culations given in Report of the Bureau of Mines, Vol. XIX, p. 150, a probable mean porosity of the rock of 10 per cent. was assumed and a yield of 38,000 million cu. ft. arrived at on that basis, whereas it can be seen the production will ultimately be about four times this amount, thus requiring a porosity of 40 per cent., which I believe is quite unknown in any field. The only way the excess production over the calculated amount can be accounted for is by the movement of gas from under the lake. This of course would have the same original pressure as that under the land area, viz., 590 lbs., and as the pressure drops, due to the flow of gas from the wells, the gas now in strata under the lake will gradually find its way to the wells drilled on land. The extent to which this would increase the calculated production cannot be determined in any way, but an increase of 20 per cent. might reasonably be looked for from this source, making thus a reserve of 78,000 to 96,000 million feet. As 24,000 cu. ft. of this gas are equal to one ton of coal, this is equivalent to 3,200,000 or 4,000,000 tons, something well worth making an intelligent effort to conserve. The amount that has been produced to the end of 1917 is equal in heating value to 3,300,000 tons of coal.

Amount of Fuel Necessary for Domestic Use and Comparison with Coal and Artificial Gas in Cost

What is a reasonable amount of fuel for the inhabitants of the districts in Kent, Essex and Lambton served by natural gas to use ? It is easily capable of calculation. Assume the population thus served to be 80,000. The figures given in Municipal Bulletin No. 10 for 1916 for Windsor, Walkerville, Sandwich, Wallaceburg, Chatham, Blenheim, Ridgetown, Tilbury, Dresden, Leamington, Kingsville, Sarnia and Petrolia total 76,300, allowing the balance to be made up by small places not mentioned and farm houses along the lines. From the figures given in Vol. XIX of the Bureau of Mines Reports, 10,000 people use 700,000 daily average throughout the year for domestic purposes. Eighty thousand would use 5,600,000 daily, or 2,044,000,000 per year. Now the total importation of anthracite coal into Ontario for the fiscal year 1915-16 was 1,827,000 tons, and this anthracite coal is a measure of the amount of fuel used for domestic purposes in the province outside of the consumption of wood, natural gas and artificial gas. This means that the average consumption is probably not much over a ton per individual, or say 100,000 tons for the 80,000 people concerned. This is equivalent to 2,400,000,000 cu. ft. of gas, a figure which agrees fairly closely with the one obtained by direct observation given above.

One circumstance which has hindered any efforts to prevent waste of gas, not only by direct escape into the air and eventual destruction, but also by the employment of wasteful appliances or using an unnecessary amount, is the fact that the price paid for the gas is totally out of keeping with the cost of the standard fuel—coal—at the present time.

From the figures given above, 24,000 ft. of gas being equal to one ton of coal, the following relation between prices can be seen, viz.:—

Natural gas at 10c. per 1,000 ft. equals coal at					$2 40 per ton.
" 15c. " "					3 60 "
" 20c. " "					4 80 "
" 25c. " "					6 00 "
" 30c. " "					7 20 "
" 35c. " "					8 40 "
" 40c. " "					9 60 "
" 50c. " "					12 00 "