



## APPENDIX 3.8

### SENATE BILL 2593, “AN ACT CREATING A HYDROGEN RESEARCH AND DEVELOPMENT CENTER AND PROVIDING FUNDS THEREFOR, AND FOR OTHER PURPOSES,” 15 NOVEMBER 2010

Of the bills filed by Senator Ferdinand “Bongbong” Marcos Jr., this is one that best recalls his ties to his mother. According to Ben D. Kritz, in an article titled “Did Businessweek Fall for a 30-year-old Hoax?” published in *The Manila Times* on 28 October 2013, Imelda Marcos was told in the 1970s that the Philippines has vast deuterium deposits in the Philippine Trench, and has since been spending “‘millions of dollars a year’ to secure an exclusive right to extract water from the trench.” Kritz (2013) thereafter cites a study that showed that “[shallower] waters...actually have a slightly higher amount of deuterium” than undersea trenches, and that the former dean of the UP College of Science and nuclear physicist Roger Posadas, once “offered a scathing assessment of the country’s enthusiasm for the potential of deuterium” in a 1988 article published in *The Manila Standard Today*, “saying that the whole yarn was ‘a gauge of our country’s extremely unscientific culture and strong proclivity toward reliance on miracles as solutions to our national problems.’” Bongbong Marcos’s bill states the myth that the Philippines has the world’s biggest deuterium deposits not only in its explanatory note, but also in the bill’s declaration of policy (“hydrogen has been proven to be most abundant in the country”).

#### *Reference*

Kritz, Ben D. 2013. “Did Businessweek Fall for a 30-year-old Hoax?” *The Manila Times*, October 28. <http://www.manilatimes.net/did-businessweek-fall-for-a-30-year-old-hoax/48710>.

#### *Source*

Senate of the Philippines. 2010. “Senate Bill No. 2593.” Senate of the Philippines 15th Congress, November 15. <https://www.senate.gov.ph/lisdata/103828908!.pdf>.

FIFTEENTH CONGRESS OF THE  
REPUBLIC OF THE PHILIPPINES  
First Regular Session



Senate  
Office of the Secretary

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SENATE  
Senate Bill No. **2593**

RECEIVED BY: 

**INTRODUCED BY SENATOR FERDINAND R. MARCOS, JR.**

#### EXPLANATORY NOTE

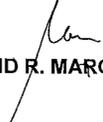
The Philippines is highly dependent on oil imports not only to pump the economy but most especially to fill its domestic requirements under a regime of increasing costs of importation. Thus, the volatility of the oil prices in the world market which is dictated by the cartel of the Organization of Petroleum Exporting Countries (OPEC) is a retarding agent in the country's efforts for a more rapid economic development. In fact, the unprecedented soaring of the oil prices in the year 2008 which preceded the global financial crisis that gravely hit even the world's advanced economies, is a clear indication on how steep oil prices can adversely affect the country's economy.

The government's thrust to intensify the exploration of available energy resources in the country, both its oil and alternative fuel energy resources, is a decisive step towards mitigating the alarming impact of overdependence by the country on oil imports. However, with the emerging issue of global warning which is attributed to excessive carbon emission from the burning of fossil fuels, and its projected serious impact on agriculture-based countries and low lying areas, the concentration has turned towards the development and utilization of alternative fuel energy sources which have been found to be abundant in the country, e.g. hydrogen.

Hydrogen is a highly flammable substance but with zero carbon emission. It is now used in Canada, America, Germany and Sweden to provide fuel for cars, trucks, jet planes, etc.. Hydrogen is being processed from deuterium which is heavy water or hydrogen water without oxygen. This is obtained from the deep trenches of the world and the world's largest deposit of deuterium is in the Philippines. Thus, a breakthrough in the development and utilization of hydrogen holds promise not only for the accelerated economic growths of the country but also for a much cleaner air which abates the effects of global warning.

This bill seeks to establish a Hydrogen Research and Development Center which will lay the foundation for and spearhead the development of hydrogen in the country, which is said to be the fuel of the future.

Earnest approval of this bill is hereby requested.

  
**FERDINAND R. MARCOS, JR.**

FIFTEENTH CONGRESS OF THE  
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SENATE  
Senate Bill No. 2593

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**INTRODUCED BY SENATOR FERDINAND R. MARCOS, JR.**

**AN ACT CREATING A HYDROGEN RESEARCH AND DEVELOPMENT CENTER  
AND PROVIDING FUNDS THEREFOR, AND FOR OTHER PURPOSES**

*Be it enacted by the Senate and the House of Representatives of the Philippines  
in Congress assembled:*

SECTION 1. Title- This Act shall be known as "The Hydrogen Research, Promotion and Development Act of 2010".

SECTION 2. Declaration of Policy- It is hereby declared the policy of the State to support and encourage the use and development of hydrogen as alternative source of fuel energy and recognizes its importance to reduce greenhouse gasses in the atmosphere which is a pressing humanitarian issue, as well as its potential contribution to the country's economy. Towards this end, the government shall endeavor to provide an avenue for the research, promotion, development and utilization of hydrogen as an alternative source of fuel energy as hydrogen has been proven to be most abundant in the country.

SECTION 3. *Philippine Hydrogen Research and Development Center.* - There is hereby created a Philippine Hydrogen Research and Development Center, hereinafter referred to as the "Center", which shall be managed, operated and maintained by the Department of Science and Technology (DOST).

SECTION 4. *Powers and Functions.* - The Center shall have the following powers and functions:

- a. To conduct research and promotion for the development and utilization of hydrogen in the country;
- b. To identify the potential areas for development of hydrogen which include the preparation of development programs for the identified areas;
- c. To initiate and/or encourage inventions of machineries, equipment, vehicle and the like to be powered by hydrogen;
- d. To serve as the core network of foreign investments on the development and utilization of hydrogen;
- e. To perform such acts as may be necessary for the effective implementation of to this Act.

SECTION 5. Rules and Regulations.- The Department of Science and Technology, in coordination with the Department of Energy, shall formulate the rules and regulations necessary for the implementation of the provision of this Act.

SECTION 6. Appropriations.—The amount needed to carry out the provisions of this Act is hereby authorized to be appropriated in the General Appropriations Act of the years following its enactment into law, in addition to the amount appropriated for the Department of Science and Technology.

SECTION 7. Separability Clause.- If any provision of this Act is declared invalid or unconstitutional, the other provisions not affected thereby shall remain in full force and effect.

SECTION 8. Repealing Clause.—All laws, presidential decrees, executive orders, presidential proclamations, rules and regulations or parts thereof contrary to or inconsistent with this Act are hereby repealed or modified accordingly.

SECTION 9. Effectivity.- This Act shall take effect fifteen (15) days following its publication in at least two (2) newspapers of general circulation or in the Official Gazette, whichever comes first.

Approved.