



**Alberta
Energy
Regulator**

AER Brine-Hosted Minerals Virtual Information Session

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Director, Minerals Strategy & Implementation

May 11, 2022



MARTIN FOY

CHIEF OPERATIONS OFFICER

Agenda

Opening Remarks

Minerals Strategy Implementation

Regulatory Development Process

Potential Mineral Resource Development

Next Steps

Q&A Session

PRESENTERS



SHAUNNA CARTWRIGHT

DIRECTOR, MINERALS
STRATEGY &
IMPLEMENTATION



CHER JACOBS

SENIOR SPECIALIST,
REGULATORY DESIGN



GLORIA LOPEZ

GEOLOGIST, MINERAL
RESOURCES,
ALBERTA
GEOLOGICAL SURVEY

Tips for Participation

» Asking Questions

- Read out questions sent in advance
- Use the 'Q&A' icon to submit your question in writing
- Email your question to minerals@aer.ca

» Using Teams

- Having technical issues? Contact 1-855-297-8311 or email minerals@aer.ca

MINERALS STRATEGY IMPLEMENTATION



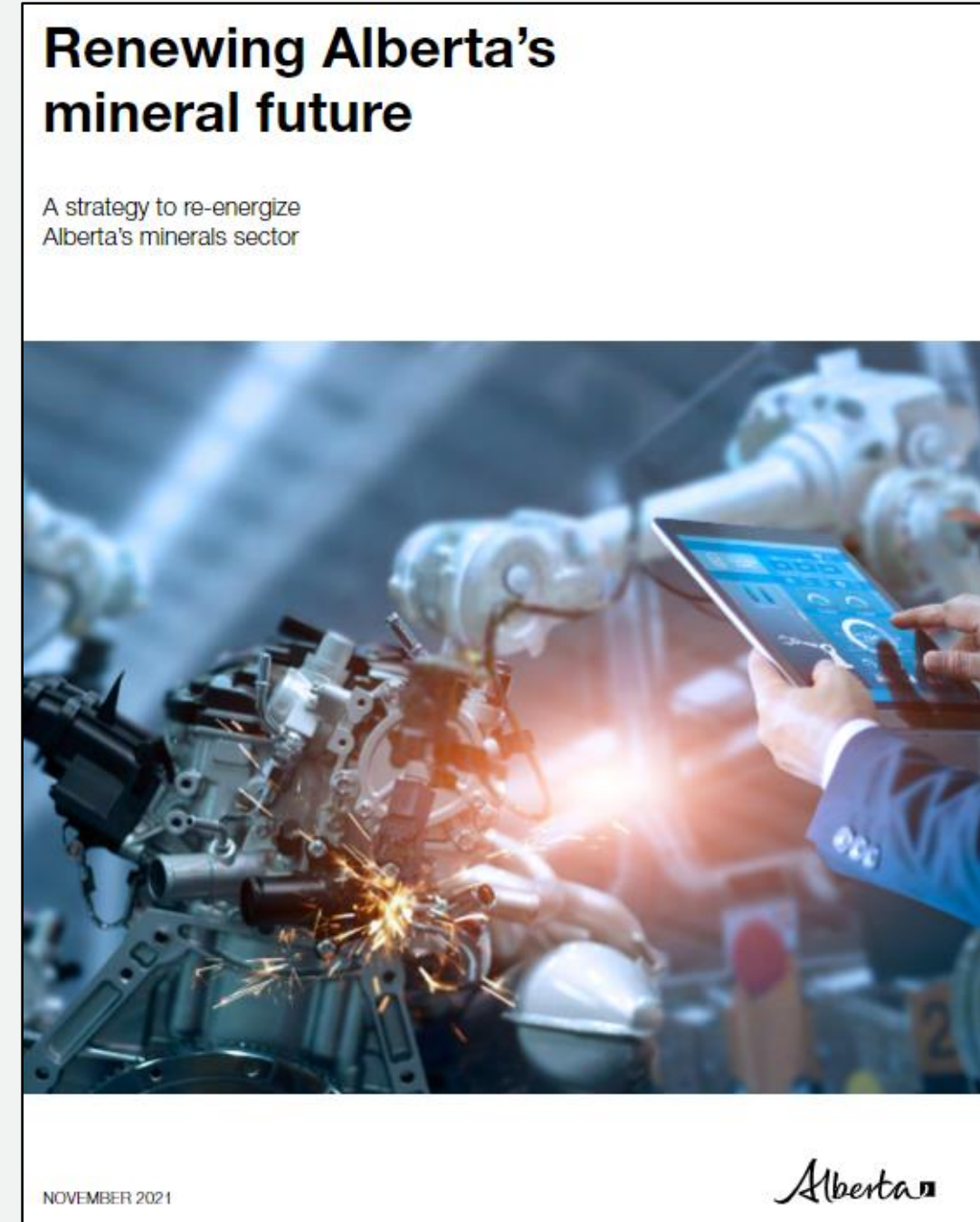
SHAUNNA CARTWRIGHT

DIRECTOR, MINERALS STRATEGY &
IMPLEMENTATION

Why Develop Minerals in Alberta?

