

**CHAPTER 7
IRREVERSIBLE AND
IRRETRIEVABLE
COMMITMENTS OF
RESOURCES**



7. Irreversible and Irretrievable Commitment of Resources

7.1 Coal

About 351 million tons of lignite would be mined and totally and irretrievably consumed by the gasification plant or sold. This amounts to about 37 percent of the 947 million tons of currently recoverable lignite near the plant-mine site. Additional coal losses may occur if Federal coal within the proposed mining area is not mined. Commercially valuable byproducts would also be irretrievably consumed in their market area.

7.2 Land and Ecosystems

About 14,000 acres of land surface would be altered for the mining and gasification plant. Even if the land was successfully reclaimed, there would be a loss of at least a significant portion of the prairie ecosystem and its associated wildlife. It is also possible that other irreversible damage could occur to the land, soils, and biota.

7.3 Water

Some irreversible damage could occur to ground waters if waste materials were to leach into underground aquifers from the burial of ash and other material in the mine overburden. Ground water within the mined and reclaimed lands would be irretrievably lost to future use. One small lignite aquifer would be irretrievably lost.

7.4 Oxygen

Some atmospheric oxygen would be consumed by the gasification plant and by burning the SNG in the service area. The degree that this consumption represents an irretrievably loss is not known.

7.5 Building and Process Materials

Many of the building materials used for the gasification facilities would be irretrievably lost. The lumber products would deteriorate by the end of the project and have to be discarded. Some metal components would be salvaged if it is economical to do so. Cement structures would be irreversibly committed as would such items as glass, ceramics, paving material, paint, wiring, and insulation. Even if the facilities had some further use after the life of the plant, the materials used in their construction would be irretrievably committed.

Process materials used during operation of the facilities would also be irretrievably committed. The change in physical or chemical form of many process additives (chemical catalysts, etc.) would be

irreversible. Petroleum products used for the operation and maintenance of mechanical equipment would also be irretrievably committed to this project.

7.6 Labor

The labor required to construct and operate the facilities would be lost to other uses while construction and/or operation is in progress. Construction and operation of the plant and mine alone would require about 32,800 man-years of labor.

7.7 Capital

The financial resources (over \$1 billion) necessary to construct and operate the gasification facilities would be irreversibly committed. However, revenues generated by the plant should more than offset costs. The capital gains could then be used for other purposes.

7.8 Services

Construction and operation of the gasification facilities would require many governmental, utility, commercial, and transportation services. The labor and capital required to provide these services would be lost to use for other purposes at the same time.

7.9 Archeological and Paleontological Artifacts

Unknown archeological and paleontological artifacts that lie beneath the land surface which would be disturbed by the proposed project may be destroyed before they are recognized as being of historical value and could be irretrievably lost. Artifacts at the eight known sites would be avoided or salvaged. Even if artifacts are salvaged, disturbance of the site precludes future study with advanced techniques and constitutes an irreversible commitment.

7.10 Cultural Values

Traditional cultural and social values of an historically rural and sparsely populated environment would likely be lost, or severely altered, because of the rapid influx of people and capital into the area.