May 8, 2026
Cosmo Energy Holdings Co., Ltd.
Cosmo Oil Marketing Co., Ltd.
ELEMENTS, Inc.

Cosmo Oil Marketing Begins Deployment of AI-Powered Automated Refueling Authorization and Monitoring System “AiQ PERMISSION” at Self-Service Service Stations

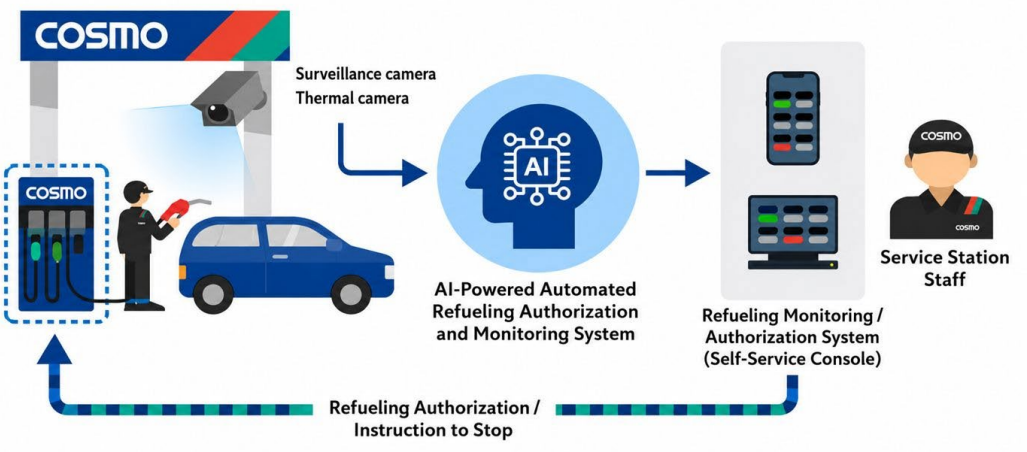
Cosmo Oil Marketing Co., Ltd. (hereafter, “Cosmo Oil Marketing”), a subsidiary of Cosmo Energy Holdings Co., Ltd., is pleased to announce that it will begin rolling out “AiQ PERMISSION,” an AI-powered automated refueling authorization and monitoring system for self-service service stations currently under development with ELEMENTS, Inc. (hereafter, “ELEMENTS”), at self-service service stations nationwide. The system will enable AI to take over some of the tasks currently performed by service station employees.

1. Overview of the AI-Powered Automated Refueling Authorization and Monitoring System "AiQ PERMISSION"

“AiQ PERMISSION” is a system in which AI analyzes camera footage to automate safety checks and detect improper refueling during refueling operations at self-service service stations. Development began in 2018, and after passing the technical standards conformity test, the system has been undergoing demonstration trials at multiple service stations. Using camera footage of customers and vehicle conditions, the AI determines whether refueling can proceed and grants permission if no unsafe behavior is detected. If any unsafe behavior is identified, the system either alerts staff or stops the refueling process.

In addition to reducing staffing requirements at self-service service stations and allowing employees to focus on higher-value tasks, the system also further enhances safety by helping prevent accidents and incidents caused by human error.

▪Overview of System Operations



▪Benefits of the System

・Ensures a high level of safety

“AiQ PERMISSION” continues to monitor even after refueling authorization has been granted. For example, the system ensures a high level of safety by strengthening monitoring that would be difficult for human operators alone to perform continuously, such as continuously detecting ignition sources both before and during refueling.

・Greater productivity through improved operational efficiency

The AI-powered automated refueling authorization and monitoring system makes it possible to automate the refueling authorization process. Employees only need to respond when the AI detects unsafe behavior, allowing them to focus on other tasks and work more productively and efficiently.

**For information on the development background and details of the on-site demonstration trials, please refer to Appendices 1 and 2.*

2. Future Implementation Plans

In 2024 demonstration trials, “AiQ PERMISSION” passed testing conducted by the Hazardous Materials Safety Techniques Association to verify that the pilot system conformed to technical standards, which is a prerequisite for implementation. From April 1, 2026, testing commenced to verify that the installed system meets the specifications and functions required of a monitoring system using a conditionally automated control device, and that a framework for system operations and management has been properly established.

