

## **MSc in Sustainable Energy Development 2025 Capstone Showcase**

**Advancing Climate Action Through Scope 3 Emissions Evaluation and Reporting at the University of Calgary**  
Masumi Vaghasiya

**Advancing Solar Energy in Alberta: An Assessment of Municipal Solar-Friendly Policies and Implications for Leadership in Renewable Energy Adoption**  
Yiming Hu

**Assessing the Impact of Variations in Energy Rates and Carbon Price Projections on Low-Carbon Building System Designs in Canada**  
Vinuki Punara Kodithuwakku Arachchi

**Assessing the Options for Sustainable Energy Solutions for the Okanese First Nation as a Means of Economic Empowerment**  
Uchenna Udobata

**Biochar Production in the Bow Valley**  
Oluwafemi Fatoba

**Cultural and Socioeconomic Impacts of Solar-Powered Refrigerators in the Peruvian Amazon**  
Charity Kangume

**Decarbonizing Alberta's Oil Sands: Integrating Electrothermal Energy Storage and Renewable Energy to Reduce Greenhouse Gas Emissions from Steam Production**  
Victor Asiamah

**Develop and Pilot a Sustainability Materiality Framework for the Calgary Stampede**  
Braedon McNicol

**Enabling Sustainable Refrigeration in the Peruvian Amazon: An Integrated Energy, Environmental, and Economic Assessment**  
Olaseni Osho

**The Energy Storage Investment Act**  
Steven Wall

**Evaluating Emerging Municipal Wastewater Treatment Technologies: Carbon Footprint, Energy Inputs, and Feasibility for Canada's Water Sector**  
Koebillah Crichlow

**Exploring Grid Reliability Risks in North America: A Multi-Region Data-Driven Assessment**  
Chetan Saha

**Feasibility of Electrothermal Energy Storage Adoption in Alberta's Steam-Intensive Industries**  
Oluwaseyi Taiwo

**Practical Solutions to Decarbonize Mining Operations in Western Canada: A Study of a Copper Mine in British Columbia Using Renewable Diesel**  
Toluwanimi Ogundipe

**A Review for a Revegetation Plan for the Casino Mine Project to Optimize Vegetation Carbon Sequestration**  
Juste Zukauskaite



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### **Review of Carbon Capture and Storage Regulation in Canadian Provinces and Territories**

Adeniyi Adeoloye

### **Sustainable Cooling and Waste Heat Recovery Systems for Data Centres in Alberta**

Caroline Bartlett

### **A Sustainable Procurement Strategy for the University Of Calgary**

Nicholas Millichamp

### **Techno-Economic Analysis and Comparison of Battery and Hydrogen-Based Energy Storage Systems**

Abdul Wahab Abdul Kather

### **Techno-Economic Study on Aircraft Emissions Reduction at YYC Calgary International Airport**

Karen Garrido Vásquez Pita

### **Villages Where Healthy Longevity Happens: How to Integrate Extended Energy, Social and Environmental Health, and Longevity into Regenerative Village Developments**

Kristy Kwan