
European Railway Energy Settlement System (ERESS)

-

”Building common European solutions”

UIC Energy Efficiency Conference 2009



ERESS - Introduction

ERESS is an open partnership for infrastructure managers



- The Danish National Railway Agency



- The Swedish National Railway Administration



- The Belgian Railway Infrastructure Manager



- **Jernbaneverket** • The Norwegian National Railway Administration

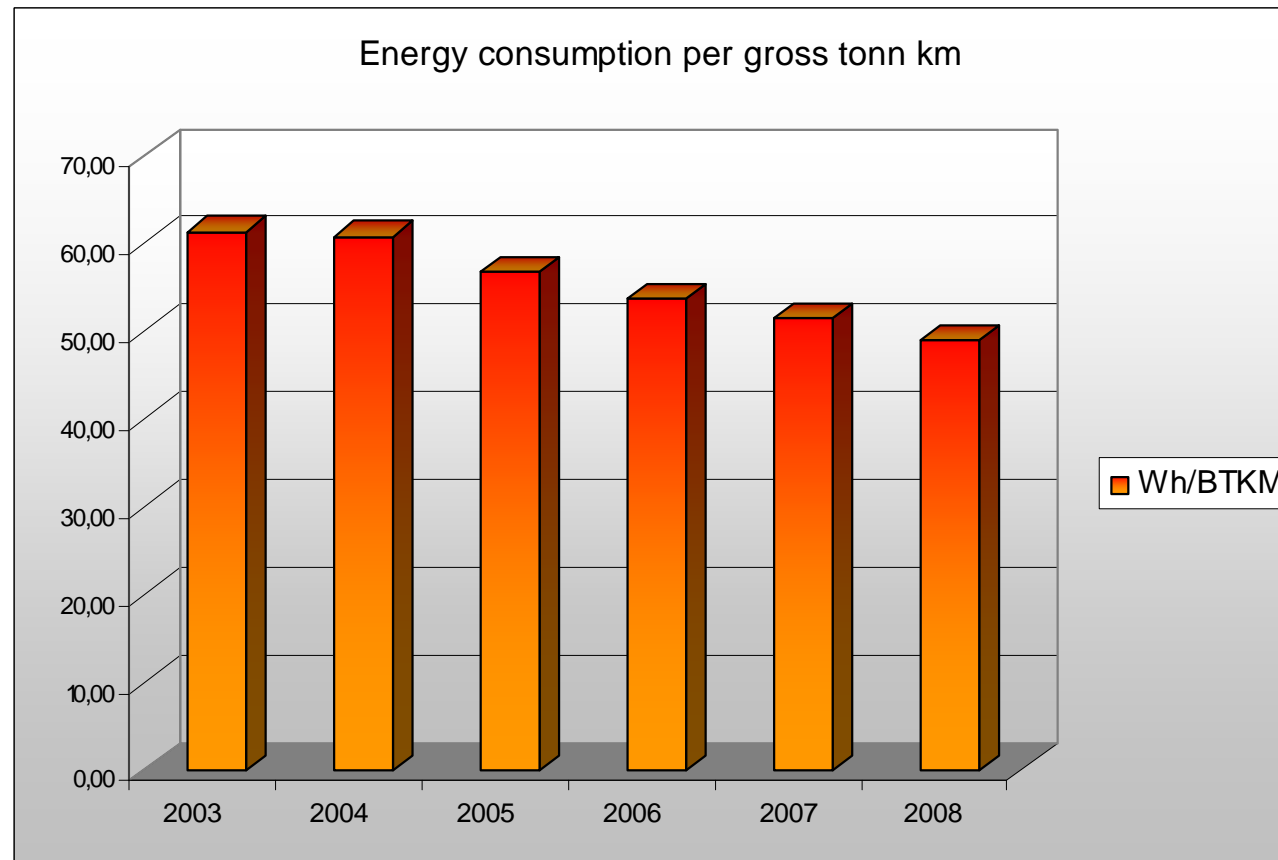
The main objectives of ERESS

- Establish and run an efficient, reliable, flexible and accurate metering, settlement and billing process
- Make train energy consumption data accessible for the customer in order to give them a clear picture of their real consumption
- Give customers the possibility to understand their consumption pattern and to save energy and money
- Ensure a simpler and more accurate energy settlement system for cross-border rail transport
- Lay the ground for the operation of a common energy settlement system

