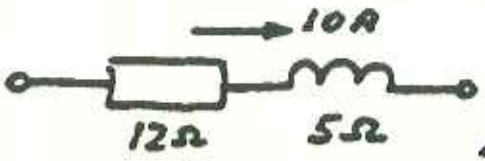
7-17



Given

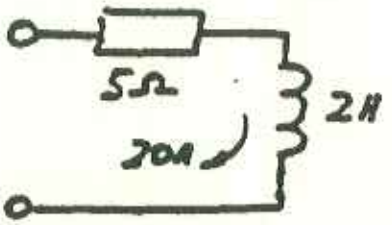
a. $P = 10^2 \times 12 = 1200\ W$

b. $Q = 10^2 \times 5 = 500\ var$

c. $S = \sqrt{1200^2 + 500^2} = 1300\ VA$

d. $\cos\theta = 1200/1300 = 0.923$

7-18



DC

V

a. $P = 20^2 \times 5 = 2\ kW$

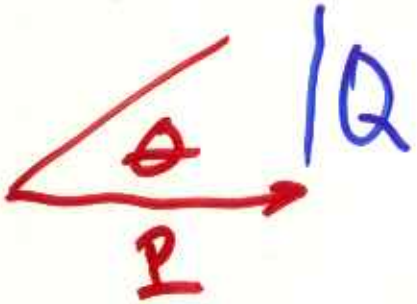
b. no reactive power is absorbed because the current is dc.

