

Expansion of green industries in Zambia: Short and long-term effects

Topic: Construction and applications of the 2010 SAM for Zambia

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Zambia produces most of its energy from large hydropower stations. The sector has been expanding in recent years, yet the country faces the problems of power shortages and high energy price that is often unaffordable by the vast majority of people and business. Investments in smaller stations are currently underway, which are expected to turn the current power deficit into surplus. The paper presents alternative economy-wide impact assessments of the expansion of hydropower industry in Zambia. The 2010 SAM produced by the national statistical office and ILO distinguishes between 20 industrial branches and has a breakdown of selected "green industries" based on the System of Environmental-Economic Accounting (SEEA) and the Environmental Goods and Service Sector (EGSS). Among these green industries, green energy production in the form of hydro-power stands out for its potential impact on other industries and household incomes. SAM multiplier analysis on quantities and prices are first carried out in isolation to estimate the demand and price push effects of installation and maintenance and increased supply. Such effects are then compared with the results of increased capacity in the green energy sector and investment demand using a full structuralist CGE. The expansion of the hydropower sector is simulated under alternative assumptions on the supply elasticity parameters as well as in a static or recursive dynamic setting to investigate the possible difference between short and long run economy-wide effects