

Evaluation of the Electronic Sales System in the Fuel Distribution Industry

Sector Studies

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Introduction

The Petroleum Industry Association (PETDER), the leading fuel distribution industry NGO in Turkey, and PwC Turkey, are carrying out research and review activities within the framework of PETDER's mission*.

The industry contributes greatly to the Turkish economy with its more than 100 distributors, more than 100 storage facilities and approximately 13,000 dealers which provide service 24/7 across the country. Moreover, when we consider the span of an end user's portfolio and the public income the industry provides, we can see the industry has a large set of stakeholders.

In this context, as a 4th study, the effect of the Electronic Sales System in the Fuel Distribution Industry in Turkey was evaluated; the benefits and the costs of the system on Turkish economy, users, dealers, and distribution companies are displayed in this report.

Along with the publicly available data sets (EMRA, TURKSTAT, etc.) information from players in the industry and other NGOs was used for analysis and examinations in the report. Figures obtained in quantitative and qualitative analyses are shared here as well as certain assumptions with the aim of informing the reader.

**PETDER advocates proactively for improvement in all aspects of the petroleum industry and carries out research and development activities to produce relevant, reliable and objective information which can be shared to shape industry policies and strengthen its advocacy role.*



Electronic Sales System in Turkey

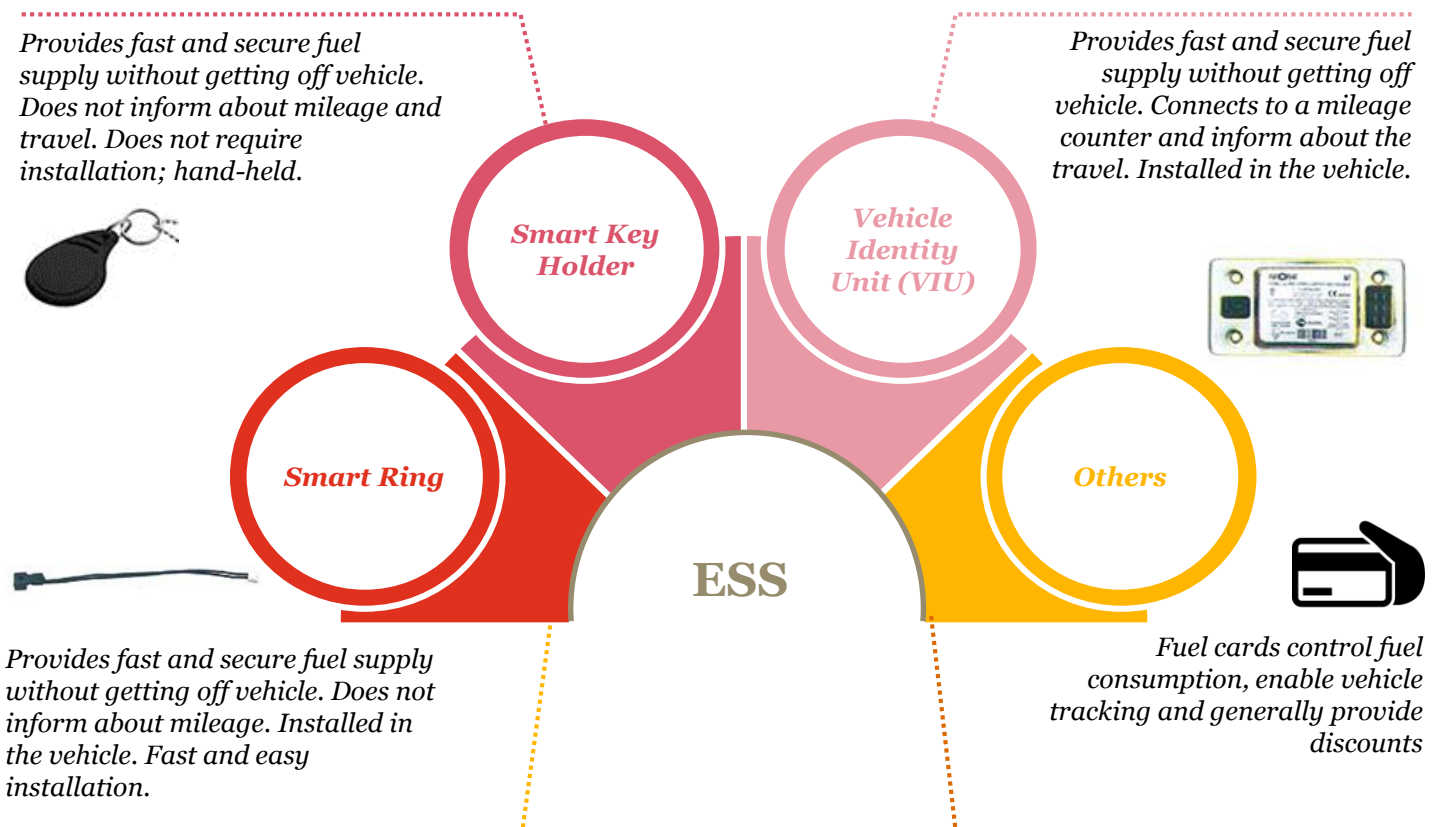
In Turkey, Electronic Sales Systems (ESS) is a widely used technology that provides services to company fleets in various industries recently. These systems allow vehicles using ESS to buy fuel more efficiently and in a traceable manner by means of infrastructure installed in contracted fuel stations.

