

Solve the problems associated with the closure of Europe's coal-fired power plants

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An Icelandic mining company is working on a new solution that solves a much bigger problem that accompanies the closure of Europe's largest coal-fired power plants. With the energy exchange in the continent, the construction industry loses access to important additives that occur during coal burning, but Icelandic nature has an answer to the problem.

All things being equal, billions are being invested in Þorlákshöfn because of this, but the mining takes place in land that is owned by the Seventh-day Adventist Church.

Main text:

We head down to a beautiful restaurant in the city center, just as the lunch hour takes shape. Eiríkur Ingvarsson arrives with a casket and a pile of papers under his arm. There is a lot to talk about. The reason for the meeting is a project that has been in the pipeline for a long time but is now well under way and will, if all plans go ahead, lead to billions in investment in the Icelandic economy in the coming years.

It is with this project, like so many others, that coincidences lead people astray, and before long an opportunity opens up that no one imagined existed, even at every step, as in this case. In this story, the decisions of past generations, marriage and religion are intertwined, but first and foremost resilience and patience.

So in 1984 Eiríkur joined the Seventh-day Adventist religion, which most people know only by questioning or with a vague reference to the congregation which has a large and beautiful house of worship in Ingólfsstræti. He made the decision after attending Hlíðardalsskóli. He later met his wife, whose family had been close to the congregation for nearly 100 years.

"It was at the turn of the last century that the leaders of the congregation persuaded me to come to terms with difficult agreements on the exercise of mining rights that the Church has had for decades. There had been a lot going on with the companies that had the agreements and the situation was not good. It was a difficult task. At that time, these mines were being used as backfill material in building foundations and I was quickly convinced that valuable material was being used in the wrong way. "

Two mountains become one

There Eiríkur refers to large mines in Lambafell and Litla-Sandfell which are mountains close to Þrengslavegur which is driven on the way south to Þorlákshafn. The mines are in a land that Adventists acquired 75 years ago.

"There were prudent people in the congregation who bought this land in 1947 to establish a boarding school, Hlíðardalsskóli. Later it has been revealed that this land is rich in material. In addition, it contains unique natural pearls and geothermal energy can also be found there, "explains Eiríkur.

It turned out, after the consulting work for the church, that Eiríkur founded a company for the operation of mines in collaboration with the church and in partnership with his business partner, Kristinn Ólafsson. The name of the company may not come as a particular surprise - Eden ehf.

"We saw an opportunity to put this material into other and more important tasks than filling the foundation. We believed that it was possible to process the substance so that it could be used in preparations by large companies abroad. It is no joke to enter into such a partnership and it requires a lot of research and preparation, but when it succeeds, it is hoped that it will be possible to build a long-term business relationship. "

Denmark's first partners

And so they started, and the first opportunity they saw was to work sand for Rockwool in Denmark, which is one of the largest industrial companies in the country.

"They use this material in mineral wool, insulation that is very important in construction. There are many opportunities. But we have been looking for more opportunities and one of them is to bear fruit now, long after the seeds were originally sown. The story behind it is related to the eruption and my attempt to get in touch with industrial producers in Germany, "says Eiríkur.

He had for a long time tried to establish contact with a company outside but could not walk or drive. Then fate seized the reins and on April 14, 2013, a large explosive eruption began in the top crater of Eyjafjallajökull. It paralyzed air travel across Europe.

"One of the representatives of the company I had tried to contact was a beach bumblebee at an airport in Europe due to the disasters. He was by nature dissatisfied with the situation, but there he had time to think and as he saw in the news pictures the ashes rising to the sky, he got the idea of using soda ash instead of fly ash which was disappearing from the market due to the closure of coal power plants. But in order to look into the matter further, he had to hear from the man who had been knocking on the door there all year. "

The idea turned to ash, but so-called fly ash plays an important role in construction. It is used for mixing in concrete and in fact gives it that strength and adhesive capacity and changes its sigma significantly.

"This method has been known for centuries. It is known that the Egyptians and Romans cleaned ash ashes and mixed them into the concrete they used to build the pyramids and water mains, for example. They did not know what it was that this material did, but they knew it worked and the concrete got better. In recent times, this fly ash has been applied to coal-fired power plants in Europe, and thus their waste has been used in the construction industry, "Eiríkur explains to a journalist who has never heard of this phenomenon before.

The fly ash will be rare

"Now these lignite plants are being shut down one after the other in the fight against climate change, which means that there will be less and less supply of fly ash. Strandaglópurinn at the airport now saw a huge amount of ash rising to the sky and there he thought it was possible to fill in the supply hole, "says Eiríkur and adds:

"We began to look at these issues in collaboration with them and domestic parties. We undertook research that actually showed that the ash was too scattered and not in usable quantities. This work, however, raised certain ideas, as similar compounds can be found in many parts of Iceland. Instead of the ash that is created by the burning of coal-fired power plants, we decided to look for substances that have burned in the bowels of the earth thousands of years ago. "

After extensive research and speculation, it is revealed that tuff found in Adventist mines in Litla-Sandfell and Lambafell can be fully utilized for this purpose. But the mines do little good, individually. By mixing the rock together from these two mountains, a material is created that has similar properties to fly ash. They can therefore be the key to solving the headaches associated with the closure of coal mines.

