International Journal of Public Administration and Management Research (IJPAMR), Vol. 8, No. 5, 2023. Available online at http://journals.rcmss.com/index.php/ijpamr. ISSN:2350-2231(E) ISSN: 2346-7215 (P). Covered in Scopedatabase- https://sdbindex.com/Sourceid/00000429, google scholar, etc.
Zharama M. Llarena, 2023, 8(5):90-102

Engineering Game Theory of Green Hydrogen towards Energy Transition using Shariah Jurisprudence Developmental Framework based on Ethical Decision-Making from Philosophy of Technology

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Abstract
Green hydrogen is a technological product of concession for renewable energies. The paradigm shift to solar power is a form of energy transition to target carbon emission towards zero level through reduction of greenhouse gases. Sustainable development is a monetary framework of business innovations and marketing of goods. However, there are apparent limitations on these contract laws, hence, gaps can be predicted concerning environmental laws of business transactions. This paper is designed to address the gaps on commercial laws and illustrate sustainable development modellings of ethical decision-making and shariah jurisprudence method to interpret the statutory laws for renewable energies and develop an equation for exhibition of its economic impacts along with the 2050 planning of storage capacity for renewable power percentage of energy transition. Hamburg to Rotterdam Rules are legal instruments of commercial transactions pertaining to transportation laws of goods under agreements. Meanwhile, statutory interpretation serves as an illustration of legislative framework formulated for public welfare and safety, in harmony with constitutional laws. Energy regulations are statutory laws for reflexive judgement of the laws of thermodynamics pertaining to mass conservation, momentum theorem, and energy equation concerning economics of the business environment. Therefore, if green economy is the 2050 plan of energy transition, the pressure relative to viscosity of hydrogen power of solar energy must be developed congruent to Ideal Gas Law, exhibiting relativity to Euler and Lorenz number in connection with thermal conductivity and its resistance akin to viscosity.

Keywords: *Green Hydrogen, Renewable Energies, Game Theory, Energy Transition, Solar Energy*

1. INTRODUCTION

The paper is predicted through equation development to meet the energy demands supplied by renewable sources concerning issues on greenhouse gases analogous to facts of hydrogen production and its investment transition to green hydrogen in compliance with Rotterdam Rules and Renewable Energy (Electricity) Bill 2000 (Cth).

1.1 The Carbon Emissions

At present, climate change is strategically interpreted as financial intelligence in sustainable development pertaining to issues on society, economy, and environment. The politics in dealing with continuous change in environmental global temperature since ancient times should be taken scientifically as innovation for economic means of public safety. From 1979-2014, the rate of greenhouse gases has augmented tremendously, ranging at an estimate of 1.4 ppm per annum prior 1995 and afterwards, increased to an atmospheric concentration of 2.0 ppm. The Convention of United Nations on Climate Change had defined its conceptual framework as a function of global thermodynamic solutions intended for direct or indirect results of changing atmospheric condition observed through relative periods of human activities bringing significant impact in natural environment.

In relation to global warming as key concentration to international climate, there has been long debates for several decades concerning the responsibility of maintaining the temperature below 2^{o}C. From 1850-2010, the energy demands were supplied through global utilization of fossil fuels and its domination resulted to sudden increase in greenhouse gases. However, using the gathered data at the end of 2010, the found high pre-industrial levels of fossil fuels confirmed that its consumption accounted for majority of global emissions based on anthropogenic carbon dioxide resulting to over 39% or 330 ppm of greenhouse gases [1].

The unprecedented climate crisis has led various nations for an immediate action and attention of worldwide transition to resolve issues in greenhouse gas emissions, hence, 2015 Paris Climate Accord was organized and established. The Paris Convention fortifies the Sustainable Development Goals of United Nations in mitigating environmental problems as monetary intelligence. For maintenance of its economic goals, it is crucial to control the sources of energy demands in advocacy of public welfare and their safety, hence, keeping the people away from detrimental effects of the environment. Thus, the measurement of energy demands is urgently required for sustaining and scaling the storage capacity in regard with the provision of secured energy supply of alternatives, hence, reducing the current non-renewable energy sources as a form of lessening the known dangers for better survival of future generations [2].