Once “AiQ PERMISSION” obtains a Certificate of Technical Compliance Verification in accordance with relevant laws and regulations, Cosmo Oil Marketing will begin introducing it at self-service service stations nationwide.

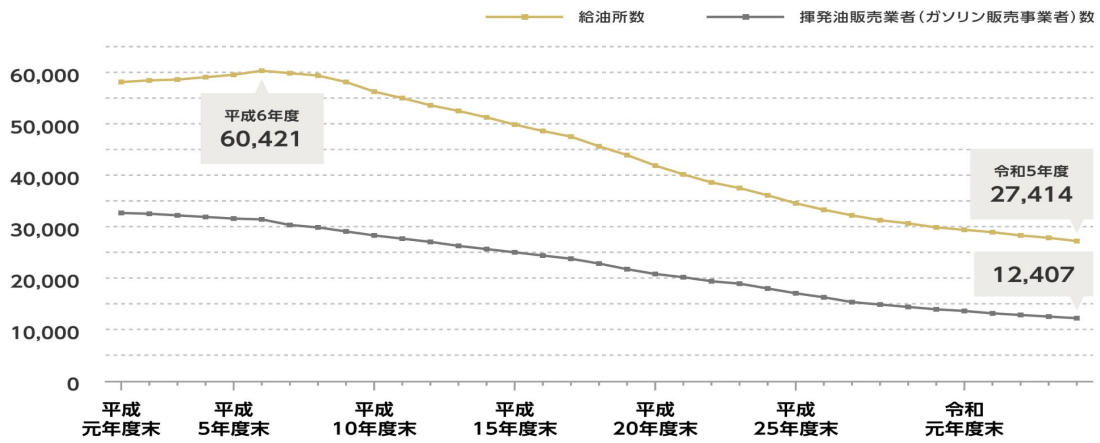
(End)

Appendix 1

▪Development Background

The number of refueling stations (service stations) in Japan peaked at 60,421 at the end of FY1994 and has been declining ever since, dropping to less than half over the past 30 years.

Trend in the Number of Gasoline Retailers and Refueling Stations (Results for 2024)
Reference: Agency for Natural Resources and Energy,
https://www.enecho.meti.go.jp/category/resources_and_fuel/distribution/hinnkakuhou/250730.html



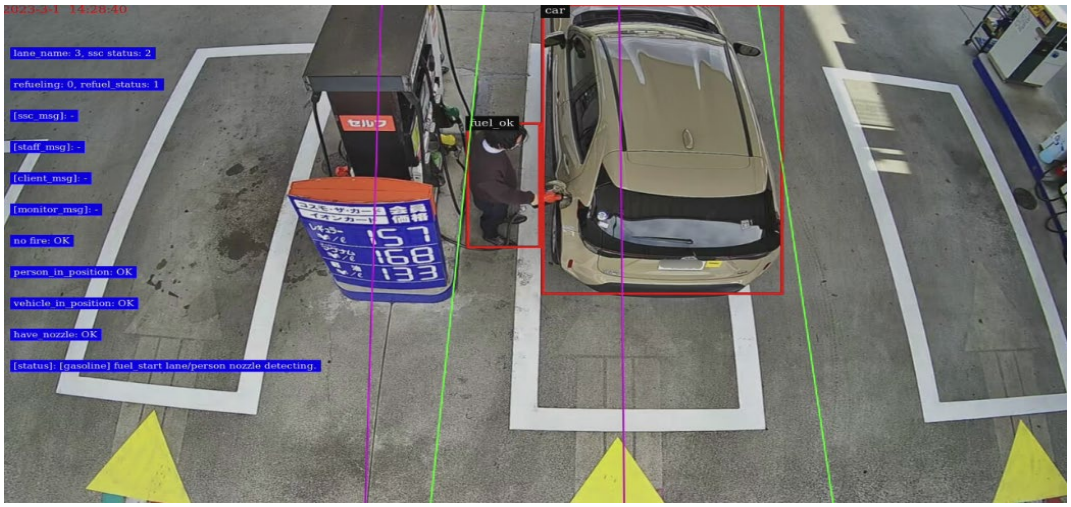
The main factors behind this trend include the decline in demand for fuel oil, as well as, in recent years, the closure of service stations due to labor shortages and a lack of successors. In particular, in depopulated areas, such closures have been regarded as a “regional infrastructure crisis” and have become a major social issue. To address these challenges, the Fire and Disaster Management Agency of the Ministry of Internal Affairs and Communications launched discussions in 2021 through the “Study Group on Smart Safety and Other Measures at Hazardous Materials Facilities” on the use of AI and other technologies to support refueling authorization and monitoring at self-service service stations. The Study Group continued to meet over the following five years, and in March 2026, it compiled the “Report of the Study Group on Smart Safety and Other Measures for Hazardous Materials Facilities.”

