

# EMILI & YOU



Newsletter – July 2023

## Consultation at the heart of the project

The EMILI project is built on listening and ongoing discussions with all residents, associations and elected representatives. Imerys is deeply committed to aligning itself with the very best standards, such as French regulations, obviously (the environmental code, the new mining code, etc.) – one of the strictest set of regulations in the world – as well as international responsible mining standards, such as the IRMA. To achieve this, there is continuous dialogue as is required by the State. But there are also voluntary discussions with all partners (elected representatives, associations, local and national administrations, etc.). Only once these dialogue phases are complete and once all administrative authorisations have been obtained can work begin.



## Tackling climate change

Electric vehicles are an effective means of reducing greenhouse gases and preventing global warming.

To keep costs down and help achieve its energy sovereignty, France and its European partners are in the process of developing their own lithium battery manufacturing sectors.

The EMILI extraction project is a local solution that would provide one of the most important raw materials: lithium would be mined from Beauvoir granite in Echassières (in France's Allier region).



**Alan Parte**  
*Vice President of Lithium Projects, Imerys*

## Protecting the region

EMILI will have no impact on the Colettes public forestland or on the Natura 2000 protected area in the vicinity of the Beauvoir site in Echassières. Since the mine would be an underground one, the surface infrastructure involved (buildings, storage areas, wells, shafts, etc.) would be kept to a minimum – the existing site would be used. So there would be no need to extend the surface of the quarry in order to extract the lithium.



## Public consultation

This summer, Imerys will refer the matter to France's national public debate commission which will decide on the procedure to put in place for public dialogue regarding the EMILI project. In 2024, a wide-ranging consultation process under the auspices of this public commission will provide everybody with the opportunity to express their opinion and find out what they need to know.



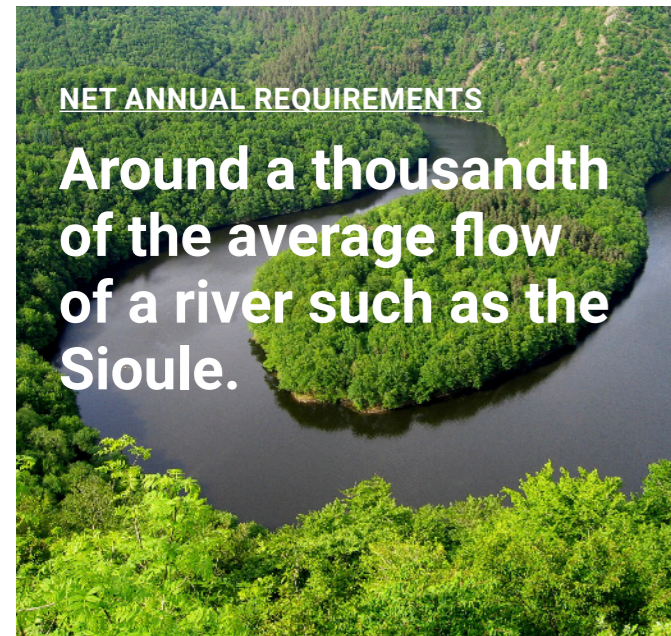
## Water: a priority



Water is key to the lithium extraction process. Protecting it is one of the priorities of the EMILI project: Imerys' teams and their partners leverage all their expertise to this end.



Hydraulic and hydrogeological studies have been conducted to locate the resources needed, understand how water circulates within them and check quality.

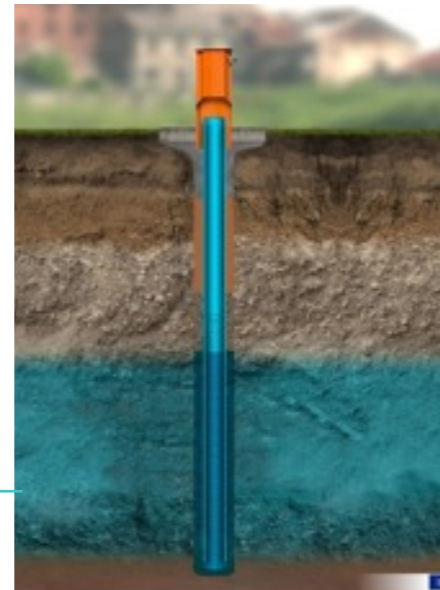


## Piezometers – water guardians

These measure the water level and its pressure. They are wells fitted with a device made up of stainless steel or PVC tubes, welded end-to-end. These wells can be between 20 and 200 m deep, and are 100 to 150 m in diameter. They are essential for monitoring underground water tables. They measure their height, and can also be used to extract samples for analysis.

Nearly a hundred monitoring points (private wells, watercourses, etc.) have also been mapped at various distances from the quarry and in different environments in order to obtain representative data.