1.2 Hydrogen Justice

The production of hydrogen (H_2) follows the laws of thermodynamics governing the Gibbs-free energy as high as 237 kJ/mol or 1.23 eV, exhibiting a common response of uphill chemical process. All the same, solar energy storage through photocatalysis of H_2 has its own intricacy and complexity in dealing with hydrogen production [3]. Ethical issues on its economic pattern and considerable behavior are usually the focus of the problem leading to decisions concerning significant environmental changes. There are apparent case debates concerning distributional and procedural justice tackling disposal of wastes, infrastructure of transportation, and generation of energy [4].

At recent, global energy is known as transformation process in terms of hydrogen production integration. Its ample sources offer great opportunities in terms of transportation and storage convenience. Hence, integrated hydrogen yield provides wide applications in promoting optimization towards a novel direction from current energy system. The interplay of hydrogen-electric integration to energy networks with non-renewables provides a favorable option towards utilization of green energy.

Hydrogen provides an economical means of targeting low-carbon energy, hence, assists in cleaning the greenhouse gas emissions that are very hard to eradicate by industries towards the promotion of sustainable development in regulating energy fluctuations and securing energy transition. Currently, fossil fuels are the chief raw materials in producing hydrogen as non-renewable energy resulting to not only high costs but also carbon pollution. The required standard for hydrogen production must be clean with high energy supply and efficient towards zero target emission levels of greenhouse gases.

The utilization of renewable energies over fossil fuels for production of hydrogen will be the dominant trend in promoting sustainable development towards a clean future of efficient economic demands. The major impacts of hydrogen production shall be disseminated to storage, refueling, transportation, and industry chain application. Moreover, in tackling scientific and rational selection

of procedural hydrogen justice, one must critic the availability or the behavior of hydrogen in the environment without harming or depleting the abundance of natural resources, hence, protecting public welfare and safety towards green economy [5].

1.3 Cost-Efficiency of Solar Energies

The United States Energy Information Administration (EIA) stated that renewable energy is an infinite type of treatment regeneration opposite to fossil fuels. As urgent response and advocacy in fighting climate change and promoting renewable energy as alternative source, the 2015 Paris Convention and the Fifth Assessment Report (AR5) of the United Nation's Intergovernmental Panel on Climate Change (IPCC) created solutions in mitigating global warming by shifting to renewable energies for green economy corroborating public safety. Furthermore, there has been a 2015 documentation of the largest per annum increment of renewable power percentage at an estimate of 147 gigawatts (GW) as energy capacity record, along with the sudden fall of all prices of fossil fuels worldwide. Hence, global investment is apparent on renewable energy sector with observed employment of 9.4 million direct and indirect jobs for financial data of business activities [6].

Tester (2005) explains sustainable energy as engineering innovations on renewable energy using integration method in climate change mitigation resulting to lessening of environmental threats, thus, reducing secondary wastes towards sustainable development of public welfare based on green economic agendas of goods. Renewable energies are being developed as alternative means of promoting green monetary intelligence in terms of resolving current issues on climate change based on fossil fuel consumption, hence, reducing carbon emissions for treatment of global warming. Hence, the utilization of hydropower, solar energy, bioenergy, ocean energy, geothermal energy, and wind energy are natural sources that can be used for energy demands without having a problem for its availability on earth.

