

Table IV: Technical Targets for Membranes: Stationary

All targets must be achieved simultaneously

Characteristics	Units	Calendar year		
		2002 status ^a	2005	2010
Membrane conductivity, operating temperature	$\Omega\text{-cm}^2$	0.1	0.1	0.1
Oxygen cross-over ^b	mA/cm^2	5	5	2
Hydrogen cross-over ^b	mA/cm^2	5	5	2
Cost	\$/kW		50	5
Operating Temperature	$^{\circ}\text{C}$	160	160	170
Durability	Hours	5000	>15000	>40000
Survivability	$^{\circ}\text{C}$	-20	-30	-40

Notes:

a) Status is present day 80 $^{\circ}\text{C}$ unless otherwise noted; targets are for new membranes/CCMs

b) Tested in CCM