

# The Bulletin

MAGAZINE - March 2024



APEA (The Association for Petroleum and Explosives Administration)





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# Inside

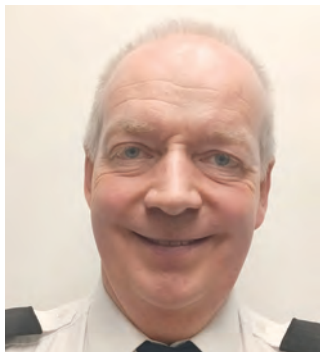
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Front cover: Local petrol station typical of the standard across Nepal.  
Credit to Lieutenant Colonel D K Hunter, Fuel and Gas Safety Regulator

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# Welcome



**Michael O'Connell**  
APEA Chairman

Welcome to the March edition of The Bulletin. This is my first as incoming Chairman of the APEA National Council, having been elected at our recent AGM. As I write this, Christmas has been and gone; the evenings are getting brighter and the New Year and all it brings is ahead of us. I wish everyone well for the coming year.

Firstly, I would like to thank everyone that helped organise our APEA Live 2023 event in November. I hope everyone attending enjoyed it as much as I did. The exhibition and trade area is always very interesting; to see the traders with their products and technologies that are constantly evolving. The workshops and open forum discussions were also very interesting as they provide us with an insight into the technologies, challenges and policies that impact our industry now and into the future.

A special thanks to all our sponsors, exhibitors and guest speakers. They made the event very enjoyable, worthwhile and interesting. Congratulations also to all our Awards entrants and winners, who all contribute so much to our industry.

I hope you enjoy this edition of The Bulletin which is full of interesting articles relevant to our industry. We are in a sustained period of change and the supporting technologies are progressing at pace. The Bulletin is always a great source of information on how the industry is innovating and reacting to this changing landscape. I hope you also take the time to look through our

advertisements as their continued support contributes to the high quality of this publication.

As our industry is constantly changing our Association must always be nimble footed and keep up with the changes as they occur. The technical guidance APEA provides to the wider petroleum and explosives industry requires regular updating. The same applies to the training courses that are available to our members. The 5th edition of the Blue Book, which is due to be published around mid-year, will be provided free of charge to all current members of our Association. This highlights the constant work being undertaken in the background by our many working groups and committees.

Following our successful APEA Live event last November and the imminent publication of the 5th Edition of the Blue Book, I would like to remind everyone of the benefits of APEA membership. APEA is the only association in the petroleum and explosives industry that brings together and unites all its stakeholders. The individual and corporate members of our Association represent the entire spectrum of the industry (regulatory, supply, transport, manufacturing, trade/retail, installation, technological and service/repair).

Our APEA local branch network geographically covers the United Kingdom and the island of Ireland. They are the lifeblood of our organisation. They meet up once or twice per year and arrange lectures/presentations on industry specific topics. Your local branch contact details are on the APEA website. They would be delighted to hear from any members who are interested in attending or indeed presenting at these meetings. The APEA Branches are always looking for new members from the diverse professions and organisations we represent. All our members contribute enormously to our Association's stated aims and objectives; which can be viewed on the APEA website.

Finally, I wish to acknowledge the work of APEA National Council which as always is evidenced by the quality of what it produces. I would also like to thank all our local APEA Branches for the work they continue to do on our behalf; and also our APEA members for their continued support of our Association.

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# Editorial



**Brian Humm**  
Editor

Welcome to this new edition of the APEA Bulletin magazine, the first one in 2024 so I know it is a bit late but I would like to start with wishing all our members a happy and prosperous year. I sincerely hope that you enjoy the usual mix of articles and news items that we have managed to cobble together for your perusal.

This may sound familiar to members but once again I would like to appeal to you to consider submitting something for publication, anything you think maybe worthwhile and of interest to members, I'll happily consider anything. If you are thinking of submitting photographs can I ask that they are high resolution and of good quality, otherwise they are hard to reproduce to an acceptable standard.

As I write this it is a very stormy period within the UK. Red alerts being issued by the UK Met office, extremely high winds, heavy rain and snow thawing has increased water levels throughout the country, resultant flooding is prevalent in a lot of areas, this could be a very dangerous time if a filling station is involved. Members with a long memory might recall an article some years ago, 2015, which detailed an incident that happened in Accra, Ghana, which resulted in the unfortunate deaths of in excess of 150 people. In essence, all this because some fill caps were left off the underground storage tank fill points after a delivery, the resultant flood entered the tanks and the petrol was displaced, reached an ignition point and the rest as they say is history. A major incident that, in the risk assessment world, could be described as unlikely to happen but if it does then major casualties.

Do you operate a filling station? Are you an enforcer? Have you ever looked at flooding of a forecourt as a risk? If you are in an area of the UK that is susceptible to flooding, then it could be beneficial to have a good look at controls that are in place in case this type of scenario happens.

The phrase "it's a small world" is often mentioned in our lives but something that happened to me last week was quite surreal to be

honest. I tend to stay in a fair share of hotels and pubs during my working week, and I was staying at a coaching inn in Surrey and attended breakfast before going off for a working day. The inn wasn't very busy and the one other person in the room said good morning and pleasantries were exchanged. Carrying on from this we talked about where I was from, and on mentioning near Eastbourne the gentleman said wow, I'm from near there as well. Then, when asked what I was doing in Surrey I mentioned that I was carrying out compliance visits to petrol stations in the area, and what I actually do for a living. His response was, 'I own and operate a petrol station in a small village'. He then spoke about the petroleum officers from East Sussex (who I knew as well) and various other topics then to cut a long story short, I have since looked at the gentleman's site in respect of flooding and given him some advice, this is because of the high water levels being experienced in the river Cuckmere and its tributaries within the area. Strange but true - you'd be surprised at the characters I meet in hotels etc, but this one was actually worth remembering!

All members of the Association need to be aware of the long awaited review of the Blue Book. I have just virtually attended a meeting of the chairs of the various working groups for all the different chapters. This was to look and discuss various issues that have been pointed out by peer reviews, and, in essence, means that the review should be published soon. No firm date has been mentioned yet but members should ensure that their membership is current and renewed on time when the new edition is released. Watch this space and your emails for updates.

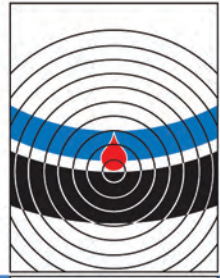
Training last year increased, obviously following the pandemic, and we have scheduled courses on our popular subjects at various venues throughout the UK. The training is the best you can get within the downstream petrol market and is equally appreciated by enforcers and operators alike. Don't forget the APEA offers online training as well, and as mentioned before the HSE (through the Petroleum Enforcement Liaison Group) have agreed that the online courses, the 3 day audit course and the 2 day electrical awareness course is a good foundation in becoming a petroleum officer, well worth considering if you are in our industry. Details are within the back of this publication.

One thing that is prevalent today is the number of articles that are being written in respect of EV charging facilities, especially on petrol forecourts, some good, some scaremongering, please remember that the APEA has guidance available, in conjunction with the IET, for EV charging on petrol filling stations. Check on the APEA website for more information.

Finally, I hope you all enjoy this edition and if you have any feedback then please let me know. Until next time...



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# Business Manager



Jane Mardell  
Business  
Manager

I hope you all had a good Christmas and wishing you well for this year. I am looking forward to the warmer weather although I have just been to India which was hot, for a milestone birthday in January, to experience Delhi, the Taj Mahal, Jaipur and some yoga in Goa. I love India and this is my fourth trip there - always challenging!

#### APEA Live

It was good to see so many of you at APEA Live 2023 in November at Stadium MK. It was very well attended; I hope that those of you who attended enjoyed yourselves and it was beneficial to your business. Unfortunately I had a dreadful virus so was quarantined to the APEA stand!

The APEA Live review magazine was sent to all members in December including awards coverage and photographs of the day and evening. There is coverage in this issue of The Bulletin of the AGM, on page 20, and the report from APEA Live magazine on page 16.

I sent out an email to all members with a link to view the photos in November. In case you missed this you can view the photos at <https://photobucket.com/u/APEALive>.

If you would like information or wish to exhibit at APEA Live 2024 please contact Tom Treverton at [Tom@fivesensesmedia.co.uk](mailto:Tom@fivesensesmedia.co.uk).

#### The Bulletin

Thanks go to the advertisers that have booked space in the publication this year. We would not be able to produce the magazine if we did not have this income. It has been a tough year for everyone, and we are grateful for the continued support.

We are always looking for press releases and articles for The Bulletin. If you have anything you think would interest our readers please email it to me at [admin@apea.org.uk](mailto:admin@apea.org.uk) and I will forward it to the editor, Brian Humm, to approve.

#### 2025 Yearbook

Please ensure you complete your entry before 1st April. Your membership contact details are not automatically included.

Please log on to your account at [www.apea.org.uk](http://www.apea.org.uk) to complete your entry. See detailed instructions on page 14.

**Important: Only entries completed by members for the 2025 Yearbook will be displayed on 'Directory' page of the website at [www.apea.org.uk](http://www.apea.org.uk) and printed in the hard copy.**

#### Membership

Memberships run for 12 months from the date of joining or payment for a renewal. Once the membership has been paid by debit or credit card it will auto renew by card one year later.

You will still receive an email one month before expiry notifying you that the payment will be taken on the date of renewal. If you wish to change or cancel your membership before payment is taken you can do so by logging onto your membership record at [www.apea.org.uk](http://www.apea.org.uk).

Card payment details cannot be changed manually, however, you can click on the 'End Membership' button in the 'Membership/Certificate' section and the membership will run until the expiry date and then you will receive an email on that date advising that your membership has not been renewed. You can then use a new card to pay.

To summarise, from the 'My Account' area you can:

- Download a membership certificate in pdf format
- View previous purchases and download invoices and receipts
- Change your membership
- Change your email address, contact details and password
- Change your Yearbook entry
- Select which format you receive The Bulletin (electronic or hardcopy)

#### Training Courses

All training courses can be viewed and booked on the APEA website at [www.apea.org.uk](http://www.apea.org.uk). If you are interested in booking a bespoke training course please email Tom Daly (Chairman of Training Committee) at [thomasdaly@apea.org.uk](mailto:thomasdaly@apea.org.uk).

#### Online training courses

Please go to the training page on the APEA website at [www.apea.org.uk](http://www.apea.org.uk) or go to: <https://apea.org.uk/pages/training> or <https://apea.mykademy.com/>

#### New Members

There have been 31 new members joining from September to December, details can be found on page 10.

#### General Assistance

If you need any assistance with general or technical matters, please do not hesitate to contact me at [admin@apea.org.uk](mailto:admin@apea.org.uk) or on 0345 603 5507. There is comprehensive contact information on the APEA website too at [www.apea.org.uk](http://www.apea.org.uk).