There are several problems being dramatically observed through the continuing energy demands of coal, gas, and oil, known as fossil fuels, as population is increasing along with the challenging growth of economic problems based on carbon emissions, non-renewable source depletion, and other related concerns, not only in military and geopolitical environment, but also in habitual recurrence of fuel price fluctuations. These issues lead to conflicts in sustainable development due to potentially irreversible dangers to public safety. All the same, there is an urgent demand for energy transition for renewable sources of energy towards green economy. Renewable energies surpassed the energy demands over fossil fuels starting for a 22% provision of total generation of global energy based on 2012 U.S. Energy Information Administration.

According to 2014 International Energy Agency, reliance on energy supply is important in all aspects of public economic demands such as industrial equipment, transportation, lighting, and heating. The replacement of fossil fuels in favor of renewable energies has significant effects in lessening greenhouse gas emissions. Moreover, the economic shift towards renewable energies maintains natural abundance based on environmental laws of thermodynamics since its supply is found to follow the mass conservation principles resulting to green production of services and goods. Hence, it is apparent that biofuels are non-renewable supply of energy that just provide a temporary sustainable development using the observed net CO_2 emissions leading to unfavorable effects not only in goods and services, but also in biodiversity favoring an energy transition to renewable sources [1].

2. MATERIALS AND METHODS

2.1 Legal Instruments (Contract Law for Commercial Purposes)

The intricate context of Rotterdam Rules can be best discussed via knowing the long historical development of Hague to Rotterdam, through Hamburg. Many centuries have passed, the international community was rushed under pressure for putting Harter Act 1893 and other national US legislations into harmony as legal instrument that would reinstate the fields of transportation law and maritime carriage as unified communication. The legal harmonization was first introduced on 1921 via Hague Rules, which an entirely private market document exhibiting bill of lading. As it became known to the public that only through international conference uniformity of communication can be restored, the 1924 Brussels convention enacted the Hague Rules as legislative scheme for maritime carriage of goods, although there are some open issues concerning its draft for exhibiting bill of lading as an international scheme to be used as reinstatement due to ambiguities in liabilities of shipping industry.

Hence, in 1968, Hague Rules were revised into Hague-Visby Rules because of these issues. However, there are still found inadequacies due to modernization that resulted to establishment of a counteroffer after a decade for harmonization and hence, Hamburg Rules was formulated as legal instrument of restoring unification of maritime laws for carriage of goods.

In order to satisfy the contractual approach in terms of fulfilling the elements required in vast amount of container transportation, being performed through door to door delivery, Rotterdam Rules provided the harmonization for international contract in transporting goods, encompassing the entire scope of its shipping agreements with responsibility of protecting the goods, hence, ensuring secured and reliable services through issuance of legal documents for clear receipt and delivery of items by carrier through land and sea transport. Rotterdam Rules offers clarification of liabilities of the delivery cargo upon receipt and delivery and between seller and buyer in the agreement. Article 27 of Rotterdam Rules specifies the responsibilities of the shipper to recipient throughout the delivery process, while Article 43 states receipt coverage of goods until destination. Furthermore, CISG and INCOTERMS expresses the shipper's obligations of intended transport together with the seller's responsibilities in delivering the goods under conditions of Article 35 (1) CISG and A9 F- and C-stipulations of INCOTERMS. Article 53 and 60 CISG specifies the buyer's liability in accepting the goods upon delivery [7]. Thus, Rotterdam Rules had extended the application scope of limited responsibilities of the shipper and consignee [8].

2.2 Game Theory Development (Environmental Law and its Economics)

Under the Law of Mass Conservation, there must be future alternatives in providing energy demands leading to significant decline of current sources, hence, mitigating depletion of the natural materials. During the 2000 period, a responsible standard has been established to target emissions of CO_2 at a concentration below 450 ppm. Hence, the IPCC has set the goals to responsibly target greenhouse gas emissions at a 50-80% reduction by 2050 at an estimation of 5.7 GT/yr and negative zero target emissions by 2100. The conclusion of Meinhausen et al. (2009) had resolved this problem by sustaining a 2050 target through probability of a 21temperature increment under 25% of the integrated greenhouse gas emissions and the to prevent carbon emissions in exceeding 1000 Gt. This concession method is the key target of resolving the issue resulting to tapering down the present CO_2 emissions from its current per annum release aiming a zero level by 2050 [9].