The philosophy of ERESS

- Develop, build and operate a cost effective system
- Promote cooperation and best practices between infrastructure managers
- Overall a non profit system according to agreement
- Open to new partners on equal rights and terms
- Both system and partnership are intended and prepared to be extended
- Use standard interfaces and open source approach in order to be independent in all aspects
- The cost of offering a service is to be charged to the users of that service

Achieved results by ERESS customers

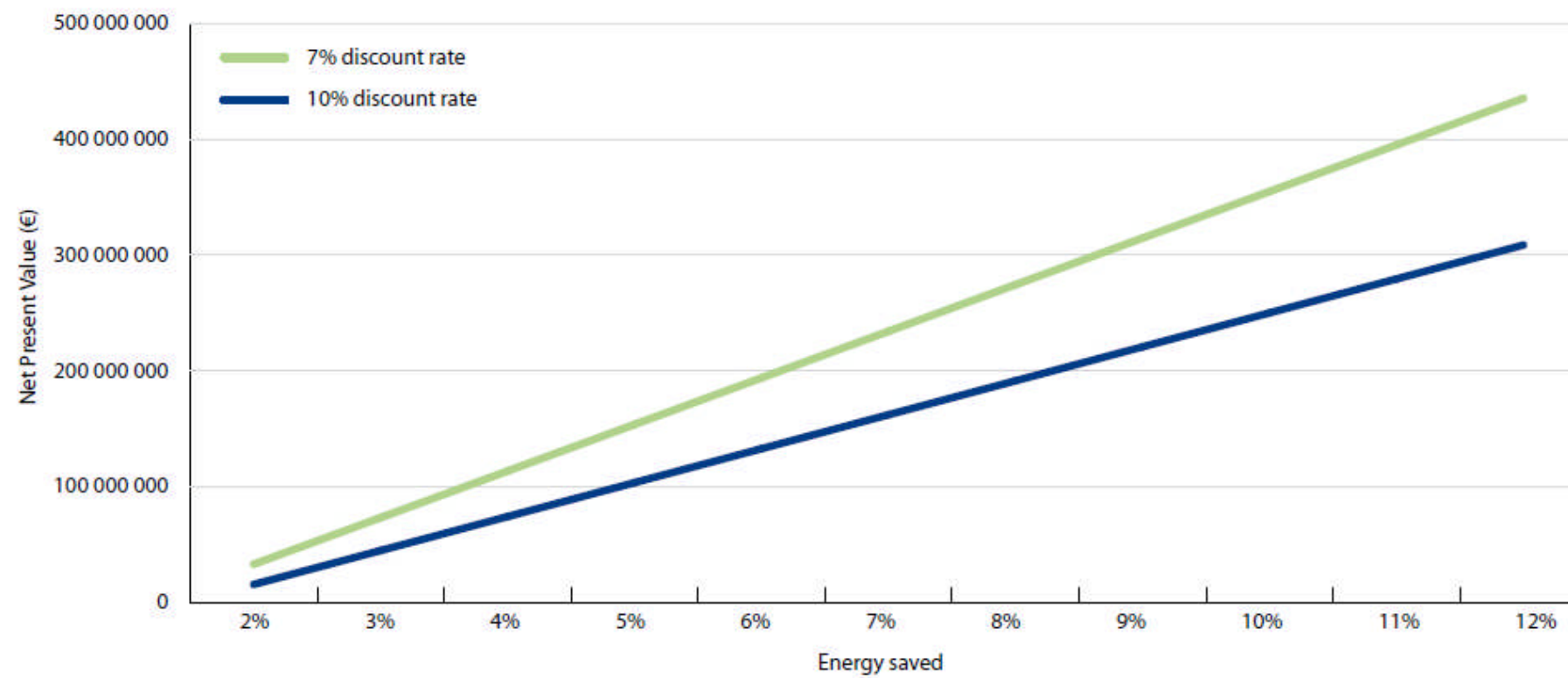


- *NSB AS have reduced the energy consumption pr ton kilometre with 17,5 % between 2005 and 2008*
- *12% additional efficiency improvement are expected within 2012*
- *For 2008 this equals a reduced energy cost of € 3 mill*

