We present, in two tables, basic information about twenty important energy policy models developed in the U.S. and Canada. This is supplemented by more lengthy discussions of those models in the tables which are not discussed in articles elsewhere in Volumes I and II. We provide a reference list for the models, and for other recent surveys of energy models.

6.1 INTRODUCTION

Since the early 1970s, and especially since the dramatic increase in the international price of oil in 1973, energy policy has received much greater attention in most countries than previously. Energy models have come to play an important role in the analysis of energy policy. Many such models are discussed in these two volumes. Our intention is to present an overview of some important integrative energy policy models developed in the United States and Canada. By "integrative," we mean that the model integrates all energy supplies, all energy demands, supply and demand, or the energy sector and the rest of the economy.

Tables 6-1 and 6-2 present a summary of the important information about twelve U.S. models and eight Canadian models. In addition, sections
6.2 and 6.3 contain discussions of those models from the tables which are not discussed elsewhere in these volumes. This is followed by a list of references to various U.S. and Canadian models and surveys of such models. General discussions concerning the development, use and impact of such models appears in the introductions to Part I and II of this volume, the papers by Greenberg and Marcuse in Part I, the panel discussions in Part II and the following references. The recent survey by Manne, Richels, and Weyant (1979) discusses seven U.S. technoeconomic energy models. The Energy Modeling Forum has compiled a catalogue (1977) with brief descriptions of 146 energy models from twenty-three different countries. Hoffman and Wood (1976) provide "an introduction to the scope, applications, methodology, and content of energy system models, particularly those developed and used in the United States." Finally, in 1977 the Energy Modeling Forum reported on a very detailed comparative study of six U.S. models of energy-economy interactions.

6.2 BRIEF DESCRIPTIONS OF SOME MAJOR U.S. ENERGY POLICY MODELS

6.2.1 Hudson-Jorgenson Model

The Hudson-Jorgenson (H-J) model, described in Hudson and Jorgenson (1974), is sometimes called the DRI (for Data Resources Incorporated) model, or the DRI combined model, since it is a combination of a long term macroeconomic growth model and an interindustry energy model.

The H-J model is composed of a nine-sector input-output model of the U.S. economy, production models of each of the nine sectors, a model of consumer demand, and a macroeconomic growth model for the U.S. economy. The nine sectors included in the model are:

Non-energy:
1. Agriculture, nonfuel mining, construction
2. Manufacturing, excluding petroleum refining
3. Transportation
4. Communications, trade, and services

Energy:
5. Coal mining
6. Crude petroleum and natural gas
7. Petroleum refining
8. Electric utilities
9. Gas utilities