

Energy In San Francisco

A Primer

Sources

- Hetch-Hetchy 460 MW ?
- Mirant 550 MW ?
- Jefferson-Martin 230 KV - MW equiv?

Proposed Sources

- CCA 360 MW conservation and renewables
- Combustion Turbines 220 MW ea.?
- Transbay cable ?

Potentials available

- Conservation 668 GWH 12%
- Solar 201 GWH 5%
- Wind 975 GWH 17%

SF Summer Peak 945 MW
Winter Peak 900 MW (at night)
Nat gas use in 2000 40 trillion BTUs (39.1 B cubic feet)
10.1 T BTU's (25%) for electricity

Glossary of Power

- Watt = Amp X Volt ($W=AV$, so $A = W/V$, and $V = W/A$)
- 1 KW = 3413 British Thermal Units (BTU's)
- 1 W = 3.14 BTU'S
- 1 Horse power = 746 W = 2546 BTU's
- Natural gas- 1 CCF = 100 Cubic Feet = 100,000 BTU's = 1 Therm = 748 gallons (of water)
- 1 AMP = 6.25×10^{18} electrons per second
- 1 W = 1 joule/sec.
- 1 BTU = 1055 joules

Curbing Gasoline Use and Paying for Needed Infrastructure

430 million gallons sold in SF in 2006

20 pounds of carbon is emitted per gallon of gasoline burned =

86 billion pounds of CO₂

SOME PRICE SHOULD BE PUT ON EACH POUND OF CO₂ AT THE PUMP

- A charge of 2 cents a pound for carbon emissions would add about 40 cents to a gallon of gas.
- An extra 40 cents a gallon would depress sales, which should be seen as a good thing in a post carbon world. Even sales at 200 million gallons would produce revenues to support MUNI and other public transit

Cons:

- Locals who travel only in the city would be disadvantaged.
- Commuters will be able to buy elsewhere. This tax would have to be implemented regionally