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If wildfire were electricity…

Have you wondered just how much energy a big wildfire releases? These calculations, by John Tourtellotte, an Alabama chemical engineer, are based on data he gathered from the U.S. Forest Service, the Energy Information Administration and the U.S. Census Bureau.

Energy experts say that if the energy released by wildfires that burned in 2002 could have been captured it could have supplied sufficient electricity for 62.2 million people, about 22 percent of the electricity consumed in the U.S. last year - an amount sufficient to serve every household in California, Oregon, Washington, Idaho, Utah, Arizona, New Mexico, South Dakota and Colorado.

Total nationwide timberland biomass is estimated at 45 billion green tons
U.S. timberland averages 90 tons of green biomass trees [fuel] per acre
90 tons x 7.1 million acres burned in 2002 = 639 million tons of trees [fuel]
Each acre burned in a stand-replacing wildfire releases as much energy as is contained in 137 barrels of crude oil
137 barrels of crude oil x 7.1 million acres = 972.7 million barrels of crude oil
972.7 barrels of crude oil/365 days = 2,664,900 barrels imported daily for one year
The heat release is equivalent to 972.7 million barrels x 5.8 million Btu's per barrel is equivalent to 5,642,000,000,000,000 Btu's of heat
If this energy were used to produce electricity in highly efficient combined cycle power plants operating at 7,000 Btu's per kilowatt-hour the electricity produced would be equal to 5,642,000,000,000,000 Btu = 805,951,000,000 kilowatt-hours
7,000 Btu per kilowatt-hour
Our nation of 287,700,000 consumed about 3,624,000,000,000 kilowatt-hours of electricity last year, or 12,587 kilowatt-hours per person. Thus, if all the energy released by the wildfires of 2002 could have been captured and used it could have supplied enough electricity for 64,200,000 people, about 22 percent of the electricity the nation consumed last year – enough energy for every person living in California, Oregon, Washington, Idaho, Utah, Arizona, New Mexico, South Dakota and Colorado!
At an average cost of 6.6 cents per kilowatt-hour the energy loss was $53 billion
Using the lumber futures price [July 2003, $258.10 per 1,000 board feet] as a benchmark, the loss in commercial lumber is $64 billion
Estimated year 2002 suppression costs are $1 billion – and still counting.
For more information log on to www.fia.fs.fed.us/rpa.htm Click on "New" and go to Tables 10 and 38

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