I What is an Electronic Sales System

An electronic sales system is a fleet management system which facilitates companies' fuel purchases from the stations of the contracted distribution companies. A vehicle with identification system can purchase fuel from a station without making any cash or card payment, and without a receipt or an invoice. In addition, it facilitates vehicle tracking by collecting electronically filling, invoice, and mileage indicator information. Collective invoice transaction takes place between the distribution company and the system user at certain periods.

II Types of Electronic Sales Systems

Radio-Frequency Identification (RFID) which is a tool under the electronic sales systems varies among distribution companies. The three most widely used types are as follows:



Benefits of ESS

There are several benefits of ESS for fuel distribution industry players, fleets as customers, as well as national economy.

- Approximately TL 20 billion market size of ESS
- Cost advantage for the industries that use fuel as an input (e.g. Transportation, logistic, construction, courier etc.)
- Discounts to several sectors thanks to competition in the industry
- Decrease in invoice trade
- Prevention of undeclared fuel use
- Faster transaction
- Opportunity of enjoying discounts for SME with low number of vehicles

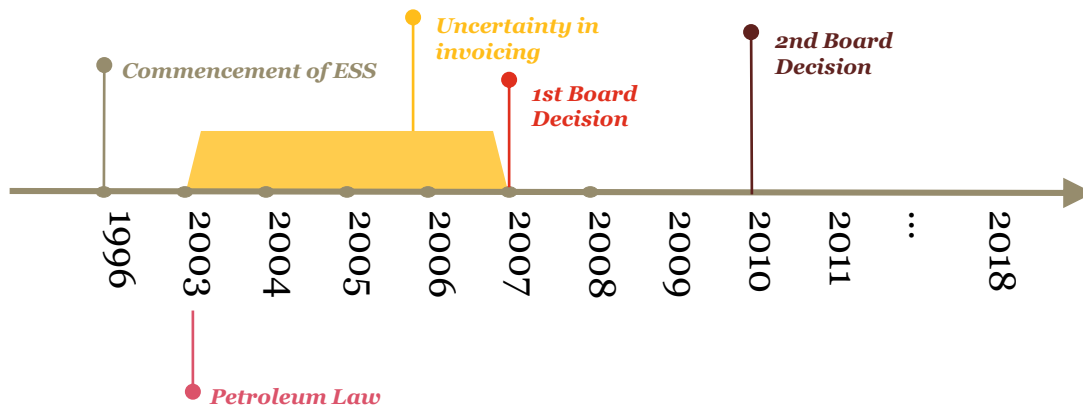
- Ability of control and classification of fuel costs
- Elimination of the need of credit card, cash transaction, receipt, and invoice
- Cost advantage provided by discounts
- Ability of automatic mileage tracking, ability of recognition of fuel type, and prevention of non-tank filling
- Automatic information receiving from pump
- Regular monthly reporting
- Ease of inspection/control
- Transparency
- Ease of accounting-invoice transactions



- Opportunity to participate in public tenders
- Sustainable growth via loyal fleet customers
- Innovative image & ease of marketing
- Increase in retail fuel sales
- Opportunity to take part in one of the few competitive areas of the industry

- Sustainable growth via loyal fleet customer
- Ease of accounting
- Technical support and marketing provided by distribution companies
- Decrease in net working capital
- Elimination of debt collection concern
- Increase in non-fuel sales

