

# Connecting, Engaging, and Training HQP

**May 2025**



**CANADA  
FIRST**  
RESEARCH  
EXCELLENCE  
FUND

# Land Acknowledgement

The University of Alberta respectfully acknowledges that we are located on **Treaty 6 Territory and North Saskatchewan River Territory of the Métis Nation of Alberta**, a traditional gathering place for diverse Indigenous peoples whose histories, languages, and cultures continue to influence our vibrant community.

I am speaking today from the territories of the Haudenosaunee Confederacy, the Wendat peoples and the Anishinaabek Nation, which includes the Mississaugas of the Credit First Nation and the Chippewa.

# Our Plan Today

Our goal is to promote discussions and idea sharing between CFREFs.

**Part 1:** We will share the FES HQP training experience as a prompt for two guided discussion periods, where other Round 1-2 CFREFs can share their experience and Round 3 CFREFs can share their plans and questions.

**Part 2:** After the break, our whole group will work together to brainstorm HQP training plan ideas for Round 3 CFREFs and future CFREFs based on their specific needs and contexts.



# Valerie Miller, PhD

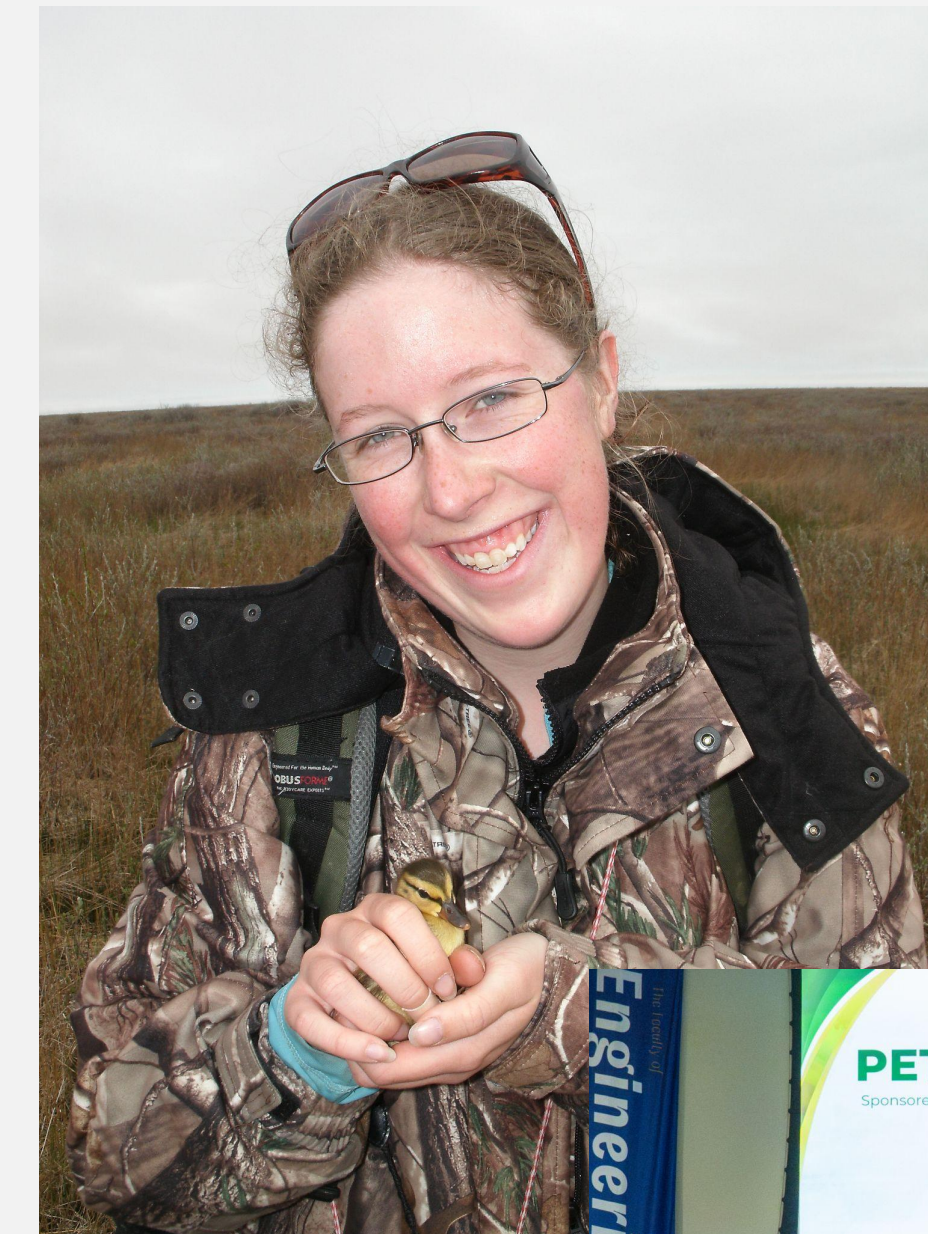
Pronoun: she/her

PhD in Land Reclamation, University of Alberta

- Building soils using mine waste in the north

Outreach and Engagement Lead of Future Energy Systems

October 2019





# Quick Introduction: Future Energy Systems



- CFREF Round 2  
(awarded 2016, launched 2017)
- \$75 million
- Received a no-cost extension,  
concluding November 2026



# Our current statistics



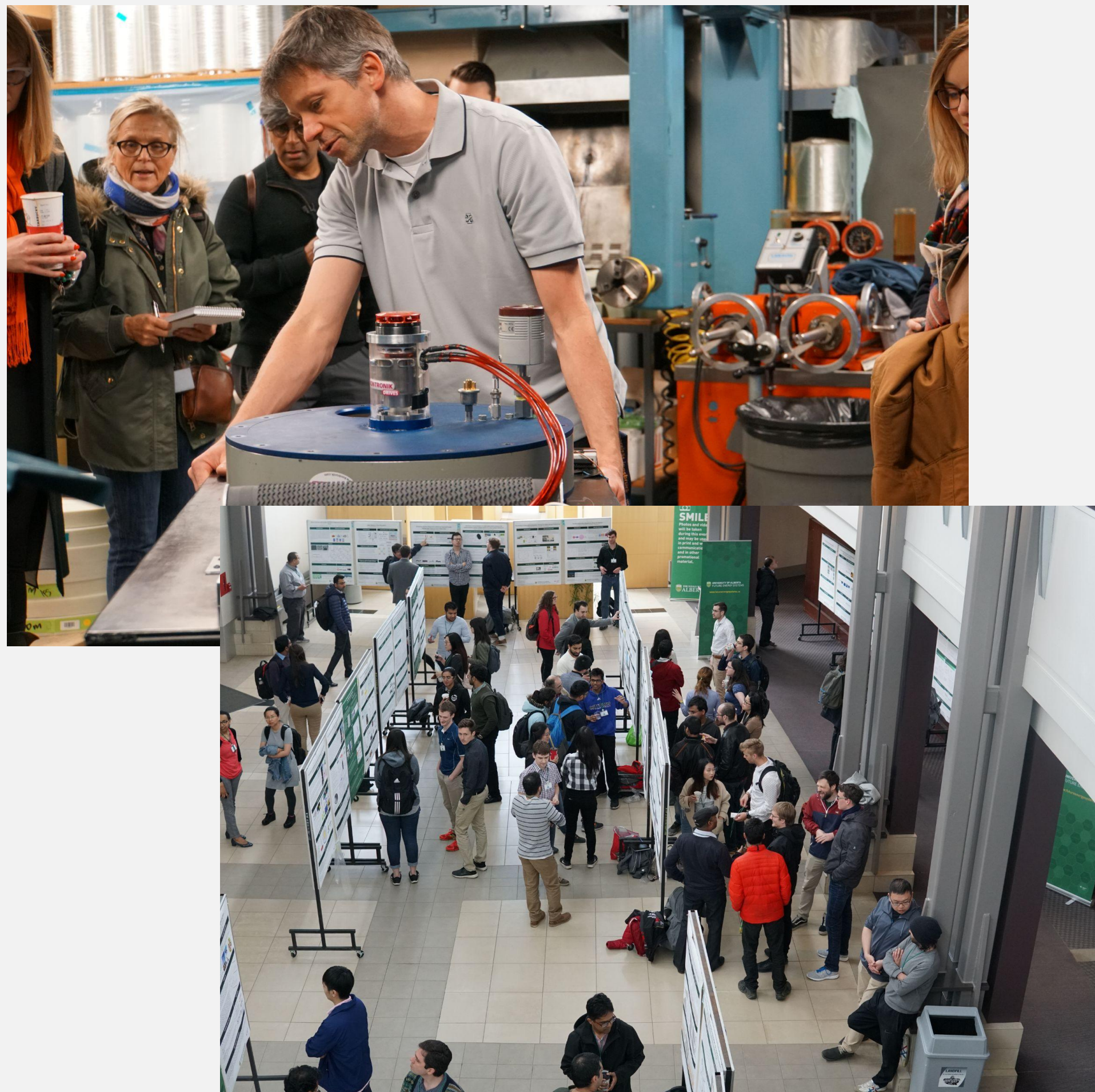
- 180 individual research projects
- 170+ researchers (PIs and Co-Is)
- 1,350+ HQP (graduate students, postdoctoral fellows, technicians, etc.)



