

## Electric Bus Supplier Conference - Minutes

Date	15. December 2014
Time	09.00 – 14.00
Place	Bjørnvika konferansesenter, Oslo
Participants	List of participants is published on the project's web site

### Meeting minutes

- Welcoming remarks, Bernt Reitan Jenssen, CEO, Ruter As
- Official opening and Environmental policy in Ruter's traffic area by
  - Guri Melby, Vice Mayor of Oslo, Environmental Affairs and Transportation
  - Thomas Tvedt, Assistant Director, Department of transport , Akershus Regional County
- Electric buses – are they an answer to today's public transport challenges? By Bernt Stilluf Karlsen, Board Chair, Ruter As.
- Ruter – our goals and challenges by Bernt Reitan Jenssen, Man. Dir., Ruter As
- Practical information about the supplier conference by Pernille Aga, Project Manager, Ruter As
- Ruter's strategy for introducing renewable solutions to its bus fleet by Frode Hvattum, Head of Strategy, Ruter As.
- The public transport market in Oslo and Akershus – how can electric buses serve this market? By Hanne B. Norli, VP Business Development, Ruter As.
- Brief presentation of participants by Zero Emission Resource Organisation (ZERO):

This presentation was performed as an “elevator pitch”, where one representative from the participating organizations got 30 sec to present themselves. The participants were divided into three groups:

1. Bus producers and sub-contractors
2. Bus operators
3. Companies that offer electric charging systems.

All presentations shown during the conference are published on the project's web site.

### Questions & Answers:

During the free questions and answers session the participants posed questions to Ruter's CEO, Bernt Reitan Jenssen. The following is a brief summary of the questions and answers:

- Q1 Have You considered BRT systems with electric supply.  
Response: *Ruter has not set any limit to what we should not consider. Ruter are open to good suggestions. At this stage, Ruter has not looked into a dedicated system.*



- Q2 Are You looking for other solutions than just electricity ex. hybrid solutions? What are you going to do with existing contracts, are they going to be cancelled?  
Response: *The path towards electric buses can be a by bridge technologies e.g. hybrid solutions. Electricity is going to play large role, but is not the only solution. Ruter will look into possibilities within the existing contracts.*
- Q3 Charging infrastructure is a new case, and what are your thoughts about how to deal with this in the tenders?  
Response: *To be able to answer this question is the reason that you are here today. We do not have the complete picture to answer this question yet.*
- Q4 Is there any suitable body or organisation that can take charge of organizing the charging systems?  
Response: *Ruter has to play an important part in organizing the charging systems. You need a lot of space for the location of bus depots, and electric buses will make the bus depots more silent. Bus depots have to have electrical supply and the plans for bus depots and electrical supply has to be coordinated.*
- Q5 If you do not find suppliers that have solutions in ongoing tenders, will the tenders be cancelled?  
Response: *Ruter will have a pragmatic approach to that. Ruter hopes that the problem will not occur, due to the increasing development of solutions by the industry.*
- Q6 Have Ruter thought about the second life of the battery?  
Response: *We have not come that far yet, but Ruter will pay attention to the upcoming solutions regarding possibilities for after use of batteries.*
- Q7 Will you look at the environmental issues connected with the production of batteries?  
Response: *We will look at the life cycles of the battery before we buy.*
- Q8 Please elaborate on the question asked by Ruter whether Ruter should ask for a specific technology or leave it to the market to come up with the solutions.  
Response: *Ruters sees that it is difficult to obtain the fossil free 2020 goal with electrical buses using the normal contract model and evaluation criteria used today, and the question is what Ruter shall do to reach these goals. Is it necessary to specify what Ruter wants more detailed or is it necessary to do changes in the evaluation criteria?*
- Q9 Have You considered trolleybuses?  
Response: *We have had a small evaluation of that solution, and discussion is not closed. The drawback is the restrictions, similar to a tram system.*
- Q10 Will minimum range be a part of the minimum requirements in the upcoming tenders?  
Response: *Yes, that could be a possible demand.*
- Q11 With electric vehicles heating and cold climate is an issue. Range is challenging, especially if you use electricity to heat the buses. Could you accept buses with diesel heaters?  
Response: *This is a challenge, but should be possible to solve. I hope that we do not end up with such a solution.*
- Q12 Somebody has to coordinate the charging systems so that they compatible.  
Response: *Ruter is aware of that, but the question is how long we will wait for standardization. We will consider innovation carefully.*