

POTENTIAL FOR CO2 EQ AVOIDED EMISSIONS - IMPACT ASSESSMENT ESTIMAT

	Segment
Potential market size (unit)	20 000
Potential market penetration	33 %
BASELINE	
Distance traveled per person in a year (km/year)	12 500
Emissions using public transport (g CO2-e/km)	60
Emissions using a medium sized car (g CO2-e/km)	160
People using car to commute	5 000
People using bus to commute	15 000
Total emissions for commuting (tonnes CO2-e/year)	21 250
SOLUTION	
Total emissions from commuting using SolarXBike (tonnes CO2-e/year)	16 875
Emissions avoided from feeding an extra 300 MWh / year of solar energy into the grid (tonnes CO2-e/year)	6
RESULTS	
Total avoided emissions potential per year by 2030 (tonnes CO2-e / year)	1 450

Assumptions

SolarXBike is able to reduce, on average, car use by 10% and bus use by 30%. So, even with a 100% penetration, only 30% of bus users and 10% of car users would change their commuting habits.

Notes

Malmö / Lund area

References

SolarXBike

Assuming a person that travel between Lund and Malmö twice per day, for 250 working days

<http://www.klimatbalans.se/neutralisera/resor.html>

Estimation

Estimation

Assuming that SolarXBike reduces car use by 10% and bus use by 30%

1kWh = 20 g CO2-e

<https://www.euractiv.com/section/energy/opinion/mondaycop22-lower-co2-emissions-with-lower-energy-consumption/>

Project proposal "nudging" 3 year 100% ren			
Active transport for a healthy everyday lif			
We want to encourage more people to use			
Market			
Transport sector for flexible and efficient			
Target group			
Employees who work with research and ed			
Number of employees, about 14000 (LTH 7			
drivers			
More than 5 km daily transport			
Goal			
Increase the proportion of climate-smart t			
Goal 1: under 3 years get 1500 motorists to			
Sub-goal 2: First year, 300 motorists get to			
Sub-objective 3: Increase the proportion o			
Solution long term			
Potential market: 20,000 (Malmö Lund)			
Penetration: 1/3 or 20,000 = 7000			
% of energy savings / emission reduction /			
Reduction of energy needs at about 100 tne			
If for example 30% of the trips replaces bu			
In addition to that, around 300 MWh / yea			
Cost Project Gate21.dk			
Effect Co2			
Price per tonne of CO2			
SEK 10,76 million (DKK 7,3 million)			
492 tons			
SEK 21,888 SEK - SEK 15,243 DKK			
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