

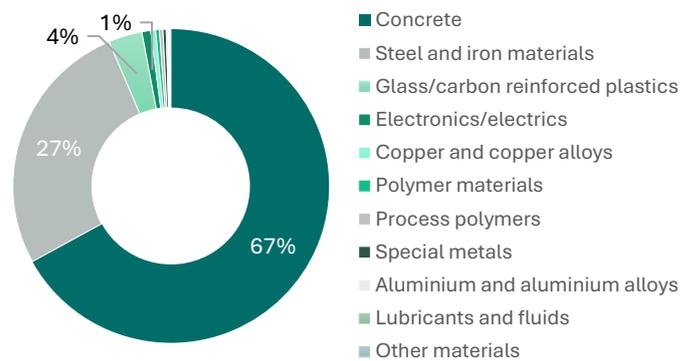
Life Cycle Assessment (LCA)

E-175 EP5 E1

Turbine Specification

| | |
|---------------------------------------|-----------------|
| Nominal power | 6.00 MW |
| Service life | 25 years |
| Hub height | 162 metres |
| Wind class | S A |
| Annual energy production ¹ | 22,881 MWh |
| Tower type | Hybrid |
| Foundation type | Flat foundation |

Material Composition ²



LCA Framework ³

Goal and Scope

Assessment of potential environmental impacts throughout the product life cycle (cradle to grave)

Functional unit

1 kWh of generated electrical energy delivered to the grid

Impact assessment method

Environmental Footprint (EF) 3.1

Data sources and software

Primary data, industry-specific secondary data, LCA for Experts background data (2025.2)

No cut-off rules applied for Life Cycle Inventory

Environmental Impact Indicators

| | |
|--|------|
| Acidification, mmol of H ⁺ -e | 0.02 |
| Climate Change total, g CO ₂ -e | 4.97 |
| Eutrophication (freshwater), mg P-e | 0.02 |
| Photochemical Ozone Formation (human health), g NMVOC-e | 0.01 |
| Primary Energy Demand (renewable and non-renewable resources, net calorific value), MJ | 0.08 |
| Resource Use (fossils), MJ | 0.06 |

Other Environmental Indicators

Carbon footprint

474
 t CO₂-e/MW

Energy Payback Time

6.64
 months

Return on Energy

45.2
 times

Recyclability ^{2,4}

89.6
 %

¹ | Based on design wind speed 7.8 m/s, including losses

² | Turbine without foundation

³ | Principles according to ISO 14040/14044

⁴ | Based on industry-specific expert assessments of recycling rates