ERESS is a profitable project

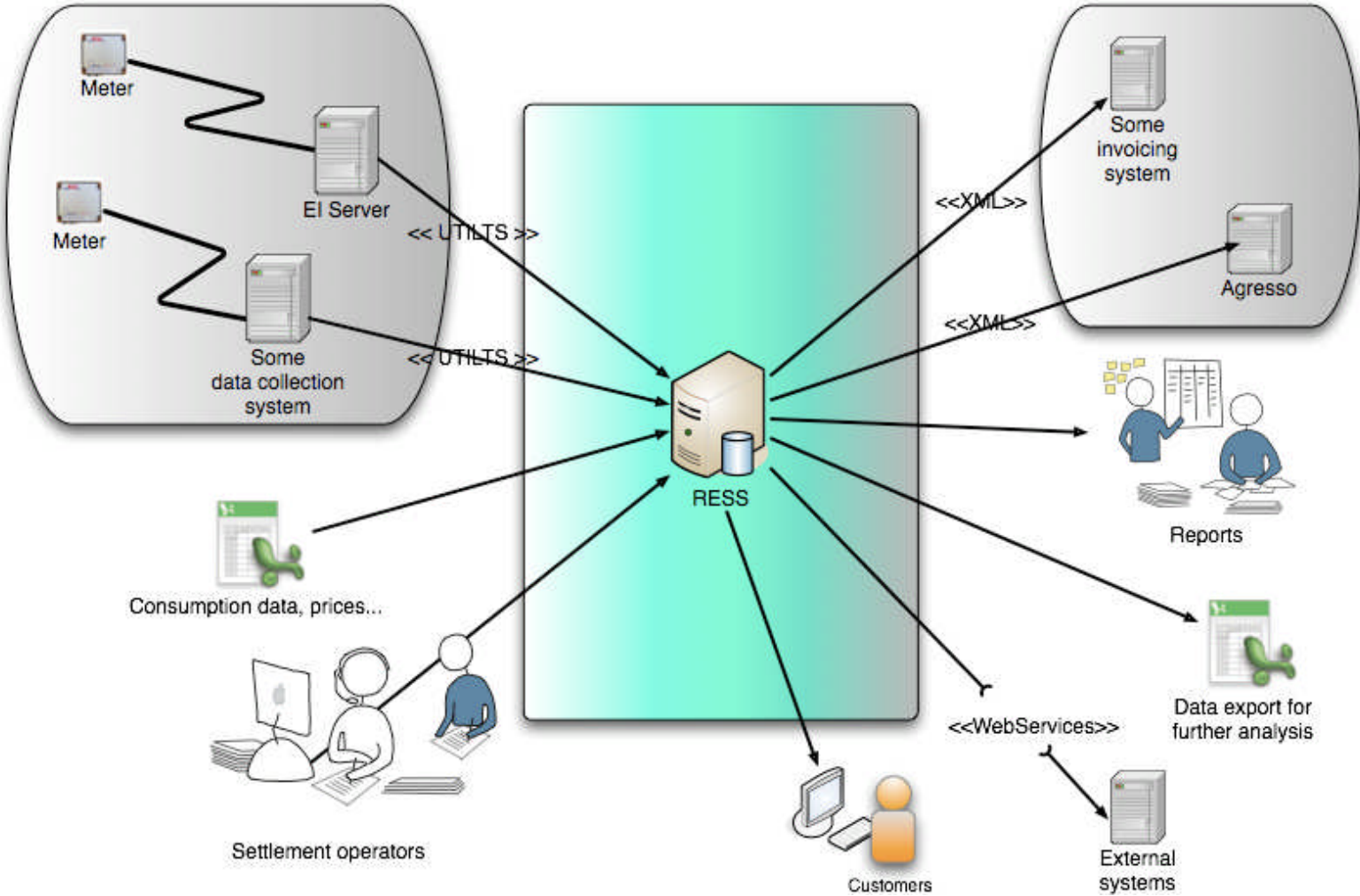
“The cost savings is realized by our customers, the train companies”

