

# Financing energy sustainability through crowdfunding

*J. Kajan<sup>1</sup>, and J. Lindgren<sup>2</sup>*

<sup>1</sup>Marketing, Aalto University School of Business  
<sup>2</sup>Applied Physics, Aalto University School of Science

## INTRODUCTION

As people are becoming increasingly aware of the environmental problems related to the use of fossil fuels to generate electricity, they have begun seeking ways to support energy sustainability. We propose that crowdfunding as an emerging funding mechanism, is applied to harness resting capital and increase general interest in green energy. The methods of crowdfunding (Belleflamme, Lambert & Schwenbacher, 2013), i.e. engaging small-scale investors, could be employed not only to fund sustainable energy projects but also to increase general energy awareness, reduce local NIMBY (Not In My Backyard) resistance to e.g. wind turbine projects and also distribute the ownership of energy.

The goal of this initiative is to study the feasibility of the crowdfunding concept and design a web service for its implementation. This will include e.g. studying functionalities of debentures and related consumer behavior.

## METHODS

Debentures are used as the main financing instrument. A debenture is an acknowledgment of debt from the issuing company to the owner of the debenture. The debt is paid according to the terms written on the debenture, i.e. as a fraction of profit from sold or saved energy.

To allow as many people as possible to participate in funding projects, we need to enable a wide scale of debenture "prices". A flexible and automatic way of creating these legal documents is thus required. In practice, this can be implemented using a web service. This web page would allow the project owner to automatically issue a debenture to the investor and also function as a secondary market for trading the financial documents.

The web page should have several energy sustainability projects open for funding simultaneously. These projects do not have any geographical limitations, as long as the necessary legal framework exists in the target country.

After the desired amount of crowdfunding is reached, the project funding is closed on the web page and no more debentures are issued. When the project is up and running the crowdfunders are paid periodically according to the debenture terms.

## REFERENCES

Belleflamme, Paul, Thomas Lambert, and Armin Schwenbacher. "Crowdfunding: Tapping the right crowd." *Journal of Business Venturing* (2013).