

Experience of add on a border crossing on-board energy metering system on the railjet

railjet

ERESS Customer Forum - Workshop I
Implementation and verification of metering solutions

Add an on-board metering system (1)

- **Implementation of an on-board energy metering system on the international premium passenger traffic train „railjet“**
 - Step 1: decision for metering and a system
 - Step 2: check the technical requirements
 - Step 3: estimate of costs
 - Step 4: order of the metering system
 - Step 5: installation of the metering system
 - Step 6: putting into operation
 - Step 7: ongoing operation

railjet



Add an on-board metering system (2)

- **Challenges of an implementation on border crossing trains**
 - accuracy of transformers on the locomotives (current and voltage)
 - concession and calibration of the energy meter
 - installation point on the locomotive
 - etc.
- **Information of the infrastructure managers abroad**
 - negotiation about the concession and calibration
 - negotiation about the data transfer
 - negotiation about the formats and the billing process

Add an on-board metering system (3)

- **Working practice**

- „RailwayBox is the metering system on-board of the railjet“
- EMH-meter is used with an Austrian concession and calibration
- transformer accuracy on the locomotives of 0.5
- error of the EMF = 1.225
- energy consumption and location data in 1-minute interval
- ground station in Austria

- **monthly data transfer of the consumption per country to the infrastructure managers abroad in excel-format**

What are the challenges of today?

- **Difference of national solutions of metering systems within different countries**
- **different national settlement systems for traction power**
- **different national concessions and calibrations of meters with varying national laws**
- **missing range of products and manufacturers for meters**

Contact



Harald Jony

ÖBB-Infrastruktur AG

Energy – Sales Department

+43 1 93000 – 32141

harald.jony@oebb.at

