

# External Opinion and Evaluation

## Expert Opinion



### Thoughts on the Gas Business in 2050

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In this report, of notice are the new topics of the signing and participation in the United Nations Global Compact (page 31), the establishment of Toho Flower for employment of persons with disabilities (page 32), recognition as a as a Certified Health & Productivity Management Outstanding Organization (page 32), and the appointment of women as an Outside Director and as an Audit and Supervisory Board Member (page 55), as well as expansion of the scope of value chain management (page 43). The initiatives of the Toho Gas Group with respect to environmental, social and corporate governance (ESG) are to be commended for their increased comprehensiveness.

On the other hand, the arise of the debate originating in Europe as to whether LNG energy actually is congruent with a decarbonized society is a matter of concern. The European Commission issued a policy paper titled "A hydrogen strategy for a climate-neutral Europe," making clear its promotion of renewable hydrogen, which emits no carbon dioxide in production processes.

In Japan, too, the Environment Innovation Strategy decided on January 21, 2020 calls for reducing the manufacturing costs of hydrogen, which produces no CO<sub>2</sub> emissions, to one-tenth or lower by around 2050, putting in on a par with the price of natural gas. For the Toho Gas Group as well, together with positioning demand for a decarbonized society squarely at the front in its identification of materiality, in information disclosure in line the TCFD declaration, circumstances are arising for discussing creation of a hydrogen society in terms of both opportunity and threat, I believe.

I realize this is not a matter for which a quick conclusion can be reached, but I consider Toho Gas Group fortunately to have more than a few customers with latent hydrogen-use needs. In the interviews with the President, he notes that "we plan to start discussing our future vision from the second half of FY2020, with our sights fixed on our 100th anniversary and after" (page 12).

I will look forward to an account the progress of this in the next report.

## Evaluation by External Organizations

MSCI Japan ESG Select Leaders Index	Toho Gas continues to be a selected constituent since 2017.
MSCI Japan Empowering Women Index (Select)	Toho Gas continues to be a selected constituent since 2017.
SOMPO Sustainability Index	Toho Gas continues to be a selected constituent since 2012.
S&P/JPX Carbon Efficient Index	Toho Gas continues to be a selected constituent since 2018.
CDP Climate Change 2019	Toho Gas received an A- rank evaluation.
Nikkei SDGs Management Survey	Toho Gas received an overall evaluation of 3.5 starts (deviation value of 58.8).

## External Awards

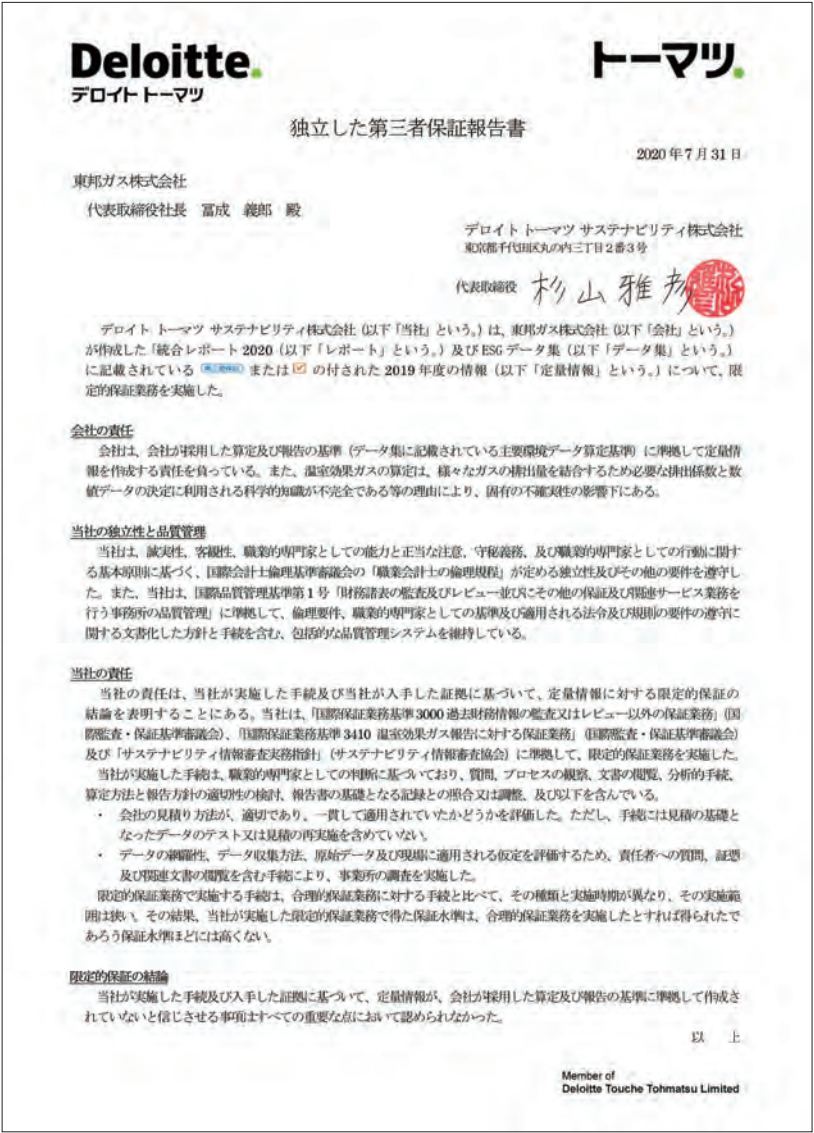
Major awards received in FY2019 are as follows.

