

Table 1 presents two kinds of findings. First, we conducted an expert survey that asked respondents to allocate 1000 chips across opportunity areas. The table reports the median score across all respondents. Second, we assessed each opportunity according to three criteria outlined above. For National Advantage (resources) a 3 means Canada has high existing capacity, 2 that Canada has potential and an existing model or demonstration, and 1 that there is untapped potential only. For Innovation Capacity, a score of 3 means that Canada has a mature cluster of 5 or more firms in the sector, 2 that Canada has strong research capacity in universities and other institutions plus some promising startups, and 1 that there is research capacity only. Finally, we considered whether the market potential for the product was small or large, both regionally and globally. Top priority opportunities scored well on all three dimensions.

TOP OPPORTUNITIES	VALUE PROPOSITION	EXPERT SCORE (Chips Study)	NATIONAL ADVANTAGE (Resources)	INNOVATION CAPACITY (Research Clusters & Existing Firms)	MARKET POTENTIAL	OVERALL RATING (Priority, Probable, Possible)
Medium and Heavy-Duty Zero-Emission Vehicles	Manufacturing vehicles in niche markets such as school buses, garbage trucks, and forklifts. Creates market pull for mining, battery metals, and hydrogen.	69	3 – Clean grid reduces manufacturing emissions footprint	3 – Leading firms in Medium-duty and leading researchers in battery metals	North Am: Large Global: Unknown	Priority
Alternative Proteins	Process, package, and market plant based proteins. Develop IP in emerging tech for cell culture and fermentation. Creates market pull and focus for agriculture.	21.6	3 – Builds on strengths in primary agricultural production	2 – Large ag-science R&D research infrastructure; domestic processing industry to build on	North Am / Global: Large, fast growing global market	Priority
Aluminum	Aluminum refining to utilize intermittent renewables is advanced sufficiently (likely 20 years) to enable refining near the source of bauxite extraction.	Green Steel, Aluminum, & Cement – 58.4	3 – Significant aluminum refining footprint	2 – Existing efforts by firms to develop new IP	North Am: Large Global: Limited	Priority
Mass Timber	Structural timber for building, including development of underlying technology.	15.4	3 – Extensive forest resources	3 – World-class wood science research capacity, several commercial firms	North Am / Global: Large	Priority
Green Chemistry	Build upstream innovation capacity in biofuels, plastics, net-zero fertilizer, and battery processing.	Biofuels – 42.5; Plastics & Chemicals – 31.2	3 – Sizable biomass production	3 – Comparative advantage in green chemistry IP & commercialization	North Am / Global: Large	Priority
Carbon Capture, Utilization, and Storage	Integrated services for CCUS project planning and development. Develop innovative negative emissions technologies, such as Direct Air Capture (DAC).	30.5	3 – Single point sources for carbon capture; downstream advantages in storage and blue hydrogen production	2 – Existing R&D clusters; fossil fuel industry support	North Am: Small US has expertise Global: Large	Priority
Hydrogen	Green and/or blue hydrogen producing capacity. Development of downstream technologies such as hydrogen fuel cells.	80.6	3 – Sizeable hydro-electric capacity, gas resources, and CO2 storage	3 – leading fuel cell research cluster 1 – electrolyzers	North Am: Large Global: Small Long-run favours local production	Priority
ENABLING OPPORTUNITIES						
Net-Zero Minerals	Mining and processing of critical minerals for net-zero supply chains.	50.7	3 – Key deposits	3 – Existing firms	Large	Probable
Strong Carbon Accounting	Necessary for the operation of effective carbon markets.	33.1	1 – Expertise must be redeployed	1 – Expertise must be redeployed	Small	Possible
Clean Grid	Expand existing clean grid.	32.5	3 – Clean power	3 – Mature grid intertie	Small	Probable
IMPORTANT OPPORTUNITIES						
Net-zero mining operations	Environmental mining equipment to a growing minerals sector.	42.1	3 – Mining sector can provide demand-pull	3 – Existing cleantech mining firms	North Am/Global: Large	Probable
Battery Metals	Develop upstream capacity in the production of battery metals.	36	1 – Mining resources could be developed	3 – IP advantage in upstream components	North Am/Global: Large	Probable
Energy Management Tech for Buildings	Manufacture smart thermostats and other tech for buildings.	35.1	1 – No significant national advantages	3 – Existing cluster of companies	North Am/Global: Small	Possible
Marine Shipping	Manufacture net-zero vessels and components.	25	2 – Leading fuel cell capacity upstream	2 – Existing Ocean supercluster	North Am: Large Global: Small	Possible
Aviation	Manufacture short-haul aircraft and develop sustainable aviation fuel.	23.7	2 – Existing industrial capacity	2 – Research capacity and existing firms	North Am: Small Global: Small	Possible
Vertical Agriculture	Niche market for vertical agricultural systems.	21.9	1 – Large ag science focused on outdoor	2 – Several domestic firms in space	North Am / Global: Small	Possible
Low Emissions Fertilizers	Low or zero emissions fertilizers from sustainable inputs.	22	2 – Feedstocks and industrial capacity	1 – No advanced projects	North Am / Global: Large	Probable