7. Appendix 4: Circular Economy Policy

7.1. Background: proper management of the planet's resources

Every year, the planet's resources are consumed to an extent that lie well beyond sustainable limits, i.e., the limits that would permit these resources to be either renewed or else managed over the long term. The date on which more natural resources have been used up than the earth can renew in the same year is getting earlier and earlier (in 2019 it was July 29, two months earlier than in 1999, *source: WWF*).

The circular economy, an economic model that aims to produce goods and services in a sustainable manner by limiting consumption, wasted resources and waste production, is a response to this challenge. In the energy sector, the circular economy can be developed on the basis of three main topics: exploitation of natural resources for energy production, energy consumption by end users and recovery of residual heat.

7.2. The circular economy within the Group

For over 20 years, the Group has been measuring its resource footprint by means of life cycle analysis. It has also developed tools that allow it to analyze flows at the regional level to reduce the impact on resources and develop industrial ecology (the Group was a driving force behind the Ecopal experiments conducted in the north of France in the 2000s).

Each site or activity works to recover and/or recycle its waste. The Group works with designers, suppliers and recycling facilities to reduce the impact on resources, particularly through its research and development teams.

As a major player in the ecological transition, ENGIE implements the principles of the circular economy and therefore undertakes to:

- increase the recycling rate of the waste generated by industrial activities;
- reduce the use of fossil fuels;
- develop green gases such as biomethane and hydrogen;
- identify recycling facilities and thus reduce the impact on resources, particularly for solar and wind renewable energies;
- use resources sustainably through certified or accredited facilities (e.g., biomass);
- combat deforestation in the supply chain and only use biomass from sustainable forest management as defined by the SBP (Sustainable Biomass Program) standard;
- encourage the reuse of spare parts and the circulation of the stock within the Group through the use of a dedicated platform (BeeWe).

7.3. Goals and commitments

Since 2017, the Group has made commitments in relation to the circular economy:

- to promote renewable gases: biogas and first, second, and third generation biomethane;
- to develop energy recovery from industrial and tertiary processes;
- to provide innovative tools to assist in the decision-making process as regards the circular economy in industrial areas (BE CIRCLE tool).

New goals and commitments have been defined for the period 2020-2030.

	Targets
A study of the impact of the main activities on the planet's limits	2025
The quantity of biogas injected into the gas transportation or distribution networks controlled by the Group	> 1.5 TWh/year by 2023 > 5 TWh/year by 2030