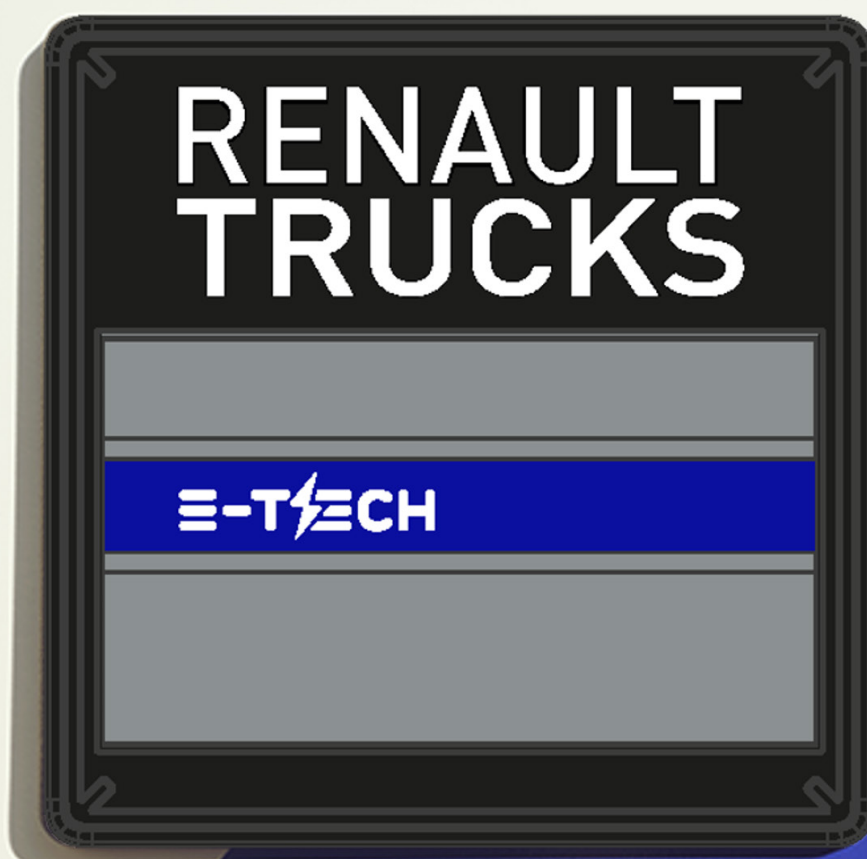


ENVIRONMENTAL PRODUCT INFORMATION



RENAULT TRUCKS E-TECH T RIGID 6X2



ENVIRONMENTAL PRODUCT INFORMATION

Environmental product information is drawn from life cycle analyses (LCAs) carried out on our vehicles. These cover all phases in a truck's life, from the production of raw materials right through to final dismantling and recycling. It provides data concerning the environmental impact of each one of these phases. In some cases, the LCA, which is far-reaching and complex, includes approximations. The results reveal the most important environmental parameters in the product life cycle.

THE THEMES

The environmental product information studies the impact of:

- **materials:** extraction and processing of raw materials used to produce the vehicle.
- **production:** manufacturing processes used by the plants, component production at suppliers and on site transport of parts.
- **use phase:** production and consumption of electric energy. Homologation trials carried out for each type of engine as well as on-road tests make it possible to ascertain the effects of energy consumption. Depending on the conditions of use, a truck's actual energy consumption can differ from the published results.
- **maintenance:** consumables and materials used in preventive maintenance and the production of parts (impact calculated on the basis of average values).
- **end of life management:** dismantling of products, management of waste and recycling the truck's materials.

THE RESULTS

The results shown include:

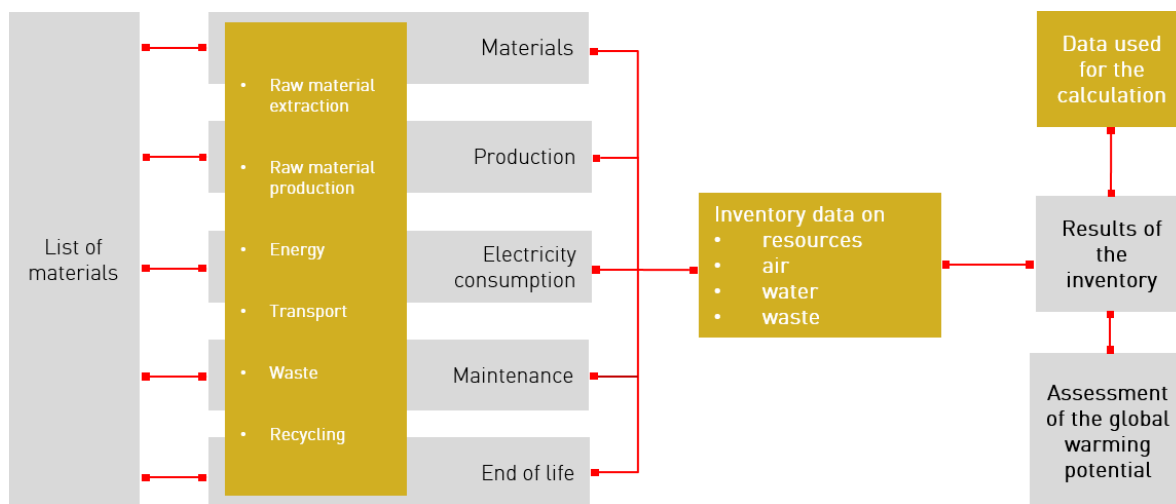
- the vehicle's bill of materials
- the rates of recyclability and recoverability as defined by the ISO 22628 standard
- the inventory results which show the data for the resources used and the emissions produced (pollution and waste).
- the assessment of the potential contribution to global warming. al.

BENCHMARK VALUES

Life cycle analysis results vary considerably depending on the data used for the calculations, the most important being country and energy source, energy consumption an mileage. The results shown here are based on the benchmark values for a **Renault Trucks E-Tech T, a 6x2 rigid** designed for regional distribution, throughout its entire life cycle.

ENVIRONMENTAL PRODUCT INFORMATION

METHOD



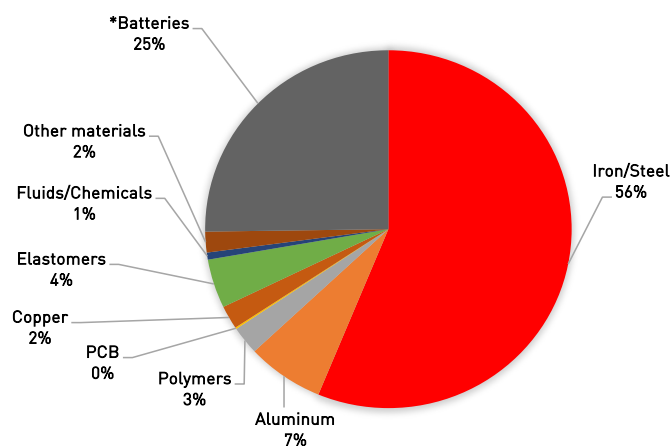
DATA USED FOR THE CALCULATION

| Vehicle model | Power | Number of batteries | Vehicle type | Distance (km) |
|-------------------------|--------|---------------------|--------------|---------------|
| Renault Trucks E-Tech T | 330 kW | 6x90 kWh | rigid 6x2 | 650 000 |

Bill of materials

Bill of materials used in the vehicle and taken into account for calculating the life cycle analyses.

| Materials | kg |
|------------------|--------------|
| Iron/Steel | 6691 |
| Aluminum | 810 |
| Polymers | 302 |
| PCB | 17 |
| Copper | 252 |
| Elastomers | 526 |
| Fluids/Chemicals | 76 |
| Other materials | 223 |
| *Batteries | 3000 |
| TOTAL | 11897 |



* Li-ion NCA

ENVIRONMENTAL PRODUCT INFORMATION

Rate of recyclability and recoverability

The vehicles are designed to ensure that the maximum amount of materials used in their construction can be reused.

| |
|-------------------------------|
| Rate of recyclability* 95,4% |
| Rate of recoverability* 98,3% |

* Calculations according to the ISO 22628 standard: The rate of recoverability is the percentage of the vehicle's mass potentially able to be reused, recycled or recovered as energy (incineration with energy recovery); it is therefore always higher than the rate of recyclability.

