



2015

Dear clean vehicle community!

An ecologically-friendly and economically-efficient driving style helps reduce energy consumption, save money and significantly lower CO<sub>2</sub> emissions. **Studies** have shown that the operation of electric public transport vehicles such as **trams, trolleybuses or hybrid (electric) buses** benefit particularly from eco-driving techniques. Thus operational expenses may be reduced and passenger comfort enhanced.

The European project "**ACTUATE - Advanced Training and Education for Safe Eco-driving of Clean Vehicles**" focused on the importance of safe eco-driving of clean vehicles and provides public transport operators with the opportunity to introduce and test safe eco-driving trainings. The ACTUATE consortium comprises public transport operators, further education organisations, clean vehicle manufacturers and trolley:motion. Starting from the principal functions of clean (i.e. electric driven) vehicles, the ACTUATE partners developed training programmes to raise awareness of the knowledge, skills and competencies necessary to perform safe eco-driving of the clean vehicle types tram, hybrid bus or trolleybus. Thus, ACTUATE performs an important role in matching clean vehicle technology markets with improved driver competence.

The ACTUATE project ended in January 2015 and the training programmes were tested with more than 1.500 drivers at the public transport operators in Salzburg (Austria, trolleybus), Leipzig (Germany, tram and hybrid bus), Eberswalde (Germany, trolleybus), Parma (Italy, trolleybus) and Brno (Czech Republic, tram and trolleybus). And results of the ACTUATE trainings show that safe eco-driving has the potential **to increase the energy-efficiency of bus and tram fleets by 3% to 6% in daily operation.**

**But an economical driving style means not only the actual saving of fuel, respectively energy!**

Why eco-driving? Eco-driving is useful for ...

- **the driver:** the driver is more relaxed and less stressed while driving
- **the passenger:** the passenger feels safer because she/he senses the calmness of the competent driver through their anticipatory and gentler way of driving
- **the infrastructure:** the infrastructure is subject to less stress with an anticipatory and gentler way of driving, resulting, for example, in less wear on points and track intersections. In the long term this means significant savings in infrastructure costs.
- **the vehicle:** eco-driving of the vehicle means it runs more smoothly and is subject to less stress, for example with less wear on the rim-tyres or less wear on the electronic control system.
- **the company:** the company will save a lot of money in the long term through lower energy consumption, fewer repairs to vehicles and infrastructure and greater employee satisfaction.

**Example:**

According to the ACTUATE partner Leipziger Verkehrsbetriebe (LVB), the application of safe eco-driving techniques allows trams to save 3% in electricity consumption and diesel/hybrid buses to make due with about 5% less fuel. These savings are on top of any other technical features, which might already permit such vehicles to consume less energy.

Applied across the entire network and the total fleet, this equates to annual savings of 1,8 GWh less energy consumption for Leipzig's trams and about 225 000 litres of



reduced diesel fuel use for the city's buses. **Financially these figures translate into savings of roughly 500 000 Euros per year; 210 000 Euro for the trams and 280 000 Euros for the buses!** Even greater energy savings can be achieved with eco-driving techniques on tramway networks that feature a higher degree of segregated track and less shared traffic lanes than in Leipzig, where trams only have roughly 30% of segregated right of way.

Thanks to the **overwhelmingly positive** feedback on the high quality and practical value of the eco-driving training sessions in the ACTUATE partner companies, a convenient "starter kit" will now be available, in order to allow any other interested trolleybus, tram or hybrid bus operators to successfully introduce eco-driving in their cities! All of the **training materials** (brochures, presentations and introduction concepts) and **image ads** that were produced and developed as part of the project may be obtained by interested public transport operators **free of charge**. The training materials are available in the following languages: **English, German, Italian, French, Spanish, Czech, Polish** (only tram and trolleybus materials) **and Romanian** (only trolleybus materials). For bus operators: the training sessions that have been developed as part of the ACTUATE project are conform to the European directive 2003/59!

In order to ensure long lasting benefits and to secure a successful know-how transfer about safe eco-driving, the ACTUATE project partners have established an e-learning module, which contains general information as well as all of the latest data. The use of this module is free of charge and therefore represents an ideal starting point for any other public transport operator hoping to introduce eco-driving training sessions. Please visit the following link: <http://www.rupprecht-academy.eu/course/index.php?categoryid=3>

The module is available in the following languages: English, German, Italian and Czech.

You will find all training materials as file downloads under the following link: [www.actuate-ecodriving.eu](http://www.actuate-ecodriving.eu).

Thanks to the **overwhelmingly positive** feedback on the high quality and practical value of the eco-driving training sessions in these four cities, a convenient "starter kit" will now be available, in order to allow any other interested trolleybus, tram or hybrid bus operators to successfully introduce eco-driving in their cities!

If we have made you curious and you would like to request a complimentary starter kit, please contact **Alexandra Scharzenberger** from **trolley:motion** until **March 18 2015** via: [scharzenberger@trolleymotion.com](mailto:scharzenberger@trolleymotion.com).

The free kit will include a USB-stick with all training materials, advertising posters, a "lessons learned" brochure (only available in English), practical give-aways and a project flyer. Please inform us, which would be your preferred language version.

We would be happy to hear from you and support you in introducing eco-driving in your city! In case of additional interest you may also contact the project coordinator **Wolfgang Backhaus** from **Rupprecht Consult** via [w.backhaus@rupprecht-consult.eu](mailto:w.backhaus@rupprecht-consult.eu) directly.

Kind regards,

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