Circularity in the renewables industry

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Who is Ørsted?

The global leader in offshore wind

We are the world’s leading developer of offshore wind. We conceived and built the first offshore wind farm in 1991 and recently built the world’s largest (Hornsea 2).

An international clean energy major

We have expanded our renewables portfolio from offshore wind to onshore wind, solar, hydrogen and power-to-X, and we are present in 14 countries.

A sustainability front-runner

We are ranked by organizations like Corporate Knights, CDP, the Science-based Targets initiative and MSCI as a leading example of corporate sustainability.
At Ørsted we aspire to run a business that gives more to nature and society than it takes. Our actions should contribute to fully decarbonizing the world’s energy systems while also creating a lasting positive impact on our environment and societies.

**Science-aligned climate action**
Accelerating climate action through green energy solutions

**2025** Carbon neutral business

**2040** Carbon neutral footprint (net-zero)

**First energy company in the world with a science-based net-zero target**

**Target examples**

**Priority areas**

**Achievement examples**

**Green energy that revives nature**
Leaving a positive impact on nature

**2030** Net-positive biodiversity impact from all projects commissioned

**Today** Ban on landfilling of wind turbine blades

**Five-year global partnership with WWF to improve ocean biodiversity**

**A green transformation that works for people**
Driving a just and inclusive green energy transition

**2025** Total recordable injury rate (TRIR) of 2.5 per million hours worked

**2030** 40:60 gender balance in total workforce and leadership

**Commitment to constructing offshore wind farms in the US with American union workforce**

**Governance that enables the right decisions**
Embedding sustainability and integrity across our operations

**Today** All future projects EU taxonomy-aligned

**Today** Code of conduct risk screenings on all sourcing contracts above DKK 3M

**Update of short-term incentive scheme to increase links to sustainability**
Circularity plays a key role in mitigating impacts while ensuring a more resilient supply chain for green energy build-out.
To achieve full circularity, we must move beyond the mainstream focus on ‘recycling’ of materials at their end-of-life

The R-Ladder

- Recycling is just one of many circularity (R) strategies we can apply throughout the entire value chain off our assets

R-Ladder with circularity strategies

The Zero Waste Hierarchy

- Recycling should always be our last resort when considering our circularity strategies and options

Source: Dillewijn Zwapak

Source: ZWIA
As a developer, Ørsted has a key opportunity to ensure circularity across the full life-cycle of our renewable energy assets

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<thead>
<tr>
<th>1. Design and supply chain</th>
<th>2. Late-life strategies</th>
<th>3. Resource recovery</th>
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<tbody>
<tr>
<td>- Minimise input materials by rethinking designs and processes</td>
<td>- Repair and reuse of main components</td>
<td>- Increase recyclability rates</td>
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<tr>
<td>- Increasing use of secondary (recycled) input materials</td>
<td>- Lifetime extension of our assets</td>
<td>- Circulate end-of-life materials back to renewables supply chain</td>
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Example: Ørsted’s circular roadmap for offshore foundations

Example: Ørsted partnership with Renewables Parts in UK to increase remanufacturing of main components in offshore wind

Example: commitment to no landfill of turbine blades (globally) and solar modules (in Americas region)
There are key challenges across all life-cycle stages to increase overall circularity of the renewables industry

<table>
<thead>
<tr>
<th>Design and supply chain</th>
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<tbody>
<tr>
<td>1. How do we increase use of secondary materials without driving up cost of new RE projects?</td>
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<tr>
<td>2. How do we adapt technological requirements to better allow for use of secondary materials?</td>
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<td>3. How can we increase the pool of available secondary materials for the RE industry?</td>
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<tr>
<td>1. How do we ensure capabilities and availability of local repair and manufacturing services?</td>
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<td>2. How do we make it more economically viable to repair/reuse over buying new?</td>
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<td>3. How do we establish reliable second-hand markets and donation programmes?</td>
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<td>1. How do we reach 100% recyclability of RE components? (today, 90-95% of all materials are recyclable)</td>
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<td>2. How do we drive down cost of recycling?</td>
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<td>3. How can we make it easier to use own “waste” streams as new input materials?</td>
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