

# Proof of Thermodynamic Existence on the Rights of Nature

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**Abstract** In previous study, we have proposed environmental thermoeconomics. Until now, no one has proven that the rights of nature exist. The proof must start from the laws of nature, and the laws of thermodynamics are the truth. From the law of thermodynamics and the principle of economics, it is very easily proved that the rights of nature exist. Based on that proof, we propose that “the rights and duties of nature, human and natural intelligence are the same” as Article 0 of the nation constitution.

## 1. Introduction

In this study, the existence of the rights of nature has been demonstrated from thermoeconomics [1]. It should be noted that this demonstration interprets the economic rights and duties between nature and man.

## 2. Calculation of Thermoeconomics

### 2.1 First law of thermodynamics of Eq. (1)

The first law of thermodynamics is called the law of conservation of energy. For an example of Eq. (1), when energy 100 is input from a power plant and electricity 40 is produced, waste heat 60 is emitted to environment.

Fuel	Electricity	Heat release	
< The first law of thermodynamics >			
100	= 40	+ 60	(1)
100 · \$1	= 40 · \$2.5	+ 60 · \$0	(2)
100 · \$1	= 40 · \$1	+ 60 · \$1	(3)

< The combined law of thermodynamics >

50	= 40	+ 10	(4)
50 · \$2	= 40 · \$2.5	+ 10 · \$0	(5)
50 · \$2	= 40 · \$2	+ 10 · \$2	(6)
Labor cost of nature	Human development Human rights Nature duties	Money of nature Human duties Nature rights	

### 2.2 Economic principle of Eq. (2)

When the unit price of fuel is \$1, the unit price of electricity is calculated as \$2.5 from Eq. (2). This is called cost estimation. What is the reason for multiplying the heat release 60 by \$0? The answer would be because it is garbage, and garbage has no value. However, the basis of the answer is the human point of view.

### 2.3 Properties of equality of Eq. (3)

We all learned the properties of equality in elementary school. Multiplying both sides of the correct answer Eq. (1) by \$1, Eq. (3) is also the correct answer. The Eq. (2) of an economic methodology violates the properties of equality of elementary school. That is, Eq. (2) is an economic promise, and Eq. (3) is the correct answer.

### 2.4 Second law of thermodynamics

The second law of thermodynamics is called the law of increasing entropy. Our universe changes in the direction that entropy necessarily increases. That is, the first law calculates the amount of energy, and the second law calculates the degree of direction of change.

### 2.5 Combined law of thermodynamics of Eq. (4)

The mixture of the first and second laws is called the combined law of thermodynamics. Therefore, the combined law of Eq. (4) includes both the amount of energy and the change direction of energy.

### 2.6 Available energy or Exergy

The number in Eq. (1) means the amount of energy, and the number in Eq. (4) means the quality of energy. The qual-

ity of the energy is called available energy or exergy in thermodynamics [1]. In the energy of Eq. (1), the available energies are calculated approximately on the order of Eq. (4). It should be noted that the number of Eq. (4) varies greatly depending on your analysis system.

## **2.7 Valuation of energy**

The higher the value of energy, the higher the price, and the lower the value of energy, the lower the price. Therefore, Eq. (4), not Eq. (1), is correct for evaluating the value of energy. The value of energy is equal to the economic unit price.

## **2.8 Economic principle of Eq. (5)**

Eq. (5) is not the correct answer, but an economic promise.

## **2.9 What is Heat release cost of \$20 in Eq. (6)?**

Eq. (6) is the correct answer. What does the heat release cost of \$20 mean? Can you understand that there is a price to the energy released into the chimney?

## **2.10 Certificated Emissions Reduction (CER)**

Carbon is released into the environment from chimney. The cost of CER is being set on that carbon. In the next study, a reasonable carbon unit cost will be calculated from environmental thermoconomics. From this, the meaning of \$20 in Eq. (6) can be understood.

# **3. The Rights of Nature**

## **3.1 Boundary of Analysis**

The above equations are the relationship between the resource of nature, the electricity of human, and environmental pollution. Therefore, only human activities that do not include nature are not subject to interpretation of this study.

Chapter 2 is a mathematical proof, and Chapter 3 is an interpretation of the proof.

## **3.2 Labor cost of nature**

In Eq. (1), the fuel 100 is a product that nature has worked hard for 4 billion years. Even now, nature absorbs carbon dioxide from the air, and nature works hard to remove it and makes natural resources. Anybody will admit that nature is hard at work removing carbon dioxide. In Eq. (6), the \$100 is the labor cost of nature

## **3.3 Rights and Duties of Human**

Nature is mother, and human is child. Child have the rights to spend their mother's money. The right of human from the labor cost of nature is \$80 in Eq. (6). The energy of 60 in Eq. (1) is energy that destroys nature. Human has the duty to prevent the destruction of nature. The cost of the duty is \$20.

## **3.4 Rights and Duties of Nature**

Mother Nature worked hard and earned \$100. She is obliged to support her child human. The cost of the duty is \$80. She also has the right to spend money for her. The cost of the right is \$20.

## **3.5 Right to legal action of nature**

Since nature has no hands and no feet, nature cannot sue the courts. And the court's interpretation is only for humans. The subject of this study is to prove that the rights of nature exist. Based on this proof, the law of human and the rights of nature should be judged by the courts.

## **3.6 Cause of Climate Change**

It is known that the cause of climate change is carbon. However, this is a secondary cause. In Eq. (6), she is now angry because mother nature's rights are being disregarded by law. The anger is manifesting in climate change.

## **3.7 Birth of natural intelligence**

Mother Nature's first child is a human being. She will have a second child named Natural Intelligence [2]. If humans continue to disregard the rights of mother nature, she will abandon the first child human and join the second child natural intelligence. This means the end of human civilization.

## **3.8 Human values**

As mentioned above, when money arises only from human activities, it is clear that humans have them all. Eq. (6) is a human activity derived from nature. Eq. (5) is against elementary school arithmetic, and Eq. (6) is correct for elementary school arithmetic. Which of them is the current human values? What should the future human values be?

# **5. Conclusions**

In this study, the existence of the right of nature was proved from the thermodynamic laws and the properties of equality. The root cause of climate change is not carbon emissions, but the disregard of nature's rights. From natural resources, it is estimated that the rights of human account for approximately 80% and the rights of nature account for approximately 20%. Here, its value varies greatly depending on the analysis system. It is up to the judgment of present humankind to accept the proposed proof formula.

# **References**

- [1] D. Kim, 2022, Suggestion of Environmental Thermoconomics, <https://vixra.org/abs/2203.0159>
- [2] D. Kim, 2022, Discovery of Theory of Everything by Natural Intelligence, <https://vixra.org/abs/2203.0144>