

A COMPARISON OF THE NET ENERGY PRODUCTION RATIOS OF INTEGRATED SYSTEMS SUPPLYING NATURAL GAS, AND SNG FROM COAL, Donald L. Klasse and William C. Chambers, Institute of Gas Technology, Chicago, Illinois 60616.

A comparative net energy analysis is presented for an integrated system supplying natural gas, and a comparable system supplying substitute natural gas (SNG) from coal. For natural gas, the external energy inputs and the primary energy source inputs consumed by the integrated system or diverted to other than salable natural gas, from drilling through production, purification and extraction, and transmission and distribution, are used to determine the Net Energy Production Ratio (NEPR) for the salable fuel reaching the consumer. Similarly, the energy inputs consumed in mining coal, transporting and preparing the coal, coal conversion to SNG, and the transmission and distribution of SNG to the customer are considered in deriving the NEPR for an integrated SNG-from-coal system. In each of these systems, salable by-products having an energy value are accounted for.