Sustainable decommissioning of wind assets: state-of-the-art practices

Lida Barekzai
Project Manager
Introduction

A Global Company

25,91 bn € in revenue
163 000 employees
present on 5 continents

3 Main Activities

ENERGY
20% revenues

WASTE
36% revenues

WATER
44% revenues

Experience in Decommissioning

Wind Turbines

Offshore oil platforms

Practical examples

Current status

Sustainable options

Veolia’s approach

Final remarks
Impact of unsustainable decommissioning

Water, soil and air pollution as a consequence of “cheap” decommissioning procedures
Loss of public acceptance leading to delays and terminations of wind energy projects
Sustainable decommissioning

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Sustainable decommissioning

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Ecological quality

Environmental media protection

Biodiversity

Resource use

Air

Water

Soil

Flora

Fauna

Land-Scape

Energy

Land

Matter

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Sociocultural quality

Health and Safety

Legal compliance

Public acceptance

Workers‘ H & S

Neighbours‘ H & S

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Sustainable decommissioning

Economic quality

Treatment cost
- Decom. cost
- Recycling cost

Value development
- Reuse Capability
- Reclamation of recyclables
- Reclamation of RDF

Subsequent cost
- Disposal cost
- Legal fees / penalties
- Remediation cost

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Sustainable decommissioning

Technical quality

Quality of technical execution

- Budgetary compliance
- Timely compliance
- Diverse applicability

Quality of standards

- ISO certification
- Third Party approved
- Independently audited

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Process quality

Project management

Conceptual design

Quality control / audit

Transparent communication

Certificate of work

Industry standards
Holistic approach for sustainable decommissioning

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Holistic approach for sustainable decommissioning

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- Ecological Quality
- Sociocultural Quality
- Economic Quality
- Technical Quality
- Process Quality

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Veolia uses different types of equipments

Standard ones ...

… and patented ones:

Rotorblade saw in Germany

… and always aims for maximum sustainability and safety
Veolia’s Unique Selling Proposition for the Wind Industry: the Rotor blade saw
Veolia’s Unique Selling Proposition for the Wind Industry: the Rotor blade saw

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The Rotor Blade Saw in Action

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Fixing the blade
Cutting the blade
The rope
Cutted piece
Handwork station
Water treatment

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The Value Proposition of a Sustainable Solution from Cradle to Grave

- **Manufacturing**
  - Total Waste Management
  - Energy efficiency
  - Help in choosing the most recyclable solution

- **Wind turbine operation**
  - Manage waste from maintenance

- **Waste transportation**
  - Optimize waste transportation logistics

- **Decommissioning**
  - Veolia provides state of the art decommissioning solution

- **Recycling**
  - Sale of Recyclables

- **Raw materials & resources Sourcing**

**AND IMPROVING WIND TURBINES LIFE CYCLE ASSESSMENT**

- **Yield**
- **Efficiency**
- **License To Operate**
- **Brand / CSR**
Thank you for your attention and you are welcome to reach us!

You are welcome to reach us

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