These discoveries, which are based on research carried out at the University of Iceland and other university institutions abroad, have led to Heidelberg and Eden now concluding an agreement aimed at producing about one million tonnes of fly ash substitutes each year.

"This is actually very positive for the environment. With this, we replace the ash produced with the result that 700 thousand tons of CO2 are created, for substances that are created with negligible effects on the climate. This will therefore be an important contribution for us Icelanders to fight climate change. "

The war only has a short-term effect

Asked about the crisis that has arisen in Europe's energy issues after Russia's unforgivable invasion of Ukraine, Eiríkur says that in the short term this can only slow down the closure of coal power plants, but that in the long run the development will be the same as people saw before the conflict broke out. . In addition, the demand for fly ash will not decrease, as there is always a need for the construction of new structures. It is a position that is not tied to Iceland and the real estate market is on the upswing.

"The next step is to complete the environmental assessment at Litla-Sandfell, but we need to expand the mining rights until this is possible. Heidelberg also intends to embark on a major development in Þorlákshöfn, which could cost around ISK 10 billion, "says Eiríkur.

He refers to a factory whose role was to receive the material from the two mines and mix it in the right proportions. It is therefore clear that Heidelberg does not intend to export the raw material from the country for further production in Germany or elsewhere.

"It is obvious that these activities will leave something significant behind here in society. The export value of the product is in the tens of billions a year and we estimate that it will create about 50 to 60 full-time jobs in Þorlákshöfn and the surrounding area in connection with the mining and the factory. "

Eiríkur points out that this development will strengthen the foundations of the town authorities in Þorlákshöfn to the effect of making the harbor in the town one of the most active large ship harbors in the country.

"A million tonnes is a large load and will play an important role in strengthening the activities in the area," he explains.

Right of use for three decades

Eden has a 30-year utilization agreement with the Seventh-day Adventist Church and says it is important to be able to look far ahead in this regard.

"We do not need to hurry in itself, even though we want to get this started quickly and well. But there is an advantage to this kind of stuff that it goes nowhere. " It's just waiting for its time there and you don't have to keep it cold or warm it up," he says with a sly expression. It is clear that the project does not run from him.

When a journalist ponders this ambitious project and how it relates to Adventist ownership, one cannot help but think of the most beautiful but difficult text contained in the Old Testament. It deals precisely with mines and quarrying of precious stones. It is found in the 28th chapter of Job . It says: "People kept the darkness under control when they explored the rocks in the dark and the gloom." However, it can be stated that it takes both imagination and some kind of wisdom to think of mixing minerals from two Icelandic mountains, transporting them to Europe and building houses from them.

Framework

A world-class natural pearl

Eiríkur has been involved in various projects in connection with the church's utilization of the large amount of land that the church's board purchased in the late 1950s. One of them is related to the nature monster Raufarhólshelli, which many have heard of.

How did that project come about?

"I had long had the idea in my stomach to set up a tourist service around the cave. Then a new chairman, Erling Snorrason, came to Iceland and he brought a whole new approach and thought into the church and I discussed these thoughts with him. I was given permission to present a business plan on how this could be built with the long-term interests of the church in mind, "says Eiríkur.

The idea was well received and in the end the church got a strong investor in the team and they started to build facilities in the cave so that people could be received in a way that was dignified.

"It was actually too late to start this project because the cave was damaged. Many people knew about it and my oldest sources of local tourists are from 1968. The cave then appears in German travel sources. Older research is available on Raufarhólshellir where it was not mapped. That research is from 1950, "says Eiríkur.

He points out that before the virus epidemic, about 4% of all those who visit the country came to the cave and is therefore one of the most popular tourist destinations. Eiríkur says it is not surprising as it is a wonderful world. It would be nice to see more Icelanders visit the place.

It is not the church that is involved in the operation of the cave. He is currently in charge of Arctic Adventures .

Has the church not wanted to be in this business itself?

"It has been the Church's policy to minimize its risk from all activities in the area and then it is better for others to manage it, whether it is related to tourism or mining. It is not appropriate for a church to be in business. Her focus is on the spiritual realm and when it comes to helping people in different situations of life. "

And Eiríkur says that there is a turning point in the strength of the congregation, which has only about 600 members.

"The operation has been good, but large projects such as mining further strengthen the work. It has been strong domestically and it will be possible to strengthen it even further with this. I do not have a seat at the table where these decisions are made, but the Church has always been involved in humanitarian work. My dream was to be able to build aid work abroad as well, even to support the education of girls and young women in countries such as Pakistan and Afghanistan. "

Eiríkur says that no matter how it all develops, the development of Raufarhólshellur is one of the most fun projects he has been involved in.