Net Present Value ERESS (EUR)



ERESS – System overview

System overview



ERESS customers get access to relevant data



Status: jbv logged in as: ROLE_ADMINISTRATOR ROLE_OPERATOR
[Log out](#)

- Message Monitor
- Queries**
- Reports
- Administration

TimeSerie Data

TimeSerie Type : Metered train active consumption
 From Date : Mon Jun 01 00:00:00 CEST 2009
 To Date : Wed Jul 01 00:00:00 CEST 2009
 TimeSerie : 50
 Entityrefs : Consumption Points (Test_Varang_CP) Message Types (E30)
 Energy : 3.480

36 results found, displaying 1 to 20. [First/Prev] 1, 2 [Next/Last]

Start Time	End Time	Value	Value Quality	Lat	Long	Lat	Long	Position Quality	Ref.Id	Created By
Mon Jun 01 00:00:00 CEST 2009	Mon Jun 01 00:05:00 CEST 2009	0,008	127	59,91						
Mon Jun 01 00:05:00 CEST 2009	Mon Jun 01 00:10:00 CEST 2009	0,008	127	59,91						
Mon Jun 01 00:20:00 CEST 2009	Mon Jun 01 00:25:00 CEST 2009	0,01	127	59,91						
Mon Jun 01 00:25:00 CEST 2009	Mon Jun 01 00:30:00 CEST 2009	0,01	127	59,91						
Mon Jun 01 00:30:00 CEST 2009	Mon Jun 01 00:35:00 CEST 2009	0,01	46	59,91						
Mon Jun 01 00:35:00 CEST 2009	Mon Jun 01 00:40:00 CEST 2009	0,008	46	59,91						
Mon Jun 01 01:40:00 CEST 2009	Mon Jun 01 01:45:00 CEST 2009	0,099	127	0,00						
Mon Jun 01 01:45:00 CEST 2009	Mon Jun 01 01:50:00 CEST 2009	0,101	127	59,91						

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[Log out](#)

- Message Monitor
- Queries
- Reports
- Administration**

Administration

Entities

Entities Name

Consumption Point

Date to: Date from: Inactive entities

List of Train Metering Points

Name	Description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description
707057500039200960	Heres comes the description

Energy metering units retro fitted



ERESS - Partnership

The ERESS organisation



ERESS is an open non-profit based partnership

Jernbanelverket
24. FEB. 2005
Saksnr. 02/ 5301
Arkivbet. SBE 760 (44)

SAMARBEIDSAVTALE
mellom
Banverket,
Banedanmark
og
Jernbanelverket

1. Avtalens parter
Denne avtale (Avtalen) er inngått 24.11.2004 mellom
Banverket (Reg. nr. 202100-4003),
Banedanmark (Reg. nr. SE 18 63 22 76),
og
Jernbanelverket ved Bane Energi (Reg. nr. NO 982 954 924)
Samarbeidsavtalens parter vil enkelvis bli omtalt som Part og sammen som Partene.

2. Bakgrunn
Partene er ansvarlige infrastrukturforvaltere for jernbanen i henholdsvis Sverige, Danmark, og Norge. Gjennom Avtalen ønsker Partene å legge til rette for anskaffelse og drift av et felles energiavregningsystem.
Målsettingen med energiavregningssystemet er dels å etablere sikker, fleksibel og korrekt energiavregning i forhold til trafikktovene i de respektive land, og dels sikre en enklere og mer korrekt energiavregning ved grensoverskridende togtransport.

