OUTRUNNING THE STORM

National Projects: Prairie Biochar Network & National Jobs Programme

Sections 3.3, 3.4 and 3.5 of the Source Document

LSCM Inc. | Dougald Lamont | May 26, 2026

PART A: PRAIRIE BIOCHAR NETWORK

> *Canada's prairie provinces generate 20–40 million tonnes of agricultural biomass residue every year. The vast majority is open-burned, generating GHGs and zero economic return. A two-tier national biochar system converts this stranded waste into certified carbon-negative commodities.*

TIER 1 — CentrePort Canada Hub (Winnipeg)

A large-scale, year-round industrial biochar processing facility at CentrePort Canada's Rail Park. Receives bulk agricultural feedstock by rail and truck from across the prairies. Produces certified biochar, recovers phosphorus fertilizer, generates heat and power, and serves as Canada's national carbon credit aggregation and certification node.

- Capital: CAD $40–55M (Phase 1), scaling to $105–155M at full build-out
- Location rationale: CN, CPKC, and BNSF rail access; Winnipeg Commodity Exchange administrative experience; prairie geographic centre
- Products: certified biochar, phosphorus fertilizer recovery, syngas heat and power, carbon credits

TIER 2 — Distributed Community Units ('Pizza Oven' Biochar Generators)

Small containerised or skid-mounted continuous pyrolysis units deployed at farms, rural municipalities, First Nations communities, and remote locations across Canada. Each unit processes 1–10 tonnes of local feedstock per day. Syngas heats the local building or dries grain. Biochar is applied to local fields or sold. Carbon credits flow up to the CentrePort registry.

- Capital: CAD $150K–800K per unit depending on size
- Economics: hub-leasing model available to eliminate capital risk; 2–4 year payback
- First Nations application: distributed units at communities with local wood waste eliminate fuel costs while generating carbon credits

Available Prairie Biomass Feedstocks

Feedstock	Primary Province(s)	Est. Accessible Surplus (t/yr)	Biochar Suitability
Wheat straw	SK, MB, AB	8–12 million t	Excellent — dry, fibrous, consistent
Canola straw	SK, AB, MB	6–10 million t	Good — higher ash, needs management
Oat/barley straw	SK, MB, AB, ON	3–5 million t	Excellent
Flax straw	SK, MB	0.5–1 million t	Good

Feedstock	Primary Province(s)	Est. Accessible Surplus (t/yr)	Biochar Suitability
Hemp stalks	SK, MB, AB	Emerging crop	Very high — low ash, high carbon
Sunflower hulls	SK, MB	0.3–0.6 million t	Excellent for small units
Cattail biomass (invasive, Lake Manitoba)	MB	2–5 million t (invasive harvest)	Excellent + ecological benefit

National Expansion Potential

Region	Additional Hub Candidate	Primary Feedstock	Distributed Unit Opportunity
British Columbia	Prince George or Kamloops	Forest slash, sawmill residue	Logging camp units, remote First Nations
Ontario	Thunder Bay or Chatham	Corn stover, soy residue, forest biomass	SW Ontario farm units; northern forestry
Quebec	Partner with Carbonity (Port-Cartier)	Forestry residue	Agricultural units; maple sugar waste
Atlantic Canada	Moncton or Truro	Forest biomass, peat, fish processing waste	Farm/forestry; First Nations Mi'kmaq communities
Northern Canada	Distributed only (no hub needed)	Local wood waste, tundra biomass	Remote community units; critical fuel savings

Priority Actions

- Federal: Designate agricultural and forestry biochar as qualifying for the carbon offset protocol under Environment and Climate Change Canada's Greenhouse Gas Offset Credit System.
- Manitoba: Provide CentrePort Special Planning Area zoning approval and fast-track permitting for Phase 1 hub.
- Federal: Include distributed biochar units in NRCan's SREP and CERRC programme eligibility for remote community applications.
- AAFC: Launch a $40–60M farmer adoption programme with capital grants for first-unit installations at co-operative and community level.
- CentrePort Canada: Commit to Phase 1 land allocation and utility connections for the hub facility.

PART B: NATIONAL JOBS PROGRAMME

> *Canada has a vast inventory of human and community needs that markets reliably underinvest in. A job guarantee designed only around the transition economy would employ trades workers and leave everyone else — the majority of the displaced workforce, including most women, most newcomers, and most people without post-secondary credentials — without meaningful inclusion.*

Core Design Principle

The work must be real. Not manufactured, not busywork, not make-work. Canada has no shortage of real work that needs doing. The shortage is of political will to pay for it. The programme should pay a living wage (estimated $21–22/hour in Winnipeg in 2026; regional rate-setting required nationally).

Five Work Domains for the Programme

1. Care Work: The Largest Single Gap

- 50,000 additional personal support workers (PSWs) needed nationally to meet the 4-hour direct care standard in long-term care.
- 200,000–300,000 Canadians waiting for or receiving inadequate home care due to staffing shortages.
- 40,000–60,000 additional early childhood educators needed to staff committed new childcare spaces.
- Programme pays PSWs $21/hour vs. current sector average $17–18/hour — immediately improves recruitment and retention.

2. Social and Community Services

- Mental health and addictions: crisis services understaffed ahead of predictable $150/bbl mental health demand surge.
- Adult literacy: estimated 6.5 million Canadians with limited literacy skills, limiting labour market participation.
- Settlement services for newcomers: 400,000+ arrivals/year with insufficient settlement support.

3. Ecological and Environmental Work

- Invasive species management, habitat restoration, wetland monitoring, fire-break maintenance.
- Northern community environmental monitoring: water quality, permafrost change, wildlife habitat.
- Agricultural environmental stewardship: buffer strip planting, wetland restoration, soil carbon measurement.

4. Housing and Infrastructure Support

- Weatherisation of social housing, supportive housing, and first Nations housing stock.
- Housing maintenance backlogs in social housing across all provinces.
- Rural road and community infrastructure maintenance.

5. Arts, Culture, and Community

- Community programming, arts education, cultural heritage preservation, particularly in Indigenous communities.
- Community food infrastructure: community kitchens, food hubs, market gardens.

Scale and Cost

- Explicit target: 50,000–100,000 direct positions.
- Annual cost at $21/hour, 40 hours/week, 50 weeks: approximately $2.2–4.4B annually at full deployment.
- Fiscal offset: reduced demand on emergency services, reduced EI claims, reduced emergency food bank demand, reduced emergency healthcare.

PART C: MANY FIELDS, MANY HANDS — Small & Medium Farm Strategy

Canada's agricultural sector has undergone rapid structural change: fewer, larger, more chemically intensive farms. At $150/bbl, the economic case for diversified, lower-input farming strengthens considerably. Section 3.5 makes the case for a complementary strategy that supports small and medium farm viability alongside large-scale production resilience.

- Diversified farms with 4–6 crops in rotation break pest/disease cycles naturally, reducing chemical inputs.
- Legume integration in rotation reduces synthetic nitrogen requirement per acre by 15–30%.
- Short supply chain and direct-to-consumer sales reduce transportation cost exposure.
- Recommended: $500M national rural food processing fund to create 200–300 rural processing nodes (flour milling, pulse splitting, canola cold-press, legume pasta).
- Young farmer entry support: land access programmes, co-operative ownership models, mentorship networks.

Source: Sections 3.3, 3.4, and 3.5, Outrunning the Storm. May 26, 2026.