COMPARATIVE ECONOMICS OF THE CITIES SERVICE CS-SRT PROCESS WITH THE LURGI PROCESS.

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Cities Service Research and Development Company, the research arm of the Cities Service Company, has been developing a process, The CS-SRT Process, for the non-catalytic, vapor phase, hydrogenation of carbonaceous feedstocks. The initial and primary emphasis in our Energy Research Laboratory was to apply this technology to convert coal into pipeline quality gas and attractive by-produces yields of light aromatic (BTX) liquids. Details of the engineering development of this process are reported in another paper at this meeting.

A conceptual plant design for producing 250 MM SCFD of pipeline gas and 6300 BPD of aromatic liquids has been generated. The design was based on data obtained from processing a North Dakota lignite in the bench-scale unit. The design was based on in-house studies and on an engineering study performed for Cities Service by the Foster Wheeler Energy Corporation.

A grass-roots coal conversion plant was designed for a North Dakota-Montana plant site. On-site power generation was included, so that, other than coal feed, only raw water and consumptive chemicals must be supplied. D&E capital investment costs were generated based on fourth quarter 1976 costs. A discounted cash flow analysis was performed to determine the cost of services for producing pipeline gas. The results of the study were compared to a conceptual plant design for producing pipeline quality gas by the Lurgi Process.