal energy [here](#), while the video he made on how to build a blade is available [here](#).



## Folkecenter Membership

Did you know that Folkecenter has a group of supporters who sustain us for some activities (e.g. Excursions with the trainees)? If you like what we are doing, you might be interested in becoming part of this group. As Folkecenter supporter, you have the right to participate to our yearly general assembly, which elects 6 out of 11 board members. In this way, you will not only follow Folkecenter’s activities, but also influence the decisions.

Being a Folkecenter Supporter can cost as little as 100 DKK/year (14 €). You can find more information [here](#).



## Education2020

There are many international goals set by 2020...

Folkecenter’s 2020 will be the year of education. Renewable energies are no more limited by technology or economy, but it is time to form people capable of understanding them and, why not, develop them!

For this reason, and after the large attention received in COP24, we have decided to launch a number of courses to form trainer (and normal people) on thematics related to renewable energies.

You can find the planned activities on [folkecenterevents.net](http://folkecenterevents.net), while the full list of courses in our minds can be found [here](#).