Best wishes

Jane





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## New Members (Sept - Dec)

### Corporate Membership

Aimee Brincat  
Environment and Resources Authority

Emma Robinson  
Fuelmii Limited

Lucy Wright  
Astley Signs Limited

Michael Dewberry  
London Fire Brigade

Rodney Gillis  
Mid Ulster District Council

Stuart Killip  
Trading Standards

Tony Simpson  
Northumberland Fire and Rescue Service

### Individual Membership

Aaron Hinton  
EconetiQ

Abdul Mohammed

Andrew Lee McManus  
Greenegy

Andrew Robinson  
London Fire Brigade

Christine Mansfield  
Mantles Kia Royston

Darren O'Mahony  
Greenegy International

David Welsh  
County Durham and Darlington  
Fire and Rescue Service

Geoff Lee

Gunduz Ismayilov  
SOCAR

Ian Richardson

Jack Shepherd  
Matthew Edward Limited

Jeff Scriven  
Red Panther Electrical Ltd

Kevin Saunders  
Intertek

Leon Kay  
Durham County Council

Mark Hilton  
Hilton Electrical Services LTD

Michael Richards  
East Ayrshire Council

Michael Sim  
Motor Fuel Group plc

Neil Rava  
LCM Environmental Services Ltd

Ricky Walters  
RJW Group Ltd

Roshan Sothinathan  
Fast Track Management UK Ltd

Spear Edwin Abowe

Stephen Dodsworth

Stuart Grant  
S R G Electrical

Vassileios Michalitsis  
EXELIXI

# Publications Information

## 4th Edition of the Guidance for Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations - "Blue Book" (Revised 2018)

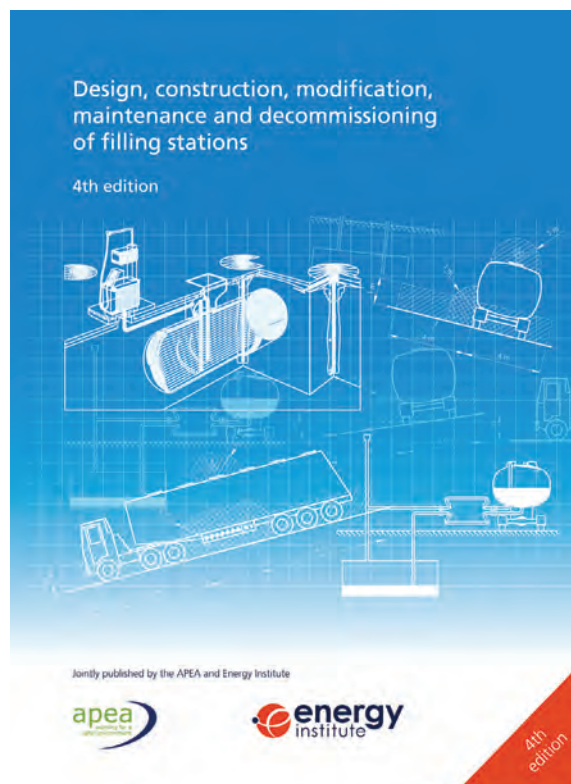
ISBN 978 0 85293 888 1

Price for hard copy  
APEA Member rate - £75  
Non APEA Member rate - £150

Price for pdf version (please note the pdf version is licensed to the purchaser only and cannot be shared or printed)  
APEA Member rate - £75  
Non APEA Member rate - pdf £150

If you wish to purchase the guide please go to the APEA website at [www.afea.org.uk](http://www.afea.org.uk) and click on the "Publications" page. You can select to pay by credit/debit card.

The APEA also publishes the Code of Practice for Ground floor, multi storey and underground car parks. This can be downloaded directly from the APEA website and is available to members at £11.00 and £21.00 to non APEA members.







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## Electric Vehicle Charging Installations at Filling Stations

A supplement to the Code of Practice for Electric Vehicle Charging Equipment Installation

### Electric Vehicle Charging Installations at Filling Stations

Price for hard copy  
APEA Member rate - £32.50  
Non APEA Member rate - £50

Price for pdf version (please note the pdf version is licensed to the purchaser only and cannot be shared or printed)

APEA Member rate - £32.50  
Non APEA Member rate - pdf £50

This Code of Practice is an authoritative guide to all installations of electric vehicle charging equipment. It has been updated in line with recent changes in BS 7671 (IET Wiring Regulations) and reflects some major developments in this area including vehicle to grid, smart integration and inductive charging.

As part of the rapid growth and development of the whole electric vehicle charging infrastructure, filling stations are seen as an obvious place to provide charging facilities. However, it is recognised that difficult safety and logistical issues are linked to such installations.

When the 4th Edition of the Code of Practice for Electric Vehicle Charging Equipment Installation was published, significant technical discussions were still underway about this area to help finalise and clarify the safety issues that needed to be addressed. The work behind these meetings was led by APEA (the Association for Petroleum and Explosives Administration) who represent the major stakeholders in this sector. APEA and the IET are therefore now issuing this joint publication to help provide important guidance in this area.

ISBN-13: 978-1-83953-315-0  
Publication Year: 2020  
Pages: 30

### About The Bulletin and how you can submit copy to be included

- The Bulletin is published four times a year with a print run of 2200
- Free issue to APEA members (approx 1200 members worldwide)
- Has international distribution and readership
- Respected source of industry specific news and information
- Contains relevant articles, news items, press releases and reports from UK and overseas
- Individual, Fellow and Retired members receive one copy each and Corporate members receive 5 copies each per quarter

The editor of The Bulletin, Brian Humm, is always on the look out for new material, so if you have something you want to be included, please email it to the APEA office at [admin@apea.org.uk](mailto:admin@apea.org.uk) and it will be forwarded to Brian for approval.

Please email the text in Word format and any images as separate high resolution pdf or jpeg files to [admin@apea.org.uk](mailto:admin@apea.org.uk).

We are always pleased to receive contributions from our members and it ensures that The Bulletin remains an interesting and informative read.

**Priority is given for press releases and articles submitted by Bulletin advertisers to be included.**

### Deadline dates for copy and advertising artwork 2024

Issue	Copy deadline date	Posting date
June 2024	26th March	11th May
Sept 2024	2nd July	9th August
Dec 2024	2nd September	2nd November
March 2025	16th December	21st February

Please note the deadline date for the March 2025 issue is early due to Christmas and New Year holidays.

### Bulletin Advertising

If you would like to book advertising in The Bulletin, please email your requirements to [admin@apea.org.uk](mailto:admin@apea.org.uk) or call the office on 0345 603 5507. Please ensure you send your artwork to [admin@apea.org.uk](mailto:admin@apea.org.uk).

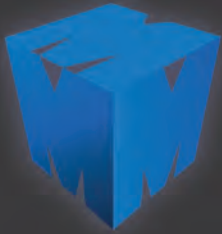
**Priority is given for press releases and articles submitted by Bulletin advertisers to be included.**

Discounts are available for booking in more than one issue, please contact Jane Mardell at [admin@apea.org.uk](mailto:admin@apea.org.uk) for more information.

Bulletin advertisers that book in 3 or more issues in one year also receive a 50% discount off rates for advertising in the annual Yearbook, see table below.

Size of advert (all rates exclude VAT)	Advert fee in 1 issue	Advert fee in 4 issues (includes 25% disc)
Full page (210mmw x 280mmh with 10mm border or with 3mm bleed)	£498.00	£1494.00
½ page (185mmw x 125mmh)	£249.00	£747.00
¼ page (90mmw x 120mmh)	£125.00	£375.00





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- Protection from environmental issues - System highlights if stock levels change without a transaction taking place.



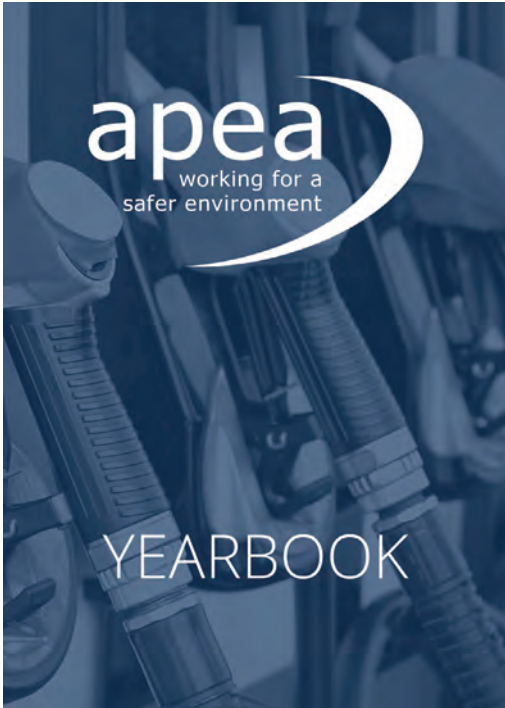


# 2025 APEA Yearbook

## How to complete your free entry

### Deadline 1st April

By Jane Mardell, APEA Business Manager



In order to ensure that your details are included in the 2025 Yearbook and on the APEA website in the 'Contacts' section it is essential that you complete your online entry by 1st April. Even if you do not wish to advertise in the Yearbook, to have your contact details and industry sector information included you should complete your entry as detailed below.

Please note I will be contacting enforcing authorities separately to update these details. If you are from an authority please do not complete the instructions below.

1. To start your entry go to the APEA website home page at [www.apea.org.uk](http://www.apea.org.uk)
2. Log on to your membership record and go to 'My Account' and then click on 'Yearbook' on the left hand side.  
If you have never completed an entry you will see figure 1 (see page 16). If you completed an entry for the 2024 you will see figure 2 (see page 16) which you amend.
3. Create or update your contact details and select the Industry Sector or Industry Sectors that you wish to be listed under.
4. When completed you will see figure 3 (see page 16) and receive a confirmation email. If you do not receive the email the entry has not been completed.

#### Petroleum Company Contact Details

<b>A &amp; P Oil Ltd</b> 17 Woodhouse Lane Leeds LS1 5JG Tel: 0113 275 1234 www.apea.org.uk	<b>Admiral</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.admiral.com	<b>Arco UK</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.arco.com	<b>BP</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com	<b>BP Energy Services</b> 100 Victoria Road London SE18 6JF Tel: 020 7473 4000 www.bp.com
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#### Industry Sector Index

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Each member is entitled to one FREE entry in the Petroleum Company Contacts section and one FREE Industry Sector per entry in the Yearbook, (see images above).

Additional Industry Sectors and Trade names are charged at £30 each. Your invoice and receipt will be emailed to you once your entry is complete and uploaded to your account on the website.



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Figure 2.

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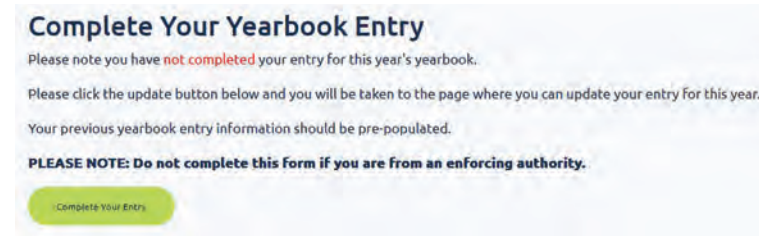


Figure 3.

