The environmental benefits can be achieved by using our unique technologies:

- **ADIOX®** which is widely recognized for memory effect prevention and for dioxin removal.
- **CUTNOX™** where injected water/air influence the combustion positively such that the initial NOx-formation is reduced.
- **VoluMix™** which injects secondary air into the combustion zone – with a complete burnout in gas phase.
- **Multi Scrubber** - compact and highly effective wet flue gas cleaning system.
- **WESP** which removes ultra-fine particles and aerosols.
- **MERCOX™** primarily in plants with a high level of metallic mercury in the flue gas.

**NextBAT®** is the Scandinavian solution to the next generation of Best Available Technology. Babcock & Wilcox Vølund and Götaverken Miljö have a long tradition for focus on high efficiency and low emissions, and together we have the solution for the future Waste-to-Energy plants.

The next generation of best available technology standards will be presented in the coming waste incineration BREF in 2013. The revised BREF will set new and higher standards for Waste-to-Energy plants in terms of higher efficiency and lower emissions.
A Waste-to-Energy plant’s level of efficiency in recovering energy from waste is measured by the R1 formula. High overall energy efficiency ensures maximum substitution of fossil fuels and thereby reduces the impact of greenhouse gasses (GHG). NextBAT® ensures that plant owners achieve a high? R1 rate because of our unique technologies:

- **DynaGrate®** which is the most advanced grate on the market – minimum unburnt in slag.
- Water cooled wear zone to minimize slag build up in the combustion zone.
- **Inconel®** in furnace walls provides high protection against corrosion.
- ACC’s Advanced Combustion Control maintain a stable combustion process by controlling the coefficient of resistance and combustion air.
- CFD simulation is an effective method for achieving the most efficient design and heat transfer in the boiler.
- **RESOX™** is a unique technology for decreasing the corrosion rate for super heaters or for allowing higher steam temperature thereby increasing the electricity production.
- The flue gas condenser recovers an additional 20–25% of energy by condensing the water vapour.

**FROM CRANE TO STACK**

1. Watercooled DynaGrate®
2. Separately cooled water zone in furnace
3. Combustion chamber with Inconel cladded walls
4. Ignition control with air
5. Advanced flame front control
6. VoluMix™ zone in 1 pass
7. Inconel cladded 1 and 2 boiler pass
8. On-Line Boiler Washing System™
9. Integrated baffle walls in 2 pass
10. Superheater sections
11. Evaporation sections
12. Superheater
13. Quenching
14. Acid scrubber stage with ADIOX packing®
15. Alkaline scrubber stage with ADIOX packing®
16. Condensing scrubber stage with ADIOX packing®
17. Final particle removal
18. Reheater
19. Emission monitoring equipment
20. Heat exchangers in condensing system
21. Absorption heat pump®
22. District heating system
23. Buffer tanks
24. Waste water treatment
25. CutNox™ and Resox™
26. Turbine/generator
27. Condenser
28. Deaerator/feed water tank
29. Feed pump
30. Feed water heat exchangers
31. From crane to stack
32. Stack