# HQP from diverse fields

Our portfolio requires multidisciplinary research to develop the energy technologies of the near future and integrate them into today's infrastructure.

We have trained HQP from the faculties of Engineering, Science, Arts, Business, Law, Native Studies, Public Health, and Agricultural, Life, and Environmental Sciences (ALES).





# Future Energy Systems' HQP Goals



Initial goals for our HQP:

- Fund and train over 1,000 graduate students
- Feature HQP in all promotion of research
- Provide high-quality opportunities for professional development



# Break Out Discussion Guidelines

Try to ensure Round 1-2 and Round 3 CFREFs are represented at each table.

Select a notetaker for each group. That notetaker should summarize the group's discussion and share with the larger group. There is a summary worksheet at each table that will be shared with organizers.

Share freely in your groups, but be clear if you don't want things shared with the larger group.

If you want your feedback to be explicitly attributed to you, make sure you are clear to the group.



# **Break Out Discussion #1: Characterize your HQP community**

- Who are your HQP?
- How many HQP have you had/are you expecting?
- What is your relationship with your HQP?
- What kind of engagement do you have with them?





# Break Out Discussion #1: Future Energy Systems

- Who are your HQP? ***Graduate students, post docs, technicians***
- How many HQP have you had/are you expecting? ***+1,000 over 10 years***
- What is your relationship with your HQP? ***We generally fund PIs research projects, and on average 75% of that money goes towards HQP compensation. In 2024, we launched a new funding scheme to specifically fund HQP for the final 2 years of the project. HQP are connected to FES through their PIs.***
- What kind of engagement do you have with them? ***Generally voluntary engagement, HQP decide to engage in FES level initiatives.***



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# **Break Out Discussion #1: Characterize your HQP community**

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**Share your  
discussion.**



