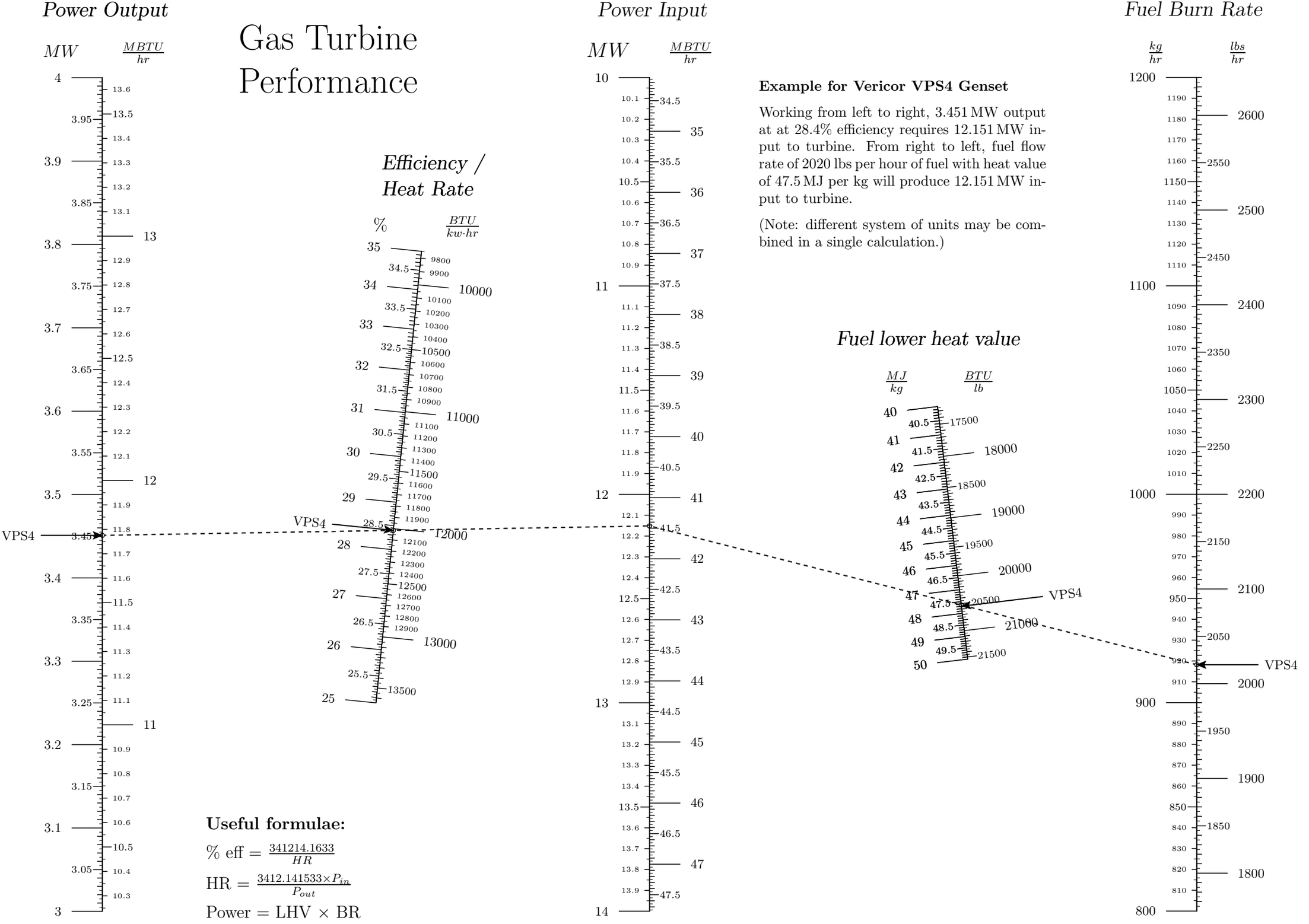
Gas Turbine Performance



Example for Vericor VPS4 Genset

Working from left to right, 3.451 MW output at at 28.4% efficiency requires 12.151 MW input to turbine. From right to left, fuel flow rate of 2020 lbs per hour of fuel with heat value of 47.5 MJ per kg will produce 12.151 MW input to turbine.

(Note: different system of units may be combined in a single calculation.)

Useful formulae:

$\%\ \text{eff} = \frac{341214.1633}{HR}$

$\text{HR} = \frac{3412.141533 \times P_{in}}{P_{out}}$

$\text{Power} = \text{LHV} \times \text{BR}$