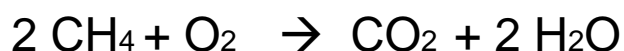


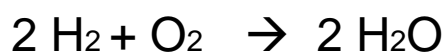
## Bond enthalpies (solutions)

Reaction enthalpy for the complete combustion of methane



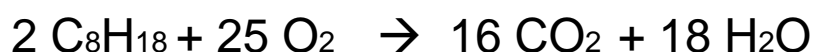
4 x C-H	413 kJ/mol	=	1652 kJ/mol
2 x O=O	498 kJ/mol	=	996 kJ/mol
2 x C=O	-820 kJ/mol	=	-1640 kJ/mol
4 x O-H	-463 kJ/mol	=	-1852 kJ/mol
			<b>-844 kJ/mol</b>

Reaction enthalpy for the oxyhydrogen reaction



1 x O=O	498 kJ/mol	=	498 kJ/mol
2 x H-H	436 kJ/mol	=	872 kJ/mol
4 x O-H	-463 kJ/mol	=	-1852 kJ/mol
			<b>-482 kJ/mol</b>

Reaction enthalpy for the complete combustion of  $\text{C}_8\text{H}_{18}$



14 x C-C	348 kJ/mol	=	4872 kJ/mol
36 x C-H	413 kJ/mol	=	14868 kJ/mol
25 x O=O	498 kJ/mol	=	12450 kJ/mol
32 x C=O	-820 kJ/mol	=	-26240 kJ/mol
36 x O-H	-463 kJ/mol	=	-16668 kJ/mol
			<b>-10718 kJ/mol</b>