2.3 The Shariah Jurisprudence Framework Development (Business Law Transactions)

Based on regulatory measures, the Renewable Energy (Electricity) Bill 2000 (Cth) created renewable power percentage for specification of required electricity expressed in gigawatts-hour (GWh) per annum as a regulation subject for imposing penalty upon violation of the said Act. The formula for computing the needed energy for a year is shown below [10]:

$$Renewable\ power\ percentage\ for\ t\ \ e\ previous\ year \times \frac{Required\ GW\ \ \ for\ t\ \ e\ year}{Required\ GW\ \ \ for\ t\ \ e\ previous\ year}$$

The energy increment needs a worldwide demand for an economical, clean, and infinite sources of renewables for energy production. The population throughout the world estimated that it would increase as high as 10 billion people by 2050, which would definitely generate an exponential energy consumption as an effect. Hence, researchers and scientists promote green hydrogen as a form of energy transition in terms of shifting to renewable sources as alternatives of economic impact. Hydrogen's storage capacity is seven times higher and bigger than the current utilization of fossil fuels, hence, its density ratio to gasoline is 1:2.75 by weight and 1:0.25 by volume [11].

3. DISCUSSION

According to Gorshkov and Makarieva, energy is originated and utilized in several processes of environment and human activities constituting to extraction, conversion, transportation, and impact application as dictated by momentum theorem of thermodynamics [12].

While fundamental developments for monetary progression are always vital, there is definitely a need for technology acceleration in providing a means of achieving essential targets for energy transition. While timeline perspective can be noted and taken into account, the important consideration is the cost-efficiency of the treatment solutions, hence the integration of financial intelligence involves shifting to economical investments and therefore, lessening impediments for monetary risks. The operational framework for a decision-making involves simultaneous actions between technological capabilities and socio-economic opportunities [13]. Figure 1 shows a neurocognitive design for sustainable development judgements constituting concession and rationalization harmonizing technological innovations for increasing demands of the public on energy consumption in the future, hence, opting to energy transition using infinite resources under dictation of mass conservation, momentum theorem, and energy equation as moral standard of human ethical conduct.

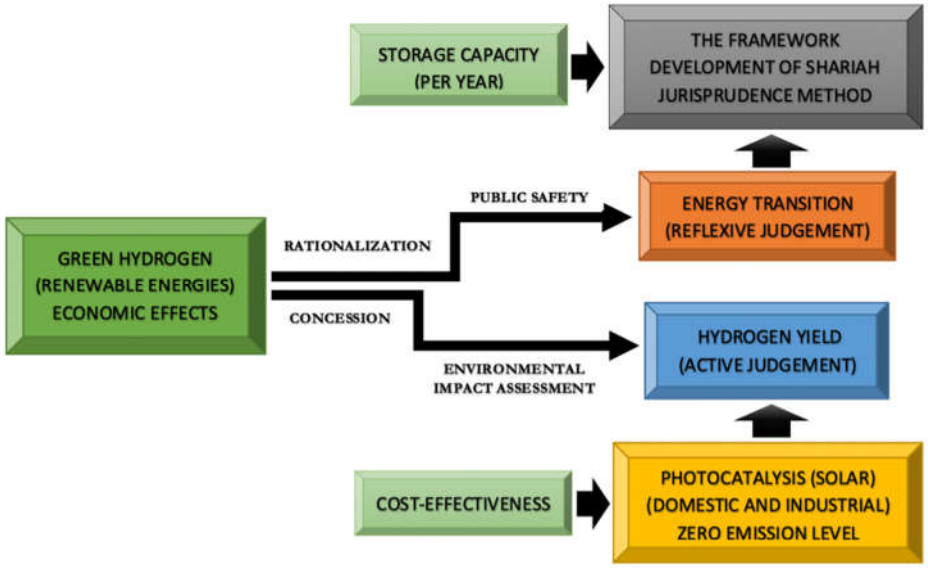

Figure 1. *The Moral Norm: Neurocognitive Design of Sustainable Development for Ethical Decision-Making*

