

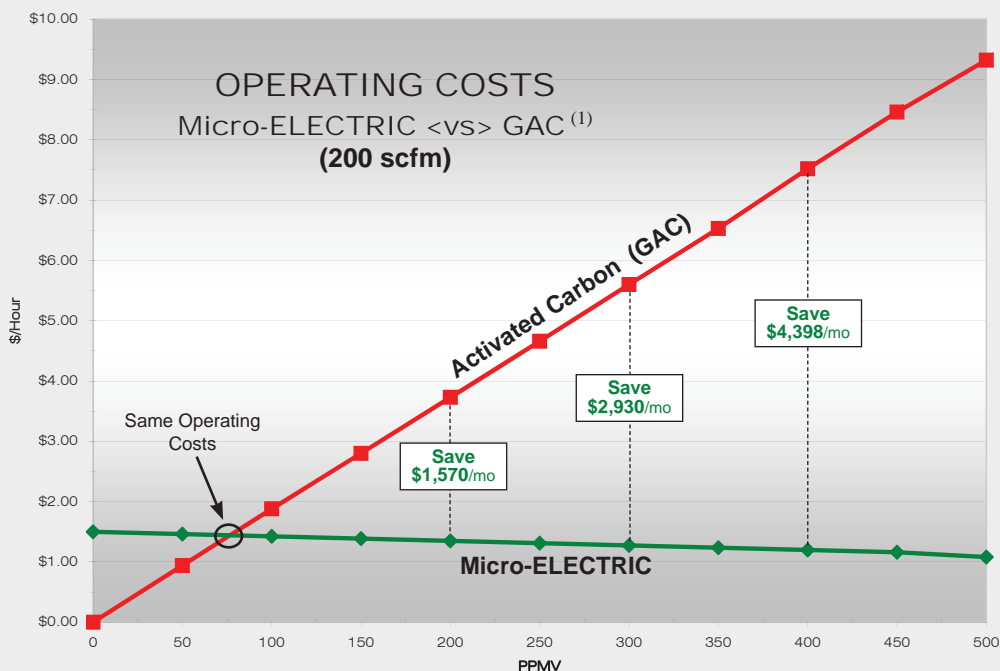
OPERATING COSTS

Micro-ELECTRIC <vs> GAC

We recently asked equipment operators what VOC concentrations they “switch over” to Granulated Activated Carbon (GAC) to finish cleaning their site. Most told us they swap out their thermal oxidizer or electric oxidizer for an SVE blower with GAC vessels at VOC concentrations from 200 - 500 ppmv. The chart below provides an operating cost comparison between our latest **Micro-ELECTRIC** SVE catalytic oxidizer and an SVE blower skid using GAC vessels for emissions control.

Micro-ELECTRIC Features

- Small size systems : 4-ft x 3-ft.
- Operates from 0 - 3500 ppmv.
- More economical from start to completion. No GAC needed.
- Quiet w/ complete SVE system.
- A “permanent destruction technology”.
- Simple “flameless” operation.
- Destruction > 99%.
- Low Greenhouse Emissions.
- Low Operating Costs over full range:
 - 3000 ppmv: \$0.05/hr
 - 2500 ppmv: \$0.35/hr
 - 1000 ppmv: \$0.92/hr



OPERATING COSTS⁽¹⁾. This chart clearly shows how GAC stacks up against our latest **Micro-ELECTRIC** oxidizer system in hourly operating costs. We found that once you get over 100 ppmv VOC's, the cost of GAC gets very expensive quickly:

At 78 ppmv, GAC and **Micro-ELECTRIC** system have equal operating costs

At 200 ppmv, GAC is ~\$1,570 more per month to operate
- Annual Savings: \$18,840 per year

At 300 ppmv, GAC is ~\$2,930 more per month to operate
- Annual Savings: \$35,160 per year

At 400 ppmv, GAC is ~\$4,398 more per month to operate
- Annual Savings: \$52,776 per year

Consider this: If you have a site to cleanup - - start out using our energy efficient **Micro-ELECTRIC** system. Once concentrations drop to 500 ppmv or less, don't change out to GAC, just keep running your **Micro-ELECTRIC** until site closure. You won't have to hassle with installing a new SVE blower skid, no worrying about space for the GAC vessels, and no messy GAC drums plugging up your site or the owners parking spaces! Give us a call to learn more:

Contact: John Burr

(818) 706-9875 x211

jfburr@soiltherm.com

www.soiltherm.com

Disadvantages of GAC

- Excessive GAC costs >100 ppmv
- Unsightly GAC vessels at site.
- Limited operating range 0 - 500 ppmv.
- Unpredictable usage costs.
- Requires scheduled changeouts.
- Potential Air Permit breakthrough violations.
- Difficult to fit in space limited locations.
- Not a “permanent destruction” technology
- GAC disposal responsibilities.



**SOIL-THERM
EQUIPMENT, INC.**

5310 Derry Ave, Unit C
Agoura Hills, CA 91301-4509
(818) 706-9875 FAX (818) 706-2145

(1) Energy costs are based on operation at 200 scfm (assumed SVE blower electricity equal for both systems), pre-cat temp at 650F, electric heater kWh @ \$0.12, GAC cost at \$1.00/#, 15% retention. Above costs are estimates only, actual results may vary.