eHighway - Electrification of Freight Transport
Role of BAS: Technical Review of the eHighway system

Test facility in Groß-Dölln near Berlin
- reproduction of a BAB section
- about 1500m/1 mile long
- safety barriers, traffic signs, VMS
- 2 trucks, 1 trailer truck

BAS: Technical Validation / Review
- effects on infrastructure
- effects on traffic safety, traffic flow, vehicle safety and operation
- interdependency between eHighway and other technical systems
- rescue / repair after accidents
- technical review of the solution
Results of Technical Review for German Motorways

Results of Technical Review:
• No additional limitation regarding height of heavy goods vehicles ✓
• Successful construction of poles and catenary at motorways ✓
• Solution for construction of catenary beneath traffic signs and bridges ✓
• Proposals for construction of poles and catenary on long bridges
• Concept for crash test, at least H4b safety barrier necessary ✓
• Psychological study about legibility and visibility of traffic signs ✓
• Proposal of electrical safety and operational concept (system & vehicles)
• Study about EMC and impact on human beings ✓
• Integration of pantograph requires 50 cm extended vehicles

Basic Concepts for Construction and Operation, to be detailed in following projects:
• landing of rescue helicopter on motorway impossible -> adapted rescue concept
• Emergency circuit breaker and shut-down system
• Construction of contact line on motorways without traffic limitations
• Road maintenance (infrastructure and catenary) without traffic limitations

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Field Trials Germany

Description
The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) set up a funding program for an eHighway trial under realistic applications and in public traffic space with comprehensive scientific support. This pilot project is a consistent follow-up of the former EUNBA R&D-projects and focuses mainly the investigation of the functionality and reliability of an eHighway system in real operation.

Process and Timeline

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<td>Call for submission of project outline</td>
<td>Deadline for submission of project outline</td>
<td>Call for submission of project application</td>
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Scope

- Number of projects: 3 (BW, HE, SH) (different locations / applications)
- Length of the track: approx. 5 to 8 kilometer per project
- Amount of trucks: approx. 5 per project
- Use cases: Highway and Shuttle (i.e. port)
- Project timeline: approx. 8 months construction & 2 years testing
- Support: Comprehensive scientific assessment

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