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# Articles

## APEA Live - 16th November 2023

By Jamie Thompson, APEA Technical Chairman

This report is reproduced from the APEA Live 2023 magazine that was posted to members in December. and can also be viewed on the APEA website - go to [www.afea.org.uk](http://www.afea.org.uk) and click on the link under 'APEA Live 2023' in the 'Events' section.

Photographs from the event can be viewed at the link below.  
<https://app.photobucket.com/u/APEALive>

Milton Keynes saw a very busy and productive Elaflex sponsored Exhibition and a Gilbarco Veeder-Root sponsored Awards evening. A big thankyou to all the sponsors and all those attending for making this such a very successful event that is now considered the best UK event to attend for this industry.

### Conference

The Conference was hosted by Nikki Dean, Broadcaster and Presenter.

The first presentation was by Jamie Thompson who updated us on the Blue Book revision and explained that the 5th edition guidance should be ready for publication in March 2024. The APEA/EI document would cover some of the changes in fuels but

it was expected that Hydrogen and Electric Vehicles at Petrol Stations would continue to be produced separately.

The publication of Energy Retail Station Sites Green Guide by the Energy Institute (available from the EI website) and covers small-scale sites which provide energy to vehicles, ranging from traditional Petrol Stations through to EV charging, hydrogen fuel or mixed energy sources.

Tim Ross, Team Leader of the London Fire Brigade Petroleum Group, followed and explained that the pending Red Guide changes include contactless payment advice.

Risk based advice is also being proposed to include metropolitan and rural areas and an increase in petroleum fees in 2024.

Work to begin on national competency framework for petroleum inspectors and the APEA training courses will have input into this.

Gordon Balmer the Executive Director of the Petrol Retailers Association (PRA) then presented an overview of the current "hot topics" concerning PRA members. Pump prices and the continued accusations by the RAC/AA of profiteering by the PRA members need defending.





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In the afternoon the **Forecourt State of Nation** session was chaired by Nikki Dean with Katherine Price of Lumina Intelligence, Chris Noice of Association of Convenience Stores Operators and Gordon Balmer.

The main issues they discussed were:

- Drive offs and some solutions
- Costs of installing EV charging
- Use of valuable store parking for EV chargers
- Brexit problems for suppliers
- Thefts from shops

The **Panel on Alternative Liquid Fuels** was again chaired by Nikki Dean with Chris Gould of Fuels Industry UK and Simon Lawford of Crown Oil. The discussion centred around Hydrated Vegetable Oil (HVO) and Synthetic Fuel developments. These fuels burn cleaner and reduce tailpipe emissions but with little support from this Government they are proving more expensive.

**The Fuel for Thought Theatre**

Driver protection that saves forecourts money, all while increasing shop sales - Luke Jenkins - Grip Hero revolutionises driver protection at the pumps, by overcoming the failings of traditional gloves.

Having surveyed a wide range of EV charging facilities Graeme Warnell, the director of EV-EXBOX, discussed why competent risk assessment is required, what is missing and the inconsistencies within current available guidance and the risk it brings to public safety, fire safety and environmental protection.

Making a Forecourt EV ready by MER - As electric vehicles sales grow forecourt operators are asking 'how can we evolve to take advantage of this new electric era?' Tim Johnson explained there is a place for forecourts in an EV-driven future, and how installing EV charging infrastructure is the key to transforming the traditional fossil fuel forecourt.

John Garnett of Vars Technology discussed the issues faced by forecourts regarding drive offs, retail theft and the newer issues arising from EV charging bays being abused. He talked about the challenges faced and how VARS can solve them using their technology.

Leaking underground sumps on forecourts: issues and solutions Alex Boudry of PFS explained the problems of water-ingress in underground sumps and chambers on forecourts. What are the causes, risks and how his company can provide the solutions.

Robin Futchter of Commercial Fuel Solutions gave a fascinating insight into the future of commercial refuelling, using hydrogen and after the presentation offered to deal with any questions.

**Pre-Dinner Drinks**

The pre- dinner drinks sponsored by Dover Fueling Solutions and enjoyed in the Exhibition area where the guests mingled with exhibitors and the awards dinner sponsored by Gilbarco Veeder-Root who were thanked by the APEA Chairman Michael O'Connell who introduced our chosen charity for the night National Safety Centre Alliance. It is with great pleasure that we can announce that £2463.00 was raised towards for the charity from the generosity of all our guests - Thank you all!

**Awards Dinner**

The awards dinner was soon underway with a record attendance of 680 people who seemed as impressed as I was in seeing the staff feed all these guests in a timely manner with excellent food.

The host for the evening was comedian Jason Manford who entered the hall singing Sweet Caroline soon having the audience singing along and then keeping them entertained while he supported the awards evening. The Lifetime Achievement award going to Jan Ageheim who first presented at this conference 34 years ago! Congratulations to all the winners and finalists. A wonderful evening and another demonstration how this industry is rising to the challenges of the future.



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APEA  
Chairman



Awards  
Dinner host  
Jason  
Manford





# APEA AGM - 16th November 2023

By Jane Mardell, APEA Business Manager

The APEA AGM was held during APEA Live 2023 at Stadium MK, Milton Keynes.

The accounts, officer reports and meeting minutes are available to view and download to APEA members on the APEA website at <https://apea.org.uk/agm/>



APEA Council Members



Michael O'Connell,  
incoming APEA  
Chairman and outgoing  
Chairman, Doreen  
Pooley

Gareth Bourhill  
presenting the  
Treasurer's report at the  
AGM

Brian Humm presenting  
the Editor's report at  
the AGM

Jamie Thompson  
presenting the  
Honorary Secretary  
report at the AGM



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There was no requirement for a vote this year. The officers below were appointed.

Post	Person	Proposer	Seconded
Chair	Michael O'Connell	Thomas Daly	Jamie Thompson
Vice Chair			
Honorary Secretary	Doreen Pooley	Andy Kennedy	Michael O'Connell
Treasurers	Gareth Bourhill	Rob Collins	Andrew Perry
Editor	Brian Humm	Jamie Thompson	Thomas Daly
Council Member	Killian Tallon	Michael O'Connell	Thomas Daly
Council Member	Anton Martiniussen	Jamie Thompson	Gareth Bourhill
Council Member	Clare Scawthorn	David Sommer	Lisa Waddingham
Council Member	Jamie Thompson	Brian Humm	Thomas Daly
Immediate Past Chairman	Doreen Pooley		



# Museum Fisogni

By Jamie Thompson, APEA Technical Chairman



In 2023 I received a birthday present from my son which involved us travelling to Milan in September to visit a museum which he felt might be of interest to me!

After flying to Milan, a 50-minute drive north to the town of **Tradate** brought us to the **Museum FISOGNI** where I was shown the most amazing collection of petrol station memorabilia that I have ever seen; in fact it has the Guinness World Record in the year 2000 as the most complete in the world with the largest collection of petrol pumps (over 180) and over 5000 objects from petrol stations.

The museum was founded in 1966 by a gentleman called Guido Fisogni (standing next to me in the photograph), who had a construction company specialising in petrol stations and during his work he often came across old historic pumps on the sites he was replacing which he carefully restored and are now on display. The level of restoration is, in my opinion, one of the best I have seen having visited several such displays around the globe.

The museum has 9 rooms which display pumps from as long ago as 1892 and this Swiss pump (below) found in Berne is the oldest in the museum. It has a small tank which has a measure and was fed by gravity into the car through a pipe and valve.



The Museum has some 9 rooms now with over 200 pumps including an up-to-date EV charger.

Some interesting exhibits show that the design of these three dispensers demonstrated the ingenuity of some manufacturers who constructed pumps to be fitted to walls, taking up less space and enabling the fuel to be dispensed across the pavement.



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The Bowser Pump range from the US which were widely used in Europe until pumps were produced here.

### Mussolini's Pump

One of the most interesting designs and important pieces they had on display was from the fascist period. In those days there were two types of fuel; Littoria (premium) and Victoria (Standard).

Here is displayed Benito Mussolini's fuel pump designed in Novecento style, thought to have been by the famous architect Marcello Piacentini. It has a round shape, while the top structure demonstrates the fascist salute. This pump was thought to have been installed in Palazzo Venezia in Rome. Records show



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this pump used pure fuel (benzina pura) totally produced with petroleum and not normal fuel (robur) the cheaper fuel mixing petrol with beet alcohol.

This model was very rare, not seen in public service stations but built by Siliam in small numbers usually for embassies and prefectures.



This pump has been adopted by the museum as its symbol and was one of the first dual electric pumps serving petrol and gas oil in 1935. It was manufactured by SAIS (Societa Italo-America del Petrolio) a subsidiary of Standard Oil USA.



An interesting design by SAIS for AGIP.



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Apart from pumps many advertising signs from the past are on show along with other memorabilia such as oil dispensing, promotional signs and other items associated with petrol filling stations.



A wonderful museum for those who are interested in petroleum memorabilia and certainly well worth a visit. Eastern Branch are exploring the possibility of an organised visit to the museum and details will be circulated to all members should this prove feasible.

The Museum can be viewed on the web [www. https://museo-fisogni.org/](https://museo-fisogni.org/)







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## Affordable Remote Tank Gauges

By Steve Gain, Managing Director, OTS Group

**Meta Description:** Learn how affordable remote tank gauges are making fuel management more efficient and accessible across various industries.

**URL:** /affordable-remote-tank-gauges

### Remote Tank Monitoring Accessible with Affordable Remote Tank Gauges

Is tank dipping still the most effective method for monitoring fuel levels? While both simple and effective, tank dipping can be a time-consuming process, and where businesses today are looking to implement automation and machine learning wherever possible to decrease costs, traditional manual fuel monitoring methods no longer meet the efficiency demands of modern businesses. Remote tank gauges are the clear solution to this problem, and their increasing affordability makes them accessible to a wider range of sectors than ever before.

### Making Remote Tank Monitoring Accessible

Remote tank gauges have been around for a while, but their adoption has often been hindered by high costs. Thanks to technological advancements, these devices have become

significantly more affordable. Linked to cloud-based software, low-cost remote tank gauges allow users to view fuel levels from any web browser, making the technology more accessible to businesses that may have previously relied on manual methods.

### How Do Remote Tank Gauges Work?

Remote tank gauges can be used with a wide range of lubricants, oils, fuel and gas tanks. They use 4G cellular technology to send real-time data about fuel levels to a cloud-based platform. This enables users to access accurate, up-to-date information about their liquid storage tanks from any web browser, without requiring specialised skill or additional equipment. Simply log in, and the required information is immediately accessible.

