

SRC Rare Earth Processing Facility

Frequently Asked Questions

General

1. What will the money the Government of Saskatchewan announced be used for?

In August 2020, the Government of Saskatchewan announced \$31 million in funding for a Rare Earth Processing Facility, which will be operated by the Saskatchewan Research Council (SRC). It will be the first-of-its-kind in Canada and will begin to establish a fully commercial Rare Earth Element (REE) technology hub in Saskatchewan, forming an industry model for future commercial REE initiatives and supply chain development.

A private sector landlord is handling the construction of the building, which will be leased to SRC. The funding will be used for specialized equipment and building requirements within that structure. As well, SRC is contributing an additional \$4 million in funding.

2. What will be done at the Facility?

The Rare Earth Processing Facility will be a commercially operated facility able to process Monazite.

The conversion of REE ore to individual REE products is done in two main stages. The first is the hydrometallurgical treatment of the Monazite into intermediate mixed Rare Earth product. The second is the more complex separation stage that converts the mixed Rare Earth product to separated Rare Earth Oxides, as the market requires. The Facility will handle both stages of the process.

3. What capabilities will the Facility have?

A key element of the Facility is a commercial processing plant, which will include concentration and separation stages and treat Monazite concentrate feed at approximately 60 per cent total Rare Earth Oxides grade. Monazite is a source of mainly light REEs, especially Cerium, Lanthanum, Praseodymium and Neodymium.

Intermediate mixed Rare Earth product will be produced from the Monazite Processing Unit and then converted in a Separation Unit to produce separated Rare Earth Oxides.

4. How big is the Facility?

SRC is in the process of some structural and design decisions that may impact the square footage of the Facility.

5. What rare earth services will SRC be offering?

We offer the following services through our existing service lines and facilities:

- Rare earth processing technology development and commercialization from Monazite, Bastnaesite, Apatite and Uranium processing waste
- Radioactive tailings processing and treatment; recovery of Thorium and Uranium
- Validation and demonstration of rare earth processing technologies in bench, pilot and semi-commercial scale

SRC plans to use this Facility as a starting point for the creation of an REE technology hub, which may include developing downstream and upstream aspects of the REE supply chain.

We are currently developing capabilities for:

- Downstream rare earth product development
- Production of ingots, magnets and alloys

6. Does SRC have any future plans for the Facility or the rare earth space?

SRC plans to use this Facility as a starting point for the creation of an REE technology hub, which will include developing downstream and upstream aspects of the REE supply chain. It will also include the development of additional midstream and downstream processing of different REE minerals and or research and development of new technologies in rare earths processing and the production of rare earth metals and alloys.

7. Why Saskatchewan?

According to the Fraser Institute, Saskatchewan is the top mining jurisdiction in Canada. Saskatchewan is home to a world-class mining industry with a vibrant and sustainable Uranium industry. This industry also produces an REE-rich solution waste stream (mainly heavy REEs) that could potentially be an additional feed source for the Facility, as markets require.

8. How can industry engage?

The SRC Rare Earth Processing Facility is positioned as a catalyst to stimulate the resource sector in Saskatchewan and across Canada, providing the early-stage supply chain needed to generate industry investment and growth. Our team of engineers and scientists can customize testing and design to meet the unique needs of REE mining and technology companies.

For more information, please email info@src.sk.ca.

9. Are there environmental regulations/standards in place around this type of work and what are they?

There are strict environmental regulations and standards in place for waste management in Saskatchewan with respect to these types of ores. As a top mining jurisdiction, there are well documented controls in the province. SRC has always met and exceeded these requirements with respect to its waste management systems in place and will continue to do in this project following the most stringent operating standards.

10. What safeguards are in place to protect the environment?

SRC's Rare Earth Processing Facility will follow the most stringent operating standards. Our goal is to build processes to be environmentally sustainable with recycling in mind to minimize the environmental footprint of our operation. SRC plans to treat, re-use and recycle as much of the solution as possible. This means that all wastewater will be treated and reused resulting in no liquid discharge from the Facility. All solid waste will be handled and disposed of properly following regulations and procedures, as SRC and mining companies in Saskatchewan do currently.

11. What products will SRC produce?

When operational, SRC will produce separated Rare Earth Oxides from the Separation Unit (Lanthium Oxide, Cerium Oxide, Praesodymium Oxide, Neodymium Oxide, a mixed REE Oxide of the middle group of REEs and a mixed group of REEs from the heavy group). In the future, SRC will potentially also produce refined metal ingots and alloys and magnets.

12. What experience does SRC have in this area?

SRC has decades of experience in concentration and separation technologies of REEs from various minerals, as well as operational experience. Jack Zhang and Baodong Zhao

of SRC's Rare Earth Element and Mining and Energy Divisions are co-authors of various papers and a book on Rare Earth separation.

13. How many jobs will this create?

Our engineering estimates indicate that the REE facility will provide 50 full-time construction jobs. This does not include ancillary construction support jobs. It will also support 24 highly qualified personnel (HQP) full-time equivalent jobs in facility operations once commissioned.

Additionally, a fully functional REE industry in Saskatchewan and across Canada would create tens of thousands of jobs.

Procurement

14. What are the timelines for completion of the Facility?

Facility completion is expected in two to three years.

15. Where will the Facility be located?

The Facility will be built near SRC's other laboratories and facilities in the north industrial area of Saskatoon, Saskatchewan.

16. Will SRC be looking to procure construction and/or other services throughout this project?

SRC is committed to fair and transparent procurement processes.

SRC is working to design, install, procure and commission the Facility and will require outside expertise for various pieces. As is standard practice for SRC, we are issuing competitive award processes for work through SaskTenders throughout the process.

17. How do I submit a proposal? How do I get notified about proposals?

SRC Purchasing handles all requests for proposals, estimates and quotations to solicit bids for procurement contracts related to this Facility.

Available opportunities will be posted on **SaskTenders** (Organization Type: Crown Corporation > Saskatchewan Research Council). For more information, please contact SRC Purchasing by **email** or phone at **1-306-933-5400**.

18. What is SRC's commitment to local Saskatchewan-based service providers?

While SRC has obligations under the New West Partnership Trade Agreement and the Canadian Free Trade Agreement, evaluation criteria may include elements such as community benefits or local content, that is considered part of the best value equation.