

Chapter 15

Business Models in Renewable Energy Industry

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ABSTRACT

Business models (BM) are, at present, a dynamic model that is continuously evaluated. The main research approaches are analyzing BM from different perspectives: resource oriented, transaction narrative and also from an entrepreneurship perspective. There remains to be seen how new business models are defined based on innovation and technological improvements for the distribution of renewable energy. Nowadays, on the global political agenda, renewable energy is a solution for reducing the greenhouse gases and their impact to climate change. In order to fulfill the European Union targets for reducing the greenhouse gas emission the EU countries introduced promotion models for renewable energy that are also an opportunity for new business ideas. The selected case studies analyze the main support schemes that are implemented in Europe, for example the Feed in Tariff in Germany and Green Certificates in Romania. Unfortunately, the process of transition to renewable energy is not so easy. The authors are analyzing the main obstacles related to the development of renewable energy and based on a questionnaire research studies they further analyze the main risk factors in the photovoltaic sector in Romania. This chapter should give an overview about the business models and the related opportunities and obstacles for the transition to renewable energy in Europe.

1. SEARCH ON BUSINESS MODELS IN THE SCIENTIFIC LITERATURE

In the beginning, around 1960, the business model was seen as a “construction plan”, a picture of a real enterprise environment with its processes, tasks and communication relations, consequently a basis for business processes and data models (Stähler 2002, p. 38). Meanwhile many specialists present their specific definition regarding business models.

DOI: 10.4018/978-1-5225-9615-8.ch015

Roland Berger Academy Network defines a business model as a “simplified representation or a picture of the mechanism, the art and mode, how an enterprise or an enterprise system or an industry on the market creates value (Bieger et al., 2002). The same approach can be found at Peter Drucker, who defines a business model as “logic of business” or a “simplified” picture for the reality. It describes the process of creation and internalization of value in a company. In this approach a business model is a static design of the configuration of elements and activities designed to maximize an opportunity with organizational effectiveness (George & Bock, 2011) meanwhile the business strategy is seen as a group of dynamic activities focused on the competitive environment.

According to Chesbrough (2010), the main role of a business model is to connect the technical input with the economic output (Figure 1).

In his opinion, the components of a business model should be the following: value proposition (what is the problem of the customer and how do we deal with it?), revenue concept (sales, costs and targeted profits), channels, chain of value creation and competitive strategy (the pursuit of obtaining competitive advantage). We can refer to Chesbrough as one of the main theorists regarding the *innovation form* of business model. So, a business model is actually a form of innovation which is independent and has a significant influence on the way the technological innovations are commercialized.

In the entrepreneurship approach, the business model concept is a tool for analyzing new business ventures (Chesbrough, Rosenbloom, 2002, p. 532). The entrepreneurship perspectives describe the way a company can capture value from technical innovations due to the implementation of a certain business model, after a proper evaluation of its strengths and opportunities. (Bieger et al., 2011, p. 76). In this perspective, an enterprise offers specialized products and services to market niches that are too small to be lucrative to large competitors, but have the potential to grow quickly.

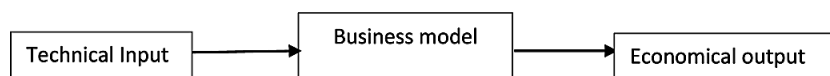
In the energy industry small high-tech firms which create a product are developing innovative prototypes in order to sell not only the product, just the whole company, to corporates like E.ON, Shell Renewables, GE or Siemens.

According to Demil/Lecoq (2010) the business model describes the articulation between the diverse activity domains and the means used by the organization to generate value in a sustainable way. Their dynamic approach based on the following elements: resources and capabilities, organizational structure, value proposition and logistics. They introduce the resource-based approach of business model. The approach based on resources describes the business model as consisting of a series of financial, organizational, know-how and human resources.

Teece (2010) considers that the business model articulates the logic, through which companies create value and redistribute it to clients: as a financial and organizational “architecture” of the business. His model has as elements market segmentation, value proposition, revenue concept, mechanisms for the “protection of competitive advantages.”

Business models can be further characterized by their design themes (Zott, Amit, 2008, 3). In the scientific literature novelty and efficiency centered business model configurations are presented as

Figure 1. Business model according to Chesbrough (2010)



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