Development of ESS in Turkey



- ESS was introduced to the industry in 1996 by Shell as an operational requirement of a logistics distribution company and started to be used in Turkey.
- At the beginning, vehicle identification tools were rented to the customers to ensure operational efficiency. Later, ESS induced competition via provided discount rates.
- With the board decision no. 1088 coming into force in 2007 (1st Board Decision), distribution companies had the right to sell fuel and invoice through dealers to end customers.
- In 2010, financial intermediaries which steered the ESS in the industry entered the market pursuant to the EPDK decision no. 2870 (2nd Board Decision). A financial intermediary which does not purchase/sell fuel and directly charges the fuel and discount costs to the customer is the company between the distribution company and the customer. These companies are intermediaries that implement the contract/invoice process between the two parties. Today, generally, electronic catering sales companies, industrial distributors and dealers act as intermediaries. The entry of financial intermediaries in the industry increase the competition in discount rates and the coverage of electronic sales systems.
- The discounts in the industry are realized in percentage in accordance with the requests of the regulations (public tender) and customers. This situation causes fluctuations in integrated margin of petroleum and products as well as prevention of the adequately adjustment of integrated margins parallel to changes in the costs and inflation. In this content, a problem regarding the division of the margin between the dealer and the distributor arises.

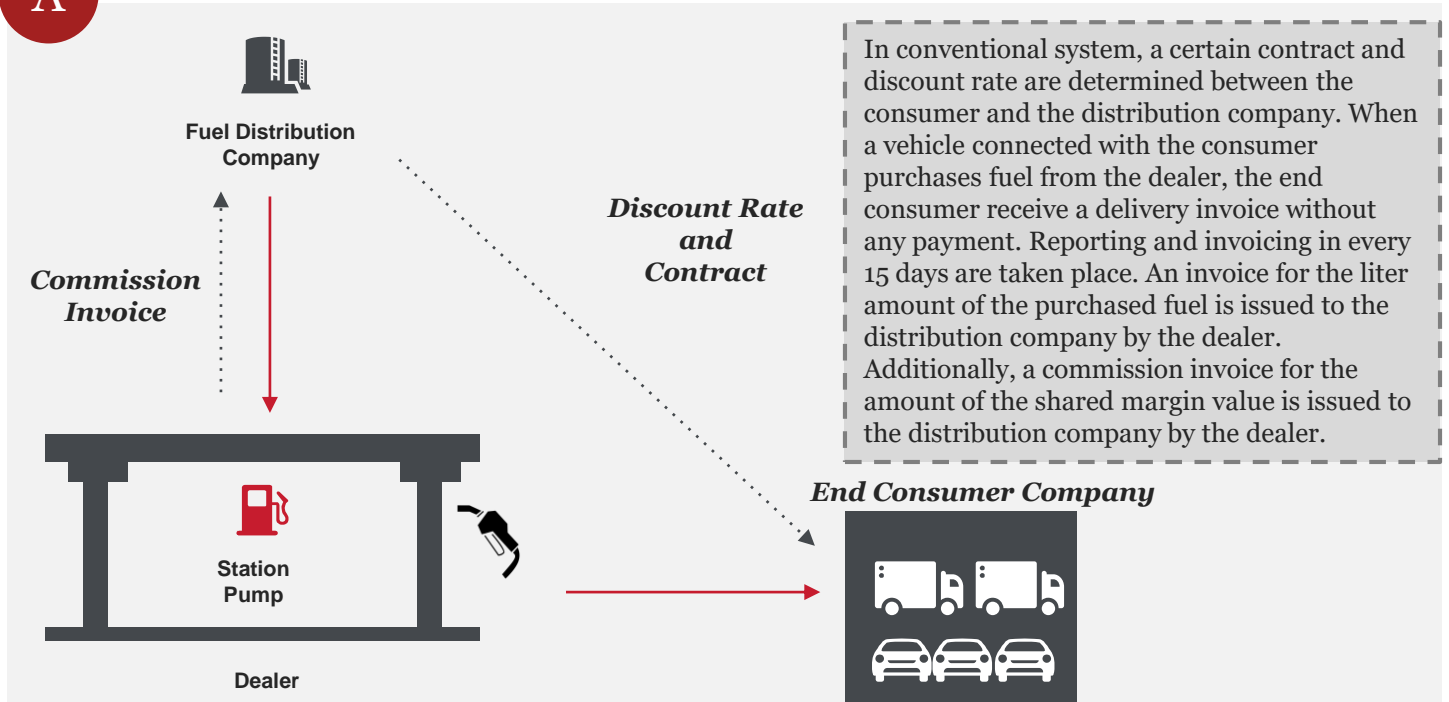
Global Examples



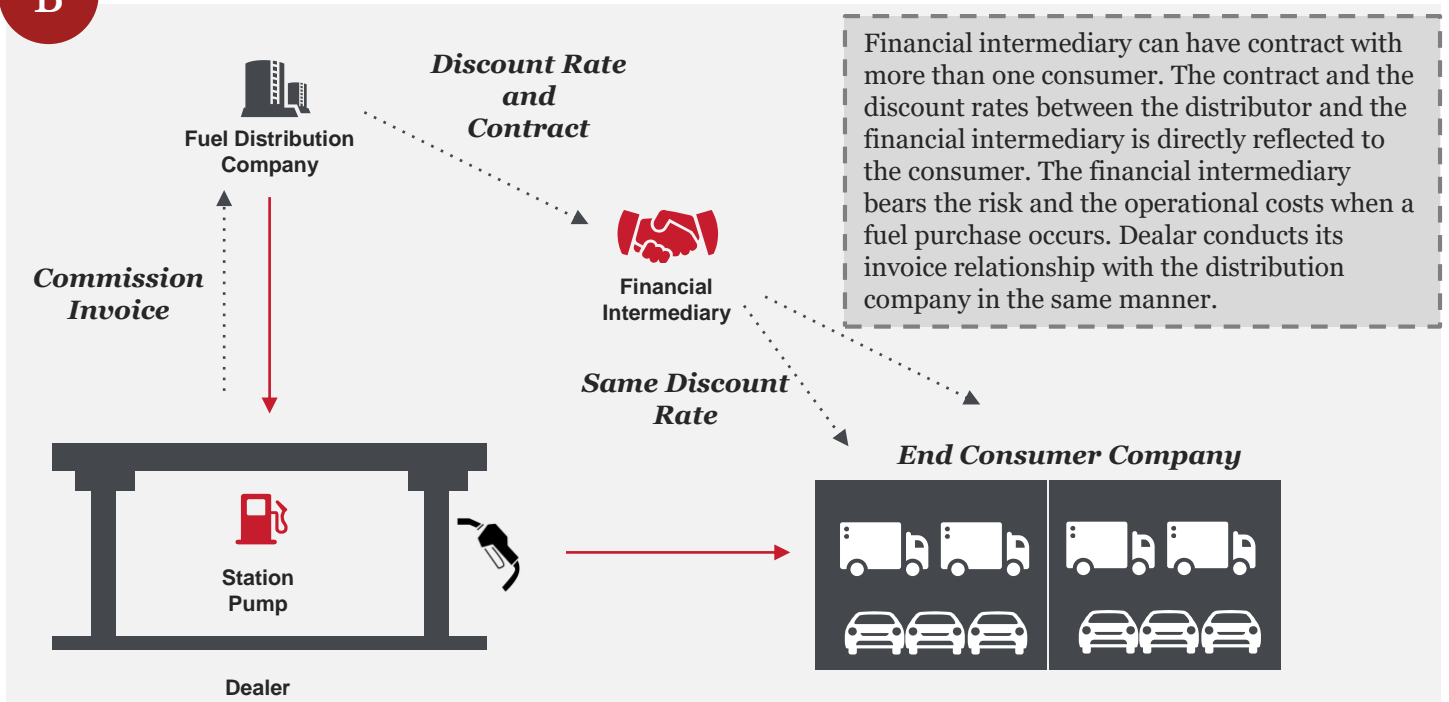
- Autonomous RFID fuel solutions produced in Turkey are generally used by fleets. These systems are also used in other countries such as; USA, Chile, Thailand, Israel, Romania, Bulgaria and Georgia.
- Alon USA has adopted RFID fuel solutions for fleet sales in 300 stations in Mid/West Texas and New Mexico in the USA. Similar to the system used in Turkey, these solutions are used for tracking fuel consumption and tracking fleets. Likewise, in the stations of Delek, which is one of the leading fuel distribution companies in Israel, benefits from RFID systems for about 100,000 vehicles.
- In addition to RFID systems, fuel cards and fleet cards are commonly used in Europe. These cards can be used by topping-up in most stations. Similarly, international transportation companies use DKV cards with pre-defined balances to facilitate refueling and vehicle monitoring.
- Besides the RFID systems, fuel cards or fleet cards are widely used in Europe. While these cards are for the purpose of topping-up, they are valid in many fuel stations. Similarly, international transportation companies employ these cards with pre-defined balance (e.g. DKV) for ease of fuel purchase and vehicle tracking.

