

## Recent Development of Bio-fuel Policies and Regulations in Taiwan

Yueh-Hsun Tsai\*, Vicky H.B. Tan

### Abstract

Energy efficiency, environmental protections, reducing the dependence on fossil fuels, and securing the autonomy of energy supply are becoming the major concerns in developing new energy policy of many countries. In recent years, Bio-fuel, a much debated and controversial alternative energy, has become a solution or a strategic policy tool, to answer those aforementioned concerns in transportation sector of many countries. A number of countries or regions developed comprehensive regulations in promoting the usage of bio-fuel, such as mandates or direct/indirect subsidies, etc.

Taiwan, a part of the global village with deep reliance on fossil fuel, the government also carried out several programs/regulations to promote the use of bio-fuel in accordance with the national policy to promote the alternative energy, such as “Green Bus”, “Green County”, as well as nationwide mandate use of B1 biodiesel (mandatory B2 nationwide in 2010). Meanwhile, a legal framework has been developed as the base to carry out those policies, in particular, the pass of the first comprehensive renewable energy law in 2009 and amendments to several energy laws from 2008 to 2009. Although the overall deployment of renewable energy, in particular biofuel, is still in initial stage in compared to some leading countries or regions, the current development in Taiwan still shows the government’s intention to achieve the sustainable development as well as to create more possibilities for the green economy in Taiwan.

This article focuses to review on the recent renewable energy policies promulgated in Taiwan, in particular on the promotion of bio-fuel; including laws, administrative programs and regulations, and further investigate the effects and deficiencies of such legal frame work.

**Yueh-Hsun Tsai\***, Assistant Professor of Law, Graduate School of Sci. & Tech., National Yulin University of Sci. & Tech., Taiwan. E-mail: [dennis@yuntech.edu.tw](mailto:dennis@yuntech.edu.tw)

