Material Use

Turbines

By knowing how Vestas’ products and materials contribute to the environmental performance of the wind plant it is possible to make fact-based and informed decisions that will minimise overall environmental impacts. Life Cycle Assessment is used to provide the detailed knowledge regarding the material composition of the wind plant.

The figures below show the typical material breakdown of Vestas’ turbines.

For example, a V112-3.3 MW turbine is composed of around 86% metals (e.g. steel, iron, copper and aluminium), 12% polymers and composite materials, and the remainder a mixture of electronics/electrical items, lubricants and fluids, etc.
3MW Platform
Turbines

V126-3.3 MW™
494 tonnes
- Steel and iron materials 88%
- Aluminium and alloys 1%
- Copper and alloys 0.4%
- Polymer materials 4%
- Glass/Carbon composites 5%
- Electronics/electrics 1%
- Lubricant and fluids 0.4%
- Not specified 0.1%

Note: 117m hub height and wind class IEC3A

V117-3.3 MW™
408 tonnes
- Steel and iron materials 85%
- Aluminium and alloys 1%
- Copper and alloys 0.5%
- Polymer materials 5%
- Lubricant and fluids 0.5%
- Not specified 0.1%
- Glass/Carbon composites 7%
- Electronics/electrics 1%

Note: 91.5m hub height and wind class IEC2A

V112-3.3 MW™
353 tonnes
- Steel and iron materials 84%
- Aluminium and alloys 1%
- Copper and alloys 0.5%
- Polymer materials 5%
- Lubricant and fluids 0.5%
- Not specified 0.1%
- Glass/Carbon composites 7%
- Electronics/electrics 1%

Note: 84m hub height and wind class IEC2A

V105-3.3 MW™
357 tonnes
- Steel and iron materials 85%
- Aluminium and alloys 1%
- Copper and alloys 0.5%
- Polymer materials 5%
- Glass/Carbon composites 7%
- Electronics/electrics 1%
- Lubricant and fluids 0.5%
- Not specified 0.1%

Note: 72.5m hub height and wind class IEC1A

V90-3.0 MW™
256 tonnes
- Steel and iron materials 88%
- Aluminium and alloys 1%
- Copper and alloys 1%
- Polymer materials 4%
- Lubricant and fluids 0.5%
- Not specified 0.5%
- Glass/Carbon composites 5%
- Electronics/electrics 1%

Note: 80m hub height and wind class IEC1A

Wind. It means the world to us.™
2MW Platform
Turbines

V100-2.6 MW
259 tonnes
- Steel and iron materials 87%
- Aluminium and alloys 1%
- Copper and alloys 2%
- Polymer materials 3%
- Glass/Carbon composites 7%
- Electronics/electrics 1%
- Lubricant and fluids 0.5%
- Not specified 0.3%

Note: 80m hub height and wind class IEC2A

V110-2.0 MW
250 tonnes
- Steel and iron materials 85%
- Aluminium and alloys 1%
- Copper and alloys 1%
- Polymer materials 3%
- Glass/Carbon composites 8%
- Electronics/electrics 1%
- Lubricant and fluids 0.3%
- Not specified 0.5%

Note: 80m hub height and wind class IEC3A

V100-2.0 MW
259 tonnes
- Steel and iron materials 86%
- Aluminium and alloys 1%
- Copper and alloys 1%
- Polymer materials 3%
- Glass/Carbon composites 7%
- Electronics/electrics 1%
- Lubricant and fluids 0.3%
- Not specified 0.5%

Note: 80m hub height and wind class IEC2B

V100-1.8/2.0 MW
242 tonnes
- Steel and iron materials 85%
- Aluminium and alloys 2%
- Copper and alloys 1%
- Polymer materials 3%
- Glass/Carbon composites 8%
- Electronics/electrics 1%
- Lubricant and fluids 0.4%
- Not specified 0.6%

Note: 84m hub height and wind class IEC2A

V90-1.8/2.0 MW
240 tonnes
- Steel and iron materials 86%
- Aluminium and alloys 2%
- Copper and alloys 1%
- Polymer materials 3%
- Glass/Carbon composites 7%
- Electronics/electrics 1%
- Lubricant and fluids 0.4%
- Not specified 0.5%

Note: 80m hub height and wind class IEC3A

Wind. It means the world to us.