## **Sustainable Remote Community-R9**

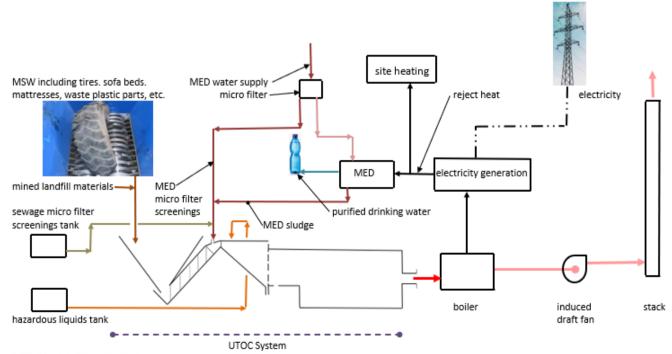
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## Solution

- 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 (<a href="https://newatlas.com/mtt-136-personal-electric-sled/30932/">https://newatlas.com/mtt-136-personal-electric-sled/30932/</a>) towed trailers). UTOC plant material handling is by electric loaders like at <a href="https://www.icb.com/en-gb/products/telescopic-handlers/525-60e-hi-viz">https://www.icb.com/en-gb/products/telescopic-handlers/525-60e-hi-viz</a>.
- 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 (<a href="https://www.cbc.ca/news/canada/north/western-nunavut-grows-vegetables-green-energy-1.5443823">https://www.cbc.ca/news/canada/north/western-nunavut-grows-vegetables-green-energy-1.5443823</a>). 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.



MED: Multiple Effect Distillation