

## Beyond Energy Action Strategies



### D.3.2. – Workshop report on bankable projects and business models

**Title of the Workshop: .Utilisation of Wasteheat at Nyhamna**

**Date realised:15.01.2015**

**Location: Aukra community building**



**Submission date: 10.07.2015**



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## 1. General

<b>Topic</b>	<b>Utilisation of waste heat at Nyhamna</b>
<b>Date</b>	<b>15.01.2015</b>
<b>Location</b>	<b>The community of Aukra</b>
<b>Number of participants</b>	<b>24</b>

## 2. Objective

The purpose of the workshop was to present and discuss possible business models for utilizing the waste heat at Nyhamna. At the workshop there were possible investors and other people and companies that might have an interest in settle and utilize the waste heat at Nyhamna. The aim was also to find out what the most important next step is in the process.

## 3. Description and overall evaluation

In the beginning of the day there was an introduction to the project where possibilities for green business at the island were showed. Then there was a lecture about biogas production and digestate from the process. The community of Aukra presented available area for industry activities. And then there was discussion/workshop around the presented themes. After lunch there was a bus trip around the island where we looked at the natural gas processing plant and the available area around the plant suited for other industry activity.

There were discussions about how much heat a biogas plant need and the conclusion was that in a commercial plant 12% and more of the biogas is used just for warming the biogas in the process. Someone suggested that one could use lime slurry from a plant nearby to mix with in the bio gas process. Aukra community is planning to build several new public buildings in a near future which could have a need for heat. There are also plans for a new harbor at the island.

There are 5 milk producing farmers, one pig farmer, 3 meat producing farmers (one of them the third largest in Norway) at the island and on the mainland there are many other farmers close by. There has been one greenhouse at the island but is down right now. Suggestions came about contacting greenhouse schools to present the area and heat available at the island. The participants were satisfied with the meeting/workshop and wanted to follow the process further.

## 4. Outcomes and conclusions

One of the conclusions was that it is more business in producing biogas as a fuel than to burn it for producing electricity. Fertilizer or digestate from the bio gas process could be as good business as the bio gas fuel itself. It could also be affordable to produce marine bio mass for bio gas production. For the investors it was important to know the real cost of the heat and the potential of bio mass. Bio mass from farmers, fish-farmers and other industry with biological waste and also bio waste from households. The bio waste from household is per today sent all the way, about 1000 km, to Sweden for bio gas production. For the waste heat company (the natural gas processing plant owner (Shell) it was important to have a specific customer to be able to calculate the price. The county authority decided to try to use the case with new public building at the community of Aukra to release the

information from the waste heat owner. The county authority also planned to order some investigations concerning logistic of biomass and biogas and heat from the plant and also look at technical solutions. Another important aspect which has to be investigated is the ownership of the heat central that would distribute the heat coming from the natural gas plant. Together with the cost analyses from “taking” the heat out from the plant, calculations has to be made of how to sell the heat; at what cost and technical solutions for that. The price should be calculated out from a social, environmental and profit perspective.

## 5. List of Participants

List of participants

Name	Company	Email
Lina Jonasson	Møre og Romsdal fylkeskommune	Lina.jonasson@mrfylke.no
Ketil Valde	MR fylkeskommune	Ketil.valde@mrfylke.no
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## 6. Agenda

Copy paste the agenda of the workshop

Møre og Romsdal Fylkeskommune	
<b>Agenda for dagen</b>	
10.00 – 10.30	Introduksjon av prosjektet og muligheter for grønt næringsliv på Aukra (Lina Jonasson)
10.30 – 11.00	Kretsløpstanke med muligheter for biorest og biogassproduksjon (Ketil Valde/IngvarKvande)
11.00 – 11.30	Tilgjengelig areal for industri og næringsaktivitet (Geir Gøncz)
11.30 – 12.00	Spørsmål og diskusjon
12.00 – 13.00	Lunsj på hotellet
13.00 – 14.00	Geir Gøncz viser oss rundt på Aukra

Aukra 15 januar 2015

## 7. Photos

Provide photos and titles from the workshop



Photo 1 Bus trip around on the island of Gossen and at the gas-process plant.



Photo 2 Almost the whole group outside the Aukra community building

## 8. Dissemination material

Some of the dissemination materials/slides from the presentations that were presented at the workshop



Photo 3 Outline of the day

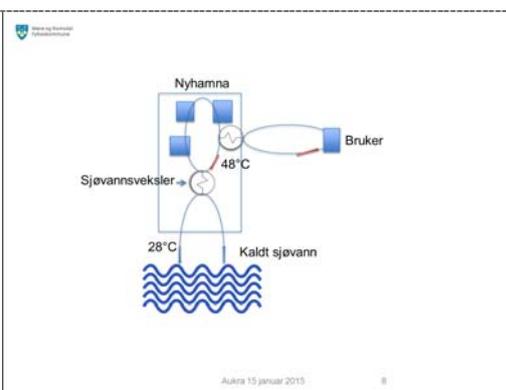


Photo 4 Description of wasteheat utilization presented by Lina Jonasson

