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**ECORails –
Energy efficiency and environmental criteria in the awarding of regional rail transport vehicles and services**



Deliverable 23: Training Module for the Guidelines

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Energy efficiency and environmental criteria in the awarding of regional rail transport vehicles and services

Distribution:

Partic N°	Participant name	Participant short name	Country code
CO	TSB Innovation Agency Berlin GmbH FAV – Transport Technology Systems Network	TSB FAV	DE
CB 2	Senate Department for Urban Development	SenStadt	DE
CB 3	Pro Rail Alliance	ApS	DE
CB 4	KCW GmbH	KCW	DE
CB 5	Berlin University of Technology	TUB	DE
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1. Introduction

The target group of this training module are Public Transport Administrations (PTAs), including both the political and the management level. Additionally, managers of train operating companies (TOCs) who are in charge of responding to invitations to tender, and manufacturers of railway rolling stock are addressees of this document.

The objective of the training module is to

- present the ECORailS Guidelines, its concept and the main issues to be considered when including energy efficiency and environmental criteria (short: EE/ENV criteria) in awarding procedures for regional passenger rail transport (mainly part 1, presentation "The Guidelines in a glance");
- structure the process when actually preparing EE/ENV criteria in an awarding project (part 2, phases of awarding and leading questions for workshop discussions);
- provide additional background information when particular criteria are to be discussed in detail.

Like the ECORailS Guidelines in general, this training module is not intended to provide elaborated texts which might be copied into awarding documents. Instead, main arguments, steps, approaches, criteria and options should help the PTAs or regional working groups to adapt the ECORailS proposals to their own specific situations and priorities.

It is proposed to calculate a timeframe of 1 – 2 days for a training session based on this module. This implies that not all issues (see part 3) can be discussed in detail but a selection according to the priorities of the participants. Follow-up sessions are recommended when the training is intended to be a kick-off for an actual awarding project.

2. Part 1: The Guidelines in a Glance

The presentation "The Guidelines in a glance" is part 1 of this training module. It is intended to present the ECORailS Guidelines, its concept and the main issues to be considered when including energy efficiency and environmental criteria (short: EE/ENV criteria) in awarding procedures for regional passenger rail transport.

This presentation has successfully been used on several dissemination events during the last third of the duration of the ECORails project. It consists of the following main chapters:

- Concept of the Guidelines
- Strategic considerations and basic decisions
- Main types of criteria and instruments
- Evaluation of rolling stock
- Monitoring operations
- Pollutants
- Noise
- Publication of the Guidelines and additional documents.

In fairly small training groups it can be useful and motivating to discuss the relevance of the arguments for the own region(s) after each chapter.

A time frame between a minimum of 40 minutes (big auditory and short discussions) and 1.5 - 2 hours (small group with intense discussions) should be calculated. Depending on the needs and the relevance of particular issues for the participants of the training, additional slides from part 3 of this training module (background information) can be inserted to this presentation, for example

- Legal considerations
- Reasons why energy efficiency should be considered
- Evaluating and monitoring operations (additional slides)
- Priority technologies and operational measures
- Pollutants
- Noise.

The first phase of the training can be complemented by the presentation "Best case examples" that is documented as Annex II of Deliverable 25 "Project presentations and background material presented at information and dissemination events including feedback analysis thereof".

It is recommended that the speaker who uses this training module is familiar at least with the respective chapters of the ECORailS Guidelines and their Technical Annex.

The presentation is provided as annex 01 to this Deliverable.

3. Part 2: Phases of Awarding and Leading Questions

The basic idea of part 2 of this training module is to compile components that could be used or further developed in an actual awarding procedure. The best approach would be to agree upon a concrete project that can be developed during the workshop.

The discussions can follow the reference model of awarding which shows the appropriate phases for almost all relevant awarding procedures in Europe.

Depending on the participants' backgrounds and needs, more than one prototype awarding project could be identified in phase A.

This approach was successfully used in the ECORailS training meeting in Brescia (Dec. 2009) where the details of the ECORailS pilot applications were developed. This approach was also used by the site working groups of ECORailS WP 4.

Reference model of awarding

<u>Main phases at PTA in a typical award project:</u>		<u>Main associated actions at PTA:</u>	
Competitive Awarding	Direct Awarding / In-house provision	Competitive Awarding	Direct Awarding / In-house provision
A. Preparation		A. Definition of the award project: decision on award procedure; identification of needs, options, targets and priorities; draft selection of criteria	
B. Elaboration		B. Elaboration of ITT / (direct) contract text, including selection and detailed definition of criteria; planning of phases D-G; publication of tender documents	
C. Response to tender	C. + D. + E. Negotiation	C. Mainly bidding operators to work; PTA to answer bidders' questions	C. + D. + E. Agreement on the contractual clauses and on the economical and technical details of the contract
D. Evaluation and awarding		D. Evaluation, decision and justification; communication of the result	
E. Negotiation <i>(optional; legal restrictions)</i>		E. Further negotiations and specifications	
F. Preparation of contract period		F. Verification of performance with selected operator; finalisation of the contract; preparing of monitoring	
G. Follow up during the contract period		G. Monitoring real performance; application of bonus/malus schemes	

In the following table it is shown which major actions should be considered by the PTA in terms of energy efficiency and further environmental criteria during the seven phases of an awarding project.

