

# **Identification and Analysis of Systemic Failures in Austrian Innovation System**

## **The case of Wind in Austria**

Hami Yousefdehi<sup>1</sup>

### **Abstract:**

Wind energy was the fastest growing renewable energy resource in the European Union (EU) in the last decade. The annual installed capacity has risen from 814 MW in 1996 to 10,163 MW in 2009. In Austria, Currently, the share of renewable energy amounts to 30.1% of total final energy consumption in Austria, with wind energy supplying 0.5%. The current installed capacity of wind power amounts to approximately 1 GW (Windkraft, 2011). It is planned to increase the currently installed capacity of wind power by 2 GW to approximately 3 GW until 2020 (Hantsch and Moidl, 2007).

The supporting policy to attain these targets until 2015 is the Eco-Electricity Act, which aims at installing an additional capacity of 700 MW until 2015 (Energy-Control GmbH, 2010). The Eco-Electricity Act provides an Austrian-wide framework for the subsidization of the production of electricity from renewable sources by implementing a feed-in tariff system.

Although, current feed in tariff in Austria is suitable to intrigue the level of investment, but it could not solve the all problems toward wind energy. Actually, the existing energy system hampers the diffusion of new energy technologies due to the inertia that is inherent in large technological systems such as the energy system and due to the strong interrelatedness between the energy system and the economic system (Hughes, 1983).

In this regard, we tried to investigate all barriers in the whole system of innovation in wind energy through examination of all reports, articles and other secondary references.

After all, we link the general theoretical categories of system failures (that we discussed last time as a framework for systemic problems) to the specific problems encountered in the diffusion, utilization and development of wind energy in Austria.

---

<sup>1</sup> Research Fellow ,IAS-STs (institute for advanced studies on science, technology and society), E-mail: yousefdehi@sts.tugraz.at