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Ensuring modern household energy services is a key focus for national governments of many developing countries and of international development agencies aiming to support sustainable development issues, especially in Sub-Saharan Africa. While renewable energy options are considered to have social and environmental benefits, and despite substantial efforts to support the dissemination of new and improved renewable energy technologies, rates of diffusion remain extremely low. For instance, biogas digester penetration in Rwanda accounts for just 1% of national potential as of 2012. This is in part due to the lack of innovation systems, which foster technology diffusion. This paper analyzes the development of a technological innovation system (TIS) for bio-digestion in Rwanda between 2000 and 2011. We apply the so-called 'functions approach' in analyzing the emergence of a Rwandan biogas technological innovation system. We show the accumulation through time of TIS functions, linking these to the weak diffusion of bio-digesters. We argue that international development assistance should aim to support to the build-up of technological innovation systems in their support for energy technologies.

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