The bullet points in the right column represent the leading questions (or headlines) for the training discussions.

EE/ENV related activities of the PTA within the phases of awarding

	<u>Main awarding phases:</u>	<u>Main associated actions at PTAs:</u>	<u>Actions at PTA concerning energy efficiency and further environmental criteria</u>
A	Preparation	Definition of the award project: decision on award procedure; identification of needs, options, targets and priorities; draft selection of criteria	<ul style="list-style-type: none"> • Analysis of the actual situation (environmental performance, “baseline”) • Identification of main environmental problems • Identification of mandatory and non-mandatory target levels for energy consumption, noise and pollutants • Market analysis (technological potentials, economic and legal restraints, potential bidders) • Draft definition of targets in terms of energy efficiency, noise and pollutants • Draft prioritisation and weighting • Decisions concerning new, refurbished or existing rolling stock
B	Elaboration	Elaboration of ITT / (direct) contract text, including selection and detailed definition of criteria; planning of phases D-G; publication of tender documents	<ul style="list-style-type: none"> • Analysis whether and how the criteria can be evaluated, validated and monitored • Clear definition of EE/ENV criteria (requirements, target values, performance specifications, penalties, incentives...) • Selection of relevant technologies/requirements • Requirements regarding LCC&CBA; elaboration of a form to permit the easy comparison of offers • Definition of priorities and weighting against other criteria • Definition of how to monitor the compliance • Draw up of contract including the conditions for monitoring, verification and fulfilment of the EE/ENV criteria

	<u>Main awarding phases:</u>	<u>Main associated actions at PTAs:</u>	<u>Actions at PTA concerning energy efficiency and further environmental criteria</u>
C	Response to tender / quote request	Mainly bidding operators to work; PTA to answer bidders' questions	<ul style="list-style-type: none"> • Response to bidders' questions for clarifications; forwarding the information to the other bidders. • Receipt of offers
D	Evaluation and awarding	Evaluation, decision and justification; communication of the result	<ul style="list-style-type: none"> • Evaluation of offers in terms of EE/ENV criteria • Assessment whether the selected offer is realistic and reliable in terms of energetic and environmental performance
E	Negotiations	Further negotiations and specifications	<ul style="list-style-type: none"> • Further negotiations and specifications
F	Preparation of contract period	Verification of performance with selected operator; finalisation of the contract; preparing of monitoring	<ul style="list-style-type: none"> • Verification of environmental performance (especially of vehicles) as far as it is possible and appropriate before starting the operation • Test runs for the verification of energy consumption • Definition of more detailed specifications if necessary • Detailed definition (if necessary) of incentive or bonus / penalty regimes according to the performance offered by the bidder

	<u>Main awarding phases:</u>	<u>Main associated actions at PTAs:</u>	<u>Actions at PTA concerning energy efficiency and further environmental criteria</u>
G	Follow up during the contract period	Monitoring real performance; application of bonus/malus schemes	<ul style="list-style-type: none"> • Monitoring of real-life energy consumption / environmental performance (application of bonus/penalty if necessary) • Verification and monitoring of operational measures • Verification measures as in phase F if further procurement or refurbishment is foreseen during the contract period • Verification and monitoring if environmental performance is affected by maintenance or vehicle quality • Identification and overcoming of obstacles for better environmental performance (in co-operation with the bidder when appropriate)

4. Part 3: Additional background information

Part 3 of the training module contains compilation of slides with additional background information or incentives for discussion. They are provided according 12 issues that are the same as the main issues of the "Campus ECORailS" (see Deliverable 21 "Report on User Platform and Campus ECORailS and status of involvement").

Using these slides, respective presentations can be prepared in advance. Alternatively, they can be used spontaneously when the trainings discussions seem to need additional input.

The experience from some of the ECORailS site workshop discussions is that some of the participants have reservations towards EE/ENV criteria in awarding procedures, especially concerning

- legal questions
- inherent incentives of the energy market
- compatibility of established awarding procedures and innovative EE/ENV criteria.

The first three issues of the background material are dedicated to the discussion of these reservations as well as the relations between actual practice and mid-term strategic embedding of awarding:

- 1) EE/ENV criteria in awarding procedures
- 2) Why should a PTA consider energy efficiency and CO₂ emissions although energy costs are supposed to be paid by the TOC?
- 3) Strategy, mid-term innovation, defining the award project

After having identified the main energy-related or environmental specifications of the "training tender", some of these criteria can be discussed and elaborated in detail:

- 4) Main types of specifications
- 5) Direct performance indicators
- 6) Reference level of consumption and service profiles
- 7) Evaluating rolling stock
- 8) Evaluating and monitoring operations
- 9) Priority technologies and operational measures
- 10) LCC analysis
- 11) Pollutants
- 12) Noise.

The slides were elaborated by several ECORailS partners; a few slides are quotations and have been taken from external stakeholders' presentations that provide insight in the awarding process and the specific situations and relations of the different stakeholder groups.

During the project, some of the issue-specific presentations were successfully used in WP 4 training events and workshops of site working groups and site stakeholder groups.

The slides are provided as annexes 02-13 to this Deliverable.