ESS Operation Flow

A Conventional ESS



B Financial Intermediary

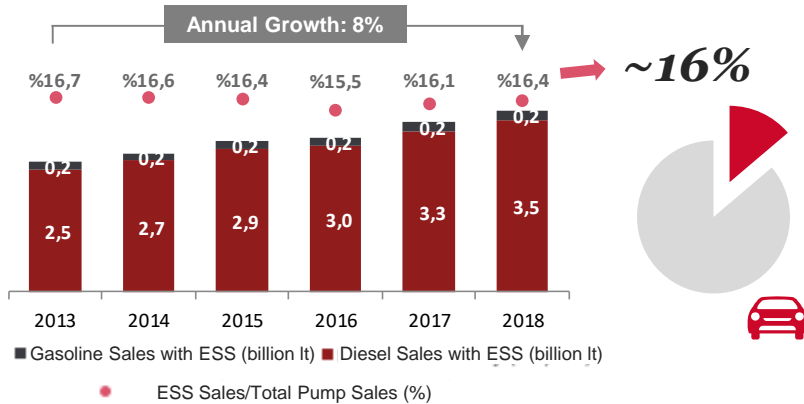


→ Fuel Supply

..... Invoice

ESS Market Analysis

Share of Sales with ESS in Station Pump Sales



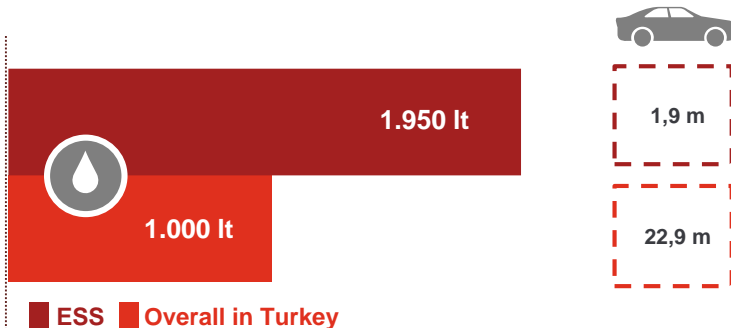
Share of Sales with ESS in Station Pump Sales

In the period between 2013 – 2018, the average annual growth of sales with ESS was realised as 8% parallel to total station pump sales. In this period, ratio of sales with ESS and station pump sales is the level of 16%. In 2018, around **70%** of the vehicles registered to ESS are passenger vehicles while **30%** of them are commercial vehicles.

Fuel distribution companies provide service to ESS customers from over **30** industries, primarily logistics, food, retail, energy, construction, tourism, personnel services.

Consumption per Vehicle – 2018

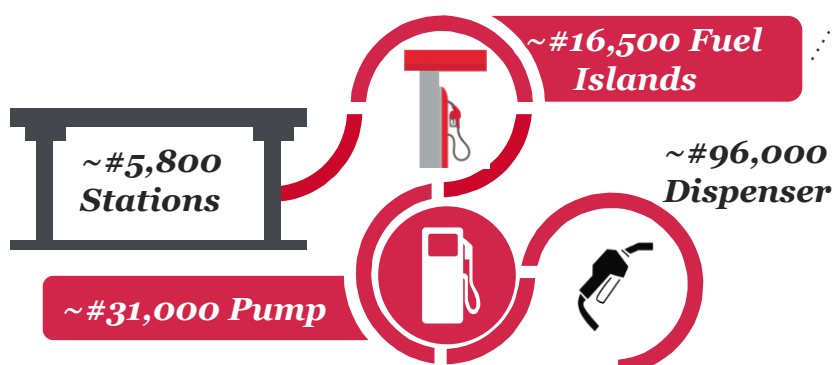
Number of Vehicles (m)



As of 2018 Year End Consumption per Vehicle and Number of Vehicles

In Turkey, approximately 1.9 million vehicle uses ESS. The average yearly fuel consumption of a vehicle which uses ESS is around **1,950** liters which is **950** liters above the overall Turkey average consumption per vehicle.