Remote tank gauges are autonomous, robust, and easily installed systems that are relied on by major oil and gas customers, with a global footprint of more than 100,000 installed on tanks in over 70 countries.

### A Business Case: Cross-Country Efficiency

Consider the example of a fuel distribution business we worked



with. With an extensive network of over 300 oil tanks scattered across multiple locations, the logistics of manually checking tanks required substantial manpower and time, with staff driving considerable distances just to perform checks.

After implementing remote tank gauges, the company noticed a marked increase in efficiency. Time-consuming trips became significantly reduced, freeing staff up to focus on core business operations. The overall savings in terms of time and resources were significant.

#### More Than Just Monetary Benefits

1. **Time-Saving:** The most immediate benefit for many businesses is in time saved. Time once spent on manual checks can be reallocated to core business activities.
2. **Real-Time and Accurate Monitoring:** Instant access to real-time data allows for more informed decision-making, timely restocking, and optimised purchasing according to market prices.
3. **Enhanced Security:** Real-time monitoring adds a layer of

security, enabling immediate detection of irregularities or suspicious activities, thus helping organisations to deter and prevent theft, an important consideration for organisations with tanks in remote locations.

#### Why the Shift Is Worth It

As businesses continue to seek automation and cost-saving solutions, the role of remote tank gauges becomes increasingly clear.

For more information on how OTS Group's ATEX certified remote tank gauges could be the solution to your fuel management needs, we recommend reaching out to experts in the field. Your business—and your bottom line—will thank you.

Contact OTS Group today to discover how you can adopt remote tank gauges to elevate your fuel management strategies and drive operational excellence.

Take the next step toward modern fuel management and explore the benefits of adopting affordable remote tank gauges today.

## Unpacking the World of Hydrogen Production: Why Is the Far East So Far Ahead?

By David Mc Guinness, Director Product Management, Electric Vehicle Charging at DFS

With a strong focus on delineating vigorous renewable strategies, including steps to drive forward net-zero climate change policies, some countries in Asia are winning the “race” in the adoption of hydrogen for both commercial transport and passenger vehicles.

Specifically, when it comes to hydrogen refuelling stations, China is leading the way with 250 stations across its territory. It is followed by Japan and South Korea, which feature 161 and 112 hydrogen refuelling stations on their roads.

In this respect, Europe is behind. Germany is the European country with the most hydrogen refuelling hubs – but with ‘only’ 101 stations, it's fair to say that the EU has some serious catching up to do with its Asian counterparts.

How are China, Japan, and South Korea so far ahead? Dover Fueling Solutions (DFS) take a look into the key differences in business culture, government, and infrastructure to discover the reasons behind the rise of hydrogen vehicles in these parts of the world.



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### Hydrogen production: East vs West

One of the main reasons China has by far the most hydrogen refuelling stations is that, globally, it's the largest producer and consumer of hydrogen. That said, the majority of its hydrogen production is black and brown, with only 1% (or slightly less) being green. What is the difference?

Domenico Sicilia, Director for Business Development Clean Energy at DFS explained: "In a nutshell, green hydrogen is cleaner and more environmentally friendly, as it is produced through water electrolysis that uses renewable electricity. Conversely, black and brown hydrogen – made respectively from black and brown coal – is less sustainable as it's obtained from carbon-rich materials."

In the next decade, China is set to increase hydrogen production even further. In 2020, it produced 26 million metric tonnes (Mt), with predictions saying that it is likely to reach 91 Mt by 2060. And while its current hydrogen policy may not be the most eco-conscious, China is starting to work hard on the development of renewable hydrogen.

Domenico further reflected on market indicators: "Based on current projections, renewable-based hydrogen could account for 80% of China's hydrogen supply by 2060. This means we (the fuelling industry) can expect this country to become a major player in the renewable industry in years to come."

Prior to China's recent hyperbolic growth in the hydrogen sector, it was Japan that boasted the most advanced hydrogen station

infrastructure in the world. This is because it is home to two renowned automakers, Toyota and Honda, that have been consistently investing in hydrogen-run passenger vehicles. In turn, this has spurred Japan to accelerate the rise of its hydrogen production, meaning that it was – and still is – one of the leading countries in this field.

As for the EU, the presence of hydrogen fuel stations almost tripled between 2018 and 2019, as the number jumped from 47 to 137 in the space of one year. Those stats are continuing to grow in a steady fashion, and are helping Europe play catch up.

### Demand: the driving force

What is also encouraging China, Japan, and South Korea to focus on the expansion of hydrogen production is an increasingly high demand from their own people.

China aims to produce anything between 100,000 and 200,000 tonnes of green hydrogen per year, as well as have roughly 50,000 hydrogen-powered cars on its streets by 2025. This is spurred by drivers' impending request for hydrogen, as the China Hydrogen Alliance suggests that demand is bound to reach 35 Mt and 60 Mt by 2030 and 2050, respectively.

After all, as things stand, China is the third-largest fuel cell electric vehicles (FCEV) market for passenger cars and the biggest in the world for hydrogen-fuelled trucks and buses. So, it's no surprise that demand is high and likely to increase over time.



What is also worth noting is that hydrogen projects in China are distributed across its whole geography and provinces. This makes hydrogen fuel stations more accessible to drivers in the country, sparking a higher interest in hydrogen-powered car models.

In Europe, instead, production is mainly concentrated in the so-called 'hydrogen corridor', meaning that European motorists are arguably more limited in choice.

What about Japan and South Korea, the other two forces in hydrogen-station infrastructure? Alongside China, these two Asian countries manufacture about 80% of the world's hydrogen passenger cars. This is thanks to automakers such as Hyundai (South Korea), Toyota (Japan), and Foton (China), who play a significant role in the FCEV market.

Together, these three powerhouses also account for over 70% of FCEV sales worldwide. So, a huge number of models produced in these countries eventually end up hitting the roads of Asia. And as motorists in the Far East continue to show an appetite for hydrogen-fuelled vehicles, China, Japan, and South Korea have no choice but to hasten the roll-out of stations to meet this demand.

#### **The importance of government funding**

Governments in China, Japan, and South Korea have several strategies and policies in place to promote the growth of their hydrogen production and fuel infrastructure.

As mentioned at the start, the significant focus on hydrogen is incentivised by these countries' sustainability targets.

In China, for example, the goal is to fast-forward its renewable strategies to preserve the well-being of its environment. Likewise,

in South Korea, hydrogen policies have been implemented as a cornerstone of the country's 2050 net-zero climate strategy.

As for Japan, the government has committed to boosting its annual supply of hydrogen to 3 Mt, reaching 20 Mt by 2050. To achieve this, Japan has announced an impressive \$100bn (£80bn) investment in hydrogen production. As well as strengthening its FCEV market, this will help Japan's marine transportation sector to carry out its operations in a cleaner, more eco-conscious fashion.

Ultimately, Far East countries are excelling in spurring the rise of hydrogen fuelling stations and the FCEV market. But to maintain this dominance, they will need to continue to steer towards the production of green hydrogen.

This is particularly the case for China, as green hydrogen makes up a very small percentage of its overall production. Yes, there are plans in place to nip the problem in the bud in the not-so-distant future, but China could still take a leaf out of some European countries' books.

In fact, although the EU is far from the Far East's numbers, Germany and France are strong actors in the sector. This is thanks to the development of innovative technology that favours the production and storage of green hydrogen, which China is slowly but surely trying to replicate.

One thing is for sure, the road to net-zero continues apace. While the East would appear to be blazing a trail in terms of Hydrogen adoption, Europe is likely to catch up in future, particularly within the commercial transport arena.



# Forecourt Structures



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## The Flying Dutchmen: Impact of a Strong EV Network in the Netherlands

By David Mc Guinness, Director Product Management, Electric Vehicle Charging at DFS

With about 112,000 electric vehicle charging points on their territory, the Netherlands have almost 30% of all electric vehicle (EV) chargers in the European Union (EU). That's 1/3 more than Germany, three times more than the UK, and nearly 70 times more than Romania, despite the latter being seven times bigger in size.

In the last decade or so, motorists in the Netherlands have witnessed a substantial increase in the number of public and semi-public charging stations across the country. In 2014, for example, there were around 12,000 EV chargers on Dutch roads. Fast-forward to the present day, another 100,000 have been added.

Despite the already impressive stats, the Netherlands have no intention of slowing down. As the EV charging infrastructure continues to evolve, forecasts say that figures will surpass 200,000 units by 2025, with the government's ultimate goal of reaching 1.8 million public and private EV chargers by 2030.

But how has the Dutch network grown at such a pace and to such

a scale? Fuelling experts Dover Fueling Solutions (DFS) explore the impact of the Netherlands' advanced EV infrastructure, highlighting the drive behind this upscale and how other European countries can take note from their Dutch counterparts.

### Government grants and incentives

Heavy incentives and government grants are one of the main reasons behind the huge expansion of the Netherlands' EV charging infrastructure.

David McGuinness, Director Product Management, Electric Vehicle Charging at DFS, said: "With the aim to improve air quality and reduce the country's greenhouse gas emissions, the Dutch government has introduced a number of schemes and subsidies to support drivers and businesses switch to more eco-friendly vehicles.

"For instance, as long as the EV meets certain requirements, Dutch motorists can receive €4,000 to help cover the costs of purchasing



or leasing a new electric vehicle. And even if it's a used model, drivers can still expect to get a handy €2,000 off. Instead, in the case of business owners in the Netherlands who are thinking about buying or renting an EV, the government will pay 10% off the list price (capped at €5,000).

“Not to mention that, should a company want to install its own private and semi-public chargers, it can get an attractive investment deduction from the government to alleviate the cost of setting up its charging points. These incentives, as well as many others, significantly outperform those offered by fellow leading countries in Europe.”

What's more, to facilitate the installation of public EV charges within the country, the government has set up a project called 'National Charging Infrastructure Knowledge Platform Foundation' (NKL).

The NKL operates to lower the cost of dotting public charging points across the Netherlands. This is particularly useful as residents can request the installation of free, public EV charges if there aren't any near to where they live or work.

While charging point schemes vary from city to city, bear in mind that all drivers will have to pay for the consumption of energy when filling up their vehicles. However, they won't be charged for the purchase, installation, or usage of the charging point.

### **Cultural factors**

As mentioned, the government is working hard to favour the growth of EV infrastructure on Dutch roads and minimise air pollution in towns and cities.

In this respect, the Netherlands has rules in place for which all new passenger vehicles in the country must comply with zero-emission regulations by 2030. As well as making cities more sustainable, the zero-emission policy is also accelerating the expansion of the EV market overall.

But incentives and government initiatives don't necessarily explain the full story as to why Dutch motorists have a soft spot for electric models. For example, EV owners in the Netherlands enjoy how quiet, technologically advanced, and environmentally conscious they are.

