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COP21 – Paris, 7th of December 2015

Energy transition and strategic metals: a key variable

Strategic material @ Siemens Wind Power

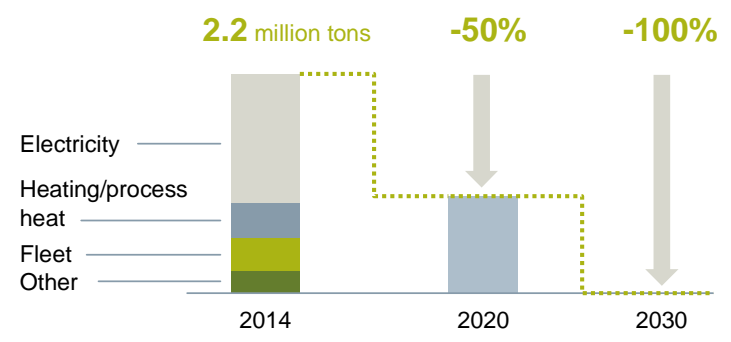


Sustainability at Siemens

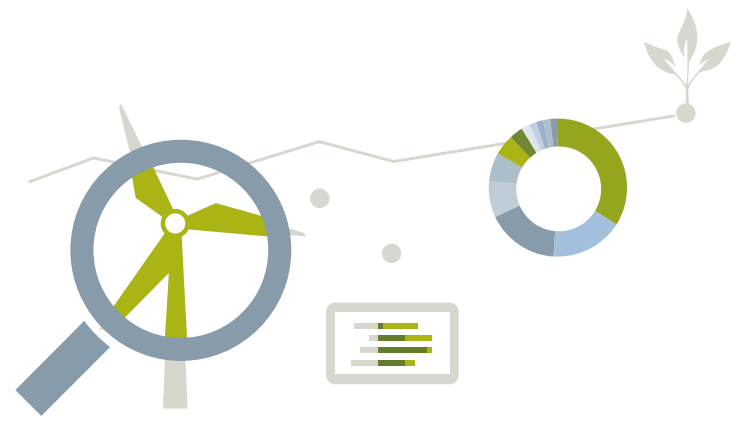
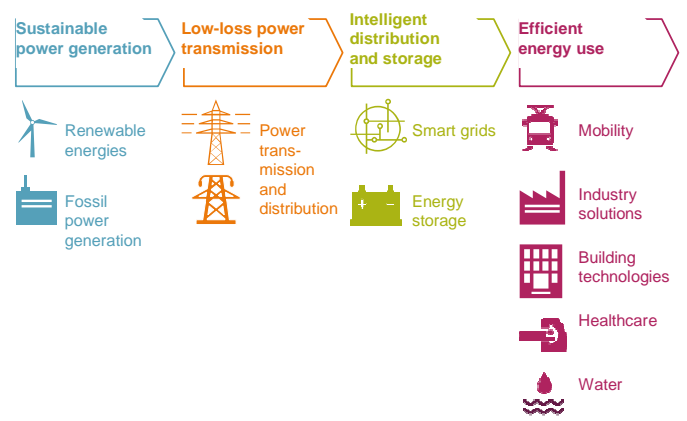
Dow Jones Sustainability Indexes



Siemens' path to long term CO₂-Neutrality



- Top rankings in sustainability indices
- First carbon neutral industrial company by 2030
- Leading customers to energy efficiency
- Sustainability as an opportunity



Environmental Product Declarations (EPD) EDP representing full product portfolio



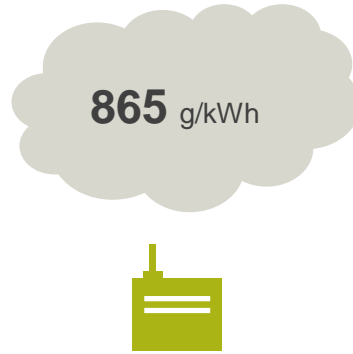
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Energy payback time: < 4.5 months

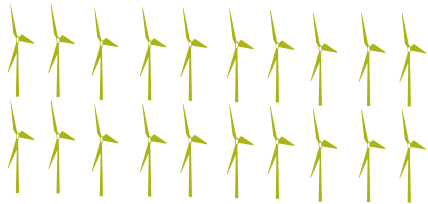
4g/kWh



865 g/kWh



4,500,000 t
Of CO₂ savings

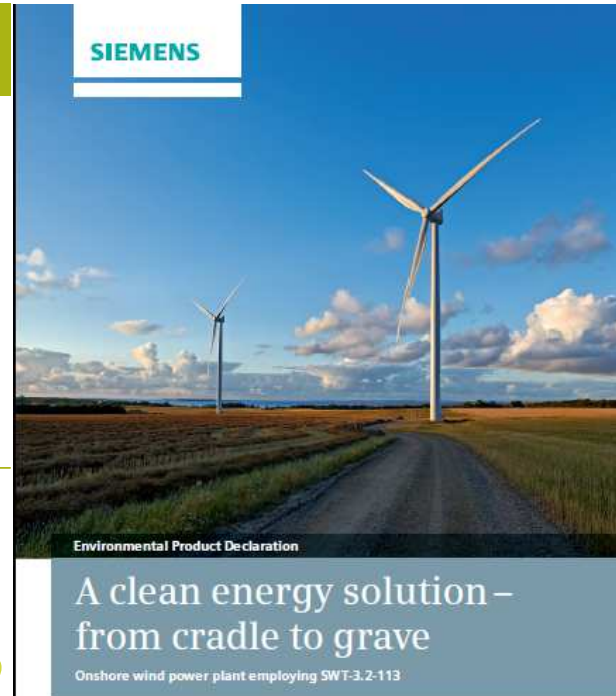


20 turbines, 20 years

160 km²
Forest area



12,65 km



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Environmental Product Declaration

A clean energy solution –
from cradle to grave

Onshore wind power plant employing SWT-3.2-113

siemens.com/wind

D3 Platform –
SWT-3.2-113



Permanent Magnets Siemens Wind Power

Siemens Direct Drive Wind Turbines

- Efficient generation of power → Boosting lifetime energy output
- Reduces the number of moving parts compared to geared machines → Reduction of service costs
- Reduces overall weight of the nacelle → Reduce infrastructure & installation





Siemens Wind Power Permanent Magnets Strategy

Supply Chain

- Strategic partners: Inside & outside China
- Continuous pursuit and implementation of long term environmentally friendly solutions

Corporate Responsibility in the Supply Chain

- Environmental Protection clauses
- CoC for Siemens Suppliers
- Sustainability Audits

Development

- Optimization of raw material usage:
- Support HRE reduction on magnets
 - Support the development of Dy free magnets

Future

- Active support on the development of reuse and recycling options of magnet material
- Expected recyclability rate of 90% for RE permanent magnets



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Thank you for your attention

SIEMENS SAS / Frédéric Petit