

ENERGY PRACTICE PROBLEMS

$$4) \quad P = 650 \text{ MW} = 650,000,000 \text{ W}$$

$$I = 400 \text{ kA} = 400,000 \text{ A}$$

$$V = (E_{mf}) = ?$$

$$P = IV$$

$$V = \frac{P}{I} = \frac{650,000,000 \text{ W}}{400,000 \text{ A}}$$

$$= 1625 \text{ V}$$

• Poster

$$V = (\text{Emf}) = \frac{[\text{Your generator (W)}]}{1000 \text{ A}}$$

$$5) \quad (E_{mf}) = NAB\omega \quad \omega = \underline{2\pi f}$$

$$(E_{mf}) = NAB(2\pi)f$$

$$B = \frac{(E_{mf})}{NA(2\pi)f}$$

$$= \frac{1200 \text{ V}}{(80)(8 \text{ m}^2)(2\pi)(60 \text{ Hz})}$$

$$= 0.005 \text{ T}$$

$$A = 8 \text{ m}^2$$

$$B = ?$$

$$N = 80$$

$$f = 60 \text{ Hz}$$

$$E_{mf} = 1200 \text{ V}$$