Against this backdrop, since the lifting of the ban on self-service refueling in 1998, safety regulations have required that refueling authorization and monitoring at self-service service stations be carried out by human operators. However, following regulatory reforms on February 27, 2026, these requirements were relaxed, allowing the introduction of automated control devices that meet certain conditions.

Appendix 2

▪Overview of Demonstration Trials

1) Standard Service Stations



2) Service Stations in Snowy Regions

Cosmo Oil Marketing has conducted demonstration trials at multiple service stations and confirmed that the system can be deployed across service stations of different scales and featuring various lane and camera installation configurations. The Company has also carried out trials in snowy regions and demonstrated that stable operation is possible even under conditions where visibility is poor to the naked eye.

Reference: AI-powered Automated Refueling Authorization and Monitoring System “AiQ PERMISSION” Refueling Scene Video

https://elementsinc.jp/aiq-permission/

Appendix 3

Comments from Representatives of Each Company

▪Cosmo Oil Marketing Co., Ltd.

Cosmo Oil Marketing regards service stations as a vital part of the infrastructure supporting local communities and is advancing initiatives to ensure their sustainability while creating new value. To date, through efforts such as developing a new hybrid service station format in collaboration with SEVEN-ELEVEN JAPAN CO., LTD. and effectively utilizing former service station sites, we have been working to expand the role of service stations and create new possibilities.

As part of these efforts, we have jointly developed “AiQ PERMISSION,” an AI-powered refueling authorization support system, together with ELEMENTS. Designed with safety as the highest priority, the system uses AI to support refueling authorization, helping to streamline service station operations and improve business continuity.

In particular, in regions where labor shortages are becoming increasingly severe, we believe that introducing this system will be an effective way to ensure the sustainable operation of service stations.

Going forward, Cosmo Oil Marketing will continue to pursue both safety and convenience while taking on the challenge of creating new value for service stations rooted in communities, thereby contributing to regional development.

■ ELEMENTS, Inc.

The closure of service stations in depopulated areas—or the shortening of their operating hours—due to labor shortages and a lack of successors has become a major issue in terms of social infrastructure. “AiQ PERMISSION” was developed to address this challenge.

By enabling AI to handle monitoring and refueling authorization decisions, staff no longer need to remain focused on monitor screens and can instead devote more time to customer-facing activities that strengthen relationships, such as car washing, customer service, and consultative sales. Even in areas where hiring staff is difficult, service station operations can be maintained while improving both customer satisfaction and profitability.

What AI replaces is not “people’s jobs,” but rather tasks that people did not need to be doing in the first place. What is needed now is not simply a temporary response to labor shortages, but a redefinition of work itself.

Our message to service station operators is simple: This is not just a labor-saving solution. AI is a means of restoring service stations to places where individual employees can engage directly with customers while taking pride in their work. We remain committed to ensuring that as many service stations as possible continue to serve their communities and to supporting the long-term stability of Japan’s energy supply.