Norske Vandrerhjem

Electric cars welcome! - Norway

SUMMARY

Project description: To install and promote charging stations in hostels in designated areas in Norway where we believe the environmental benefits will be the greatest.

Project type: Energy Efficiency, Water, Education in Sustainability

National association: Hostelling International Norway

Project location: Kongsberg Hostel, Bergen Hostel Montana, Haraldsheim Hostel, Horten Hostel, Voss Hostel

Estimation of number of reduced tonnes of CO_2: If we take into account that our 5 charging stations will be used by 1000 cars (in total) in 2016, and that each car charges to drive 100 km, we can calculate that there is a saving of 5,2 tons CO_2

Total funds request: £ 5,000

Total project cost: £ 5,500

Annual £ saves and ROI (return of investment): We expect to neither lose nor earn a considerable amount of money from this investment. We would like this to be an extra service for our guests and the local community rather than a primarily cost-saving investment.

Why should this project be funded ahead of others: We believe that we here have an innovative project and one that can be replicated by other hostels in the future. By showing environmental consciousness in practice, we hope to get our guests to reflect on their own carbon footprint and how they alternatively can help to reduce it. We also hope this project can be a bridge between the local communities and the hostel and in this way help the mission for the hostels to be a meeting place.

DETAILED PROJECT INFORMATION

Electric cars welcome! – A project reducing CO2 emissions in the transport sector for hostellers in Norway:

In Norway, cars with the registration plate "EL" for "electric" is an everyday sight. Norway is in the absolute forefront of using electric cars (electric vehicles, hereafter called EVs) in the world. In 2015, **20%** of all new cars sold were EVs and the number is rapidly increasing, passing 50,000 EVs this year. Although there is a debate concerning how sustainable car batteries for EVs are, we believe that an increase in EVs is a step in the right direction for a more carbon neutral transportation sector.

Cars are responsible for 10% of the carbon emissions in Norway, 5.3 million tons yearly. Electric vehicles, on the other hand, emit no local pollutants and greenhouse gases. Hostelling International Norway wants to be a part of the new, electric transport era – especially **since 98% of Norway's electricity comes from hydropower**. EV owners usually charge their cars overnight in their homes or at work – but where do they charge them when they are out travelling? **Hopefully, soon in some of our hostels!**

What do we want to do?

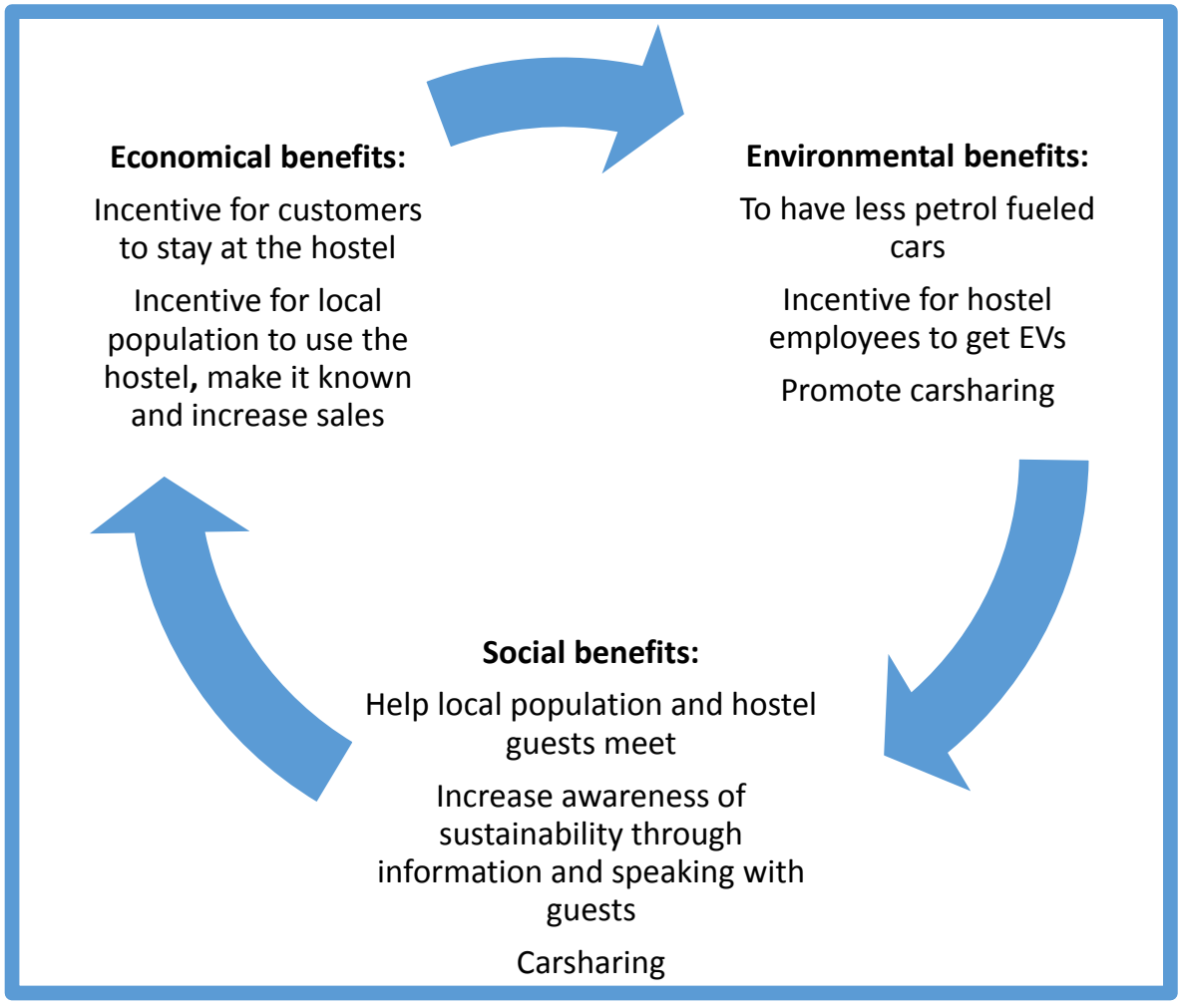
HI Norway wants to install and promote charging stations in hostels in designated areas in Norway where we believe the environmental benefits will be the greatest.