» The Government of Alberta wants to:

1. Be the preferred producer and supplier of minerals and mineral products in Alberta and internationally.
2. Address the shift towards a lower-carbon economy.
3. Strengthen and diversify the economy.
4. Create jobs.
5. Attract investment.

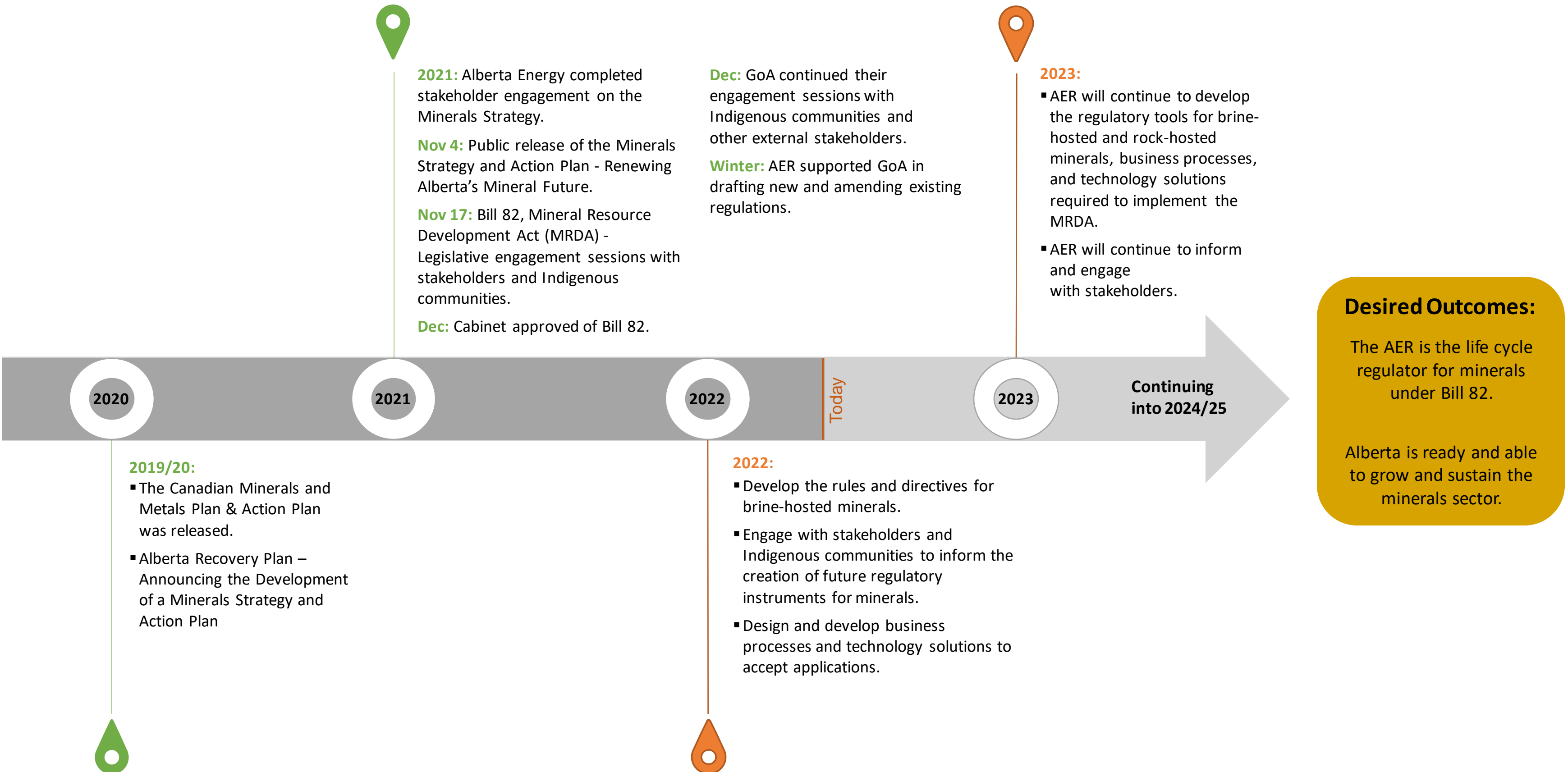


Role of the Alberta Energy Regulator (AER)

