

# Why Natural Convection Cooling?



## 1. Fan has limited lifetime

- Within 10 years of operating in clean conditions expected fan failure rate is 8.8%.

In real life failure rate is higher

## 2. Electronics of the fan cooled rectifier suffers from dust and dirt in the air

- Dust and particles cover electronic components with heat insulating layer preventing their proper cooling. Overheated components are aging faster, underperform and could be damaged.
- Dust and particles build inside the power converter conducting bridges. They are sensitive to humidity, temperature and destroy electronics at unpredictable moment.
- Power systems with fan cooled rectifier modules require regular service visits for cleaning and modules swapping.



**Rectifier module MHE, No Fans, Field proven reliability**  
Dust and particles do not settle inside the module.



- Maximal reliability and power availability
- Minimum maintenance needed
- Thanks to modular architecture maintenance process can be easily outsourced and module swap and expansion is easy to manage
- Specialists qualified and authorized to service DC power systems can operate remotely.
- Investment of the no fan MHE based power system will pay back within 3-5 years.
- Warranty period 5 years, Lifetime 20 years

**TCO - Modularity and No fans mean the lowest Total Cost of Ownership for backup power systems lifetime**