Republic of the Philippines
DEPARTMENT OF ENERGY
(Kagawaran ng Enerhiya)

DEPARTMENT CIRCULAR (DC) NO. DC2023-11-0031

GUIDELINES ON THE AWARDING OF SERVICE CONTRACTS FOR THE EXPLORATION, DEVELOPMENT AND PRODUCTION OF NATIVE HYDROGEN

WHEREAS, Section 2, Article XII of the 1987 Constitution provides that "*xxx The exploration, development, and utilization of natural resources shall be under the full control and supervision of the State. The State may directly undertake such activities, or it may enter into co-production, joint venture, or production-sharing agreements with Filipino citizens, or corporations or associations at least sixty per centum of whose capital is owned by such citizens. Such agreements may be for a period not exceeding twenty-five years, renewable for not more than twenty-five years, and under such terms and conditions as may be provided by law. xxx*";

WHEREAS, Section 2 of Presidential Decree (PD) No. 87 or the Oil Exploration and Development Act of 1972, as amended, was declared to be the policy of the State to hasten the discovery and production of indigenous petroleum through the utilization of government and/or private resources, local and foreign, under the arrangements embodied in this Act which are calculated to yield the maximum benefit to the Filipino people and the revenues to the Philippine Government for use in furtherance of national economic development, and to assure just returns to participating private enterprises, particularly those that will provide the necessary services, financing, and technology and fully assume all exploration risks;

WHEREAS, Section 4 of PD 87 provides that the Government may directly explore for and produce indigenous petroleum or indirectly undertake the same under service contracts;

WHEREAS, Section 3 of PD 87 provides that "*petroleum shall include any mineral oil hydrocarbon gas, bitumen, asphalt, **mineral gas** and all other similar or naturally associated substances with the exception of coal, peat, bituminous shale and/or other stratified mineral fuel deposits*";

WHEREAS, native hydrogen refers to naturally occurring hydrogen gas in geologic formations which can be considered as a ***mineral gas***[1];

WHEREAS, various studies[2] have documented several observations of seeps of native hydrogen, together with abiotic methane on the seafloor and on the continents

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[1] **Abrajano et al.** 1988. Methane-Hydrogen Gas Seeps, Zambales Ophiolite, Philippines: Deep Or Shallow Origin?. Chemical Geology. Issue No. 71. Pages. 211-222;
Etiope et al. 2011. Abiotic Methane Flux from the Chimaera Seep and Tekirova Ophiolites (Turkey): Understanding Gas Exhalation from Low Temperature Serpentinization and Implications For Mars. Earth and Planetary Science Letters. Issue No. 310. Pages 96-104;
Etiope et al. 2017. Methane and Hydrogen in Hyperalkaline Groundwaters of the Serpentinized Dinaride Ophiolite Belt, Bosnia and Herzegovina. Applied Geochemistry. Issue No. 84. Pages 286-296;
Zhu et al. 2023. A Model to Predict the Thermodynamic Stability of Abiotic Methane-Hydrogen Binary Hydrates in a Marine Serpentinization Environment. https://doi.org/10.3389/fmars.2023.1140549;
[2] **Smith et al.** 2005. Hydrogen Exploration: A Review of Global Hydrogen Accumulations and Implications for Prospective Areas in NW Europe. http://pgc.lyellcollection.org;
Etiope and Schoell 2014. Abiotic Gas: Atypical, But Not Rare. DOI: 10.2113/gselements.10.4.291;
Prinzhoffer and Deville 2015;

(e.g. Mt. Chimaera in Turkey, Semail Ophiolite in Oman, and Los Fuegos Eternos in the Philippines) in the last three decades, proving the natural occurrence of hydrogen as gas in the environment formed through a number of mechanisms and may be considered as mineral gas;

WHEREAS, the exploration, development, and production of native hydrogen found in geological formations are the same with "natural gas" as provided under Section 3 of PD 87, which are obtained from boreholes and wells and consisting primarily of hydrocarbons;

WHEREAS, the Department of Energy (DOE) is continuously adopting new mechanisms and strategies to effectively carry out its plans and programs as mandated under PD 87, as amended, including its implementing rules and regulations;

WHEREAS, there is a need to provide guidelines to accelerate the exploration, development and production of native hydrogen to contribute to the country's energy security, create jobs, and generate wealth;

WHEREAS, Section 4 of Republic Act No. 7638 or the DOE Act of 1992, as amended, mandates the DOE to prepare, integrate, coordinate, supervise, and control all plans, programs, projects, and activities of the Government relative to energy exploration, development, utilization, distribution, and conservation;

NOW, THEREFORE, in consideration of the aforementioned premises, the following policy is hereby adopted and promulgated.

Section 1. Policy. The exploration, development and production of naturally occurring native hydrogen shall be governed by PD 87, as amended, and shall be implemented under the rules, regulations, issuances and procedures issued by the DOE relevant to the conduct of petroleum exploration, development and production.

Section 2. Repealing Clause. All issuances that are inconsistent with this Circular are hereby repealed or amended accordingly.

Section 3. Effectivity. This Circular shall be effective fifteen (15) calendar days upon its publication in two (2) newspapers of general circulation. A copy of this Circular be filed with the University of the Philippines Law Center - Office of the National Administrative Register (UPLC-ONAR).

Issued on ____ November 2023 at Energy Center, Rizal Drive, Bonifacio Global City, Taguig City, Metro Manila.

RAPHAEL P.M. LOTILLA
Secretary
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Frery et al. 2021. Natural Hydrogen Seeps Identified in the North Perth Basin, Western Australia. *Science Direct*. Journal Homepage: www.elsevier.com/locate/he;
McMahon 2023. Natural Hydrogen Seeps as Analogues to Inform Monitoring of Engineered Geological Hydrogen Storage. Department of Civil and Environmental Engineering, University of Strathclyde, Glasgow, UK;
Levy et al. 2023. Looking for Natural Hydrogen in Albania and Kosova. https://doi.org/10.3389/feart.2023.1167634