

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

ECORails

Deliverable 23: Training Module for the Guidelines Annex 03

Part 3/Issue 02 - Why should a PTA consider energy efficiency and CO₂ emissions although energy costs are supposed to be paid by the TOC?

Version:

V01

Status:

PU

Draft:

Function

Approval

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Why should a PTA consider energy efficiency and CO₂ emissions although energy costs are supposed to be paid by the TOC?

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Why should a PTA request energy savings when contracting out passenger rail services?

- Actual energy prices do not sufficiently reflect the urgency of climate protection.
- Actual energy prices do not sufficiently reflect future shortages of energy supply.
- PTAs may accelerate innovations in terms of energy efficiency. This is reasonable with respect to the needs of transport and climate policy.
- Innovations today makes public transport cheaper in the future.
- Big steps forward can more easily be done if supported by the PTAs.

Why should a PTA request energy savings when contracting out passenger rail services?

- Cost calculations of bidding TOCs focus on the first period of operation (usually not more than 1/3 of the vehicle's lifetime).
 - Increased investment costs for more energy-efficient technology are only accepted by the TOC if they can be balanced by savings in the first period of operation.
 - In the 2nd and 3rd period of operation energy efficiency and energy costs will be worse than the state-of-the-art of that time. This will be a financial burden for the collective of PTAs, especially if increasing energy prices are to be expected.
- If the PTA owns the rolling stock it means risk reduction (future usability, higher residual value, longer lifetime).

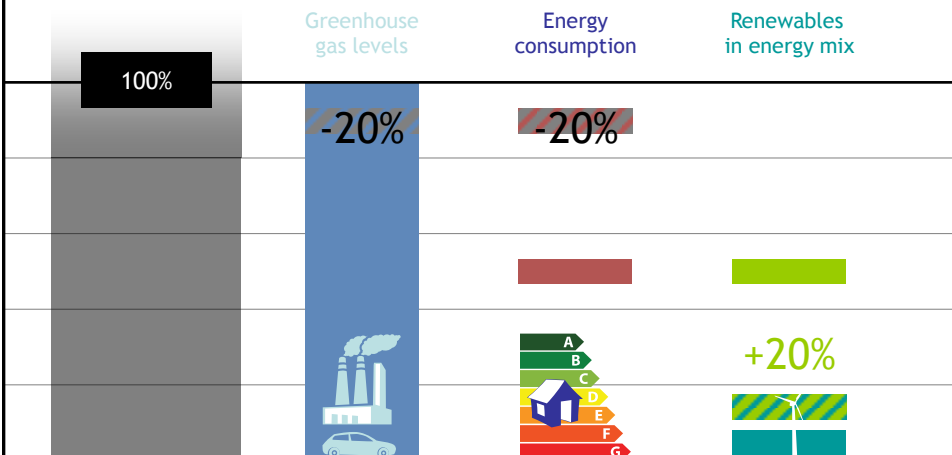
Energy costs are one of the financial burdens of a TOC. Why should a PTA additionally request energy savings when contracting out passenger rail services?

- Transparency: At present, there is usually a lack of information about energy consumption.
- In some cases energy costs are born directly by the PTA and not by the TOC.
- In some cases energy is not charged according to the real consumption (e.g. fixed percentage of the track access fee).
- Actual energy prices do not sufficiently reflect the urgency of climate protection nor future shortages of energy supply.

Why should a PTA request energy savings when contracting out passenger rail services?

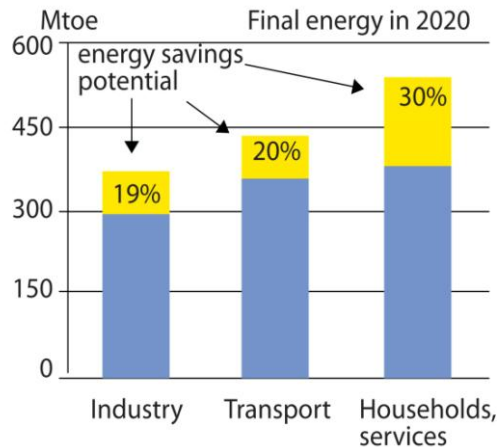
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The 20-20-20 EU policy By 2020