Inventory results

| | Unit | Materials | Production | Use phase | Maintenance | End of life | Total |
|----------------------------------|----------------|--------------|-------------|--|-------------|--------------|--------------|
| Electricity - renewable* | MWh | 15,85 | 6,73 | According to country and primary energy source | 6,51 | -1,3 | 1201 |
| Electricity - non-renewable* | MWh | -0,24 | 3,79 | | 2,497 | -0,23 | 7 |
| Other renewable energy* | MWh | 0,003 | 0 | | 0 | 0,0038 | 0 |
| Other non-renewable energy* | MWh | 108,9 | 202 | | 26,8 | -25,9 | 11631 |
| Materials | kg | 8898 | 0 | | 1460 | -7814 | 2544 |
| CO* | kg | 103,2 | 20,6 | | 2,8 | -55,7 | 82 |
| CO ₂ * | kg | 26232 | 672 | | 4608 | -7926 | 29451 |
| HC/VOC* | kg | 66,5 | 7,4 | | 13,8 | -20,9 | 70 |
| NO _x * | kg | 58,1 | 4,3 | | 10,8 | -15,75 | 61 |
| SO ₂ * | kg | 65,1 | 2,6 | | 7,4 | -17,1 | 61 |
| Particulates* | kg | 18,16 | 0,86 | | 1,99 | -6,87 | 17 |
| Biological oxygen demand* | kg | 0,79 | 0,13 | | 0,26 | 0,01 | 1 |
| Chemical oxygen demand* | kg | 13,86 | 3,25 | | 2,48 | -0,2 | 21 |
| CO ₂ -eq* | kg | 29104 | 5450 | | 5962 | -17792 | 28673 |
| CO ₂ -eq | kg | 60360 | 5450 | | 5962 | -8312 | 63460 |
| Use of water (excluding cooling) | m ³ | | 8,66 | | | | |
| Use of water for cooling | m ³ | | 2,17 | | | | |
| Non-hazardous waste treated | kg | | 339,16 | | | | |
| Non-hazardous waste to landfill | kg | | 10,21 | | | | |
| Hazardous waste treated | kg | | 193,54 | | | | |
| Hazardous waste to landfill | kg | | 4,7 | | | | |

*Batteries excluded

ENVIRONMENTAL PRODUCT INFORMATION

Inventory results

By country

| | Unit | BE | CH | SP | FR | GB | IT | LU | NL | NO | SW | DE | EU28 |
|-----------------------------|------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|---------------|--------------|--------------|---------------|---------------|
| Electricity - renewable | MWh | 614 | 1029 | 1064 | 432 | 997 | 1230 | 1122 | 561 | 1251 | 969 | 1197 | 883 |
| Electricity - non renewable | MWh | 1162 | 880 | 679 | 1831 | 643 | 158 | 561 | 137 | 28 | 1022 | 371 | 718 |
| Other renewable energy | MWh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other non-renewable energy | MWh | 731 | 469 | 1316 | 337 | 1165 | 1578 | 1229 | 1719 | 59 | 66 | 1464 | 1198 |
| Materials | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO | kg | 139 | 115 | 256 | 72 | 359 | 286 | 256 | 165 | 19 | 188 | 300 | 296 |
| CO ₂ | kg | 191001 | 168053 | 366385 | 92773 | 282010 | 391524 | 410941 | 462111 | 30032 | 38736 | 496551 | 362545 |
| HC/VOC | kg | 332 | 267 | 912 | 193 | 703 | 1309 | 634 | 910 | 23 | 54 | 751 | 722 |
| NO _x | kg | 224 | 196 | 607 | 152 | 404 | 397 | 445 | 422 | 16 | 81 | 525 | 440 |
| SO ₂ | kg | 59 | 90 | 453 | 86 | 191 | 175 | 194 | 110 | 7 | 41 | 231 | 344 |
| Particulates | kg | 17 | 21 | 53 | 15 | 28 | 33 | 48 | 48 | 5 | 18 | 59 | 48 |
| Biological oxygen demand | kg | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chemical oxygen demand | kg | 105 | 162 | 481 | 65 | 50 | 260 | 487 | 498 | 5 | 7 | 616 | 398 |
| CO ₂ eq. | kg | 199875 | 175344 | 392597 | 97771 | 295813 | 423808 | 428269 | 487065 | 30666 | 40476 | 517273 | 381680 |

