

Lithium-ion batteries have become a top topic in the world, but also in Serbia

When we look at all aspects of the use of lithium-ion batteries, from mobile phones and computers, to electric vehicles, we can say that these batteries have revolutionized the storage and use of electricity and that their importance is huge. Of all the known metals, lithium is the lightest, ie with the lowest density, which explains its advantage in battery design.

Representatives of Rio Tinto spoke for Telegraf Business about how they are working on the development of technology for jadarite processing and the application of modern mining technological solutions;

A large amount of work is ahead of the Jadar project team to ensure that a greenfield mining and metallurgy project of this size develops to its operational phase in a safe and sustainable way, in environmental and economic terms.

The interlocutors of the Telegraph also remind that in 2019, the Nobel Prize for Chemistry was awarded to a group of scientists precisely for the development of lithium-ion batteries. One of the award winners then said that lithium-ion batteries “enabled the mobile world”, and the Nobel Committee itself said that these batteries are used globally to charge portable electronic devices that we use for communication, work, learning, listening to music and searching for knowledge.

“On the other hand, the progress of society, increasing energy use, industrial plants and technological progress have led to the setting of new priorities at the global level, and one of these priorities is the green agenda, which implies an increasing need to find green solutions. The agenda also includes the adoption of directives related to the reduction of permitted levels of carbon dioxide emissions in the EU, and the solution for this is electric and hybrid vehicles in which lithium plays a key role, given that such vehicles use lithium-ion batteries as propulsion.

Due to all this, lithium is one of the strategic, and in the future the most sought after, raw materials in the world.

Can you explain the process of obtaining the battery?

“What is important to mention is that our final product - lithium carbonate - will be of the quality needed for the production of batteries, so there will be no need for additional processing.

The next step in the production of batteries takes place in specialized plants for the production of Cathodic active material (CAM), where lithium carbonate is only one of the raw materials, along with nickel, cobalt, manganese, and others. At the end of the production cycle, in the battery factory, in addition to the cathode active material, other components are needed for production - anodes, separators and electrolytes.

In that sense, how important is the lithium deposit in Serbia, and what is your plan when it

comes to the mine, but also the exploitation?

“One of the most important lithium deposits in the world is located in Serbia, in the valley of Jadar, and its certified reserves amount to 158 million tons. When we talk about further plans, we are now in the phase of preparation for the construction of one of the most technically modern underground mines in the world with a modern concentrate processing plant and a solution for sustainable industrial waste management. This project is extremely specific and very complex because it involves a new mineral, and thus the development of new processing technology, and complex engineering solutions necessary for the sustainable and safe development of this greenfield mining and technological complex. Precisely because of the strategic importance of this deposit, we are working hard to keep up with the deadlines for the project. It is planned that the technical documentation and the Impact Assessment Studies will be completed by the end of this year, after which we will apply for the necessary permits for construction and operation.”

It is planned that the works on the construction of the mine itself will begin in 2022 and last for about four years.

How many people would it employ? Can you talk about some occupations that you will need?

During the construction phase, the Jadar project could employ more than 2,000 workers. During the exploitation phase, between 650 and 700 permanent highly qualified jobs will be opened for the mine and the factory plant, and it is estimated that there are about 1,500 indirect jobs.

About 2/3 of the jobs will be the jobs of the operator and maintainer. The jobs of the operator will be highly qualified as they will manage complex mining equipment in the mine or a highly automated processing plant. Experts in process engineering, metallurgy, electrical engineering, mechanical engineering, automation, geotechnics, hydrology, geology and IT are just some of the staff we will need.”

How do you view the competition? It is known that more and more countries are interested in digging lithium? Recently, lithium mining was announced on the other side of the Drina. Every mining project is preceded by detailed market research, and modeling of future supply and demand, on the basis of which investment decisions are made. Rio Tinto has experience in project planning of this, as well as significantly higher investment value, and its economic team assisting in strategic decision making. We are confident that our understanding of the market, the high quality of our product, as well as the resources that the company will make available to this project, will contribute to a competitive positioning in the market. On the other hand, a larger number of lithium suppliers will at the same time encourage the automotive industry to plan a faster and more aggressive transition to electric vehicles.

The first meeting of the working group of the Jadar project with the local population was

held recently in Loznica, in order to acquaint the citizens with the realization of the project, but also the impact on the environment, how did it go, what are the conclusions?