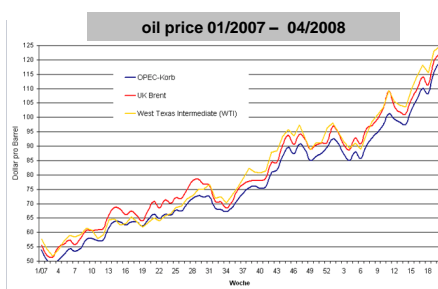
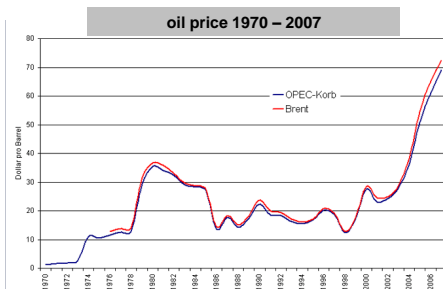
Source: EACI

Savings potential by 2020



Source: Commission

I. Growing risks for public budgets by the development of the oil price



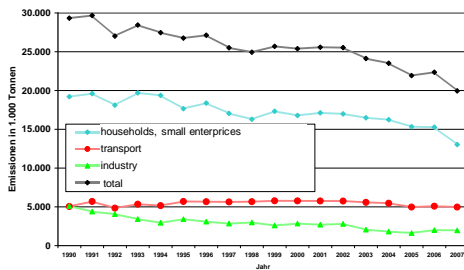
1. high risks for public finances
2. need to fix energy efficiency standards in tenders and contracts
3. need to create a higher interest of PTA, TOC and industry

PTA's reasons
framework conditions

I. changes in political priorities

Objectives

Senate of Berlin 1990 – 2010 -25% CO₂
1990 – 2020 -40% CO₂



Development of CO₂-emission in Berlin 1990-2007
 • overall - 32%
 • industry - 60%
 • transport - 1%
 • households - 20%



1. climate protection has become a major role in political priorities
2. transport sector shows no significant contribution to reach political targets
3. some efforts in road and rail transport where compensated by growing air traffic

PTA's reasons
framework conditions

Training module • Part 3 – Issue 02 IEE/08/690, 06.05.2009 – 05.07.2011

Present situation

- **No environmental standards by law** for rail are known in Italy till now (except for noise)
- The **market of energy** is **open to competition** and regulated by an independent Authority: **incentives** to save energy are provided, but **not specifically for public transport**
- **TOCs pay:**
 - **electric power through the infrastructure managers**
 - **fuel at market prices**
- **Rail Infrastructure Managers buy the electric power on the market**
- **TOCs do not correctly feel the real cost of electric power:**
 - under the law, the **fare applied by the national infrastructure manager** (= 0,357 €/km) is heavily **under the market cost**
 - the **costs** paid by the TOCs on every kind of rail infrastructure are **not linked to the energy consumed by each train** (flat fare)
- **PTAs pay to the TOCs a contract price** from 8 to 10 €/train*km where **the share due to the cost of energy is not known**; the **increased costs of energy** are usually paid by the PTAs



Need of incentives to energy efficiency in the rail market

Training module • Part 3 – Issue 02 IEE/08/690, 06.05.2009 – 05.07.2011

Expectations on ECORails

- **The ecological commitment:**
 - also railways should **help the** national and European **effort** to reduce the environmental impact, according to the international treaties, **BUT**
 - **railways are still the most environmental friendly carrier**
- **The railways' ecological leadership needs to be improved**
 - **many not environmentally friendly behaviors** can be corrected
- **The institutional issue (Italian example):**
 - the **PTAs at present pay the costs** of some environmental problems affecting public transport: energy consumption, barriers against noise
 - the **awarding procedures can therefore be coherent instruments to focus the TOCs' managers on energy saving and the emissions**
- **The financial argument:**
 - **public funds are declining**, while **costs are raising**
 - **increased competition among different uses of public money**
 - **instable energy markets**

Contact

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