Panel 3 (d)

Diesel Rail Services – Recommendations

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Recommendations – Economic Perspective

Investment Costs

Ecodriving level 3
- Traffic flow Management

On-board Energy storage

Ecodriving level 2 (DAS)

Smart on-board energy Management

Ecodriving level 1 - Training

Motor flux management

Parked train Management low tech

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Railenergy Final Conference
Recommendations for Diesel Operation

- **Ecodriving level 1 (4-8%)**
  - Low tech measures, drivers' training

- **Ecodriving level 2 (5-15%)**
  - Driving Advice Systems, stand alone

- **Ecodriving level 3 (10-20%)**
  - Traffic flow Management

- **Parked train Management (4-10%)**
  - Shore supply, system solution

- **Time-table optimisation**

- **Infrastructure measures**
  - Smoothening of speed profiles of tracks

- **Parked train Management low tech (1-3%)**

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Recommendations for Diesel Rolling Stock

Smart Energy Management (5-10%)
- Systemic approach, Traction + Auxiliaries + Comfort

Hybrid Propulsion (PM technology) & Energy Storage (10-35%)

On-board Energy Storage (10-30%)
- Supercaps for regional trains

Energy Management (2-5%)
Traction chain, auxiliaries

New energy efficient components

Upgrading of existing trains (new engines, insulation, HVAC...)

Complexity

System

Component

Short term

Mid term

Long term
Thank you for your attention!

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