

# Press release Paris, December 10, 2019

# EDF and VEOLIA announce the creation of Graphitech

Today, EDF and VEOLIA, through their respective subsidiaries Cyclife Holding and Asteralis, announce the creation of a joint entity – Graphitech – in response to the challenges of decommissioning nuclear reactors that incorporate graphite technology.

The dismantling of the graphite reactors is complex because of their design (stacking of graphite layers inside the reactor) and the volume of materials to be evacuated. Globally, only two reactors of small power graphite technology have been dismantled to date.

Graphitech will be responsible for the technological development and engineering studies required in preparation for decommissioning nuclear reactors that use graphite technology, around 60 such reactors in the world, Graphitech will thus be ready to meet the needs of France, the United Kingdom, Spain, Italy, Lithuania and Japan.

Combining EDF's nuclear industry expertise and decommissioning engineering know-how with Veolia's nuclear-environment robotics capability, to enable the design of specialized machinery and long-distance intervention platforms for decommissioning, Graphitech will use its expertise to:

- develop remote-operation tools to break up complex, large-scale concrete and metal structures, and tools to extract activated graphite bricks and piles;
- design systems and articulated arms to enable deployment of these tools.

Graphitech's first objective will be to provide EDF with an optimized scenario for decommissioning the Chinon A2 reactor in 2028 and to offer a testing program to evaluate the technological solutions needed to complete the operation.

This program will begin in 2022 with a development and qualification phase using full-scale models to prepare the remote-operation tools to be used in decommissioning the Chinon reactor.

The feedback from this pioneering operation will then be used with other reactors in France and around the world.

Dismantling graphite reactors is complex, due to their design (stacks of graphite layers inside the reactor) and the volume of material to be removed. Worldwide, just two small-scale graphite reactors have been decommissioned to date.



This press release is certified. Check its authenticity at medias.edf.com

#### About the EDF group

A major player in energy transition, the EDF group is an integrated energy company operating in all business lines, from generation to transmission, and the buying and selling of energy and energy services. As a world leader in low-carbon energy, the group has developed a diverse power generation mix based on nuclear, hydroelectric, thermal and new renewable energies. The group supplies energy to around 39.8 million customers, including 29.7 million in France alone. In 2018, it recorded consolidated revenue of €69 billion. EDF is listed on the Paris Bourse.

#### About Veolia

Veolia group is the global leader in optimized resource management. With over 171,000 employees across five continents, the Group designs and provides water, waste and energy management solutions that contribute to the sustainable development of communities and industries. Through its three complementary business activities, Veolia helps to develop access to resources, and to preserve and replenish available resources. In 2018, Veolia group supplied 95 million people with drinking water and 63 million people with wastewater services, produced 56 million megawatt hours of energy and converted 49 million metric tons of waste into new materials and energy. Veolia Environnement (*Paris Euronext: VIE*) recorded consolidated revenue of €25.91 billion in 2018. www.veolia.com

### Contacts

## EDF

Press: +33 1 40 42 46 37 Analysts and investors: +33 1 40 42 40 38 VEOLIA Group Press Relations Laurent Obadia - Sandrine Guendoul +33 1 85 57 42 16 - sandrine.guendoul@veolia.com Analysts and investors Ronald Wasylec - Ariane de Lamaze Tel. + 33 1 85 57 84 76 / 84 80 investor-relations@veolia.com

