

Conservation

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Electricity and Gas as Domestic Fuels

Figures Showing Comparative Cost which are of Interest to Every Householder

Electricity has not proved generally feasible for domestic heating, but, as a consequence of gradual improvements, it has become a keen competitor with other fuels for cooking. Its convenience and efficiency for this purpose are well known, but not many people are aware of its low cost as compared with other fuels.

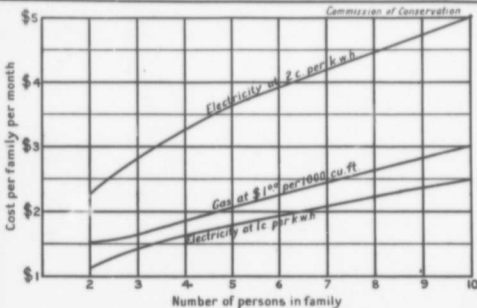
The above chart shows the monthly cost of electricity and of gas for cooking for a family of from 2 to 10 persons, the cost for electricity being figured on rates of 1c and 2c per kilowatt hour, and that for gas at \$1 per 1,000 cubic feet.

For instance, for a family of five, the monthly cost for cooking only would be \$1.80, using electricity at one cent per k.w.h., as compared with \$2.05 for gas at one dollar, but, on the other hand, if the cost of electricity is two cents per k.w.h., the monthly bill would be \$3.60.

The chart was compiled from figures given by the Hydro-Electric Power Commission of Ontario. The Commission operates a number of gas plants in addition to its extensive system of electric distribution and is thus in a position to collect authoritative information enabling a comparison of the cost of the two fuels for cooking purposes.—I.G.D.

Nearly \$300,000 Fire Loss in B. C. Forests

The fire season of 1917 was an unusually severe one in British Columbia. Reports made to the provincial Forest Branch show that, exclusive of the railway belt, a total of 986 fires occurred. In fighting these fires, the Forest Branch expended \$88,246. The total area burned over was 236,186 acres, of which only 2,825 acres was merchantable timber land; 16,226 acres contained valuable reproduction, and 159,886 acres were classified as cut-over, old burn not restocking, or unmerchantable mature timber. The total damage done is estimated at \$291,726. The staff of the Forest Branch has suffered severely through enlistment for overseas service.—C.L.



Electric Traction May Supersede Steam

Low Efficiency of Steam Locomotives and Coal Shortage may be Determining Factors

The electrification of steam railways would undoubtedly effect a great saving in coal. At present, the steam railways require about six pounds of coal to produce one horse-power hour. This is about three times the quantity which would be required to produce the same amount of power in a modern central steam power station. As the efficiency for the conversion of energy in the coal to mechanical power for steam locomotives is less than five per cent, therefore, if every pound of coal now utilized for steam traction were converted into power, even on a basis of 50 per cent efficiency, it would be used ten times more economically than when burned under present conditions on steam railways.

In a recent address before the American Institute of Electrical Engineers, President E. W. Rice showed that with electrified railways the coal shortage and the 'heatless days' of the past winter would probably not have occurred at all. The situation was not so much due to lack of production, as to the failure of the agencies of distribution, which would have been largely prevented if the railways of the country had been operated by electricity instead of steam.

It has been estimated that the substitution of electricity increases the available capacity of existing tracks fully 50 per cent. Again, 16

per cent of the capacity of our steam railways is taken up by the coal required for their own consumption, and in extremely cold weather, when coal is most needed, steam locomotives are at their lowest efficiency.

Electrical traction is an accomplished fact. No other sphere affords an opportunity for such a saving of fuel as the replacing of steam locomotives by electric. At the present time, the railways of Canada use, annually, approximately 9,000,000 tons of coal, or about 4,000,000 tons more than the total required for domestic heating.

Survey Water-powers of New Brunswick

Commission of Conservation Will Soon Begin. Coal Shortage Shows Need of Development

The Commission of Conservation will shortly undertake an investigation into the water-powers of New Brunswick that are capable of developing any considerable amounts of power. The recent coal shortage has awakened the province to the fact that its water-powers are not being adequately utilized and several Boards of Trade in the province are urging that the larger undeveloped powers be developed and that, as a basis for such action, a thorough investigation of water-power conditions be made. The suggestion has also been made that interned alien labour be used in the work of development.

Seeds are scarce this year and will be scarcer next. Grow your own.

Relaxation of Game Laws Inadvisable

Work of Years Would be Undone and Food Supply Would Not Be Materially Increased

The scarcity of food has resulted in various government organizations, directly concerned, being flooded with suggestions for the relaxation of game laws, and the Commission of Conservation has taken some pains to ascertain just what effect such a course would have. The conclusion reached is that it would have no appreciable effect in relieving the shortage of meat and would result in the very serious depletion, and in some cases the total extinction, of valuable game species. Many well-intentioned persons in making such suggestions overlook the fact that wild game, once it is depleted to a certain point, will, even under natural conditions, continue to decrease until extinct and can never, as in the case of domestic animals, be restored.

Dr. C. Gordon Hewitt, Dominion Entomologist, in referring to such proposals, said in part: "While these suggestions are undoubtedly made with the best of intentions, they would, if put into practice, undoubtedly result in consequences of a most serious nature which are not realized by those unacquainted with the present status of our wild life and with the progress of game legislation and its enforcement. The chief cause of depletion has been either the absence of game laws or laxity in their enforcement. The struggle to prevent extermination has been very uphill work, but, owing to the attitude of the real sportsmen, as opposed to the market hunters and 'game hogs,' and of the public generally, steady progress has been made.

"To relax these efforts at the present time would more than undo the results of the hard work and effort of years and would be catering to those individuals who have been the greatest enemies to game conservation, men who are entirely selfish in their point of view and who have very little interest in the welfare of the country as a whole. In the West, this class is largely made up of foreigners. To all these persons who violate the game laws

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