The charging stations will be registered and promoted on the national website **www.ladestasjoner.no**. We will inform guests from both Norway and abroad about the benefits of electric cars, using posters and information in reception areas and outside at the charging station.

We also will inform the local population about the possibility of charging cars at the hostel, and bring up the issue of car sharing for travelers. We would like to focus on hostels that are situated in a **100km-distance from larger cities in Norway**, as research shows that most people using EVs are located within this area. We have chosen hostels located in areas in relative closeness to big cities, but where there has been varying incentives from the municipalities to put up charging stations.

This, we believe, will both be an environmental initiative for those using EVs but also a way to show that HI Norway is engaged in new technology the road towards more energy efficient transport sector. There is an extra benefit in the information material we want to give to the hostels involved for their international customers – we believe that creating more visibility of initiatives such as EVs will have a positive impact on travelers' minds, just as information on solar cell panels could have a great impact on Norwegians when they travel abroad.

Sustainable Development Matrix:



Environmental impacts:

Norway is a large country with few people, to put it simply. The country has the second lowest population density in Europe, **making public transportation challenging** (Figenbaum and Kolbenstvedt 2015: 9). Taking into account that 98% of Norway's electricity come from hydroelectric power, focusing on electric cars is an obvious choice. Norway's focus on EVs is, as a recent report has put it: "a test site, with a global responsibility to test incentives and learn from experiences that can be useful in other countries also" (ibid: 23).

There are also the obvious advantages when it comes to noise pollution and general air pollution, that EVs have very little of.

One of EVs biggest challenges is how far you can drive using the battery, before you have to re-charge. Most EVs have an on-road range of 80-130 km. This means that EV owners need to have a dedicated parking space with electricity available. We want our hostels to take part in this, and to be a natural choice when EV owners are looking for accommodation. This will:

1) Provide EVs with cheap and easy-access electricity, helping reduce Co2 emissions as the drivers will not use petrol-fueled cars when travelling
2) Increase the visibility for both domestic and international guests when it comes to the use of electric cars – we will inform about the environmental impact of the cars in the hostels. As research shows: Norwegian "incentives can contribute to increased environmental consciousness" (ibid: 45).
3) Help increase overnights as EV owners will choose hostels for accommodation

Estimate of emission reduction:

Firstly, there is a big debate on whether one should include the EV batteries and the energy it takes to make the battery, when calculating the emission reductions for EV cars. We are no experts on this but have looked at various calculators when it comes to calculating emissions for EVs and emissions for other petrol driven cars.

If we take into account that our 5 charging stations will be used by 1000 cars (in total) in 2016, and that each car charges to drive 100 km, we can calculate that a petrol driven car emits 130g co2/km and an EV emits 78 co2/km, there is a saving of 5,2 tons co2. (130*100*1000 = 13000000g co2 – 78*100*1000 = 7800000g co2 = 5200000g co2).

We should also keep in mind that there are also no greenhouse gas emissions from EVs.

Saved Funds, ROI:

We expect to neither lose nor earn a considerable amount of money from this investment. There are many ways for the customers to pay for charging of EV batteries, and we want to look for a cheap but sustainable economic solution. Payment via an app, SMS or in person while checking in/out seems to be good options for guests and customers. We would like this to be an extra service for our guests and the local community rather than a primarily cost-saving investment.

How will we monitor the effects?

We will use a variety of methods to monitor the effects of this project.

First, we would like to evaluate - together with the hostels - how many cars have been using the charging stations on a monthly basis. This will be done through interviews from the Main Office and following a survey which will be followed up by the Main Office.

Second, we want to evaluate the visibility of the project both in the hostels and in the local community (for instance, have they got local media coverage on the project?). Here we will use media watch and the hostels sending the Main Office details on how they are informing about the project.

Third, we would like to ask guests at the hostel, both Norwegian and internationals, about their perceived effect of this project. Did they get more information about EVs than they already had?

Fourthly, we would like to combine the charging stations with a test project about carsharing – where the hostels that get a charging station will be responsible for putting up a carsharing system, meaning that guests with extra space in their car can take on people who are going the same place. We believe this will also have an extra social impact and increase the social sustainability of the project.

Finally, we will include information about where we have charging stations on our website and in social media – and of course monitor the clicks on this page as well.

Why this project?

We believe that **we here have an innovative project** and one that can **be replicated by other hostels** in the future. By showing environmental consciousness in practice, we hope to get our guests to reflect on their own carbon footprint and how they alternatively can help to reduce it. We also hope this project can be a bridge between the local communities and the hostel and in this way help the mission for the hostels to be a meeting place.

Sources:

Figenbaum, Erik and Kolbenstvedt, Marika (2015): "Pathways to electomobility – perspectives based on Norwegian experiences"(Institute of Transport Economics)

http://www.nextgreencar.com/electric-cars/environmental-benefits/

https://www.naf.no/tips-og-rad/elbil/miljo-og-elbil/lokal-luft--og-stoyforurensing/

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