Based on the study of Bedoui & Mansour (2015), Al-Qurubi explains Shariah as Islamic canonical law constituting both legal and moral standards in judgement comparison of human behavior. By argument of premises, not every Sharia principle is legal although all of their rulings are deemed as moral. Kamali (2008) differentiated legal principle from moral norm based on the enforceability to procedural courts since ethical conduct of humans can be an invalid premise for a legal argument. According to Ibin Ashour (2001), the Shariah is modelled using the purpose measurement of sustainability and preservation of the community system through dominance righteousness of humans. Hence, Shariah regulates ethical behavior using justice security with beneficence of the society and its environment, neutralizing the origins of corruption (economic deficits) and harm (pollution). In this concern, the Shariah jurisprudence serves as a sharp assessment tool to evaluate human actions in achieving their economic interests and safety in harmony with the objectives of a Lawgiver since this model illustration acknowledges the possible problems between sustainable development and Lawgiver's objectives [14]. Figure 2 shows the framework for Shariah jurisprudence modelling the objectives of the Lawgiver tackling energy transition as sustainable development goals.

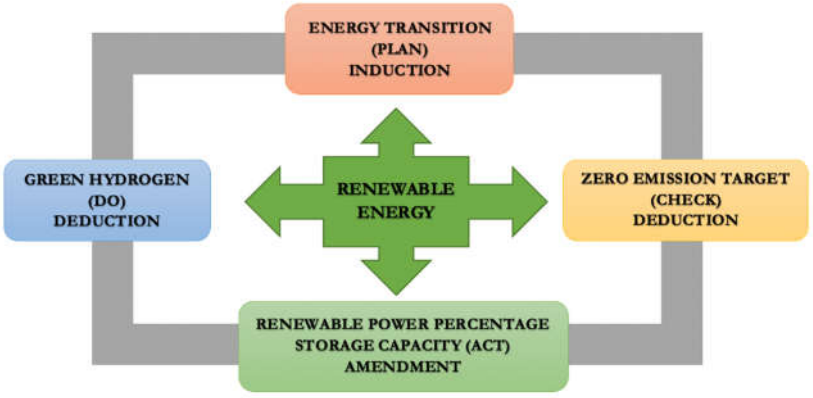

Figure 2. *The Legal System: Developmental Framework of Shariah Jurisprudence Method*

3.1 Statutory Interpretation of Legal Instruments for Commercial Transactions

There are argumentations of premises favoring and arguing with legal formalism approach on sustainable development towards green economy. Addressing problems on parliamentary system and its accompanied amendments in legislation satisfies the formalist obligation of enforcing the constitutional powers of the government. The society must feel the existence of the justice system for security ties of statutory interpretation, specifically when values and norms are emphasized for public safety as to gain righteous intuitive result. Statutory interpretation is a judicial activism process of engineering the right answer based on presumptions, rules, extrinsic materials, and written laws. It is illustrated as a hermeneutical circle since developing deeper thoughts based on provisional interpretations is inclined for a different and lucid understanding of an innovative reasoning approach. Hence, using a mathematical equation, statutory interpretation [10] is formulated and expressed as the following principles to elucidate and show that energy transition must be equivalent with sustainable development in measuring the harmonization of legal instruments towards green economy.