Open communication with the locals is very important for us, because the success of such a large project requires support and cooperation with the local community. The participants of this meeting discussed topics of most interest to citizens, namely the purchase of land - what landowners and movable and immovable property can be expected from the company, which includes a support program for moving households, the impact of the project on the environment - what the company does to protect the environment, the impact on rivers, agricultural land, air, but also the landfill - the manner of disposal and the location of the landfill, but all other important issues and aspects of the Jadar project.

The first meeting went well and we are already preparing for the next one, considering that the dynamics of these meetings has been determined once a month.

Another model of communication with citizens is the practice of organizing open doors in the Info Centers in Loznica and Brezjak. So far, 21 such events have been organized on various topics, from environmental protection to property and legal relations, and the last one was related to the Study on the assessment of the impact of the Jadar project on the environment.

What are the citizens of the village around Loznica most interested in?

The topic that interests the locals the most is the process of land acquisition, which is completely natural and understandable. The issue of land acquisition is sensitive for landowners, and for that very reason this process is realized in a transparent, careful and fair way. We are in constant contact with the locals and landowners, the purchase process itself is carried out in accordance with the laws of the Republic of Serbia and the best world practice, the principles of which have been determined by the International Finance Corporation.

Our goal is for both parties to be satisfied at the end of the purchase process, and the company provides an additional intangible support program that is completely free and provides locals with property legal support in the process of buying new land, advice on resuming agricultural activities, starting a new business and planning finances.

The topic that is also of interest to the locals is the protection of the environment, and the impact of the project on the environment, and that is why we organize monthly working group meetings and "open doors" to provide all interested citizens with first-hand answers and doubts.

How realistic is the lithium battery factory in Serbia?

The decision on one such project is solely up to the investor. The investor in the battery factory before the decision analyzes the proximity of electric vehicle factories, availability of raw materials, as well as all other typical preconditions such as availability of labor, infrastructure and financial incentives.

We believe that the positive investment decision for the Jadar project will help the local development of the battery industry, not only in terms of providing raw materials, but also as a confirmation that Serbia is a good investment destination. We are also working closely with the Serbian Government to make our knowledge of the battery industry available to attract potential investors from the sector.

Can lithium be called the “new gold”?

Whether it is new gold or not, it is difficult to say. However, what is certain is that lithium remains a key metal for further progress of humanity, and that the Jadar project represents a strategic development opportunity for Serbia, with direct and indirect economic benefits, with the possibility of stimulation other related industries in the green economy development chain.

The line ministry has submitted a request for an increase in ore rent, how do you view that? The issue of ore rent is important for all mining companies, not only in Serbia, but all over the world. This is a topic that we are closely following, in connection with which we want to cooperate with the Government of Serbia. We strive to be a true partner of the state.

Also, let us deal with this topic in a more comprehensive way and explain the issue of ore rent both in our country and in the world. Ore rents are calculated in the world according to various methodologies, some of which are extremely complex.

Simply put, if we look at metal raw materials, for example copper, on all continents summarized for all calculation methodologies, the ore rent does not exceed 5% on average. Examples from our neighborhood are often wrongly cited, specifically Hungary and Romania with an ore rent of allegedly 12%, as well as Slovenia with an ore rent of 18%. Romania actually has an ore rent of 5%, Hungary 2%, Macedonia 2%, Turkey 3%. The situation is similar in the world.

In countries where ore rent is higher – say up to 10%, it is typically a calculation based on profit, not income, with a progressive scale (for example, Chile), and with more deductions for large investors (Canada), which leads to similar or mostly lower final effective taxes compared to Serbia.

In Slovenia, on the other hand, after 500 years of uninterrupted exploitation, not a single exploitable metal resource remains, so today they do not have a single metal mine – nor an ore rent of 18% for metal raw materials.

You work a lot on the green agenda, tell us more about it.

In the 21st century, every mining and industrial project focuses primarily on environmental protection, and the green agenda is one of the pillars of our company as well. During 2018, Rio Tinto made a strategic decision to stop coal mining, moving away from that as a way of providing the fossil fuel market as an energy source.

We believe that a future with low carbon emissions is possible, and therefore we want to actively contribute to such a future through responsible business. We operate in the field of

exploitation and processing of ores and metals that play an important role in the positive impact on climate change and the environment with reduced carbon dioxide emissions that we strive for.

The Jadar project has a key role to play in achieving this goal. We are also focused on reducing carbon dioxide emissions in our business, with short-term reduction goals but also the ambition to reach zero emissions by 2050.

For the Jadar project, we envisage the supply of exclusively certified green energy, ie. energy with an associated green guarantee of origin.

Source: Telegraf Business