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- The ERESS partnership is open to any Infrastructure Manager who wants to join the partnership
- ERESS is based on a non-profit agreement where both existing and future partners have the same rights and obligations

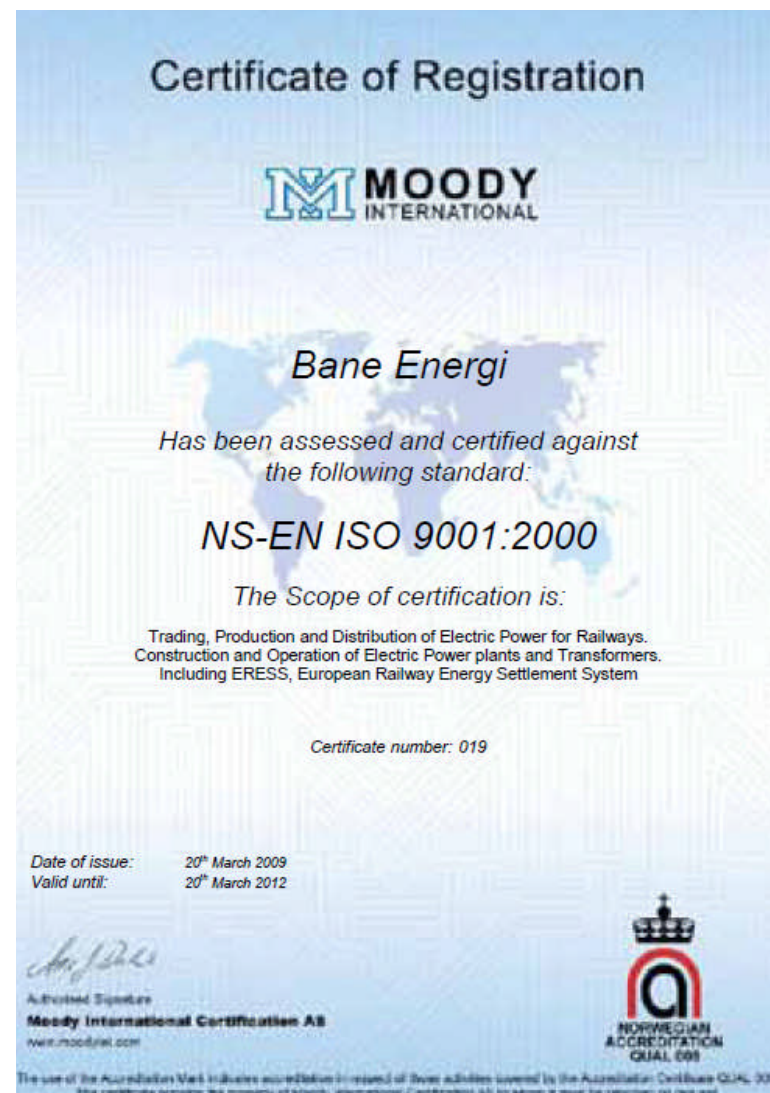
ERESS test participant concepts

Energy metering and
settlement system

Railway Energy Exchange
Module

Short description

- Test a complete energy metering and settlement system without becoming a ERESS partner, or the Railway Energy Exchange Module for validation, splitting and distribution for cross-border train traffic in accordance with UIC leaflet 930
- Conduct testing and gain experience at a low cost for a temporary period
- Decide after test period if joining the ERESS Partnership is of interest



ERESS status September 2009

- ERESS has been in operation since January 2007
- Our experience with ERESS has been good
- Significant energy savings have been realised by our customers
- ERESS has been verified by a third party (Veritas)
- The system, the organisation and the work processes have been certified according to ISO 9001:2000
- Almost 500 trains have been retro fitted with new energy meters

For more information regarding ERESS
please visit our representatives at the
ERESS stand or www.eres.eu