Additionally, the Dutch population – as a collective – has a strong interest in playing a part in preserving the well-being of their surroundings. About 69% of the population would rather grab a sweater or blanket than turn up the heater, whereas more than one person in two often (or always) showers for less than five minutes.

Ultimately, six out of ten adults in the Netherlands believe that climate change is caused by humans, which is why so many people – and drivers – are trying to adopt more sustainable behaviours on a daily basis.





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### A focus on usability and sustainability

In many European countries, the current main target is to increase EV ownership levels and encourage more people to purchase or lease electric models. As things stand, Norway and Sweden are leading the way in getting EVs on the road.

While the Netherlands are spurring their drivers to opt for cleaner cars too, it seems that they are focusing on nailing their EV network and infrastructure first.

There are national agreements on interoperability in place, which aim to ease the rollout of as many charging points as possible close to residents who need them. In turn, this means that EV drivers are almost guaranteed to always have an available charger nearby when they're at the wheel.

The Netherlands are also putting a lot of effort into installing fast chargers across major motorway networks. This is a particularly clever move as it makes electric models more appealing. Why? Because it tackles the issue of range anxiety, which is one of the biggest sources of hesitation for car buyers when considering an electric vehicle.

It is also worth reiterating that the Dutch government's EV-related incentives and goals are strongly linked to ambitious climate change targets. For instance, to combat climate change and pollution, the Netherlands plan to reduce their greenhouse gas emissions by 49% by 2030, and by a whopping 95% by 2050.

So far, their efforts are paying off as they rank 13th in the Global Sustainability Index. And as the country continues to improve its EV network, it will put itself in a great position to hit its sustainability objectives.

### A role model to follow

In short, the Netherlands are ahead of everyone else in Europe and the EU when it comes to suitable infrastructure for electric vehicles. But they are not only focusing on themselves.

The Netherlands are the coordinator of the ID & Data Collection for Sustainable Fuels in Europe (IDACS) consortium, in which many other EU states take part. This is an exciting project that invites consumers to make use of alternative fuels, including hydrogen, electricity, and other renewable sources that can promote sustainability.

They are also a founding member of the Transport Decarbonisation Alliance (TDC), an initiative that strives to quicken the global reduction of CO2 emissions from transport. The goal is to reach zero-emission mobility by 2050.

With their prominent involvement in these projects, the Netherlands are aiding the electrification of neighbouring countries. So, as well as creating a cleaner, better future for their own people, they are actively helping others improve their EV infrastructure, too.

# Mastering Cable Duct Sealing on Filling Stations with the APEA & Energy Institute's "Blue Book"

By Carl Pike, AC Cable Solutions



When it comes to any installation on a Fuel Filling Station, one of the most essential references for Designers, Consultants, Engineers, Contractors and enforcement Officers is the "Blue Book", meticulously crafted and maintained by the Association for Petroleum & Explosive Administration (APEA) in collaboration with the Energy Institute.

## What Exactly is the "Blue Book"?

The "Blue Book" is a comprehensive manual jointly authored by APEA and the Energy Institute. This invaluable resource outlines everything you need to know about the design, construction, modification, maintenance, and decommissioning of filling stations. In essence, it serves as the holy grail for all activities on Fuel Filling Stations.



## The "Blue Book's" Contribution to AC Cable Solutions

Our commitment at AC Cable Solutions to providing the best possible duct sealing solutions is deeply rooted in our adherence to the guidelines laid out in the "Blue Book". This indispensable guide has played a pivotal role in shaping our products - DuctSeal LG, DuctSeal HG, and Greystuff. It provides authoritative recommendations regarding the technology and materials that should be employed. As a result, we, along with all contractors in this field, follow these guidelines rigorously when it comes to sealing cable ducts.

## Why should a cable duct be sealed on a Fuel Filling Station?

Fuel Filling Stations are integral to our daily lives, providing us with the fuel needed to power our vehicles. However, they can also be potentially hazardous environments due to the presence of flammable liquids, vapours, and gases. One often overlooked and/or inappropriately selected safety measure is the sealing of below-ground cable ducts on fuel filling stations. In this blog, we will explore why it is essential to seal these ducts as recommended in the "Blue Book" to prevent the transfer of flammable substances between hazardous and non-hazardous areas and ingress into building structures or equipment, ensuring the safety of both people and property on the site.

## Understanding the Risks

Fuel Filling Stations are filled with numerous sources of ignition, from running vehicles to static electricity, making them high-risk areas for fires and explosions. Flammable liquids, such as petrol and diesel, can easily spill during refuelling or due to accidents. These spills can lead to the formation of flammable vapours, which can travel significant distances and pose a danger to anyone in the vicinity.

## Cable Ducts: A Potential Pathway for Hazards

Cable ducts are installed below the forecourt and traffic surfaces of Fuel Filling Stations to carry electrical and communication cables and pneumatic lines for various equipment, including fuel dispensers, tank monitoring systems, lighting, and security systems. While these ducts are essential for ensuring smooth operations, they can also serve as pathways for the transfer of flammable liquids, vapour, and gases between potential spillage areas and buildings or other confined spaces on site.

## Sealing at the Point of Entry

Sealing cable ducts at the appropriate point in a below-ground draw chamber is crucial to prevent the intrusion of flammable substances. When a spill occurs, flammable liquids and vapour can seep into cable ducts through liquid and vapour pathways. Once inside, these substances can travel to other areas, increasing the risk of ignition. Proper sealing ensures that the ducts are impermeable to such substances, preventing their spread.



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## Choosing the Right Sealing Materials

The choice of sealing materials is critical in ensuring the effectiveness of duct sealing. It is essential to use materials that are resistant to the chemicals present in fuel and can withstand the environmental conditions on a petrol station forecourt. Common sealing materials include sealants, gaskets, and mechanical collars designed specifically for this purpose.

## Regular Maintenance and Inspection

Once the ducts are sealed, regular maintenance and inspection are necessary to ensure their continued effectiveness. Over time, wear and tear, as well as additional work and maintenance activities, can result in changes in environmental conditions, which can compromise the integrity of the seals. Routine inspections should be conducted to identify and address any issues promptly.

## What products can be used to seal cable ducts on a Fuel Filling Station

Any duct sealing system used must be able to show clear test evidence that the product can resist hydrocarbons that are generally present on a Fuel Filling Station. Some of these hydrocarbons are listed below, but not completely exhaustive, and each site should be treated separately.

- Petrol
- Diesel
- Ethanol
- LPG Gas
- HVO Synthetic fuel
- AdBlue®

Examples of the most common seals installed within the ducts are the following:

### DuctSeal LG

Introducing the DuctSeal LG Cable Duct Sealing System from AC Cable Solutions, a leading choice for effectively sealing cable ducts. This system is highly favoured for its compatibility with cables under 25mm in overall diameter, making it an ideal solution for a wide range of cable sizes commonly encountered in petroleum station forecourts.

At the heart of this system lies the exceptional sealant known as "GreyStuff," which has undergone rigorous testing to ensure its resilience against hydrocarbons. Beyond its chemical resistance, GreyStuff also exhibits remarkable microbial resistance, effectively inhibiting the growth of bacteria, mould, and fungi on the sealant's surface. This feature is particularly valuable, given that duct entry points are frequently located in damp, stagnant environments.

### DuctSeal HG

DuctSeal HG, powered by the same outstanding GreyStuff sealant, takes duct sealing to the next level by accommodating a wide spectrum of cable sizes, from the smallest cables to large, heavy power cables or pipes. What sets this system apart is its innovative rubber sleeve backing system, designed to envelop and support the cables, delivering robust support.

This unique sealing approach not only ensures hydrocarbon resistance but also provides exceptional pressure resistance,



withstanding pressures of up to 2.0 bar. DuctSeal HG is the ultimate solution for sealing and securing your ducts, offering versatility, strength, and protection in one comprehensive package.

#### Conclusion

The sealing of cable ducts on Fuel Filling Stations is a vital safety measure that should not be overlooked. Preventing the transfer of flammable liquids, vapour, and gases through these ducts can

significantly reduce the risk of fires and explosions, protecting both people and property on the site. Sealing systems dictated in the “Blue Book” create a robust barrier against potential hazards. By choosing the right sealing materials and conducting regular maintenance, Filling station owners can contribute to a safer and more secure environment for all. Safety should always be a top priority, and sealing cable ducts is a small yet significant step in achieving it at Fuel Filling Stations.



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# The UK's Drive-Off Epidemic

By Cheryl Ashton, Marketing Coordinator, TSG UK Solutions Ltd

The growing number of fuel thefts from forecourts is adding extra pressure to a sector that is already undergoing an expensive seismic change to keep pace with consumer demand.

The forecourt sector is suffering from a recent spike in drivers leaving the premises without paying for fuel, commonly referred to as drive-offs, predominantly triggered by rising energy prices and the cost-of-living crisis.

This modern-day scourge is having a massive impact on the profitability of fuel retail operations which are experiencing a typical loss of £50 per drive-off, with each site incurring an average of ten thefts every month.

The British Oil Security Syndicate shows there are now around 1.5 million non-payment incidents per year, resulting in a staggering £100m annual loss for the industry across the UK.

The use of false number plates during drive-offs is commonplace, making tracking down the perpetrators almost impossible. Other prevalent criminal practices include 'double-tanking' where thieves carry more than one fuel container to maximise their ill-gotten gains.

In point of fact, fuel theft has now become such big business for crooks, that organised crime gangs are now beginning to emerge, sweeping the country and compounding the misery for energy retailers.

## Mitigate the risk

Forecourt retailers need to remain vigilant and consider tightening pump authorisation procedures, as well as briefing staff on the tell-tale signs that indicate a potential drive-off.

### Typical warning signals of a drive-off

- The driver is still at the wheel and the passenger is filling up;
- Open doors or open boot to hide number plate;
- Number plates obscured or appear altered;
- Lights of the vehicle still switched on;
- Engine still running;
- Vehicle parked facing away from the kiosk towards an exit;
- Customer trying to hide behind their own or another vehicle when filling up;
- Motorcyclists wearing a helmet during refuelling.

## Stop the rot

A surefire way to eradicate drive-offs is for retailers to take pre-





payment at the pump before the fuel is dispensed. This radical but extremely effective step may involve retrofitting pre-pay devices to each dispenser, a method that has already been widely adopted in many European countries.

However, apart from the immediate financial impact of upgrading the pumps, many retailers are reluctant to implement pre-payment for fear of lost sales of high-profit-margin drinks and snacks from their convenience stores, which is a core part of their business. To overcome this mindset, many retailers are analysing the numbers in terms of site locations and footfall levels and reaching the conclusion that preventing fraud is preferable to trying to recoup the loss.

Alternatively, those taking a more positive standpoint claim that pre-payment of fuel at the pump not only prevents drive-offs but eases the queues in the store, allowing genuine grocery shoppers more time and space to fill their baskets.

#### TSG is here to help

TSG has over 30 years of experience in the supply and installation of retail solutions for fuel sites across the UK. With its extensive portfolio of products, TSG can satisfy the needs of any size of operation, from a single independently owned business to a national multi-site network.

