



Energy and Resources as a Service:

The paradigm shift required to kick start a circular economy model

Panel Discussion for the Committee on Sustainable Energy

24 September 2021, 12– 13h00 Geneva time

United Nations Economic Commission for Europe

Background

Realization of Sustainable Development Goals requires massive inputs of low-carbon energy and other natural resources, including land and water. The current resource use varies significantly between low income and high-income countries by a factor of over ten. As the quality of life improves for a vast global population, the demand for energy and natural resources, including critical raw materials required for sustainable energy transitions, will increase immensely. Such demands are aggravated by the rapid urbanization of the world population, which puts a lot of stress on grid-based power, availability of clean cooking fuels and other raw materials required to ensure energy efficiency. Current patterns of resource use will not be able to meet the demand reasonably. Hence, rapid progress to a circular economy is seen as essential.

However, the current energy efficiency rates are stagnating, and the amount of materials recycled remains at a dismal rate of about 8 per cent. Energy and Resource as a Service (E-RaaS) is the new paradigm shift required to decouple energy/resource and sustainable development. The E-RaaS paradigm entitles moving away from the current commodity and product-based models in subscription-based industries that are outcome-focused. Recent years have seen a giant leap in Software as a Service (SaaS), which includes hardware. Mobility as a Service (MaaS) is another example that is receiving a lot of attention. Such “as a Service model” offers the most significant opportunity to be energy and resource-efficient and progress rapidly towards a circular economy. Some modest beginnings are visible in E-RaaS, but the concept holds a lot of promise and is still in its infancy. The rapid transition to a sustainable energy system offers an excellent opportunity for this paradigm shift to happen.

Objective

This panel will discuss the promise offered by Energy and Resources as a Service model to help progress towards a circular economy. Several models being applied by the IT, mobility and other sectors could be easily adapted by energy and resource industries. The panel will focus on i) identification of key policy aspects, (ii) considerations for business models, and (iii) financial sector requirements that can potentially promote E-RaaS models.

Issues to be explored

- How significant is the promise of “as a service” in enabling a more circular economy?

- What are the policy and regulatory challenges in introducing energy and resource as a service model?
- How can the energy and resource industry align to new E-RaaS models?
- Can the energy and resource sectors learn from other industries on “as a Service” models?

Panelists

- Moderator and Introduction to “as a Service” framework: A new era in energy and resource management? **Scott Foster**, Director, SED, UNECE
- EU policy for circular raw materials-metals and minerals’: **Maria Nyberg**, Policy Officer, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Commission
- Enabling “Resource as a Service” framework based on UNRMS: The proposed case study in UK: **Frances Wall**, Camborne School of Mines, University of Exeter, UK
- Moving from a commodity focus to a outcome centered subscriber economy: Past experiences and opportunities: **WRI/WSCBD** speaker tbc
- Q&A/Discussions (15 minutes)