Chapter 3

A CONCISE INTRODUCTION TO THE COST OF CAPITAL FOR REGULATED BUSINESSES[1]

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Introduction

Regulatory agencies are authorized by national laws to estimate a reasonable return for network businesses. This means that the capital cost plays an important role in rate regulation[3] of network utilities. Experience shows that, in estimating cost of capital, regulators usually depend on the works and recommendations of their staff and/or outside consultancy services. Especially, regulatory agencies face significant information asymmetry when determining what the appropriate rate of return should be when reviewing tariff proposals, establishing price limits, or handling conflicts. Obviously, the information deficiency forces regulators to depend more and more on outside services.

Since the ultimate decision is made by regulators, they need to understand the challenges in, and key issues about the estimation of capital cost. Moreover, they need assistance in better understanding and interpreting the estimation results, not only from the viewpoints of investment decision and portfolio management, but also from the perspective of an effective regulation. Therefore, the main purpose of this chapter is to introduce and discuss the methods available for the calculation of the capital cost for network businesses.

This chapter is organized as follows. First, the importance and role of capital cost in rate regulation is described. Second, the models suggested in the literature for determining capital cost have been categorized and assessed. Finally, the last section summarizes what has been covered and ends the chapter.

The importance of capital cost in rate regulation

Rate regulation deals with the regulation and monitoring of the wealth created by network utilities through tariffs. Depending upon the purpose of regulation, net-

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[3] The cost of capital to the network utility and rate of return to the finance provider of the network utility are different things. The finance provider to the network utility forgoes the opportunity by using its capital to provide utility services rather than engage in some other profitable activities. In other words, the cost of capital is the minimum rate of return that finance provider (investor) expects from its investment in the energy network utility. Therefore, the cost of capital should reflect return expectations of the finance provider to the network utility.

Although it is theoretically reasonable, APT is not expected to be able to assist energy agencies at least in the future. The main reason for this is the uncertainty about which parameters should be entered in the APT formula.

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