

Paris Session 2022



Setting ambitious climate strategies in the energy sector

POWER SYSTEM ENVIRONMENTAL PERFORMANCE SC C3 - PS1

Question 1.15 : To reach a carbon-neutral value chain in the entire process of network operators, there is need to embed circularity in their core business processes. An innovative approach needs to be adopted about the circularity of materials and the eco-design, applying extensively the concepts of resources management, recycling, refurbish, life extension and the LCA methodologies. What experience can be reported about the decision processes for asset management based on circularity? What results can we report?

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RTE's eco-design actions

- Eco-design into its Environmental Management System (EMS)
 - taking greater account of environmental issues from the design of its projects, policies or purchases in a complete life cycle vision,
 - reducing greenhouse gas emissions and the volume of materials extracted
- Approach/tool used :
 - LCAs to assess the environmental footprint of the structural elements of tomorrow's network in order to improve decision-making and identify eco-design options => 4 generic LCAs have been carried out between 2020 and 2022
 - anticipating and set new environmental requirements in RTE's contracts and projects
 - using internal price of carbon

Group Discussion Meeting

RTE's eco-design actions: examples of results

- LCA on onshore substations:
 - enabled to evaluate the interest of adding a reference (of lower power) to the power transformer framework market, with a very good level of energy efficiency, a lighter material balance, and a reduction in the cost of acquisition.
 - allowed to compare the environmental impacts of different substation technologies (Air-Insulated Substation (AIS), Gas Insulated Switchgear (GIS) with SF6 or alternative ...).
- 10 framework contracts and large-scale projects have environmental requirements since 2018
- increasingly requesting a "Raw Materials Passport, an ISO 14025-compliant LCA document, and a carbon balance for construction contracts