Installed ESS

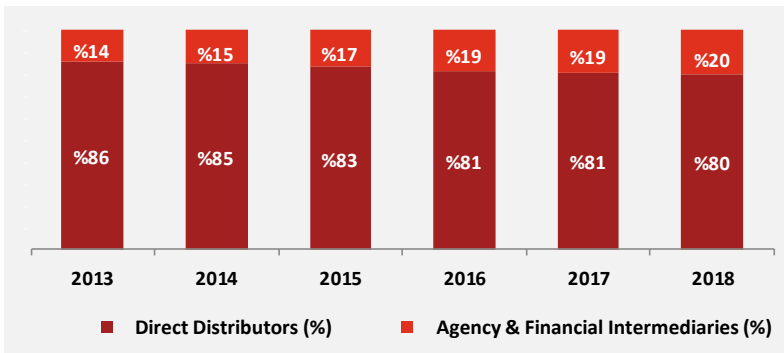


Installed Electronic Sales Systems

In 2018, it is estimated that there are **5,800** fuel stations with installed ESS out of total 13,000 in Turkey. In other words, ESS are used in approximately **45%** of stations in Turkey.

ESS Market Analysis

Breakdown of Direct Distributor and Financial Intermediary in Sales with ESS



Breakdown of Direct Distributor and Financial Intermediary in Sales with ESS

In 2018, approximately 80% of the sales with ESS consist of direct distributors.

Benefits of ESS for Private Sector

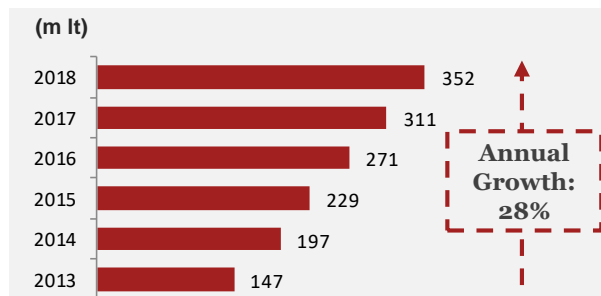


Private Sector Sales with ESS

In 2018, volume of sales with ESS to private sector customers is approximately 3.5 billion liters. It is estimated that correspondingly around **200 million liters** fuel discount was provided to private sector customers.

*It is estimated that the benefit stemmed from the discounted ESS sales of fuel distribution companies to private sector was around **TL 1.2 billion**.*