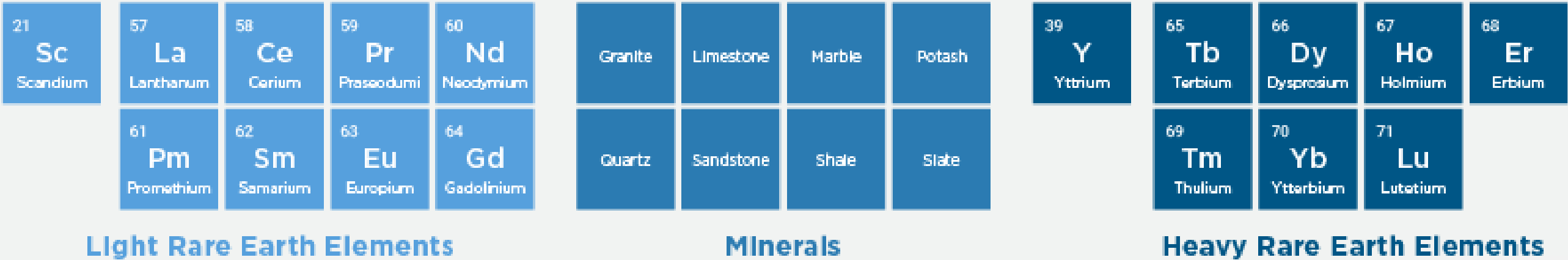
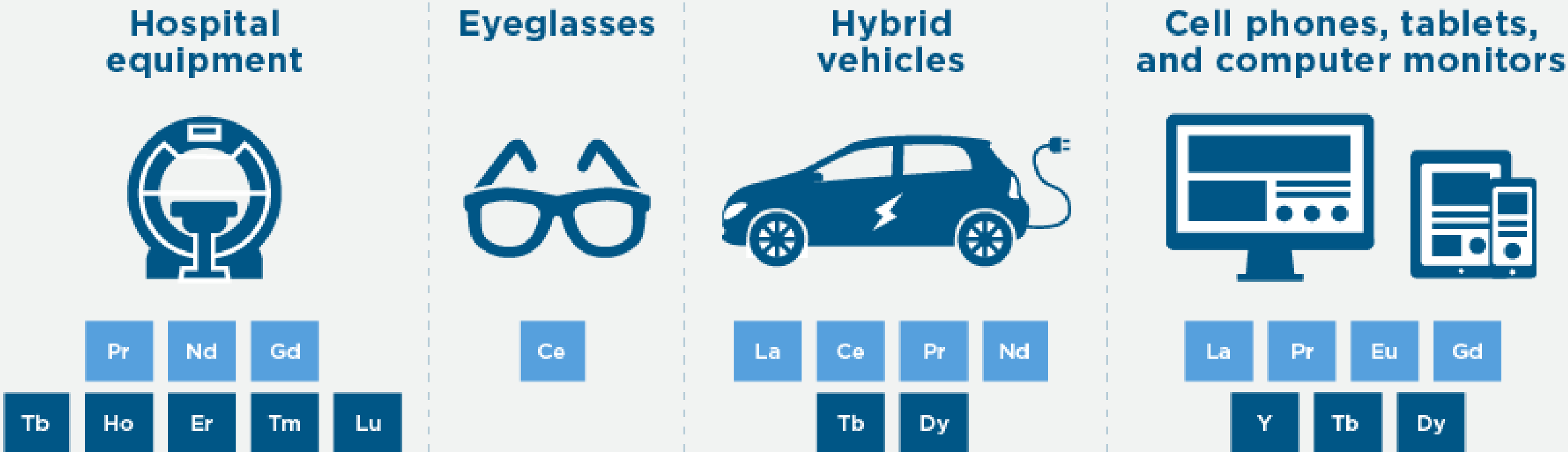
- Expanding mandate to include the regulation of minerals (including critical minerals and rare earth elements).
- The Mineral Resource Development Act (MRDA) will establish the AER as the life-cycle regulator for Alberta's mineral resources.