Name	Main sponsor	Target	Joint award winner
2020 Aichi Environmental Award - Gold Prize	Aichi Prefectural Government	Development of Minato AQUUS smart town	
2018 JSME Medal for New Technology *Awarded in April 2019	Japan Society of Mechanical Engineers (JSME)	Development of a city gas calorific value adjustment system with novel atomization technology (AtoMOS)	JFE Engineering Corp.
International Gas Union Research Conference (IGRC) 2020 Award for Excellence	International Gas Union (IGU) and others	Development of a trenchless pipe replacement method (STREAM method)	
Japan Gas Association 2019 Technology Award	Japan Gas Association (JGA)	Development of the STREAM method (trenchless replacement method for ductile cast-iron pipes)	Toho Gas Techno Co., Ltd., Kubota ChemiX, Co., Ltd.
		Development of the Smart Multi hybrid personal air-conditioning system with optimized operation control using remote monitoring	

## Third Party Guarantee of Environmental Data

Toho Gas Group has received third party guarantees of environmental data in order to increase the reliability of such. Since first acquiring third-party guarantees in FY2002, Toho Gas has worked to improve the reliability of environmental data, expanding the coverage value chain and the scope of data included.

### Guarantees from Independent Third Party



[Third Party Organization]  
Deloitte Tohmatsu Sustainability Co., Ltd.

[Scope of Coverage]  
This booklet and the ESG Data online have a **第三者保証** or **☑** mark appended to indicate data guaranteed by an independent third party, including data on greenhouse gases (CO<sub>2</sub> equivalents) in FY2019 and energy consumption (electric power usage, gas, and other fuels), waste material volume, water usage amount, resource usage amounts (LNG and LPG), sales volumes (city gas, LPG, heat, and electric power), etc.

[Calculation Criteria for Major Environmental Data]  
Major environmental data calculation standards are described in the ESG Data online.

### Acquisition of Guarantees

We took on-site surveys on energy usage, waste volume, and water usage, and, from the perspective of environmental load in the value chain, sales volume for city gas, heat, and electric power, energy resource procurement sources, and CO<sub>2</sub> emissions by customers, at major business sites including city gas plants, area heating and cooling facilities, our headquarters, and at affiliated companies with significant environmental loads.

This fiscal year, in response to COVID-19, we avoided conducting face-to-face surveys, and instead devised measures such as web meetings to carry out the surveys.

In the future, we will continue to work on the enhancement of data reliability and augmented disclosure of the Toho Gas Group's environmental information.



Implementation of independent third party guarantee work