

## FRANCE

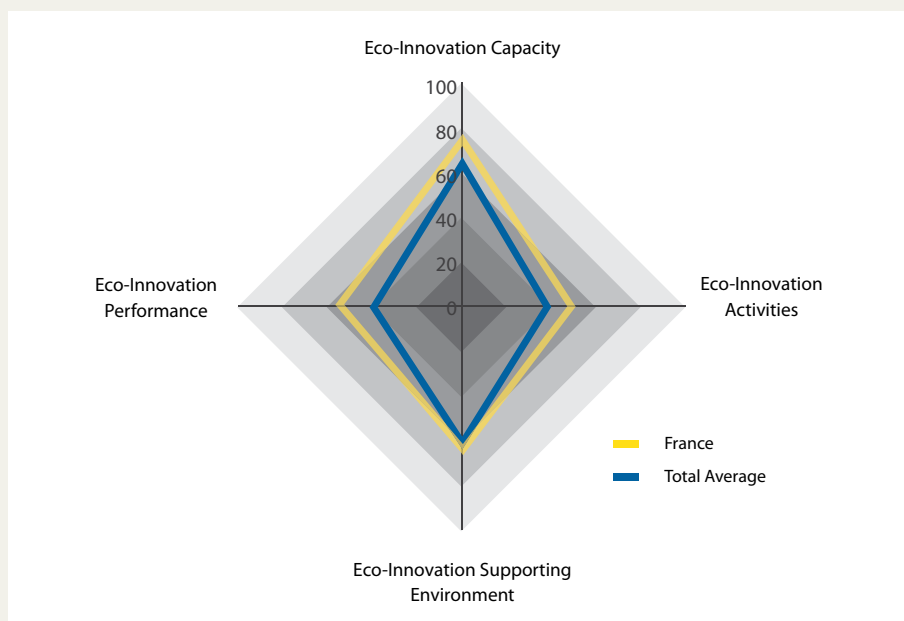


Fig. 10 Result analysis of France

### Country Result & Analysis

Based on 20 indicators, which are aggregated into four criteria, France positions relatively high (62/100) in ASEI. France demonstrates slightly above average level of “eco-innovation capacity”. While most of indicators examined in the area of eco-innovation capacity are average, the large “number of jobs in green technology industry” particularly improves the overall criteria level. In regards to the “eco-innovation activities”, the country reveals high “number of green patents” high “level of commercialized green technology SMEs”, and a large “turnover of environmentally friendly companies”. Among French companies involved in the field of green technology, approximately 34.7 percent of these companies possess already commercialized green technology solutions while only 6.7 percent of the companies possess green technology solutions at early stage.<sup>41</sup> The country shows average level of “eco-innovation supporting environment”. It is found that France has larger number of local investors in green technology and successful investment deals in the area. France has matured environmental market and relatively long history of public efforts regarding environmental issues. Thus, the country shows strong “eco-innovation performance” backed with good score in “green industry market size”, “level of environmental impact on society”, “CO2 emission intensity level” and “level of energy sustainability”. Overall, France ranks higher than the average in ASEI.

### France’s Key Eco-Innovation Environment

With strict environmental regulations, the government has continuously set ambitious targets achieve environmentally sustainable economic progress. Instigated by the former President Nicolas Sarkozy in 2007, “Grenelle Environment Roundtable (Grenelle de l’environnement)”, a wider environmental protection framework was launched. Under this Grenelle Environment Roundtable, legislations were adopted that

<sup>41</sup> Cleantech Group Data

## **CASE STUDY 2**

### **Veolia Environmental Service**

**Veolia Environmental Services (Veolia)** is a provider of waste management and resource recovery services, and its France-based multinational parent company, Veolia Environment, is a water, waste management and energy services provider. Bioreactor of Veolia Environmental Services is a fruit of the company's strong commitment to eco-innovation. Bioreactors built on landfills are designed to accelerate decomposition process and to efficiently capture biogas. Biogas captured by network of pipes through the residual waste is then converted into green electricity. The Veolia Environmental Service increases the green electricity production volume and biogas emission rate per unit by ten times compared to previous technology. Currently, Veolia's development of bioreactor technology solutions is being carried out in two sites, Woodlawn Bioreactor and Ti Tree Bioenergy facility in Australia.

*Source: <http://www.veoliaes.com.au/recycling-services/resource-recovery-facilities/bioreactor-landfills>*

## **CASE STUDY 3**

### **SP3H SAS**

**SP3H SAS (SP3H)**, founded in 2005, presents innovative and ground-breaking technology which offers lower fuel consumption, lower pollution levels and CO2 emissions and optimization of reliable performance and engine power. SP3H's smart on-board fuel sensor analyzes and measures the molecular structure of fuel using the patented HydroCarbon Profiler (HCP) technology. The analyzed information is then transmitted to the engine control unit to compute real time optimization of injection strategies, combustion and post treatment for all possible diesel and gasoline fuels. SP3H may be a young SME, but the company has received a number of awards since creation. In 2011, the company was named the winner of the Engineering Prize of the Year in the category of Sustainable Development among eight other categories. In the same year, the company won the Cleantech Republic 'Grand Prix' at the Pollutec Show. In addition to the numerous public recognitions, the company's project is part-financed by the EU.

*Source: <http://www.sp3h.com/en/index.html>*

## ***National Strategy for Green Technology***

In 2008, the Ministry of Industry and Environment launched the Strategic Committee for Eco-Industries (COSEI), which composed of business leaders and professionals in the field of green technologies. The committee was set up to stimulate the eco-industry in France. COSEI presented the Ecotech 2012 in 2008, which included guidelines for policy interventions to support eco-industrial R&D activities. Ecotech aims to support innovative partnerships in the field of green technologies and foster public-private partnerships. It has a funding programme which provides 30 million Euros to R&D activities on green technology over the three years. It also supports commercialization and exportation of eco-innovative products of SMEs. Ecotech can be seen as one of representative bodies that fosters eco-innovation at the national level.

## ***Eco-Innovation Case Studies***

### **CASE STUDY 1**

#### **Solairedirect**

**Solairedirect** is a manufacturer of solar PV installations for residential, commercial and community-scale customers. Based in France, Solairedirect has a number of subsidiaries worldwide including South Africa, Chile, United States, Morocco, India, Malaysia and Thailand. Activities of Solairedirect comprise of construction of solar PV rooftops and solar parks and solar power sales. Solairedirect's solar PV rooftops are installed for private residential and industrial buildings. The company aims to not only increase value of rooftops but also achieve energy efficient buildings that comply with low energy building regulations. Another innovative approach of Solairedirect to solar energy business involves solar parks which allow local authorities to respond to climate change issues as well as to develop a robust photovoltaic energy business using unused land. In 2010, with Schneider Electric, another global company specializing in energy management, the company announced to carry out a joint project in the field of solar energy in Morocco. In addition, the company has recently acquired a business partner, JinkoSolar (Jinko), in the fast-growing emerging market, China. Using 25 megawatts of Jinko's solar modules, Solairedirect will execute construction of five ground-mounted solar panels projects. In 2012, Solairedirect was named as one of Global Cleantech 100 companies for two consecutive years, and the company is continuously seeking to expand its business in other emerging markets.

*Source: <http://www.solairedirect.com>*

