CLARIANT

Media Release

Construction of Clariant's sunliquid® plant in Romania on track for completion by the end of 2021

- **Construction continues with over 650 workers on site operating in full compliance with all COVID-19 pandemic precaution measurements**
- **Majority of large key production equipment has already been installed**
- **Recruitment and training of plant operators and other local staff members in progress**

Muttenz, December 2, 2020 – Clariant, a focused, sustainable and innovative specialty chemical company, today announced that it is making good progress with the construction of its sunliquid® cellulosic ethanol production plant in Podari, in the southwestern part of Romania. While the COVID-19 pandemic continues to present a challenging situation, Clariant's team was able to ensure that work on the construction site continues while fully complying with all pandemic precaution regulations as established by the Romanian authorities.

"It is truly impressive to see how our project team as well as all local partners have been able to keep this important construction project running while ensuring everyone's safety and health during the COVID-19 pandemic. Once completed, this sunliquid® cellulosic ethanol production plant will be a cornerstone of our continuing transformation into a leading specialty chemicals company and another proofpoint of our commitment to innovation and sustainability," said Hans Bohnen, Clariant's Chief Operating Officer.

The sunliquid® plant receives more than EUR 40 million in funding from the European Union[1] and is constructed on a 10-hectare area in Podari near Craiova in southwestern Romania, from where it has access to a secure regional supply of feedstock and can benefit from the region's existing logistic and industrial infrastructure. Once operational, the plant will process approx. 250,000 tons of straw to produce 50,000 tons of sunliquid® cellulosic ethanol on an annual basis. This is an advanced, truly sustainable, and carbon-neutral biofuel that can readily be blended into conventional fuel and be used in today's car infrastructure.

"Over the past months, several milestones have been reached on the construction site while also achieving the installation of the majority of large key equipment. This puts us on track to complete the construction by the end of 2021, after which start-up and production will commence. We are proud to see already the substantial benefits that our investment is bringing to the Podari region and look forward to see its impact increase further once the plant is fully staffed and operating at full capacity", says Christian Librera, Vice President and Head of Business Line Biofuels and Derivatives at Clariant.

Clariant is also making headway with the recruitment and training of staff members for its sunliquid® project in Romania. The company's local employee population is expanding rapidly, with a total of 26 people so far. These team members benefit from a comprehensive training program in Germany and Romania. They started their training at the pre-commercial sunliquid® plant in Straubing, Germany, followed by training sessions in collaboration with the University of Craiova, a renowned educational center in the Southwest of Romania. In the long-term, up to 100 staff members will be directly employed in the plant, while about 300 jobs will be created in connecting businesses, e.g., the collection, storage, and transportation of the feedstock.

On the Moleculist Blog on Clariant's website, the successful path that has taken the sunliquid® technology platform from development and testing in Bavaria, Germany to the first-of-its-kind commercial facility in Podari, Romania is presented in greater detail.

Aerial view of the Clariant sunliquid® construction site in Podari, Romania in November 2020 (Photo: Clariant)

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Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. On 31 December 2019, the company employed a total workforce of 17 223. In the financial year 2019, Clariant recorded sales of CHF 4.399 billion for its continuing businesses. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. Clariant's corporate strategy is based on five pillars: focus on innovation and R&D, add value with sustainability, reposition portfolio, intensify growth, and increase profitability.

www.sunliquid.com
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sunliquid® is an innovative biotechnological method for manufacturing cellulosic ethanol from agricultural residues such as cereal straw, corn stover or sugar cane bagasse. In the completely integrated process, highly optimized, raw material-specific biocatalysts decompose cellulose and hemicellulose in high yields under stable processing conditions into fermentable sugar. The process-integrated production of the biocatalysts offers flexibility and reduces production costs. In the next step, an optimized fermentation organism simultaneously converts C5 and C6 into ethanol with high yields and short reaction times. A highly optimized purification process is instrumental in enabling all the energy required for the process to be derived from the process byproducts like insoluble lignin. Since July 2012, Clariant has been operating a precommercial plant in Straubing, Germany, which produces up to 1,000 metric tons of cellulosic ethanol every year, confirming technical and economic performance. In September 2018, Clariant broke ground for its first-of-its-kind commercial facility in Podari, Romania, where the construction is currently underway. Clariant licenses its sunliquid® technology platform globally. So far, four license agreements have been concluded with renowned industry players in Slovakia, Poland, Bulgaria and China.

[1]The project receives funding from the European Union's Seventh Framework Program for research, technological development and demonstration under Grant Agreement no. 322386 (SUNLIQUID) and from the Bio-Based Industries Joint Undertaking under the European Union's Horizon 2020 research and innovation program under Grant Agreement no. 709606 (LIGNOFLAG).