

Solution

1. Remote monitored, automated, universal organic feedstock capable, self sustaining UTOC systems convert community garbage into heat. Community garbage (Municipal Solid Waste) is collected by electric vehicles (e.g. electric sled (<https://newatlas.com/mtt-136-personal-electric-sled/30932/>) towed trailers). UTOC plant material handling is by electric loaders like at <https://www.icb.com/en-gb/products/telescopic-handlers/525-60e-hi-viz>.
2. UTOC system heat is used to produce electric power for the UTOC plant, community greenhouses, and charging electric vehicle/site loader batteries. Residual UTOC system heat can be used for:
 - multiple effect water distillation of potable water that is available for pick up or distribution to residents by electric transport.
 - heating greenhouses/buildings/community centres/medical stations/and like.

Benefits

1. Project simple payback potential less than 3 years.
2. Significant community employment opportunities during UTOC Electric Energy From Waste plants construction, and operations thereafter.
3. UTOC daily feedstock requirement shortfalls can be made up with material extracted from existing community waste disposal sites (facilitating land reclamation), no value-low value forestry vegetation/residue, general community clean up/deadfall collection, demolition waste, spent plastic/composite end of life boats-vehicle parts, tires, end of life furniture/mattresses/sleeper sofas/and like.
4. Progressive, income generating employment for community residents **starting with** loading/offloading/driving electric waste collection-purified water distribution vehicles **through** UTOC plant/greenhouse operators and equipment maintenance tradespersons **to** a Sustainable Community Systems Manager(s).
5. UTOC powered-heated greenhouses provide community employment and fresh vegetables year round (<https://www.cbc.ca/news/canada/north/western-nunavut-grows-vegetables-green-energy-1.5443823>). Greenhouse waste is either composted (year round) in UTOC heated buildings or recycled into energy as UTOC feedstock.
6. Complete in-community recycling of construction/demolition organic waste, tires/deadstock/ offal, diseased biomass, spent paints/pesticides/herbicides/lubricants, unused solvents, and medical/other hazardous wastes into clean energy.
7. Operation and maintenance support via remote monitoring of site automation system monitor.