TSG specialises in secure payment solutions to suit any site layout or environment. For retailers wishing to prevent drive-offs by installing pre-payment facilities on the forecourt, TSG provides help and advice to establish the best possible solution to suit the business' needs.

TSG can also support site owners looking to step up security measures by delivering high-specification closed-circuit television cameras, to monitor all aspects of the forecourt and convenience store and help prevent criminal activity.

#### Tokheim Crypto VGA™

The Tokheim Crypto VGA™ is the most advanced and secure dispenser integrated terminal (DIT) in the energy retail sector. The Crypto VGA™ is fully certified per the latest PCI DSS approvals. It accepts credit, debit and fuel cards along with the latest technologies, such as contactless and smartphones.

Aside from an easy transaction process and modern payment methods, the Crypto VGA offers anti-fraud protection, with its integrated privacy shield plus advanced anti-tamper and anti-skimming measures, to help counter fraud attempts.

The DIT is available as either a single or double-sided solution and integrates seamlessly into the Tokheim Quantum™, Wayne Helix™ and third-party dispensers.

#### Security counts

##### Tokheim EYE Security Solution

Surveillance cameras are fast becoming today's most cost-effective and reliable answer to crime prevention. One such option is the Tokheim EYETM Security Solution from TSG UK. This award-winning closed-circuit television (CCTV) solution was designed specifically for forecourts and has proved to be an excellent deterrent to criminals.

Tokheim EYE is an advanced high-definition (HD) camera surveillance system, activated by the slightest of movements on

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the forecourt, that is able to capture and store images of a suspected crime. The footage can be easily retrieved and viewed by site owners and authorised personnel, retrospectively or live, on any smart device.

The cameras are interfaced with automatic number plate recognition (ANPR) software and point-of-sale equipment both at the pumps and within the kiosk. This provides a range of valuable information linked to the camera recordings. Real-time and post-event data includes details such as the pump number, receipt, staff member involved, time/date and other useful transaction inputs.

To conclude, whilst drive-offs are a difficult challenge to manage, it is possible to significantly reduce their impact by implementing equipment upgrades and making changes to security processes, safeguarding fuel retailers and their customers.



# Are Fleet Managers Ready for the Clean Air Revolution?

By Cheryl Ashton, Marketing Coordinator, TSG UK Solutions Ltd

The government's strategy to reduce (or at least limit) the emissions of air pollutants from road traffic in major cities is changing the way UK business manage their fleets.

Low Emission Zones (LEZs) are areas in which high-polluting vehicles are prohibited or required to pay a fee for access. These zones target the worst polluters, specifically heavy diesel vehicles, buses and coaches by imposing minimum emissions standards on traffic operating in designated regions. The restrictions vary across the country, depending on the city and the type of vehicle.

In some cases, LEZs can have zero-emission zones (ZEVs) within them, where vehicles are subject to restrictions on exhaust emissions beyond those in the Ultra-Low Emission Zone (ULEZ) or LEZ. Electric vehicles (EVs) have unrestricted access, whilst fossil fuel vehicles are either excluded or required to pay an entry charge. ZEVs can help improve local air quality while encouraging a switch to zero-emission vehicles, walking, cycling and the use of public transport.

To complicate the situation even more, there are also clean air zones (CAZs) springing up in many major towns and cities. Clean air zones are a type of LEZ that has stricter emission standards and applies to a wider range of vehicles. It is fair to say that every fleet operator has a herculean task simply navigating the complexity of the regulations associated with the different zones.

### What does it mean for fleet operators?

It is possible for freight vehicles to be denied entry to ULEZ, LEZs, CAZs or ZEVs, depending on the protocol in place, forcing the

drivers to take lengthy detours in order to reach their destination. However, in most cases, delivery vehicles will be allowed access to the zones, as long as the company meets the substantial fines in place.

Either way, fleet operators will incur a financial penalty, whether in the form of burning additional fuel or paying daily non-compliance charges, which fluctuate in severity.

Almost all businesses will be impacted by the growing number of clean air zones, and fleet managers face new challenges in building a flexible fleet that not only meets the demands of the business but also satisfies the regulations of the low-emission areas.

As a short-term measure, operators can plan their routes in order to complete essential trips. One option may be for company fleets to be fitted with tracking technology which can provide information on the best routes to take for a given journey, as well as routes to be avoided.

Inevitably, the only permanent satisfactory solution is to transition the fleet to cleaner and more sustainable energies, including hydrogen, liquid and compressed natural gas (LNG & CNG), biodiesel, biogas and electricity. Of course, this bold move will require a significant investment in new vehicle stock and supporting infrastructure at the depot.

### The benefits of going green

Switching to greener energies will undoubtedly convey a company's commitment to sustainability and raise its profile in the



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community. Manufacturers and retailers are increasingly looking for an environmentally responsible logistics partner to help them meet their own sustainability targets, so a commercial fleet powered by green gas or electricity could give a business the edge it needs when competing for new business contracts.

#### **TSG is here to help**

TSG specialises in addressing the obstacles faced by fleet operators by providing the best possible solutions and equipment on the market today. With over 30 years of expertise in the sector, TSG works together with fleet owners to fully leverage the potential of the site.

TSG has been providing equipment to the retail fuel industry for many years but is now making a name for itself in the new energy sector, delivering a wide variety of products and advanced solutions to assist fleet operators in making the switch to electricity, gas or hydrogen.

As leaders in the design and installation of electric vehicle charging infrastructure, TSG is well-placed to guide fleet managers through the process and help them determine the best possible solution for their business, with a view to expansion as their EV fleet grows.

Additionally, TSG supplies all types of CNG and LNG plants and dispensers, hydrogen compressors and electrolyzers for those fleets choosing gas power.

Now established as the UK's first-choice engineering, procurement and construction (EPC) contractor for all new energies (including

solar), TSG delivers all works within a predefined timescale and budget for any application. Furthermore, TSG provides an unrivalled aftersales service to support its customers following installation. Operating seven days a week, TSG has a large team of highly skilled technical engineers and advisers on hand for every eventuality.

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Profleet LOGmaster from TSG UK is the successor of the very popular DiaLOG fuel management system, delivering total depot control via a completely new range of stylish terminals.

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# Global Satellite Services Provider Specifies Trenwa Fibrelite Trench & Cover System

By John McCarthy, Marketing Assistant, OPW

**Client:** Anonymous  
**Industry:** Telecommunications  
**Location:** Pacific Northwest, USA  
**Products:** Trenwa heavy-duty precast concrete road crossing trenches topped with Fibrelite's LHF traffic-rated composite trench covers  
**Project Status:** Complete

This large multinational satellite services provider has specified the Trenwa Fibrelite partnership trench and cover system for their latest satellite earth station antenna facility in the U.S. The partnership system combines Fibrelite's lightweight GRP composite lids and Trenwa's heavy-duty road crossing precast trenches. This facility provides mission-critical commercial satellite communication services to the U.S. government, other select military organisations (and their contractors), airline and marine operations, television and telecom service providers.

### Key Requirements

- Protecting and allowing safe, fast access to cables running from antennas to control rooms

- Running cables across road crossings
- A long-term solution
- Safe manual access to cables for monitoring and maintenance

### The Fibrelite & Trenwa Solution

- Trenwa BHF precast trench with integrated Trenwa/Fibrelite LHF26-60 composite trench covers
- Trouble-free lightweight durable monolithic structure
- Safe walking & driving surface wet or dry (anti-slip/skid)
- Safe manual cover removal by two people at all load ratings
- Long term solution – chemically inert, noncorrosive, and freeze/thaw cycle impervious
- Tried and tested since 1980 (Fibrelite covers) and 1961 (Trenwa precast trenches)
- Excellent insulation against heat
- True HS20 load rating

Explore Fibrelite's technical case study library here: <https://fibrelite.com/satellite-APEA/>



The Fibrelite Trenwa trench and cover system installed at mission-critical satellite facility





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The Fibrelite Trenwa trench and cover system protects and allows safe, fast access to cables running from the antennas to the control rooms



The trench and cover system provide a solution which is chemically inert, noncorrosive, freeze/thaw cycle impervious



Fibrelite's lightweight GRP trench covers can be safely and quickly removed by 2 people (image used for illustration purposes and shows a different installation)





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\* Fuelvac® uses solvent-free and non-hazardous materials

## A Brand-new Approach to Fuel Management How AVI Technology Revolutionises the Fuel Management Game

By Steve Gain, Managing Director, OTS Group

Until recently, fleet managers have primarily used Fuel Management systems to measure and track fuel inventories, accessing data through web portals and using this information to make decisions regarding fuel purchasing & vehicle fleet maintenance. With AVI technology, fleet managers now have access to so much more, so much faster.

The use of AVI technologies in Fuel Management represents a breakthrough in the level of accuracy and control that an organisation can have over their fuel consumption. Organisations can now ensure that the right amount of the right fuel is dispensed into the right vehicle at the right time as well as monitoring the vehicle fleet in real time.

This enables fleet managers to improve efficiency, which can lead to cost savings, improved productivity, and better customer service.

AVI Fuel Management and Traditional Fuel Management: two different approaches to monitoring and controlling fleet fuel consumption.

### Monitoring Fuel Consumption

Traditional Fuel Management systems focus on controlling fuel consumption by measuring and tracking fuel inventories and monitoring fuel dispense. The data is then provided to managers through web portals, and while the pumps can be viewed in real

time, there's no oversight of vehicle activity & fuel consumption. AVI Fuel Management systems, on the other hand, provide real-time monitoring of fuel consumption by integrating advanced sensors and telematics devices into vehicles. This allows businesses to have a real-time view of their fleet's fuel consumption, which is crucial for making informed decisions and taking actions to improve fleet efficiency.

### **Control of dispensing to avoid fuel misuse or theft from the nozzle**

Where AVI Fuel Management systems really come into their own is dispensing control. With AVI Fuel Management systems, only the proximity of authorised vehicles or plant can activate the dispensing mechanism on automated fuel pumps. There is a wireless RFID communication between the vehicle and the pump that ensures that authorised vehicles will be refuelled with the correct type of fuel, and that no further fuel can be dispensed to secondary containers or vehicles. This ensures a much greater level of fuel security, effectively eliminating fuel misuse, misappropriation, or theft from the nozzle. Third parties simply cannot access the fuel from the nozzle. This is particularly important to our clients since the changes to the entitlement to rebated fuels in April 2022, when fuel stored in remote or unattended storage tanks became significantly more vulnerable to theft and misuse.

### **Reducing operational expenditure by eliminating manual processes**

The use of AVI Fuel Management technology significantly reduces operational expenditure by eliminating manual processes. One key way this is achieved is by removing the need for fleet drivers to manually input odometer numbers or driver identification numbers at the pump. This eliminates the potential for human error in these inputs, as well as the time it takes for drivers to manually input this information on the keypad. By automating these processes, AVI Fuel Management technology can save a significant amount of time per refuel.