**Vicky H.B. Tan**, Research Assistant, School of Sci. & Tech., National Yulin University of Sci. & Tech., Taiwan.

## References

1. Mark Rosegrant and Siwa Msangi, *Agriculture and the Environment: Linkages, Trade-Offs and Opportunities*, 19 GEO. INT'L ENVTL. L. REV., 2007, at 699,703.
2. Ayhan Demirbas, *Global biofuel strategies*, Energy Education Science Technology, 2006; 17:27-63. See also, Ayhan Demirbas, *Progress and recent trends in biodiesel fuels*, Energy Conversion and Management 50, 2009, pp.14-34, at 30.
3. Poonam Singh Nigam and Anoop Singh, *Production of liquid biofuels from renewable resources*, Progress in Energy and Combustion Science(2010),pp.1-17.
4. T. Wiesenthal, G. Leduc, P. Christidis, B. Schade, L. Pelkmans and L. Govaerts et al., *Biofuel support policies in Europe: lessons learnt for the long way ahead*, Renew Sustain Energy Rev 13 (2009), pp. 789–800.
5. Poonam Singh Nigam and Anoop Singh, *Production of liquid biofuels from renewable resources*, Progress in Energy and Combustion Science(2010),pp.1-17.
6. Bureau of Energy, Ministry of Economic Affairs, *Energy Policy and Implementation in Taiwan Area*, available at: <http://www.moeaboe.gov.tw/Policy/PoMain.aspx?PageId=executepolicy>
7. Bureau of Energy, Ministry of Economic Affairs, *Taiwan's Energy Policy and Supply-Demand Situation-Implementation Measures*, available at: [http://www.moeaboe.gov.tw/About/webpage/book\\_en3/page3.htm](http://www.moeaboe.gov.tw/About/webpage/book_en3/page3.htm)
8. United Nations Framework Convention on Climate Change(UNFCCC), *Kyoto Protocol*, available at: [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php)
9. Ministry of Economic Affairs, Executive effects and review on the conclusion of "The First National Energy Conference" in 1999, March 12, 2009, available at: <http://www.moeaboe.gov.tw/Download/Policy/98EnergyMeeting/meetingpolicy/important/files/87年全國能源會議結論執行成效與檢討.pdf>
10. Council for Economic Planning and Development, *Challenge 2008 National Development Plan*, available at: <http://www.cepd.gov.tw/ml.aspx?sNo=0001539&ex=1&ic=0000015>
11. Bureau of Energy, Ministry of Economic Affairs, *The conclusion and executive effect of National Energy Conference of 2005*, available at: <http://www.moeaboe.gov.tw/Policy/98EnergyMeeting/MeetingMain.aspx?pageid=mainfram>
12. *Administrative Regulations on the Production, Import, Blend, and Sales of Ethanol, Biodiesel, and Renewable Oil*, available at: [http://law.moj.gov.tw/News/news\\_detail.aspx?id=52660](http://law.moj.gov.tw/News/news_detail.aspx?id=52660)
13. Bureau of Energy, Ministry of Economics Affairs, *Framework of Taiwan's Sustainable Energy Policy*, available at: <http://www.moeaboe.gov.tw/Download/Policy/files/永續能源政策綱要.pdf>
14. Bureau of Energy, Ministry of Economics Affairs, *The conclusion of "National Energy Conference of 2009*, available at: <http://www.moeaboe.gov.tw/Policy/98EnergyMeeting/MeetingMain.aspx?pageid=convention>
15. Council for Economic Planning and Development, *Framework of Sustainable Energy Policy-Action Program of Energy Saving and Carbon Reduction*, September 4, 2008, available at: [http://www.moeaboe.gov.tw/Download/Policy/98EnergyMeeting/meetingpolicy/important/files/節能減碳行動方案-全國能源會議上網版\(經建會\).pdf](http://www.moeaboe.gov.tw/Download/Policy/98EnergyMeeting/meetingpolicy/important/files/節能減碳行動方案-全國能源會議上網版(經建會).pdf)
16. Council for Economic Planning and Development, *News release- Practice Sustainable Energy Policy, Establish low-carbon and energy-saving society*, December 4, 2009, available at: <http://www.cepd.gov.tw/ml.aspx?sNo=0012689&key=%e6%b0%b8%e7%ba%8c>
17. Bureau of Energy, Ministry of Economic Affairs, *The White Paper on Energy Industry and Technology of 2010*, available at: <http://www.moeaboe.gov.tw/Download/Policy/files/2010年能源產業技術白皮書.pdf>
18. *2010 National Establishment Plan of Republic of China(Taiwan)-Policy and Establishment*, the meeting No.3177of the Executive Yuan, December 31, 2009, available at:<http://www.ey.gov.tw/public/Attachment/01119451771.pdf>
19. Lin Mei Hua,Su Tzung Jen , *Executive effect on the adjustment of paddy field and upland utilization in 2007-2009*, Argricultural policy and information, September, 2010, Vol 219., available at: <http://www.coa.gov.tw/view.php?catid=22082>
20. Environmental Protection Administration, *The Environmental Benefits and Strategy Analysis of the Biodiesel Vehicles*, executed by The Energy and Environment Research Laboratories (EERL) of the Industrial Technology Research Institute(ITRI), available at: [http://epq.epa.gov.tw/project/projectcp.aspx?proj\\_id=HTYUJPORFC](http://epq.epa.gov.tw/project/projectcp.aspx?proj_id=HTYUJPORFC)
21. Environmental Protection Administration, *The Project of Used Cooking Oil Recycling, PVC Controlling, and Estimation of General Waste Clearance and Treatment Costs (2nd year)*, executed by Sinotech Engineering Consultant, LTD., available at: [http://epq.epa.gov.tw/project/projectcp.aspx?proj\\_id=QJHAMTKLSW](http://epq.epa.gov.tw/project/projectcp.aspx?proj_id=QJHAMTKLSW)
22. Lin Mei Hua,Su Tzung Jen , *Executive effect on the adjustment of paddy field and upland utilization in 2007-2009*, Argricultural policy and information, September, 2010, Vol 219., available at: <http://www.coa.gov.tw/view.php?catid=22082>
23. Bureau of Energy, Ministry of Economic Affairs, *The comparison between Erneuerbare-Energien-Gesetz (EEG) of German and Regulation for Renewable Energy Development of Taiwan*, December 4, 2009, available at: [http://unfccc.epa.gov.tw/unfccc/chinese/\\_upload/copenhagen/01\\_wang\\_2.pdf](http://unfccc.epa.gov.tw/unfccc/chinese/_upload/copenhagen/01_wang_2.pdf)
24. Jenn Jiang Hwang, *Promotional policy for renewable energy development in Taiwan*, Renewable and Sustainable Energy Reviews 14, 2010, pp.1079–1087, at 1086.
25. Ayhan Demibras, *Importance of biodiesel as transportation fuel*, Energy Policy 2007; 35:4661-70.
26. Chen Ming De, *Present and Trend on Biofuel Industrial Development, Unlimited Potential for New Powers-Green Energy Industries Associated Symposium*, National Taiwan University of Science and Technology, August 26, 2010.