

Part 4. Country Results and Analysis

AUSTRIA

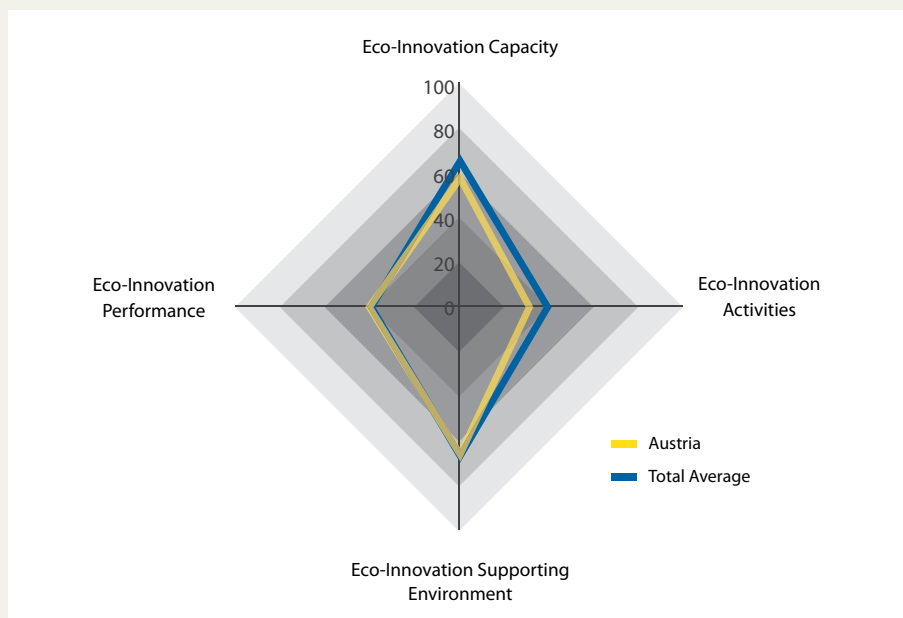


Fig. 6 Result analysis of Austria

Country Result & Analysis

Based on twenty indicators aggregated into four criteria, Austria positions below the average of ASEI (48/100). In regards to "eco-innovation capacity", Austria shows average "level of economic competitiveness" and "general innovation capacity" but relatively high "awareness on sustainability management". In the area of "eco-innovation activities", the country shows low level of "renewable energy utilization", "commercialized green technology SMEs", "green technology SMEs at early stage", "environmental management" and "turnover of environmentally friendly companies". However, Austria holds high "number of green patents" compared to the average of ASEM member countries. Austria's "eco-innovation supporting environment" is above the average level backed with the government's high expenditure on R&D of environmental technology solutions and average level of environmental laws and country's commitment to international environmental agreed goals. Yet, Austria scores quite low on the level of investment maturity on green technology. This may due to low number of local investors investing in green technology. Austria demonstrates average "eco-innovation performance" in ASEI. In terms of "eco-innovation performance", Austria shows high score in "water consumption intensity" and "CO2 emission intensity" and in the "level of environmental impact on society" yet, falls below average in "green industry market size" and "energy sustainability level". Overall, Austria ranks slightly below average in ASEI.

Austria's Key Eco-Innovation Environment

Austria may not be one of the eco-innovation leading countries in the EU. However, Austria recognizes the importance of eco-innovation and puts effort to follow and participate in the EU's eco-innovation related policies and programs. Under the Austrian Sustainable Development Strategy announced in 2010, Austria's eco-innovation seems to focus on stimulating resource efficiency, green public procurement and supporting new SMEs.

Dedicated Policy on Resource Efficiency

Austria has a strong reputation for its expertise and know-how in the sustainable use of natural resources, and in fact, it is one of few countries with policy dedicated to resource efficiency. As a main element of Austrian Sustainability Strategy and part of Austrian government's coalition agreement, Resource Efficiency Action Plan (REAP) was set up in the late 2000's. REAP sets both qualitative and quantitative targets to reduce consumption level of resources and increase the resource efficiency. Under this action plan, the country performs various regional efforts on resource efficiency. In case of Upper Austria, the government of Upper Austria has adopted "Energy efficiency, energy management and renewable energies" as part of its strategic economic and research program, "Innovative Upper Austria 2010 Plus." In Upper Austria, following the provincial and federal visions and related policy measure, a good amount of R&D efforts are being demonstrated in pursuit of 'less input, more output.'²⁰ Dedicated policy on resource efficiency is stimulating more eco-innovation activities at the industrial level in Austria.

Supporting Local Eco-Innovative SMEs

The portion of SMEs in Austria accounts for approximately 99.7 percent with about 68 percent of the total workforce employed by SMEs.²¹ Accordingly, a number of Austrian policies and programmes are linked to fostering of entrepreneurship and innovation of SMEs. In Austria, Seedfinancing program is set up to foster the creation of small innovative companies by providing a loan of up to EUR 1 million. Another financial program promoting innovative start-ups is the AplusB program. The program provides financial aid to foster academic spin-offs of institutionalized centers at universities which may result in successful technology transfer.²² Since mid-2000s, more SMEs support programs that are closely linked to eco-innovation have set up. In 2005, Environmental Technology Export Initiative was established with 270 participating companies and its purpose is to support eco-innovative SMEs to develop international presence. Austria is a small country, but the country demonstrates strong and active export activities on environmental technology. About 85 percent of Austrian exports come from environmental technology sector²³, which shows good standing of Austria in eco-innovation export market with a strong potential for future growth.