By primary energy source

| | Unit | Hard coal | Brown coal/ Lignite | Natural gas | Hydro power | Nuclear power | Wind power | PV solar cells | Solar thermal | Biomass |
|-----------------------------|------|---------------|------------------------|---------------|----------------|------------------|---------------|----------------|------------------|--------------|
| Electricity - renewable | MWh | 12 | 22 | 6 | 1172 | 1 | 2444 | 5861 | 8703 | 2592 |
| Electricity - non-renewable | MWh | 8 | 13 | 2 | 0 | 2802 | 2 | 25 | 26 | 5 |
| Other renewable energy | MWh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other non-renewable energy | MWh | 2660 | 2762 | 2191 | 6 | 23 | 29 | 177 | 137 | 94 |
| Materials | kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO | kg | 177 | 753 | 176 | 11 | 6 | 29 | 73 | 88 | 2772 |
| CO ₂ | kg | 902187 | 1081566 | 434607 | 5864 | 4199 | 8275 | 51488 | 39806 | 22668 |
| HC/VOC | kg | 2261 | 504 | 876 | 3 | 14 | 15 | 182 | 81 | 233 |
| NO _x | kg | 1245 | 880 | 309 | 4 | 18 | 11 | 89 | 75 | 828 |
| SO ₂ | kg | 792 | 914 | 36 | 3 | 18 | 12 | 114 | 44 | 410 |
| Particulates | kg | 144 | 151 | 10 | 3 | 5 | 4 | 18 | 9 | 77 |
| Biological oxygen demand | kg | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chemical oxygen demand | kg | 1737 | 1651 | 9 | 1 | 1 | 4 | 37 | 22 | 533 |
| CO ₂ eq. | kg | 968624 | 1101235 | 457973 | 5950 | 4517 | 8690 | 55383 | 43502 | 31167 |

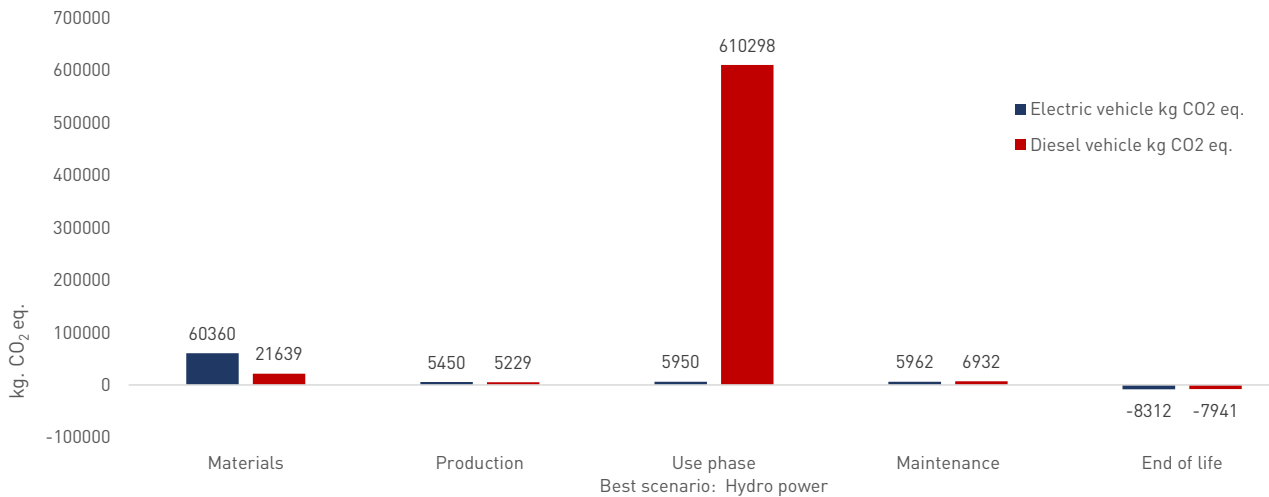
ASSESSMENT OF THE IMPACT ON THE ENVIRONMENT

Assessing a product's environmental impact throughout its lifetime makes it possible to determine which aspects must be studied to improve its overall environmental performance. This assessment may be qualitative but also quantitative by using appropriate methods and tools

