THESI INTERROGATORY #8

INTERROGATORY

Reference: Report of John Todd, filed September 26, 2003, Page 4, Lines 13-16

Do you agree that an industry with fixed costs that are high relative to variable costs tends toward natural monopoly? Are you aware of any existing natural monopolies that charge prices equal to marginal costs? Would such a natural monopoly charging prices equal to marginal costs continue to be viable?

RESPONSE

It is not true that industries with high fixed costs relative to their variable costs tend toward natural monopoly. Telecommunications is just one counterexample. Other examples include most forms of manufacturing that require more machinery than human capital.

Natural monopoly results from situations in which average costs decline with scale, provided that the scale economies continue to be significant even when most of the market is served by a single supplier. Economies of scale occur in most industries, but the efficient scale is reached with only a fraction of the market served.

Unregulated natural monopolies tend to charge monopoly prices, which are normally well above marginal cost. In economic terms, a monopolist maximizes profit by charging a price such that incremental revenue equals incremental cost, taking into account additional revenue due to a higher price and lost revenue due to lower volume. It would be inconsistent with economic principles for a natural monopoly to charge prices that equal marginal cost, although that price would maximize economic efficiency.

Regulated monopolies normally have rates set to recover average costs, as that is a price that equitably balances the interests of ratepayers and shareholders.

Whether or not a natural monopoly that charges prices equal to marginal costs will be viable depends on whether marginal costs are above or below average costs. In a natural monopoly, average costs should be strictly declining with scale, which implies that marginal costs must be below average cost. Hence, by definition a natural monopolist should not be viable if it charges prices that are below marginal cost.