One major retailer that has implemented AVI Fuel Management technology reported that this time saving alone resulted in tens of thousands of pounds in savings across their operation. By reducing the time required for each refuelling by just 30 seconds, the retailer was able to achieve significant cost savings. This is just one example of the many ways in which AVI Fuel Management technology can help businesses reduce operational expenditure. Additionally, automated systems can also help to prevent fraud, leading to even more savings for the business.

### **How does EasyFuel+ AVI Fuel Management system work?**

EasyFuel+ is an advanced fuel management solution that uses GPS and Odometer Sender technology to accurately record the distance travelled by a vehicle without needing to connect to the vehicle's On-Board Diagnostics (OBD) system. This makes it a uniform solution that can be used for all vehicle models.

One of the key features of EasyFuel+ is its small profile, which allows for in-loom installation. This means that it can be easily integrated into a vehicle's existing wiring without causing any warranty issues, as it does not connect to sensitive vehicle electronics.

The Advanced GPS Odometer Sender in EasyFuel+ measures the true distance travelled independently of the vehicle, which eliminates the need for calibration or recalibration. It also uses a

proprietary compensation algorithm to provide distance correction in the event of satellite loss, ensuring accurate readings at all times.

EasyFuel+ also provides two road speed pulse outputs, one for the Vehicle Interface Device (VID) and the other for the On-Board Computer (OBC). This ensures uniformity in the readings recorded on the VID and OBC, ensuring that the data is accurate and consistent. The solution also includes GOS antennas for both sill or roof mounting, depending on the installation preference.

### **Why use the EasyFuel+ Fleet Management option?**

EasyFleet is an advanced fleet management solution that builds upon the capabilities of EasyFuel. It provides all the benefits of EasyFuel while also adding powerful vehicle location tracking functionality. This allows businesses to monitor the location and movement of their fleet vehicles in real-time, which can be used to optimise routes, improve driver safety, and increase overall fleet efficiency.

In addition to live location tracking, EasyFleet includes a number of features intended to simplify fleet administration. These include:

- CANbus diagnostic data capture
  - EasyFleet can capture data from the vehicle's Controller Area Network (CANbus), which can provide valuable information about the vehicle's performance and maintenance needs.
- Temperature monitoring
  - EasyFleet can monitor the vehicle temperature ensuring that goods are being transported at the correct temperature.
- 2-Way Driver Communication
  - EasyFleet provides two-way communication between driver and fleet manager making the communications process more streamlined. Managers can provide instructions, receive updates, or address any issues that may arise.
- RFID Driver Identification:
  - EasyFleet uses driver identification RFID technology which can be used to track driver behaviour, monitor compliance with regulations and improve fleet efficiency.
- Onboard Fuel Tank Level Monitoring
  - EasyFleet monitors fuel levels in the vehicle's tank using an external ultrasonic sensor, enabling managers to optimise fuel usage & reduce consumption.
- Camera Tracking
  - Telematics units have road and driver camera options available.

### **Benefits of AVI Fuel Management systems**

The EasyFuel+ Fuel Management solution enables businesses to reduce their operating costs, increase operational efficiency, and perform better when it comes to both duty of care and customer service.

#### **Benefit 1: Reducing Operating Costs**

EasyFuel+ can help businesses reduce operating costs in several ways. It can prevent unsanctioned trips, such as personal use of



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business assets, unscheduled stops, and use out of normal operating hours. It also helps businesses to reduce fuel consumption by managing driver speed and reducing excessive idling.

Additionally, it can control labour costs by reducing paperwork, eliminating prolonged stop times, monitoring vehicles being used for private use, and deterring excessive overtime use. Furthermore, it can lower insurance premiums with driver behaviour management and accident notification.

### Benefit 2: Gains in Operational Efficiency

EasyFuel+ provides real-time knowledge of where vehicles are and have been, which allows businesses to do the same job with fewer assets. It also enables businesses to analyse delivery times and stops, providing notification of delivery prior to the vehicle arriving. With EasyFuel+ businesses can improve vehicle dispatch and Green Footprint management.

### Benefit 3: Duty of Care

EasyFuel+ helps curb unsafe driving habits before they lead to more serious incidents, such as monitoring driver behaviour, reducing speeding and reducing long trips without a break. It also helps reduce unauthorised vehicle use by instantly flagging vehicle movement in non-working hours and easily detecting and confirming planned stops made. With EasyFuel+ businesses can view and replay any vehicle journeys and respond quickly to emergencies by knowing the exact location for field technicians. Additionally, it improves business risk management by identifying

dangerous driving habits, reducing damage costs, lost production and minimising brand risk.

### Benefit 4: Customer Service Improvement

EasyFuel+ allows businesses to enhance their customer service by providing accurate and real-time data on vehicle location and delivery status. This means that businesses can provide more accurate ETAs and keep customers informed of any changes in delivery schedule, thus improving transparency and trust. Additionally, it can help in identifying areas of improvement in their operations and addressing them, leading to increased customer satisfaction and retention. Overall, EasyFuel+ can help businesses improve their customer service, leading to a more positive relationship with their customers.

### Conclusion

As a technological business, we're always on the lookout for new solutions to existing problems. After successful rollouts in 2022, we're convinced that AVI-enhanced Fuel Management solutions are going to become more and more prevalent in the next 12-18 months with organisations that manage very large fleets of commercial vehicles set to implement them.

If you're looking to reduce operating costs, increase operational efficiency, and improve duty of care and customer service when it comes to your fleet operations, please do get in touch. We'll be happy to discuss how AVI Fuel Management could transform your fleet management operation.

# Top 3 Cost-Saving Tips for Heavy Fleet Operators

By Steve Gain, Managing Director, OTS Group

## Leveraging AVI and Modern Technology

At a time when margins are razor-thin and operational optimisation is more than a catchphrase, fleet operators are under constant pressure to streamline processes and reduce overheads.

We caught up with Shaun Ferreira, OTS' Sales Director and Fuel Technology Specialist, to find out his top 3 fuel-related cost-saving recommendations for heavy fleet operators.

### 1. Holistic Monitoring of the Fuel Journey

Shaun advocates for a comprehensive approach. When we met, he mentioned that "the concept is to monitor every part of the fuel journey, from the depot to the vehicle, looking at fuel storage, dispensing, and consumption."

"In addition to standard Fuel Management Systems, we advocate for the use of AVI technology. Automatic Vehicle Identification (AVI) uses radio-frequency identification (RFID) tags and sensors to precisely identify vehicles at the fuel pump. This technology empowers organisations to have full control over their fuel dispensing process, allowing for accurate and secure allocation of fuel to designated vehicles. By ensuring that fuel is only dispensed to authorised vehicles, AVI technology significantly enhances fuel management, reduces the risk of unauthorised refuelling, and prevents fuel theft from the nozzle."

By leveraging AVI technology, operators can ensure that each drop of fuel is tracked, reducing wastage and theft.

Tip: Invest in an AVI integrated Fuel Management System that offers a bird's eye view of your entire fuel supply. Such holistic oversight minimises losses and optimises usage.

### 2. Harness the Power of Telematics and AI

Incorporating telematics and AI can offer predictive insights, facilitating proactive rather than reactive decisions. As we talked, Shaun elaborated on the trend towards AI, "We're using machine learning to identify trends, and using those trends, it [AI] performs some of the analysis for us."

These intelligent systems continuously analyse data points—from engine performance metrics to fluid levels and vibration patterns—to detect anomalies or trends that might signify a pending problem. By applying advanced algorithms to this data, AI can predict when a part is likely to fail or when maintenance is due, enabling timely interventions. This not only minimises downtime but also extends the lifespan of machinery, thereby maximising ROI. Preventative actions can be automated or triggered for manual review, turning

maintenance from a reactive task into a proactive strategy. Real-time data analysis not only paves the way for cost containment strategies but also assists in predicting consumption patterns, which can be invaluable for procurement and budgeting.

Tip: Integrate telematics with your fleet management system to monitor fuel consumption and manage driving habits such as excessive acceleration, deceleration, unsanctioned trips, and idling time.

### 3. Prioritise Safety to Prevent Costly Incidents

Safety isn't just about adhering to regulations; it's also a significant cost-saving measure. Ensuring that vehicles operate under safe conditions prevents expensive accidents and legal liabilities. Shaun touched on this in our interview, emphasising monitoring aspects like vehicle speed in forecourts and ambient light conditions. If safety conditions aren't optimal, advanced systems can take corrective actions, such as shutting down a forecourt or dispensing station.

Tip: Invest in technology that offers automated safety checks and alerts. For instance, sensors on the forecourt can track the speed of incoming vehicles, and lighting monitors can automatically adjust or shut down operations based on ambient conditions.

### Customised Solutions Over One-Size-Fits-All

In addition to his top 3 tips, Shaun also stresses the importance of bespoke solutions. He believes that OTS Group's edge over competitors lies in our ability to tailor solutions to specific client needs rather than selling generic products. "We're not just selling boxes; we're selling solutions to our customers."

Implementing systems like EasyFuel+ that can integrate seamlessly into existing frameworks is a great way to do this, as is partnering with companies that have the ability to look at the problem holistically and can implement a number of different technological solutions to resolve the problems you are facing.

To sum up, as the heavy fleet industry grapples with modern challenges, embracing innovative solutions like AVI and cutting-edge technology becomes a necessary and logical next step for organisations that want to stay on top of fuel costs. OTS Group's recommendations offer a roadmap for operators aiming to harness technology for tangible cost savings and operational excellence.

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## Ask the Experts

By Brian Humm, Editor of The Bulletin and APEA Trainer

*I have just purchased a petrol station and have started to operate it and would like to ask about the petroleum storage certificate (Psc) that has been issued for my site. I have 6 underground storage tanks, 3 of which are currently holding petrol, however my storage certificate only shows the 3 petrol tanks? All the tanks are double skin steel with liquid leak detection, is this correct?*

In a word no, there is a criterion that was published when the petroleum (Consolidation) Regulations 2014 were introduced to assist petroleum enforcement authorities (PEA) to understand what tanks could be included on the PSC, the PSC must list all underground tanks that can legally hold petrol, even if they currently are used with another fuel.

This is to facilitate a grade change (petrol to diesel or vice versa)

without the need to inform the PEA, as long as it is done in a safe manner and the vapour recovery is removed/replaced as required, the PEA would then pick this up on their next visit and amend their records accordingly.

The guidance is in the form of a PETEL which is issued by the Petroleum Enforcement Liaison Group (PELG) and can be found on the Energy institute website.

Petrol Enforcement Liaison Group (PELG) - PETELs | EI - Publishing ([energyinst.org](http://energyinst.org))

PELG PETEL 14 - Guidance on the introduction of the new Petroleum (Consolidation) Regulations 2014.