Sales with ESS to Public Sector



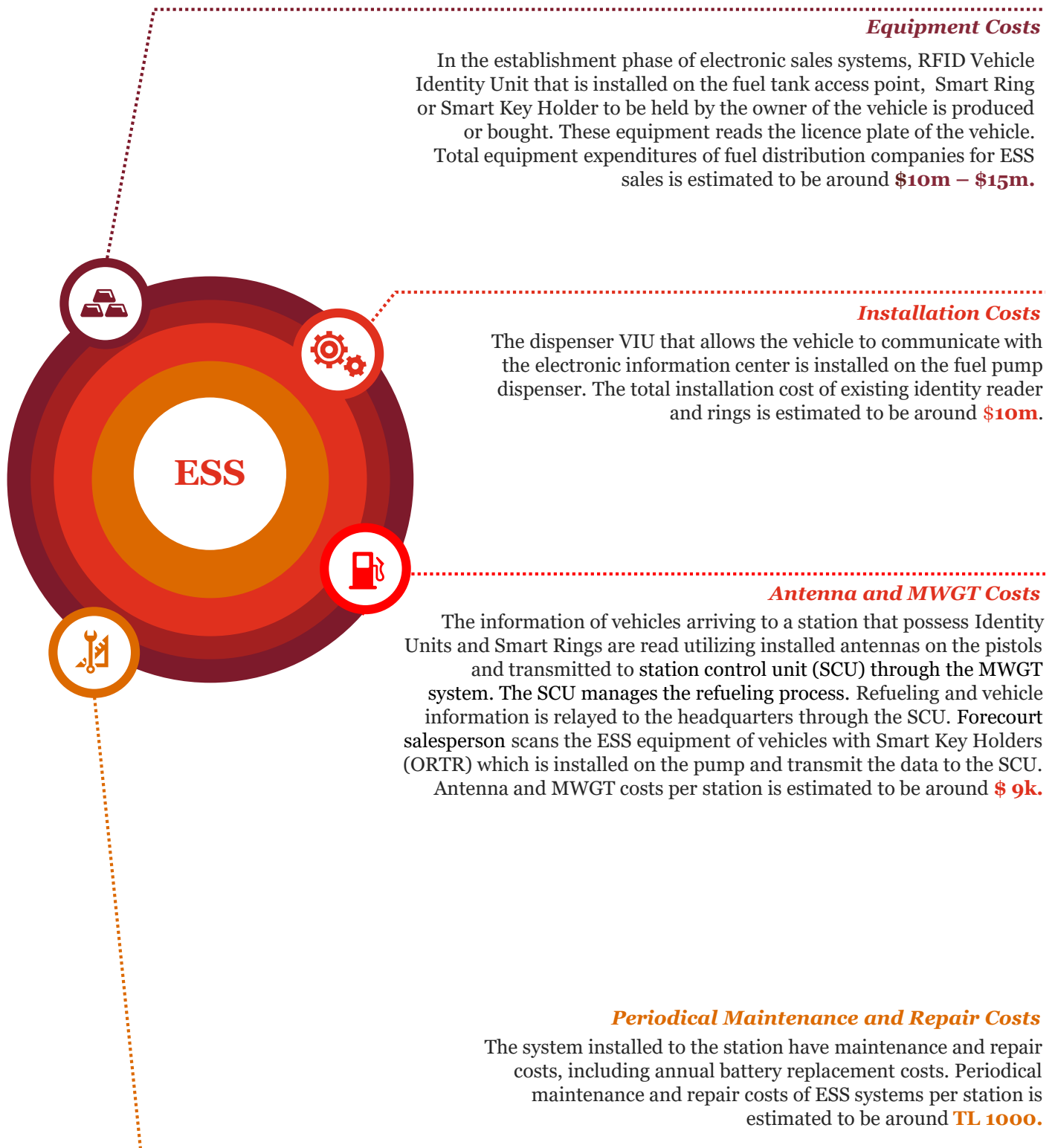
Sales with ESS to Public Sector

The volume of the discounted sales with ESS by fuel distribution companies to public sector has grown by 28% on average annually between the period 2013 – 2018 and reached the level of 0.4 billion liters. It is estimated that correspondingly around **33 million** liters fuel discount was provided to public sector customers.

*In 2018, it is estimated that the benefit stemmed from the discounted ESS sales to public sector was around **TL 195 million**.*

It is considered that the total benefit of the discounted sales with ESS to private and public sectors was approximately **TL 1.4 billion in 2018 with the current prices.**

Electronic Sales System Costs



Opinions and Suggestions from Industry Experts

1 Improving the Transparency of Margin Distributions

- Although it is impossible to share information of ESS customers' as this information is considered confidential for fuel distribution companies, it is thought that ESS sales reports should be more transparent.
- On the other hand, it should be ensured that the reporting of sales with ESS does not cause disinformation and the concerns on this issue should be eliminated.

2 Kuruş/Liters Application of Discounts in the Fuel Distribution Sector

- Generally, in the fuel distribution industry of our country, in public tenders, wholesale trades and ESS sales discounts are applied as a percentage. This is due to legislation in public tenders and customer demand in other sales. As they depend on international petroleum/product prices and exchange rates, fuel prices are very volatile. This situation, depending on the direction of the change, causes consumers or suppliers to lose money and leads to uncertainty in the future.



PwC's aim is to build trust in society and provide solutions to important problems. We are a community consisting of more than 236,000 employees in 158 countries with a focus on providing high quality service in assurance, tax and advisory services.

PwC has provided service to the Turkish business community since 1981, and, with our professional staff of almost 1,700 people in five offices located in Istanbul, Ankara, Bursa and Izmir, we work to create the value desired by our clients.



PETDER
PETROL SANAYİ DERNEĞİ

The Turkish Oil Industry Association, PETDER, was established in September 1996 by a consortium of leading fuel distribution companies actively participating in the Turkish oil market and with the aim of forming a non-governmental organization supporting a spectrum of business activities in the downstream oil industry.

PETDER's primary target is to be a professional, strong, reliable and objective NGO, and it has always worked to that end.

Present PETDER members include Alpet, Aytemiz, Belgin, BP, ExxonMobil, GO, Opet, Petline, Petroyağ, Petrol Ofisi, Shell, Shell & Turcas, Total Oil, Total Turkey Marketing and TP.