GLOBAL WARMING POTENTIAL

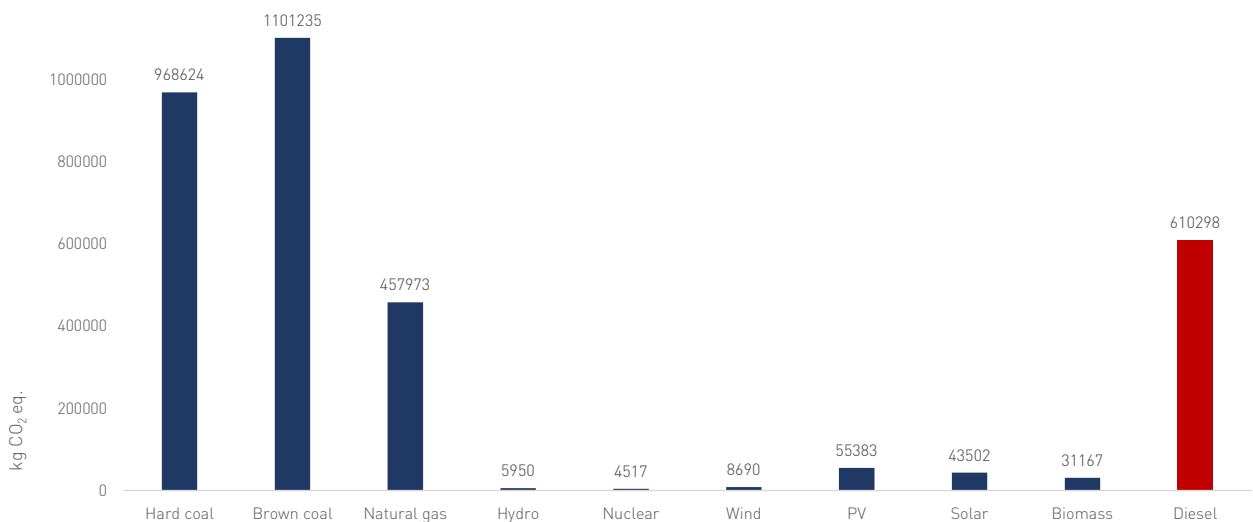
Life cycle analysis makes it possible to determine a vehicle's global warming potential throughout its operational life. This potential consists of the various greenhouse gas emissions it produces that affect the climatic system. It is expressed as the equivalent quantity of Carbon Dioxide (kg eq. CO₂).

Life cycle emissions - CO₂eq.



Global warming potential for the different life cycles of Renault Trucks E-Tech T rigid 6x2. The use phase shows the best case.

Use phase emissions from production of electricity - CO₂eq. Energy sources and comparison with Diesel



ASSESSMENT OF THE IMPACT ON THE ENVIRONMENT

COMMENTS

Over the entire life cycle of an electric truck, materials, including batteries, account for most of the greenhouse gases emissions, while the use phase, which is very predominant for a diesel vehicle, is less.

By switching to electric power, the reduction of the truck's climate impact during this use phase can be extremely important depending on the selection of the primary source of this energy and its production origin.

The analyses show that electricity produced from coal will have a high carbon impact, unlike electricity produced from nuclear or renewable energy sources. The results on the whole life cycle differ according to the national energy mixes within the European Union but show a gain in all countries that should increase as decarbonization progresses.

Powered by low-carbon electricity, of hydraulic origin at best, the **Renault Trucks E-Tech T rigid 6x2** shows a significant reduction in CO₂ emissions equivalent of its life cycle of nearly 90%.

By developing its 100% E-Tech electric range of vehicles Renault Trucks is substantially reducing the CO₂ emissions from products over their entire life. Renault Trucks is continuing its efforts to reduce batteries environmental impact by securing materials supply and recycling and by using new technologies.

Renault Trucks is preparing battery management in line with the principles of the circular economy. After their first service life, batteries can be reconditioned and reused on trucks. When used, they will be converted to applications other than mobility, and then recycled at the end of their life, with the recovered materials being reinjected into the manufacture of new units.

RENAULT TRUCKS

Renault Trucks is committed to improving sustainable goods mobility and is striving to reduce the effects its products have on the environment. Renault Trucks vehicles are designed to comply with legislation limiting atmospheric pollution and also to continue lowering fuel consumption which results in reducing carbon dioxide emissions.

Together with ever more fuel efficient transport solutions, Renault Trucks offers a full range of vehicles powered by alternatives to diesel fuel to enable operation in any environment: 100% electric; compressed natural gas; biofuels.

Renault Trucks implements an environmental policy based on specific commitments and a stringent management system that covers its dealer network, suppliers and partners. Its vehicles are manufactured in ISO 14001 certified production plants. It is geared to limiting its consumption of energy, water and raw materials but also to reducing waste production. Its products are designed to allow maximum reuse of the materials that have gone into their production.

