

The welfare effects of revenue decoupling for electric utilities

Nori Tarui

Department of Economics, University of Hawaii at Manoa

and

University of Hawaii Economic Research Organization (UHERO)

Arlan Brucal

Department of Economics, University of Hawaii at Manoa

Abstract

As energy conservation programs are adopted and distributed generation increases in scale, electric utilities' sales growth has been slowing down in a number of U.S. states. Many states have adopted revenue decoupling (RD), where the utility is allowed to adjust electric rates to maintain its revenue when its sales decrease. This study investigates the welfare consequences of RD under increased distributed generation. Given inelastic demand, RD induces an increase in electricity rates. Though RD tends to increase the utility's short-run profit, it has ambiguous long-run impacts on the utility's investment and profit. The excess burden of subsidies for distributed generation is larger under decoupling. Decoupling also shifts the risk burden of distributed generation from the utility to consumers. An illustration using data on Hawaii's residential sector indicates that decoupling might amplify the regressive distributional impacts significantly.

JEL codes: L51; D60; Q48