

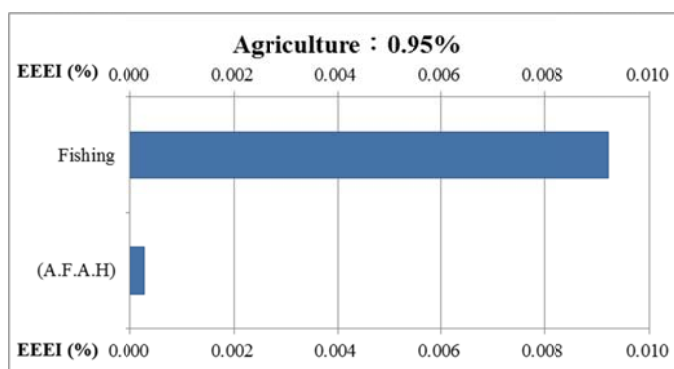
## **The Economic Energy Efficiency Ranking of Taiwan Has Fallen 4 Places**

According to the latest Economic Energy Efficiency Index (EEEI) published by the Triple-E Institute, in terms of its 2009 economic energy efficiency ranking Taiwan is in 16<sup>th</sup> place. Compared to the ranking for 2008, it has gone down 4 places and lags far behind the ranking for Korea (in 7<sup>th</sup> place). The major reason is the inefficiency in energy use of chemical material manufacturing. The difference in terms of the EEEIs between 2009 and 2008 is -2.81% for chemical material manufacturing. In addition to that, the difference in terms of the EEEIs between 2009 and 2008 is -1.29% for land transportation services, although its economic energy efficiency is the best in the year 2009. Other energy intensive industries, such as non-metallic mineral products, basic metals, paper, textile mills, and plastic products are all worse in terms of economic energy efficiency from 2008 to 2009. Therefore, energy intensive industries are bound to be responsible for the low ranking in terms of economic energy efficiency in Taiwan in 2009.

In order to calculate the vertical decomposition effect of the EEEI, the present report classifies the economy into three large categories: the agricultural sector, industrial sector, and services. Under the three big sectors, there are 33 small industries that cover detailed subsectors. Compared to the base year of 2005, the performance in terms of economic energy efficiency has improved by 6.69% overall, which is a positive but unsatisfactory result. Within this improvement, the biggest contribution to economic energy efficiency comes from services (4.37%), followed by the industrial sector (1.36%), and then the agricultural sector (0.95%). Going down further to the small industrial level, the EEEI shows that land transportation contributes 2.76% to economic energy efficiency, which reveals that about 60% of the contribution is from services that also accounts for the best performance among all industries in Taiwan in 2009. For the industrial sector, the electronic parts, computers and electrical equipment (EPCEE) industry has the second best performance with 2.36%. The EPCEE industry belongs to the non-energy intensive industries in Taiwan. In third place is the petroleum and coal products industry with a contribution of 1.37%. The basic metals industry also contributes 1.19% of the EEEI. The last two industries belong to the energy intensive industries in Taiwan.

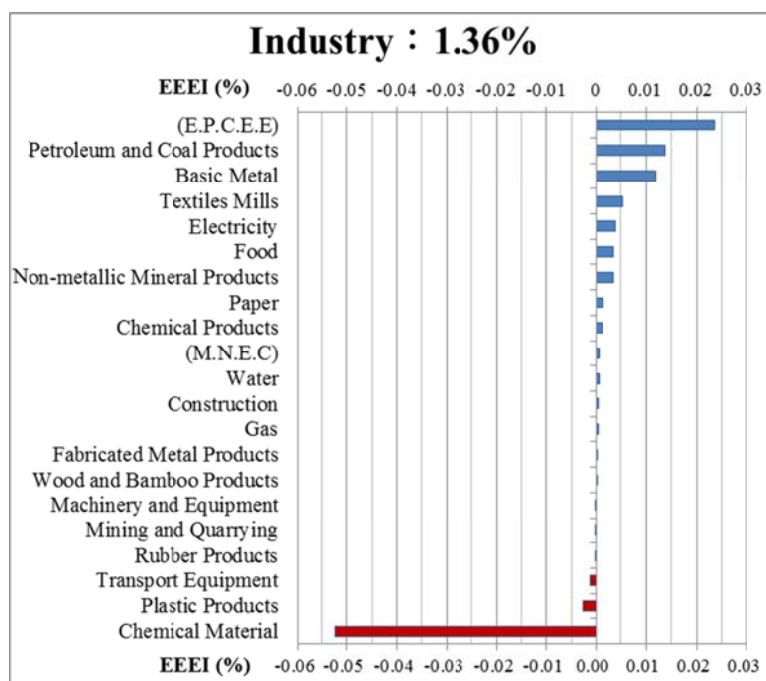
On the contrary, there are many industries with worsening performance in terms of economic energy efficiency, such as chemical materials (-5.23%), plastic products (-0.27%), transport equipment (-0.13%), warehousing, transportation and postal services (WTP) (-0.04%), rubber products (-0.02%), mining and quarrying (-0.01%), and machinery and equipment (-0.01%). Among them, chemical material manufacturing is again the critical

industry that had a big and negative impact on Taiwan’s economic energy efficiency in 2009. Administrative officials should seriously review the current industrial economic policy as well as energy policy. There are several measures that can solve this problem: (1) eliminate or phase out old factories; (2) move the production chain to low-cost bases located abroad; (3) conduct a full-scale energy audit and trace the factors for the inefficient use of energy; (4) replace the old technology; and (5) promote high value-added production and products. All of the above measures can interact together without difficulty and are also good for any low-performance industry. The key issue is to stop the economic energy efficiency being downgraded and pursue sustainable development in Taiwan.



\*(A.F.A.H): Agriculture, Forestry and Animal Husbandry

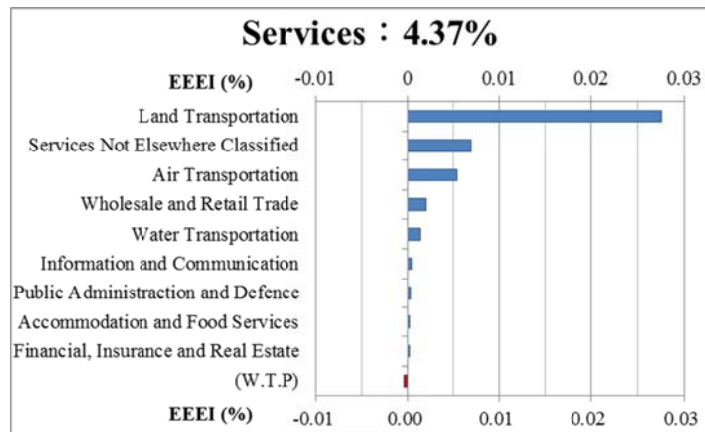
**Figure 1: EEI Real Contribution of Agriculture in Taiwan**



\*(E.P.C.E.E): Electronic Parts, Computers and Electrical Equipment

\*(M.N.E.C): Manufacturing Not Elsewhere Classified

**Figure 2: EEI Real Contribution of Industry in Taiwan**



\*(W.T.P): Warehousing, Transportation and Postal Services

**Figure 3: EEI Real Contribution of Services in Taiwan**