# **Worksheet: Break Out Discussion #1**

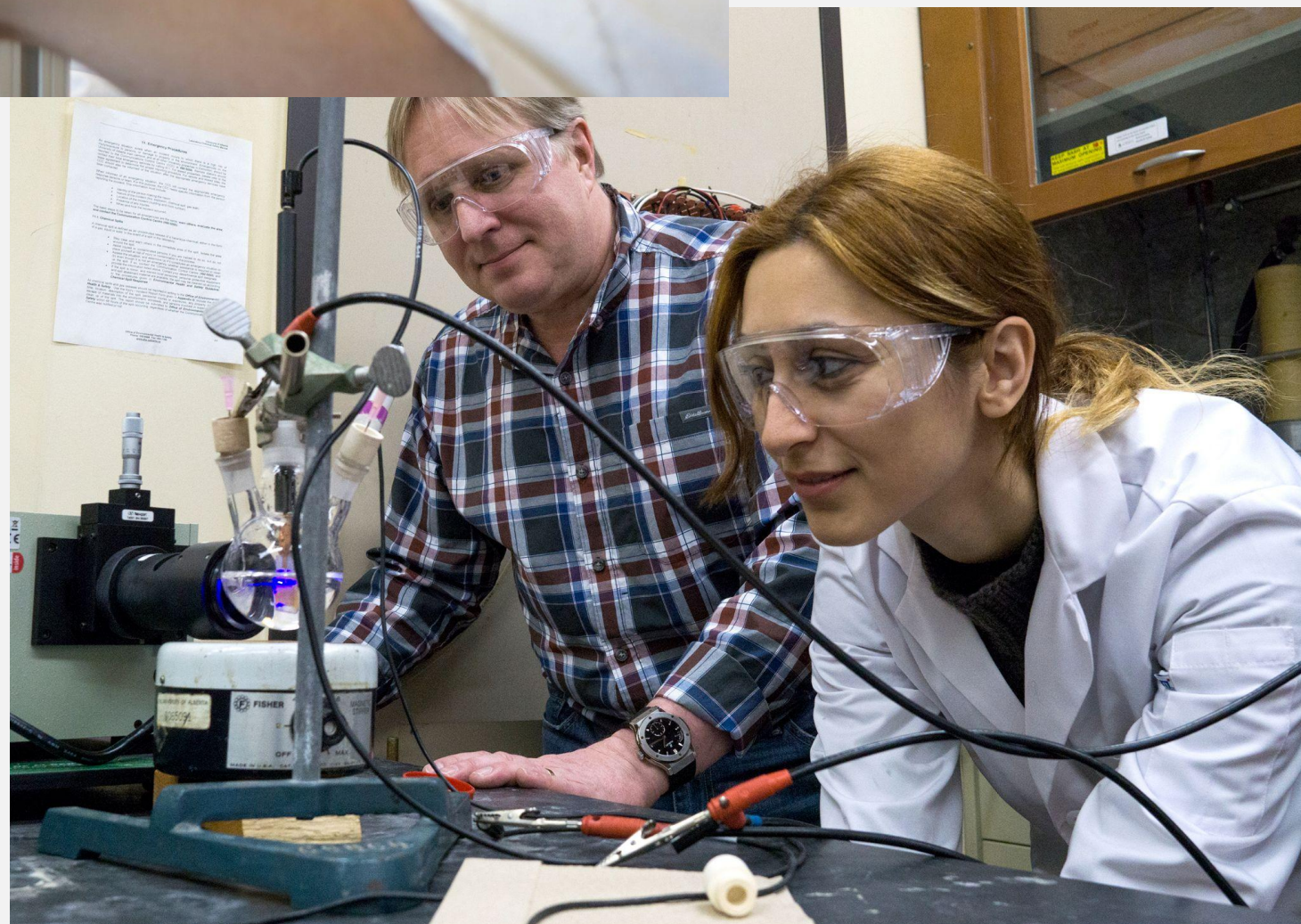
Highlight three important points that came up in your discussion



# Future Energy Systems' HQP Goals

Initial goals for our HQP:

- Fund and train over 1,000 graduate students
- Funded over 1,300 HQP
- Research training occurs within research groups and by the University
- FES supports training primarily for soft skills (will discuss below)





# Future Energy Systems' HQP Goals

Initial goals for our HQP:

- Feature HQP in all promotion of research
- Highlight HQP in research stories
- HQP at all tours for industry, government, public
- HQP doing research communication (talks, demos, etc) (will discuss below)







# Future Energy Systems' HQP Goals

Initial goals for our HQP:

- Provide high-quality opportunities for professional development
- Focus on communication training - why?
- Gave us the ability to meet many of the soft skill competencies that students should develop in graduate school





# Questions To Ask Developing HQP Training Strategy

Top-down vs. Bottom-up Approaches

What leverage do we have to ensure HQP participate in training?

