



Prof.dr.ir. AHM Verkooijen

The Energy Technology section uses and expands its know-how to contribute to the sustainable conversion of useable energy and to a gradual decrease of the dependency on fossil fuels. Technology improvement and innovation are the most important tools to achieve this goal. The study of "clean fossil power" could effectively lead to the mitigation of the negative effects associated with the use of fossil fuels, while enabling the gradual introduction of renewable primary sources and technologies. At the same time we want to develop integrated concepts for poly-generation.

Efficient use of fossil and renewable resources with a minimum environmental impact on a global scale is studied on different levels: systems, plants, equipment, processes and materials.

Within this context, the section builds on its insight into the thermodynamics of energy conversion processes and their integration and optimisation on system level. Also, extensive fundamental fuel characterisation work has laid a foundation for better understanding of energy conversion processes via system component modelling and validation on a pilot plant scale. During the period 2001-2006 more work was done on projects in the emerging field of Organic Rankine Cycle technology. This reflects increasing societal concern about anthropogenic global warming. This concern will continue for the next decade.