Paris Session 2022



Material Development Trends for Sustainability

SC B1 Insulated Cables – PS3 – Q2

What trend can be foreseen in cable insulation material development?

Marc Bailleul, Belgium

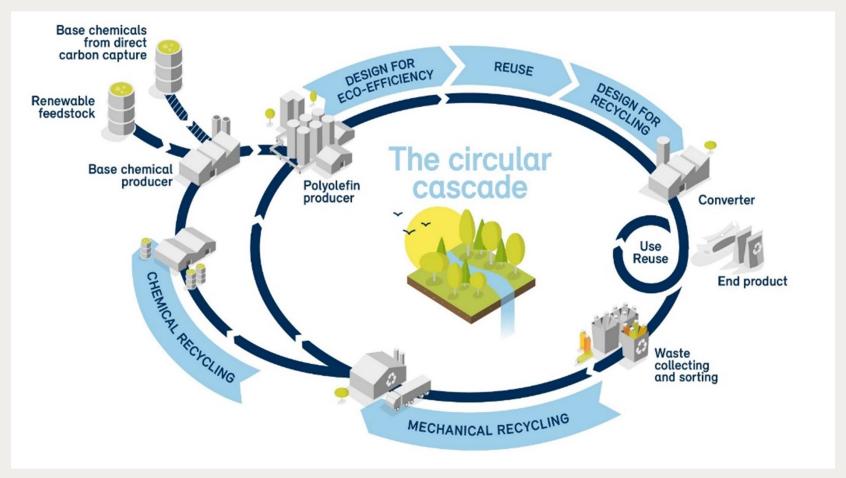


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Manufacturing needs to shift to a circular model to become sustainable



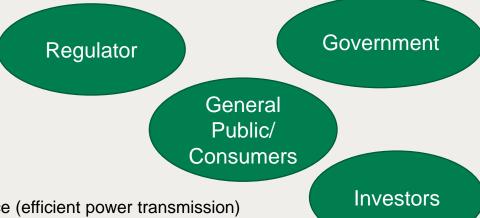
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Trend in material development must fit into a broader picture of Power System Value Chain & Society – keyword = collaboration

> Raw materials

- Performance (extrusion, cleanliness)
- Reliability (ageing)
- Manufacturing impact
- End-of-Life (recyclability)





- Performance (efficient power transmission)
- Reliability (40+ year service life)
- Environmental impact (installation, operation)
- End-of-Life (recyclability)



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- Performance (supply = demand)
- Flexibility
- Reliability
- Environmental Impact; Acceptance
- Sustainability

Challenges to overcome

- Balance between Sustainability Performance & Technical Performance
- Development duration vs. Innovation requirements (2050 pledges) time constraints?
- Material development vs. Need for track record how to demonstrate long-term reliability while maintaining innovation flexibility?
- Update of Standards enabling adoption of sustainable solutions
 - Renewable/chemically recycled feedstock in insulation materials to be considered recycled from a regulatory standpoint; <u>do not require</u> requalification
 - Recycled content in jackets may affect the properties what is acceptable?

Thank You!

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