What competencies do we want our students to build?

How do we maximize impact with the time we have available?

What flexibility do we have to change the plan over time?



# Our HQP Training Experience

- FES HQP training was a bottom-up development
- Symposia were well-attended but did not expand competencies
- PIRC was initiated with students helping students
- Wide variety of training programs were offered, limited uptake on most
  - Communication fundamentals, media training, 3 Minute Thesis, research posters, infographics, video training, etc.





# What Did We Learn?

- Staff were needed to have consistent and quality opportunities
- Training was most successful when paired with an immediate opportunity to practice skills
- Promotion of programs had to go through a variety of pathways - PIs (relationship building essential), newsletter, other HQP





# Who Are The Energy Explorers?

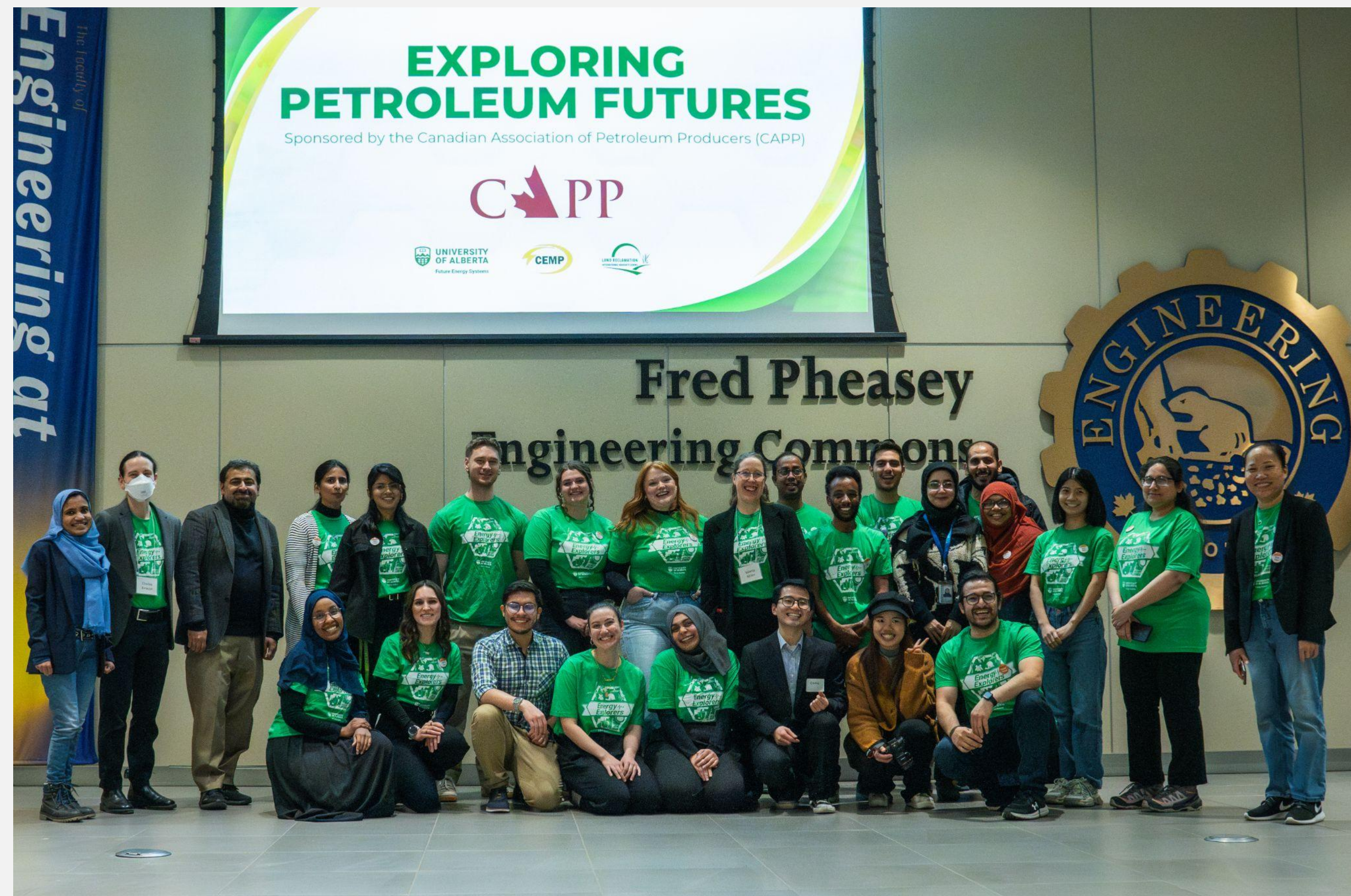
- Energy Explorers is a research communication training program for HQP
- 65+ HQP since fall 2022
- Focuses on developing communication skills to connect research to a wider audience