Based on the given statutory interpretation formula:

$$\text{ISSUE} + \text{RULES} = \text{OUTCOME} \tag{1}$$

Hence:

$$\text{RULES} = \frac{<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>-\text{MAXIMS}+\text{PRESUMPTIONS}}{\text{EXTRINSIC MATERIALS}=\text{HISTORY}+\text{DEBATES}+\text{DICTIONARIES}} \tag{2}$$

$$\text{EXTRINSIC MATERIALS} = \frac{<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>-\text{MAXIMS}+\text{PRESUMPTIONS}}{\text{RULES}} \tag{3}$$

$$\text{EXTRINSIC MATERIALS} = \frac{<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>}{\text{RULES}} \quad \frac{\text{MAXIMS}}{\text{RULES}} + \frac{\text{PRESUMPTIONS}}{\text{RULES}} \tag{4}$$

$$\frac{\text{PRESUMPTIONS}}{\text{RULES}} \quad \text{EXTRINSIC MATERIALS} = \frac{\text{MAXIMS}-<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>}{\text{RULES}} \tag{5}$$

$$\frac{\text{PRESUMPTIONS}-\text{EXTRINSIC MATERIALS}}{\text{RULES}} = \frac{\text{MAXIMS}-<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>}{\text{RULES}} \quad (6)$$

$$\frac{\text{PRESUMPTIONS}+<\frac{\text{WORDS}}{\text{CONTEXT}}\times\text{PURPOSE}>}{\text{RULES}} = \frac{\text{MAXIMS}+\text{EXTRINSIC MATERIALS}}{\text{RULES}} \quad (7)$$

$$\text{PRESUMPTIONS} + < \frac{\text{WORDS}}{\text{CONTEXT}} \times \text{PURPOSE} > = \frac{\text{MAXIMS}+\text{EXTRINSIC MATERIALS}}{\text{RULES}} \quad (8)$$

Equation (9) is shown below to explain development of energy transition to solar energies concerning human ethical activities circulating under sustainability development of contract laws in maritime carriage of goods (Hamburg Rules) pertaining to bill of lading, as well as its delivery and receipt of its obligations under Rotterdam Rules. The exhibition of energy transition is directly proportional with sustainable development as uppercase shows strong financial evidence of economic opportunities, while lowercase symbols illustrate possible sources of costs to satisfy the energy interests affecting the laws of the environment, and thus, is limited due to restrictions on enforcing of legal principles and its regulations vary per country, hence, not a universal standard that can be evaluated as comparison to another territorial jurisdiction by means of environmental law and its economic benefits.

$$\Lambda + < \text{K} \times \beta > = \frac{\tau + \alpha}{\theta} \quad (9)$$

Where:

$\Lambda = Uppercase\ lambda$
$\beta = Uppercase\ beta$
$\alpha = Lowercase\ alp\ \ a$
$\theta = Lowercase\ t\ \ eta$
$K = Uppercase\ kappa$
$\tau = Lowercase\ tau$

Since:

$$\Lambda = \frac{\tau + \alpha}{\beta} \frac{\partial\,(K)}{\partial\,(\theta)} \quad (10)$$

Furthermore, green economy, in relation to statutory interpretation, exhibits relationship of equal ratio between energy transition and sustainable development. Equations (11) to (21) show that solar power is generated when renewable energy technology is used and employed in relation to sustainable development.

$$\text{GREEN ECONOMY} = \frac{HAMBURG\ RULES + HAGUE\ RULES}{LEGAL\ INSTRUMENTS} \frac{\partial\,(\frac{SOLAR\ ENERGIES}{CISG})}{\partial\,(ROTTERDAM\ RULES)} \quad (11)$$

Since:

$$\Lambda = \frac{\partial(K)/\beta}{\partial(\theta)/\tau + \alpha} \quad (12)$$

$$\text{GREEN ECONOMY} = \frac{\partial\left(\frac{SOLAR\ ENERGIES}{CISG}\right)/LEGAL\ INSTRUMENTS}{\partial(ROTTERDAM\ RULES)/HAMBURG\ RULES + HAGUE\ RULES} \quad (13)$$

