

## How can technologies be compared?

You can compare technologies by performing a search with specific, user-defined search criteria. There are different ways to narrow your search results. The easiest way is to open the advanced search form and include specific evaluation criteria in your search.

**Advanced Search - Technology Database** i

Show only technologies which contain the following **keyword(s)**:

Show only technologies which belong to the following **technology field**:

Choose **type of traction**:  
  and

Choose **type of transportation**:

Please select **evaluation criterion** first: Then choose a corresponding **value**:

Please select **date** and if necessary **date range**:

▶ 3 results of 92.

Technology	evaluated	Overall Potential	-- show additional criterion --	go
Optimisation of traction software	✓	promising		
Reference cycle for energy efficiency	✓	promising		
Upgrading of engines	✓	interesting		

By clicking on a technology name in the result list which appears below the search mask, you can display the evaluation part of the technology.

go back to technology list

previous technology

next technology

## Optimisation of traction software ✓ evaluated **i**

In modern electric stock, various components of the power train are regulated and operated by an on-board computer. In many cases the corresponding software offers considerable potential for optimisation from an energetic point of view. In these cases a software modification of existing stock is an interesting option.

**Technology field:** Optimisation of traction technologies

### General information

#### General criteria

##### Environmental criteria

###### Impacts on energy efficiency:

**Energy efficiency potential for single vehicle: 2 - 5%**

**Energy efficiency potential throughout fleet: < 1%**

Experts calculate a theoretical saving potential of 15% achievable through traction software measures. In practice, an ex post software improvement will typically raise energy efficiency by 1-3 % depending on vehicle and the degree of software optimisation already realised by the manufacturer. For large series (such as DB's BR 101) even a small improvement potential of only 1% can economically justify such a measure.

**Other environmental impacts: neutral**  
(no details available)

##### Economic criteria

**Application outside railway sector** (this technology is railway specific)

##### Overall rating

On the following page you can click on the plus icons to open a specific part of the information you are interested in. To display the same evaluation criteria for the other pre-selected technologies, you can use the navigation tool on top of the page (previous / next technology).