Expanding Eco-Innovation through Green Public Procurement

Public authorities are major consumers in Europe accounting for about 20 percent of the EU's GDP. ECOPOL states that GPP is considered vital for supporting eco-innovation and a "potential major incentive for eco-innovative products and services"²⁴. The Austrian Action Plan for Sustainable Public Procurement (naBe-Actionplan) was established in July 2010 providing green purchasing guideline. Green public procurement works as an instrument to provide incentives for developing green technologies thus can act as a great catalyst to advance eco-innovation market of a nation. Best practices of green public procurements are found in several provincial areas. In Vorarlberg of Austria, GPP approved apparel and equipments are available to public organizations via on-line. The managing organization is Eco Procurement Service (ÖBS), and GPP experts check and evaluate the products before they can be sold by ÖBS.²⁵

²⁰ *Innovative Upper Austria* (2011)

²¹ European Commission, *Enterprises and Industry Fact Sheet, Austria*, http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2008/austria_en.pdf

²² OECD (2010), *SMEs, Entrepreneurship and Innovation, Austria*

²³ EIO (2012), *Emerging Markets*

²⁴ http://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters/eu/20121029-making-the-most-public-purchasing-power_en.htm

²⁵ *Eco-Innovation Policies for Green Public Procurement*, <http://www.ecopol-roject.eu/easydata/customers/ecopol/files/materials/gpp-poster.pdf>

Eco-Innovation Case Studies

CASE STUDY 1

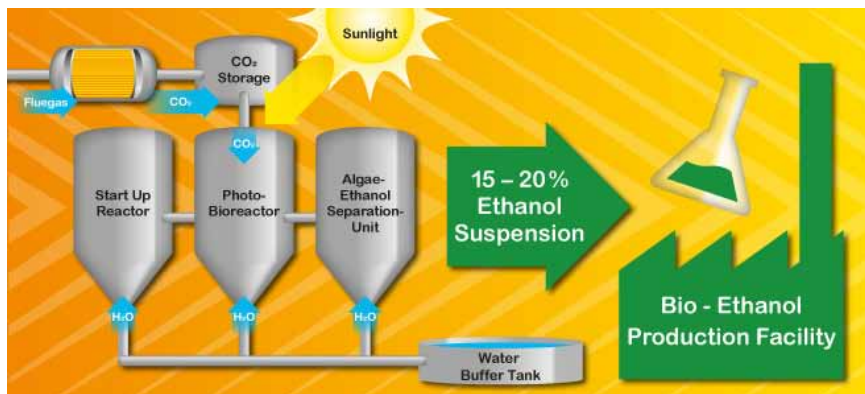
Kraft und Wärme aus Biomasse

Kraft und Wärme aus Biomasse (KWB) is an Austrian SME manufacturing wood-chip, firewood and wood pellet heating systems along with hot water storage systems and supporting control infrastructure. KWB introduces its eco-innovative heating system in a belief that heating with wood protects environment, safeguards local jobs and provides independence of the global market. Burning wood does not release any additional CO₂ as opposed to burning fossil fuel, and this fact allows KWB's product to contribute to reducing GHGs emissions and responding to global climate change. KWB's biomass heating system uses wood chips and pellet. Wood chips can be produced without deforestation by using wood from storm damaged wood, bark, branches and even waste from carpenters' shops and joiner's workshops. Furthermore, pellets are even more eco-efficient than woodchips since they can be produced from sawdust without any synthetic additives. KWB's pellet heating system can be installed for residential, commercial and municipal purposes, and the company serves a 40,000 customer base throughout Europe.

Source: http://www.dulas.org.uk/downloads/KWB_TDS_Brochure.pdf

CASE STUDY 2

SEE Algae Technology (SAT)



SEE Algae Technology (SAT) is an Austrian enterprise that builds production plants for algae-based compounds. Algae lipids, 50 percent of algae biomass, can be used to produce biofuels and biochemicals. After the algae lipids are extracted, the remaining algae meal can also be used to supplement or replace other food crops in its livestock feed with no adverse effects. Based on this fact and with optimal analysis of algae life cycle, SAT tries to maximize biomass production greatly enhancing system efficiency and cost-effectiveness. SAT's technology contains high potential to play a key role in reducing GHGs emissions as SAT utilizes a customer's CO₂ waste stream to drive the microalgae's photosynthetic process. In 2012, SAT was named a winner of the Brazilian Bioenergy Innovation of the Year 2012 Award.

Source: http://www.seealgae.com/documents/SAT_Company_Eng.pdf

CASE STUDY 3

Buchdruckerei Lustenau

Buchdruckerei Lustenau (BuLu) is a printing company founded in 1913. BuLu's services include small and large printed products such as folders, brochures, leaflets, packaging, books, posters, notepads, labels and small print articles. BuLu not only considers environmental protection as one of the company's great concerns but also seeks to become Austria's most climate friendly printing company. In addition to standard printing machines, the company has 'green printing' equipments which minimize waste, resource consumption and emissions in the production process. In addition, BuLu also offers carbon-neutral printing by which quantity of carbon dioxide produced in the printing process is offset by the reduction in the same quantity in a different place. In order to do so, the company made a material flow analysis in which all specific factors in printing process were included and evaluated for calculation of CO2 emissions they produce. BuLu provides climate-neutral printing certificate to its customers of carbon-neutral printing products so that they can show their commitment toward climate protection. BuLu has been recognized for its company level eco-innovative efforts. In 2010, BuLu received the Austrian Eco-label from the Minister for the Environment for the company's emphasis on environmental and climate protection. Other certificates include FSC label granted by the Forest Stewardship Council (FSC) and PEFC certification given by an independent organization dedicated to improving sustainable forest cultivation. In addition, the company received GREEN Brands award for the company's awareness of its responsibility for the environment.

Source: <http://www.bulu.at/en/index.php>