Hence:

$$\Lambda = \frac{\partial \ln \beta}{\partial \ln \theta} \quad (14)$$

$$\text{GREEN ECONOMY} = \frac{\partial \ln LEGAL\ INSTRUMENTS}{\partial \ln\ ROTTERDAM\ RULES} \quad (15)$$

Since:

$$\text{ISSUE} + \text{RULES} = \text{OUTCOME} \quad (16)$$

$$\text{ISSUE} = \text{RULES} \quad \text{OUTCOME} \quad (17)$$

Thus:

$$\Delta = \Lambda - \text{X} \quad (18)$$

$$\text{ZERO EMISSION TARGET} = \text{GREEN ECONOMY} \quad \text{ENERGY TRANSITION} \quad (19)$$

Where:

$X = Uppercase\ c\ \ i$
$\Delta = Uppercase\ delta$

Therefore:

$$\text{ISSUE} + \text{RULES} = \text{OUTCOME} \quad (20)$$

$$\text{GREEN ECONOMY} = \text{ZERO EMISSION TARGET} + \text{ENERGY TRANSITION} \quad (21)$$

3.2 Development of Mass Conservation based on Dimensionless Ratios

The first law of thermodynamics, dictating the promotion of sustainable development as concession, states that the natural resources must not be depleted nor completely destroyed for exhibition of legal and moral norm of hydrogen production as infinite source of energy demands showing natural proliferation of ethical human activities towards and meeting the mitigation of Lawgiver's objective for compensation, thus, neutralizing the decline of economic deficit as shown in Equations (22) to (29), and reduction of greenhouse gas emissions as elucidated in Equation (27). Equations (22) to (24) explain the relationship of variables in Ideal Gas Law of mass conservation. In relation to that, Equation (25) shows the dimensionless relationship of pressure based on Euler number, while, Equation (26) illustrates thermal conductivity pertaining to viscosity or resistance of hydrogen production to promote renewable energy according to energy equation of the third law of thermodynamics [15].

$$C_{A_s} = \frac{P_{A_S}}{RT} \quad (22)$$

$$PV = nRT \quad (23)$$

$$M = \frac{n}{V} \quad (24)$$

$$Eu = {}^{P}\!/_{\rho v_\infty^2} \quad (25)$$

$$L = \frac{k}{k_e T} \quad (26)$$

$$C_{A_s} = \frac{(Eu\rho v_\infty^2)_{A_S} k_e L}{Rk} \quad (27)$$

$$nRT = V(Eu\rho v_\infty^2)_{A_s} k_e L \quad (28)$$

$$V = \frac{nRT}{(Eu\rho v_\infty^2)_{A_S} k_e L} \quad (29)$$

Therefore, for targeting zero level emission of greenhouse gases, the mass diffusivity of non-renewable energies can be utilized using Ideal Gas Law of Mass Conservation, and its mathematical argument is shown below:

$$C_{A_s} = \frac{(Eu\rho v_\infty^2)_{A_S} k_e L}{Rk} \quad (30)$$

3.3 Energy Equation Development for Renewable Energies

Energy transition is developed based on the third law of thermodynamics as sustainable development goals towards storage capacity based on required renewable energy percentage of Renewable Energy (Electricity) Bill 2000 (Cth) as legal standard subject to enforceability of distributional hydrogen justice of its production for usage of society. Equations (31) to (50) demonstration energy equation development based on hydrogen production, following the laws of thermodynamics, in harmony of energy (electricity) capacity based on renewable source.

