

The WITNESS: Other things being equal they would go to where the natural gas was.

Mr. FERGUSON: Thank you very much. But you did say it had no bearing.

The WITNESS: No, I said it had little bearing, but the other things must be equal.

There are very few industries in which fuel amounts to more than 3 or 4 per cent of the cost of the product. The general average is about 2 per cent. The cost of labour, the cost of transportation, the cost of raw material, and the cost of a whole series of things have so much more bearing than the cost of fuel, that fuel can only have an incidental effect except upon a few industries. The ceramic industry needs natural gas. It can work much better with natural gas at equal price with other fuel. For the smelting of copper, lead, and zinc, natural gas is very valuable. In the paper industry natural gas is a factor but other fuels are just about as good.

Mr. HIGGINS: Once the pipe lines are constructed—

The CHAIRMAN: Pardon me, Mr. Higgins, if we are going to have questions I think Mr. Goode has the floor.

Mr. GOODE: As long as I receive the same privilege as anyone else I am prepared to leave my questions until later.

Mr. HIGGINS: When the pipe line is constructed there would be very little cost for labour and maintenance on the pipe line?

The WITNESS: There is not a great deal but it depends where you are. If you are going through flat plains like there are in Alberta the cost of maintenance is very small. If you are going through swampy country like that in southern Louisiana, or if you are going through mountainous country with heavy snowfalls, the maintenance would be higher. It is not one of the largest factors in the cost of a pipe line but it is a factor. The largest cost of any pipe line, and which makes up the total cost of the ultimate project, is the capital cost of construction.

Mr. CONNOLLY: Perhaps, Mr. Goode, I could ask questions on just a few points. Mr. Dixon, you might tell the committee something about the importance of accessibility to a pipe line in mountains, for example, for maintenance purposes, and why you have to have it accessible as distinct from the situation for an oil pipe line?

The WITNESS: If an oil pipe line breaks considerable oil is lost but they always have storage at the other end and there is no disaster. If a pipe line for gas breaks then you must shut down all of the appliances in the towns that are being served. For a little while the gas that is left in the mains will serve the towns but that is only for a matter of hours or, at the most, for a day or so. Then you must cut off the gas entirely and you cannot start the gas again through the mains and you cannot serve the towns, until you have gone to everybody and seen that their pilot lights are out, telling them over the radio and so on, and it is a matter of five or six days before you can get gas through again. If that happens in a cold climate it is a disaster,—and it is a tremendous inconvenience in any place. It happened in the town of Fort Worth not many years ago when they had a pipe line washed out in a flood.

*By Mr. Higgins:*

Q. You keep regular crew men?—A. You have to have quite a few men, more than are really necessary, at the compressor stations so that you have a unit to go out to the appliances. Then, along the route you must have crews stationed. They have very little to do but they must be there in order to take machinery out and start repairs.