Minerals Strategy Implementation – The Journey



Minerals: Everyday Use



Brine-hosted Minerals

Brine-hosted minerals are typically found in underground saltwater and are mostly extracted through well infrastructure.



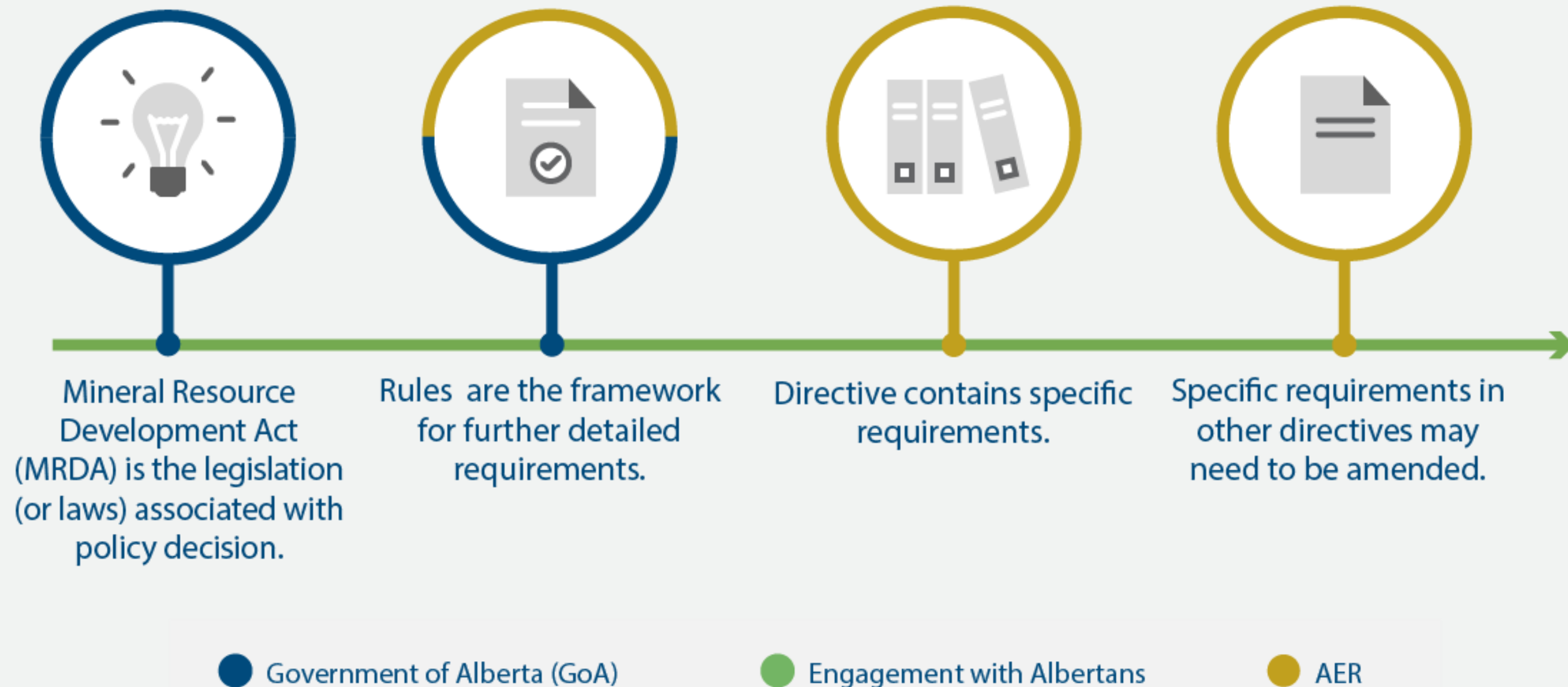
REGULATORY DEVELOPMENT PROCESS



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DESIGN

Minerals Regulatory Framework Overview



Addressing Risks with Regulations



POTENTIAL MINERAL RESOURCE DEVELOPMENT



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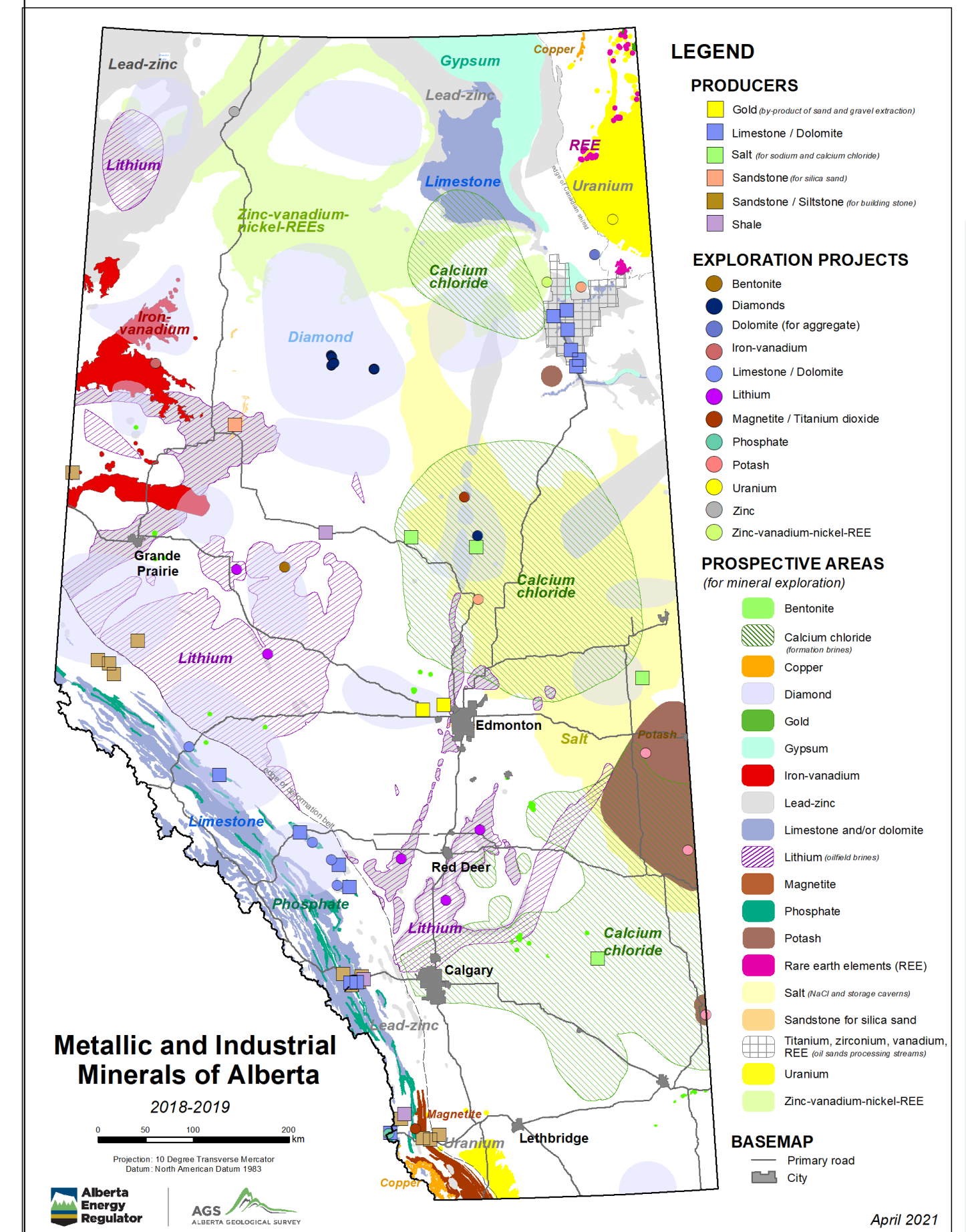
Potential of Mineral Resource Development

- 》 The Alberta Geological Survey (AGS) is responsible for describing the geology and resources in the province.
- 》 AGS has been researching minerals in Alberta for decades.
- 》 This has helped to map the geology and minerals in our province and to identify the potential for mineral resource development.



Minerals in Alberta

- » The Minerals of Alberta map highlights areas with the potential for mineral exploration.
- » Includes all minerals except coal, sand, gravel, and ammonite.