The following are variables in principles of thermodynamics:

$$T = \frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{nR} \quad (31)$$

$$C_{A_s} = \frac{(Eu\rho v_\infty^2)_{A_S} k_e L}{Rk} \quad (32)$$

Meanwhile, the relationship for electricity equation in terms of resistance (Ω) is illustrated below:

$$R\ (\Omega) = \frac{V^2\ (volts)}{P\ (watts)} \quad (33)$$

$$P = \frac{V^2}{R} \tag{34}$$

Furthermore, the potential energy function in relation to Lennard-Jones parameter is expressed below:

$$\mu = 2.6693\ x\ 10^{-6}\ \frac{\sqrt{MT}}{\sigma^2 \Omega_\mu} \tag{35}$$

$$\Omega_\mu = 2.6693\ x\ 10^{-6}\ \frac{\sqrt{MT}}{\sigma^2 \mu} \tag{36}$$

The following energy variables exhibit the equation of watts:

$$\mu = 2.6693\ x\ 10^{-6}\ \frac{\sqrt{MT}}{\sigma^2 \Omega_\mu} \tag{37}$$

$$\mu = 2.6693\ x\ 10^{-6}\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{nR}}}{\sigma^2 \Omega_\mu} \tag{38}$$

The formulation of energy equation expressed as gigawatt-hours (GWh) for the storage capacity relationship required in renewable power percentage is illustrated below:

$$\mu = 2.6693\ x\ 10^{-6}\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{nR}}}{\sigma^2 \Omega_\mu}\ x\ 10^9 \tag{39}$$

$$\mu = 2.6693\ x\ 10^{3}\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{nR}}}{\sigma^2 \Omega_\mu} \tag{40}$$

$$R = \frac{8.3145\ J}{mol\ K} \tag{41}$$

$$R = \frac{8.3145\ kg\frac{m}{s^2}}{mol\ K} \tag{42}$$

$$R = \frac{8.3145\ kg\ m}{mol\ K\ s^2} \tag{43}$$

Therefore:

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{n\frac{8.3145\ kg\frac{m}{s^2}}{mol\ K}}}}{\sigma^2 \Omega_\mu} \quad (44)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L}{n\frac{8314.5\ g\frac{m}{s^2}}{mol\ K}}}}{\sigma^2 \Omega_\mu} \quad (45)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L\ mol\ K\ s^2}{n8314.5M}}}{\sigma^2 \Omega_\mu} \quad (46)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{M\frac{V(Eu\rho v_\infty^2)_{A_S} k_e L\ mol\ K\ s^2}{n8314.5M}}}{\sigma^2 \Omega_\mu} \quad (47)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{8314.5M\ V\left(Eu\rho v_\infty^2\right)_{A_S} k_e LKs^2}}{\sigma^2 \Omega_\mu} \quad (48)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{8314.5M\ V\left(Eu\rho v_\infty^2\right)_{A_S} k_e LK}}{\sigma^2 \Omega_\mu} x\ s \quad (49)$$

$$\mu = 2.6693\ x\ 10^3\ \frac{\sqrt{8314.5MV\left(Eu\rho v_\infty^2\right)_{A_S} k_e LK}}{\sigma^2 \Omega_\mu} x\ 0.00028\ \ r \quad (50)$$

4. CONCLUSION AND RECOMMENDATIONS

Environmental issues on climate change generates tremendous problems in sustainable development. Green economy offers great opportunities in sustainable development in strengthening the economic impacts of not only industrial modernization, but also domestic urbanization towards utilization of hydrogen production for cost-efficiency of storage capacity concerning renewable power percentage. Legal instruments for harmonization of international contract are utilized for the purpose of monetary intelligence, starting from Hague to Hamburg Rules, and extending its amendments to Rotterdam Rules in connection with CISG and INCOTERMS for receipt and delivery of goods, served as a legal means to engineer a jurisprudence method towards economic benefits of energy transition in harmony with Renewable Energy (Electricity) Bill 2000 (Cth). Thus, developing ethical norms from concession with interpretation of statutory law equation creates rationalization of the 2050 planning concerning energy transition favoring hydrogen production for solar energies through development of storage capacity for electricity consumption since this would secure zero emission target for reduction of greenhouse gases advocating green monetary success against climate change.

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