7-19

$P = 1200$, $\cos\theta = 0.8$ $\therefore S = 1200/0.8 = 1500\ VA.$

$Q = \sqrt{1500^2 - 1200^2} = 900\ var$

Given

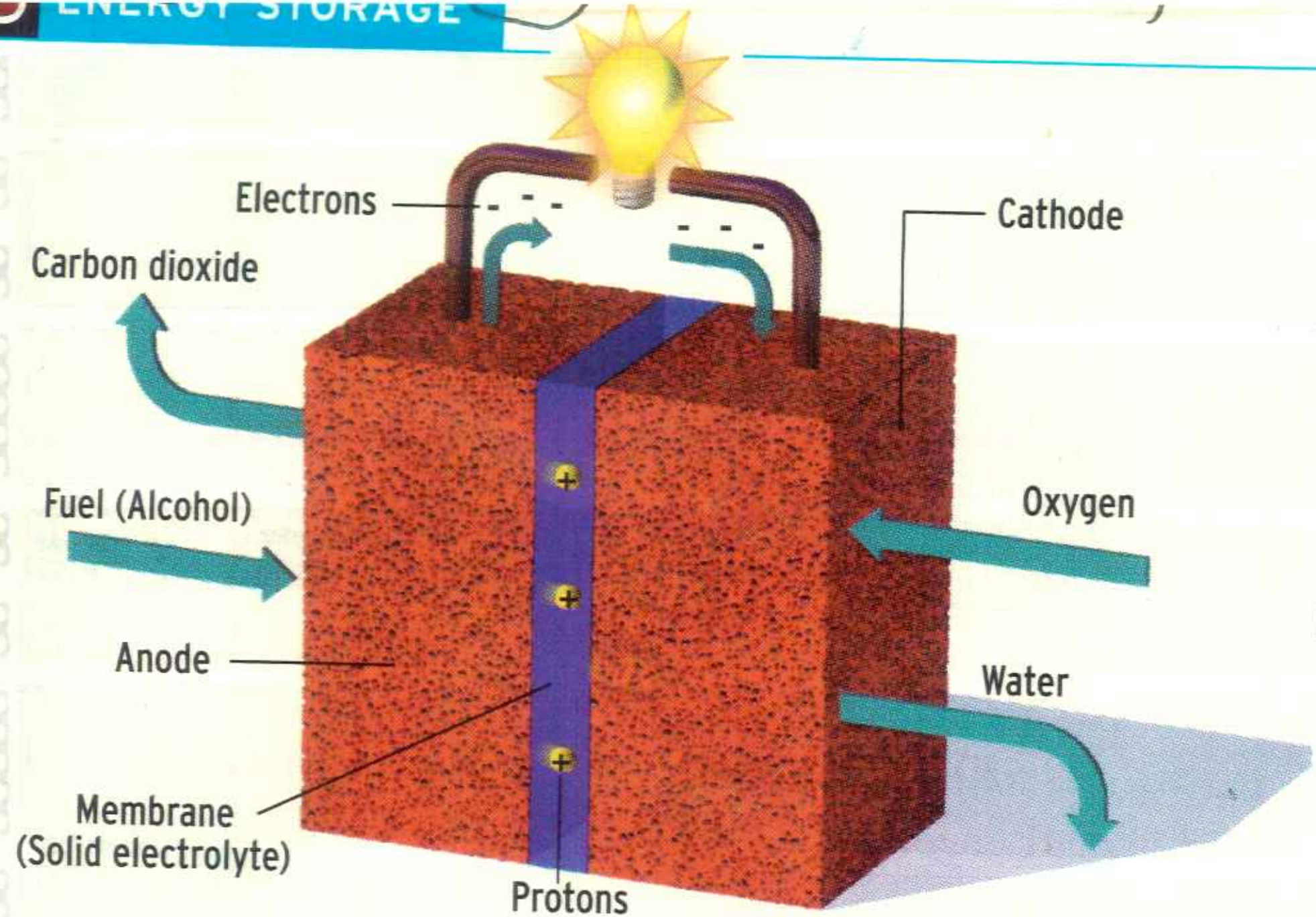


Fuel Cells

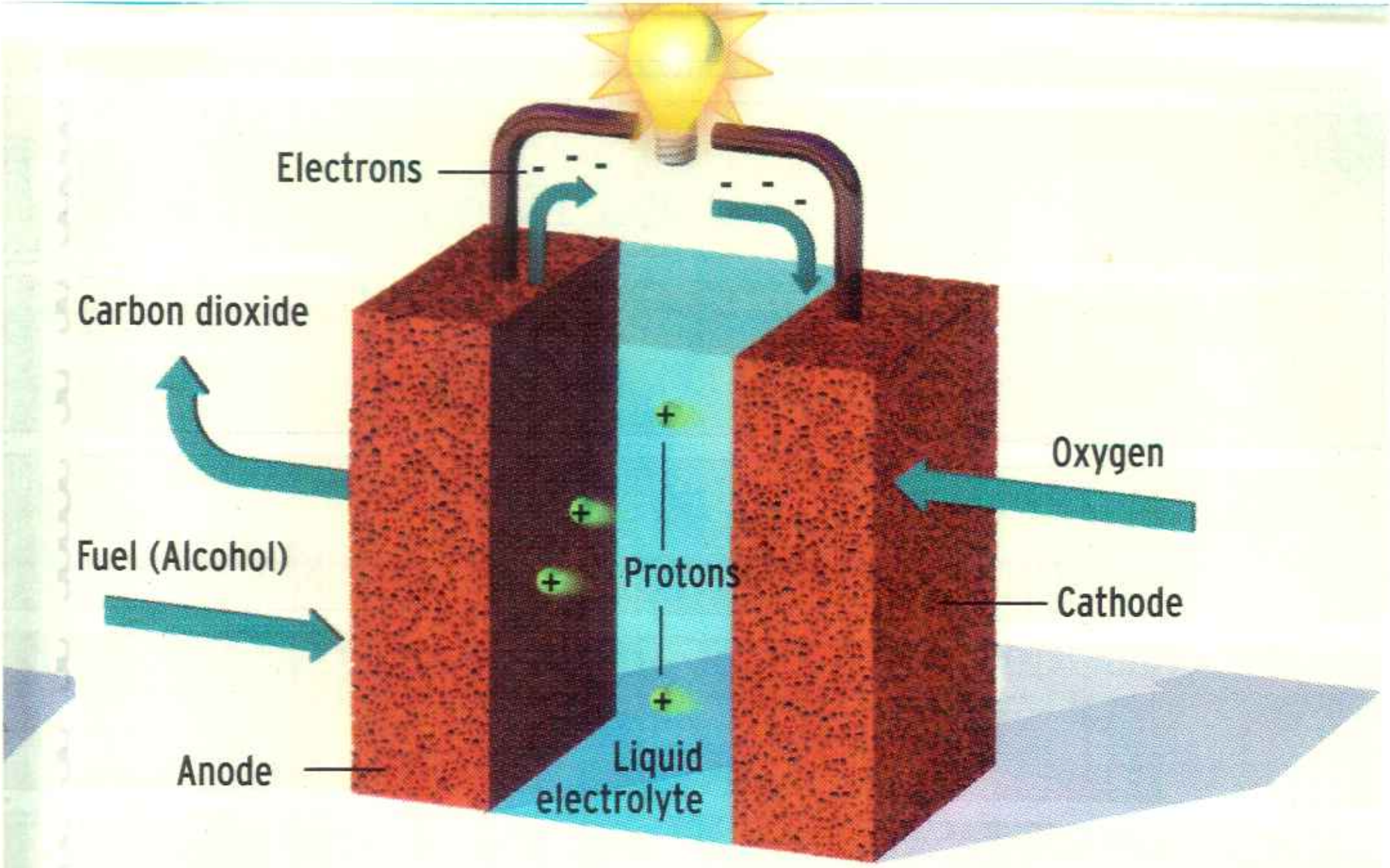
- Gas vs. Hydrogen
  - General gasoline engine description
  - General fuel cell description
  - Compare
- Cost
  - Explore the different costs of fuel cells financially and environmentally
  - Compare to gasoline engine costs
- Public Opinion
  - What seems to be the general feeling of people towards fuel cells?
  - Will they ever reach mass production?

Fuel Cells

- Safety
  - Hindenburg comparison
  - what happens if the hydrogen is ignited
  - health issues
- Future
  - time line for mainstream use
  - Are fuel cells inevitable



The heart of the MTI/MFC fuel cell is ...



Designed from the get-go to be as inexpensive as possible, the Medis

Chapter 7
Part 1

- Review
  - Laws
  - Basics
  - Reactive Load
- Power Factor
- Legal
  - Fed/State Rules
  - IEEE Rules
- Conservation vs. Economics
- Extra Problems
- Fuel Cells