

HEAT Systems Australia

The Carbon Regeneration Experts



The use of activated Carbon in the treatment of drinking water is one of the largest and most well-known applications for this filtration medium. Water utilities around the globe can benefit from the use of this sophisticated, efficient, and cost-effective Carbon regeneration technology to ensure that their populations are benefitting from the purest, water they can provide.

HEAT Systems don't just supply you with off-the-shelf items, we manufacture them with your needs in mind. This means you are receiving the best service available, and our actions always add value to what you do.

In essence, we function as an extension of your maintenance department. From start-up to installation support to emergency services and preventative maintenance, HEAT Systems offers a variety of services to keep your equipment running optimally for years to come – whether it's our brand or another.

We offer the following services:

- Installation & Start-up Support
- Spare Parts
- Field Services
- Drum Trunion Training
- Alignments
- Gear Replacement
- Spare Parts Installation
- Inspections
- Equipment Audits
- Training Programs
- Process Optimisation Engineering
- 24-Hour Emergency Service

HEAT Systems is proud to serve the following countries:

Australia, Philippines, Indonesia, Vietnam, Papua New Guinea, Turkey, Spain, United Kingdom, Egypt, Mali, Burkina Faso, Cote d'Ivoire (Ivory Coast), Senegal, Argentina and many others.



For all enquiries: +61 8 6465 4198 info@heatsystems.com.au heatsystems.com.au

The economics of Carbon regeneration

Carbon regeneration is much more effective than purchasing new activated Carbon, as can be seen in the economic model below.

Buying new activated Carbon

Total activated Carbon purchased per year:	25 Tonne
Cost of activated Carbon per Tonne:	\$3,500.00 (ex GST)
Cost of activated Carbon disposal per Tonne:	\$350.00 (ex GST)
Total annual Cost of activated Carbon:	\$87,500.00 (ex GST)
Total annual cost of activated Carbon disposal:	\$8,750.00 (ex GST)
Total annual cost:	\$96,250.00 (ex GST)

Environmental cost of producing 1 tonne of activated Carbon

Approximately **8 Tonne of raw product** (coal, wood, coconut shell) go into making **1 Tonne of Activated carbon**;

Approximately **800 litres of diesel** is consumed in the pyrolysis (charring) and activation process;

Approximately **600 litres of water** is consumed to create steam during the activation process;

Approximately **1,200 kW hours of power** is consumed during the total process.

Carbon regeneration

Total activated Carbon regenerated per year:	25 Tonne
Cost of activated Carbon regeneration per tonne:	\$2,000.00 (ex GST)
Total annual cost of activated Carbon regeneration:	\$50,000.00 (ex GST)
Total volume of activated Carbon top up:	2 Tonne
Total cost of activated Carbon top up:	\$7,000.00 (ex GST)
Total annual cost:	\$57,000.00 (ex GST)

Environmental cost of regenerating 1 tonne of activated Carbon

Approximately **112 litres of diesel** is consumed in the regeneration process;

Approximately **10 litres of water** is consumed to create steam during the regeneration process;

Approximately **24 kW hours of power** is consumed during the total process.

Environmental Cost Activated Carbon:

Reactivation vs Regeneration



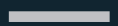
1200kW
hours of power



24kW
hours of power



8 Tonne
raw product to
produce 1 Tonne
of Activated
Carbon



800L
diesel consumed



112L
diesel consumed



600L
water consumed



10L
water consumed



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