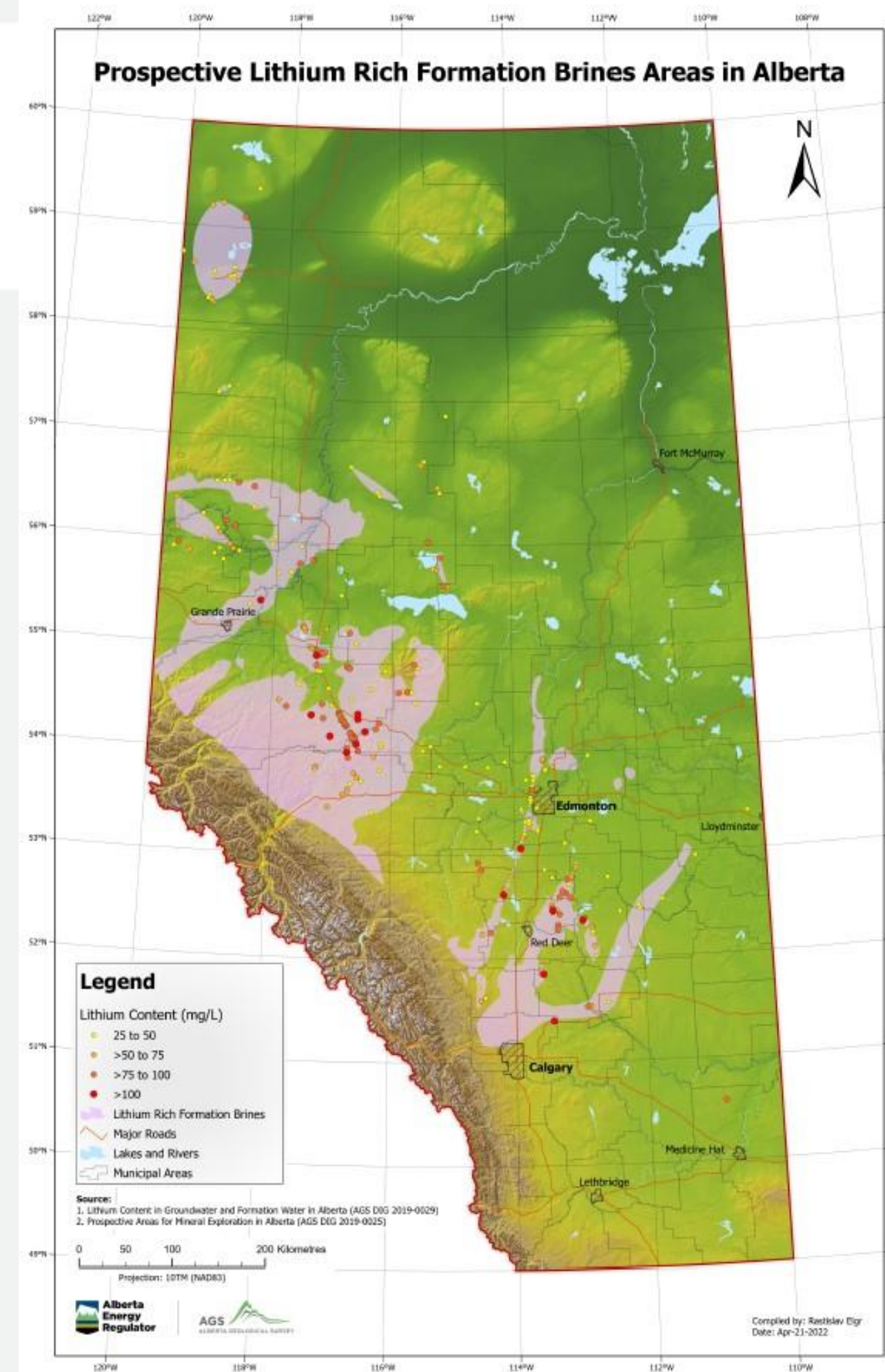
Brine-Hosted Mineral Extraction

- » Calcium and magnesium are already produced from brines in Alberta.
- » Brine-hosted minerals are extracted similar to how we recover oil and gas from reservoirs.
- » Brine-hosted minerals could be processed differently on the surface.



Lithium Potential in Alberta

- » Some of Alberta's brines contain lithium, among other elements of economic interest.
- » The AGS has been studying mineral rich brines since the 1970s and particularly lithium rich brines since the early 2010s.



NEXT STEPS

Further Engagement and Timeline

- 》 Post-session survey: May 18
- 》 Engagement workshops: May 31 – June 2
- 》 Public comment period: Fall 2022
- 》 Accepting applications: Early 2023



CONNECT WITH US

AER WEBSITE: WWW.AER.CA

EMAIL: MINERALS@AER.CA

INQUIRIES LINE: 1-855-297-8311

Questions



How to Ask Questions on Teams

- 》 Refer to the information package that was sent after you registered.
- 》 Submit questions using the 'Q&A' icon if you're using the MS Teams app.
- 》 Or, submit questions to minerals@aer.ca.
- 》 We will do our best to address every question in the time allotted.
- 》 Please use respectful language.



Thank You



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