# Why Did It Work?

- Energy Explorers was effective because it paired training with immediate opportunity to use skills
- Through Energy Explorers, train multiple soft skills competencies based on real-world experience





# What is included?

- 10 hours of classroom instruction
  - Focused on learning strategies, building connections, breaking down barriers (jargon, blind spots)
  - Partnered to provide EDI training
- On location training event
- Commitment to minimum of three follow up events





# What skills do they learn?

- Communication and interpersonal skills
- Teaching
- Creative thinking
- Knowledge mobilization
- Leadership







## What Did We Learn?

- Building a community of people supports training and new members
- Highlighting success encourages PI support
- Immediate opportunity to practice and continued expectation was essential
- Opportunity to connect to different audiences expanded skills
- Creating incentives to get registration is a benefit





## What we wish we'd known...

**Start early:** In the first few years, HQP and Investigators were much more enthusiastic about participating — but we didn't have our program organized.

**Consolidate training goals:** separate sessions for each competency meant some were undersubscribed, so bundling 'unpopular' competencies with popular ones was important.

**Use the skills:** training was only really effective when we ensured there were immediate opportunities to practice with the competencies in the real world.



## **Break Out Discussion #2:**

# **What are your HQP training goals and systems?**

- Do you have specific goals for training HQP?
- Will your HQP respond best to a top-down or bottom-up approach?
- Do you have audiences or stakeholders with whom your HQP can engage to build skills?





## **Break Out Discussion #2:**

### **What are your HQP training goals and systems?**

- Do you have specific goals for training HQP?
- Will your HQP respond best to a top-down or bottom-up approach?
- Do you have audiences or stakeholders with whom your HQP can engage to build skills?

**Share your  
discussion.**



# Worksheet: Break Out Discussion #2

Highlight three important points that came up in your discussion





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Future Energy Systems



CANADA  
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- **BREAK** -  
(10 min)



# Break Out Discussion #3: HQP Program Ideas for Round 3 CFREFs

## Process:

1. Each Round 3 CFREF will have the chance to introduce their program and HQP goals.
2. Explain constraints (e.g. research context, administrative limitations, resources, etc.). Identify existing mechanisms at your organization that you could leverage from the start of your program.
3. Group discussion of possible strategies for building an effective HQP training program.





# **Break Out Discussion #3: HQP Program Ideas for Round 3 CFREFs**

## **Process:**

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3. Group discussion of possible strategies for building an effective HQP training program.

**Share your  
discussion and  
key strategies  
proposed.**



# Worksheet: Break Out Discussion #3

Highlight three constraints (e.g. research context, administrative limitations, resources, etc.) that were raised in your discussion.

Highlight three existing mechanisms that you could leverage from the start that were raised in your discussion.

Highlight three possible strategies for building an effective HQP training program.



# **Team Effort: HQP Program Recommendations for Future CFREFs**

Based on everything we've discussed today, what recommendations can we provide to TIPS which they could share with all future CFREF programs, to ensure they launch with successful HQP training programs?



# Questions?

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# Thank you!

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