Piezometers will be installed at key locations – both at the site and in the surrounding areas in various environments.



## 3 questions for Fabrice Frebourg

EMILI Environment Manager



### 1 – How much water would be needed for production before and after the process?

Net annual water requirements for concentration and transport to the loading site would be in the region of 600,000 m<sup>3</sup>. A further 400,000 m<sup>3</sup> would be needed annually to separate the lithium from the mica. We are investigating various options for keeping these quantities to a minimum (such as recycling water within the closed-circuit process, potentially using grey water, etc.).

### 2 – What happens to the water once it has been used for the phases before the process (concentration and transport)?

Once it is at the end of the circuit, most of the water would be sent back to the concentration plant and reused.

### 3 – Again, regarding the upstream phases, what happens if there is a drought?

So as not to impact water resources during the driest periods, the reserves generated by kaolin activities would be reused.

## Geologists – planet experts

Geologists know all about soils and the Earth's crust. As scientists, they have the knowledge needed to decode the signals that our planet sends us. Their expertise enables them to analyse natural phenomena. And for the Beauvoir site, they are able to form a better understanding of

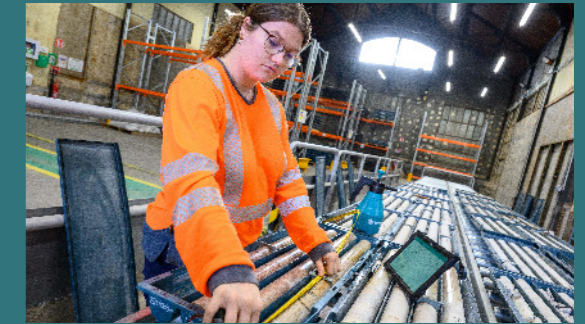
the lithium deposit, mapping and pinpointing it so as to determine just how extensive it is.

Geologists working at the site take samples referred to as "cores", which provide insights into soil composition. Modelling the ground helps them to extract lithium from it.



## 300 million-year-old rocks

The drilling campaigns conducted on the deposit provide us with insights into what they look like and how big they are. These campaigns involve drilling into the rock at various locations. Cores around 10 cm in diameter and 3 to 6 m long are extracted from these drill sites. They are taken from depths of up to 500 m. Examining these granite cores is like travelling 300 million years back in time! An age when the Earth was just one supercontinent, full of giant dragonflies, carnivorous amphibians and the very first dinosaurs – such as the Staurikosaurus!



## Alyson – a core sampling geologist

"As a geologist, I spend every day at core sampling sites. Part of what I do involves working with our service provider and checking that the cable drills (which can drill down to depths of 500 m) are working properly. I also examine the quality and composition of the cores themselves."

## Rail access – an essential objective

Rail transport is one of the safest and least polluting forms of transport. Large numbers can use it, to transport goods as well as passengers. It helps prevent the roads getting blocked up with hundreds of lorries. So it was quite natural that Imerys should investigate rail as a solution for transporting the micas to the

conversion plant where lithium would be extracted from it. Numerous discussions and studies have been undertaken to get this solution off the drawing board. The close partnership with elected representatives and the SNCF Réseau will result in the best solution. This would involve significant

**Eight times less CO<sub>2</sub>**  
emitted by rail transport compared with transport by lorry.

investment in modernising the lines and rendering them more dynamic, revitalising the region and ensuring the long-term existence of passenger traffic, particularly between Gannat and Montluçon.

# Benefits for the region

This project would lead to numerous benefits for the region – economic ones in particular, such as the creation of a labour pool with around 300 to 350 direct jobs at the Echassières site and 200 to 250 at the conversion plant... without counting all the indirect and consequential jobs which would see these figures triple. It should also result in the creation of a hub of excellence for the whole Auvergne Rhone-Alpes region, and the regeneration of the Gannat – Montluçon railway line.



## Lithium is already part of our daily life!

Lithium's properties make it particularly well suited for storing electricity. Hence its utility in car batteries, as well as in mobile phones and rechargeable power cells. It is used in numerous everyday objects – such as portable tools used in DIY and gardening, induction hobs in the kitchen, reinforced lenses and even dental prostheses! Lithium is also found in lubricating greases, rubbers, enamels, aluminium and certain alloys.

## Imerys' Lithium mica mining project – how it works



### Process: 3 sites for 3 stages

- 1 – Extraction/Concentration
- 2 – Loading workshop
- 3 – Conversion

## Consultation process: the next steps

**SECOND HALF OF 2023**

Referral to the national public debate commission and preparation of public consultation / debate

**FIRST HALF OF 2024**

Public consultation / debate is held

**SECOND HALF OF 2024**

Summary of the procedure and follow-up by Imerys

