

APPENDIX B

Liquefaction and Regasification Capacity Measurements

Liquefaction Capacity

It is difficult to give precise numbers for the production capacity of liquefaction plants. Figures cited in the press or in company documents can show significant differences depending on whether they refer to the design capacity of the plant or actual output, which itself can vary from year to year depending on operational factors such as the timing of maintenance.

LNG plants are designed to produce the volume of LNG required by the project sponsors; this is often referred to as the 'design' or 'nominal' capacity. Most plants produce significantly more than their design capacity. This was especially true in the early days of the LNG industry, when security of supply was very important and sponsors and contractors wanted to ensure that the plant would not perform below its design capacity. Hence, the facilities were often over-sized and suboptimal operating conditions were assumed.

When these plants came on-stream, they then produced considerably more than their design capacity would have indicated. As experience in designing and operating LNG plants has increased, the degree of over-design has reduced, but plants coming on-stream in recent years still typically operate at 10 percent above their design capacity. After plants come into operation, bottlenecks that constrain production are often identified. 'Debottlenecking' the facility to remove these constraints can provide a low cost option to increase capacity further. As a result, the actual capacity of many LNG plants is over 20 percent higher than the original design capacity.

Regasification Capacity

Many regasification terminals are built to have the ability to send out far more than the average annual requirements of the areas they serve, since they must meet variable seasonality requirements. The nominal capacity of many terminals, especially in Asia, is more than double actual throughput and thus greatly exceeds actual imports. In the United States, total terminal capacity is more than 3 times annual throughput.