# News

## The EV revolution steps forward

With several countries taking steps to make the future of road transport electric, service stations try to become destinations that will appeal to the EV customer. Key questions remain though, such as the profit margins on the kWh.

In a world where 1.3 billion vehicles navigate the intricate web of global road networks, the wheels of transformation are spinning at an unprecedented rate. Electric vehicles (EVs) are taking up a higher share of the mobility market in several markets, mainly China and Europe. As EV adoption accelerates, the demand for electric vehicle charging infrastructure has surged, presenting a pivotal opportunity for forecourt companies if they can fend off competition from new players.

Electric car markets worldwide are experiencing exponential growth. In 2022 alone, sales of electric vehicles exceeded an impressive 10 million units. More significantly, these vehicles accounted for 14% of all new cars sold, a remarkable rise from approximately 9% in 2021 and less than 5% in 2020. The question is where will these vehicles charge? Are fuel retailers well positioned to become the preferred destination for on-the-go charging?

“Competition for charging kWh's is complex, with home charging, workplace charging, destination charging, and on-the-go charging competing with each other and each with a distant competitive environment. Charging speed and the price of convenience will create further complexity. In the on-the-go segment, charging speed and reliability are the top two key purchasing criteria. With strategic highway and transient locations, fuel retailers are particularly well positioned to play and have a route to become the main go to provider,” explains the Boston Consulting Group (BCG).

The shift from range anxiety to charging anxiety in developed markets poses a significant challenge, impacting both consumers and charge point operators as queues become a common sight, leading to decreased utilisation rates.

To address this challenge, BCG suggests three key strategies: first, implementing pre-booking of charging slots, with the potential for no-show fees, to enhance confidence, reduce wait times, and optimise network utilisation; second, utilising dynamic pricing to incentivise off-peak charging and minimise demand spikes during peak hours; and third, integrating charge point information with in-car navigation systems to efficiently guide users to available charging stations, enhancing network utilisation.

### Motor Fuel Group's (MFG) electrifying vision

MFG, the leading independent forecourt operator in the United Kingdom, has embraced the electric revolution with a robust strategy. Martin Symes, EV Director at MFG, clearly outlines their approach: “High powered, ultra-rapid charging in hubs with multiple bays, and encompassing the traditional offerings that you would see across a forecourt retail, such as food to go and Amazon lockers.”

The numbers behind MFG's commitment support their words as they have managed to meet their 2023 targets. They have allocated £400 million to deploy ultra-rapid 150kW, 300kW, and 400kW EV chargers throughout the UK. At present, they operate 500 ultra-rapid chargers, accounting for 5.4% of the UK's public charging network. In a testament to the accelerating EV adoption, these chargers have collectively charged over 50 million zero-carbon miles in 2023 alone.

MFG are not only investing in the charging capability but in the whole customer experience. The company offer multiple payment options, food on the go options and other services, but the future of the experience lies elsewhere.

“The future of the EV experience is plug & charge. That's actively coming to our network and others. For me that's the biggest differentiator versus ICE vehicles that will make the transition easy. You don't have to worry about having multiple RFID cards or apps. That's the biggest difference between today and where we need to be,” adds Symes.

MFG's ambitious roadmap includes the installation of 3,000 ultra-rapid chargers across approximately 500 sites by 2030. It's a massive operation that shows the scale of the transformation occurring in the mobility sector.

### Circle K Sweden bets on electric trucks

Circle K is at the forefront of the EV charging transformation. In Sweden, a recent focus has been the heavy-duty transport sector. They have strategically placed 50 charging points for trucks with 360 kW chargers. Soon they will also install their first megawatt chargers. These energy hubs provide power; they offer essential amenities, including food services, beverages, shops, and secure parking, creating comprehensive rest areas for truck drivers.

“In November we have also received new fundings to build 13 stations with a total number of 56 charging spots, these sites are subsidised with 70% of the cost by the Energy authority. We will put even higher power at those sites, 400 kW. In all this will bring us up to around 140 charging spots for trucks during 2025,” explains Lennart Olsson, Senior Manager Pricing & Biofuel at Circle K Sweden.

Circle K aims to be a holistic solution provider for the evolving transportation landscape. With a commitment to offering integrated charging solutions, Circle K is playing a vital role in electrifying not just passenger vehicles but also the heavy-duty transport sector.

When asked about the business case for charging, Olsson says they have seen an increase in in-store sales. “We have seen that charging added to in-store sales from the beginning. The sites are getting bigger restaurants and stores. The EV customer stays for longer and buys more. We also try to be profitable with the charging revenues while keeping a fair price,” he explains.





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### More OEMs join the party

The electric vehicle charging landscape is not just evolving; it's expanding. OEMs such as Mercedes-Benz and BMW are now venturing into the charging market. Mercedes-Benz has embarked on an ambitious plan to set new standards in convenient, clean, and reliable EV charging. They've inaugurated their first charging hub at their US headquarters in Sandy Springs, Georgia, marking the initial step in their \$1 billion commitment to deploy 2,500 chargers across at least 400 charging hubs in North America by the end of the decade.

Mercedes-Benz acknowledges the challenges of building a reliable charging network and emphasises the importance of strong partnerships. As they work with industry leaders like E. ON Drive GmbH in Europe, they focus on selecting suitable locations and crafting exceptional customer experiences.

"When selecting locations for our charging hubs, the customer experience is paramount. That's why we attach particular importance to a correspondingly premium experience when selecting locations. This means that, in addition to attractive facilities, there should also be places to stay, soft drinks and snacks, but also toilets in the immediate vicinity," says Nico Dettmer, COO Charging Solutions at Mercedes-Benz Mobility.

### The road ahead: A charged future.

Despite all the activity the profitability of EV charging infrastructure is marked by uncertainties, primarily revolving around per kWh unit margins. These margins vary significantly based on factors such as charging location and speed, with ultra-fast highway on-the-go charging yielding the highest profit margins, often more than double that of slow charging across various markets. BCG's expectation is that EV drivers will opt for on-the-go charging when no other alternatives are available, making them less price-sensitive, which clarifies the path to profitability in this segment as increasing EV density boosts charge point utilisation.

As the experiences of MFG and Circle K demonstrate, forecourt companies are not merely adapting to the EV revolution; they are architects of change. These players leverage their strategic locations and existing infrastructure to offer high-powered charging, food services, and additional amenities, crafting a seamless charging experience for EV drivers.

The electrification of transportation is not a distant vision but an accelerating reality. As more companies follow in the footsteps of Mercedes-Benz, MFG and Circle K, the EV charging landscape will continue to evolve, electrifying not only our roads but also our businesses.

## Certa opens HVO Biofuel Station in Dublin

Certa has become the first energy operator in Ireland to open a fully-fledged HVO fuel station. Certa's new "Forecourt of the Future" in Liffey Valley in Dublin cost over €1 million to build and is the first in Ireland to make Hydrotreated Vegetable Oil (HVO) available at all pumps alongside diesel and unleaded petrol.

HVO is produced from waste plant matter and can be used as a direct replacement for diesel without any need for vehicle or engine modifications to help motorists lower their carbon emissions by up to 90%.

Certa has already started to upgrade its network of 41 unmanned, pay@pump forecourts to offer HVO at all fuel pumps alongside other fuels.

The first of the newly upgraded forecourts are scheduled to open in Clarehall, Clearwater, Ballymount, Ashbourne and Drogheda before the end of the year.

Certa is also the first fuel supplier in Ireland to present HVO pricing on its forecourt pricing totems. It is currently matching the price of HVO with diesel at its new forecourt in Liffey Valley and said it is committed to achieving future price parity.

66 Solar PV panels have been installed at the newly opened Certa forecourt in Liffey Valley to help power the site, including its carwash and two Electric Vehicle (EV) fast chargers with speeds of up to 180 kWh. The installation is estimated to save 7 tonnes of carbon a year.

## Jet achieves nine-site deal in the UK

JP&S Servicess' entire portfolio of fuel retail locations will now sport the chain's colours thanks as well to the re-signing of four existing locations.

Jet consolidates a year of growth with the announcement of a new nine-site deal with JP&S Servicess Limited. The deal includes the re-signing of four existing sites - meaning that the entire portfolio of JP&S sites will all be within the chain's network by the end of 2024.

"We are delighted to welcome nine quality new sites to the growing Jet network - an achievement that is testament to a first-rate team who have built a valued and trusted relationship with JP&S," said Rupert Turner, Managing Director of UK Marketing at

Phillips 66 Limited. The new sites, seven of which are Texaco branded and two BP branded, are all in the south of the United Kingdom. The new deal will boost Jet's London portfolio to 28, with the remaining four sites located in Hampshire, Surrey and Oxfordshire.

"Alongside redevelopment, when we moved Hertford Road to Jet in 2021, we saw volumes increase and shop sales double. Strong, open lines of communication are key in running a successful site and we have that with Jet," stated Visvanathan Yoganathan, Founder and CEO of JP&S Servicess Limited.

Following the deal, JP&S will be the second largest volume branded dealer group in the Jet network.

## Spar UK regional partners expand through acquisition

Henderson Retail and A.F. Blakemore have both purchased neighbourhood branded stores thus expanding their footprints across England, Ireland and Wales.

Spar UK partners Henderson and A.F. Blakemore have expanded to ensure continued supply to local communities through the acquisition of branded stores.

Henderson Retail announced the acquisition of two neighbourhood Spar stores, one located in Annalong and another in Omagh. The Annalong premises has been operated by Simon Heenan and his family for 30 years, while Anderson Gardens has been owned by Jimmy and Una McGirr for the past 27 years.

Additionally, Henderson celebrated the opening of Eurospar Supermarket in Coleraine. The new facility has replaced the Spar neighbourhood store which stood on the same site for over 20

years. This brings the total number of branded stores operated by Henderson Retail in Northern Ireland to 106.

On the other hand, Blakemore expanded its operation in Sleaford, Lincolnshire after agreeing a deal to purchase Hockmeyer Motors Limited. Hockmeyer Motors Limited was established in 1937, with the family business moving to the Spar brand in 2011.

Blakemore Retail continues to strengthen its overall retail and forecourt operation. Other recent expansion in the last six months came from the acquisition of Spar stores in Tipton, Phoenix Park (Nottingham) and a new build store opening in Warrens Wood, Gainsborough.

This brings the total number of A.F. Blakemore branded convenience stores and forecourt sites to 260 across England and Wales.





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## Maxol unveils second Recharge EV Hub in Ireland

The inauguration is part of a £2.35million investment to transform the company's Braid River service station.

Maxol has completed the transformation of its Braid River service station, located in central Ballymena, following an investment of £2.35 million.

The investment is part of a wider five-year £84M capital investment programme across The Maxol Group to create a network of convenience-led forecourt services. These are set to offer customers quality, value and choice on everything from fresh coffee and groceries to food-to-go on their doorstep.

A new Ultra Rapid EV Charging Hub - the second to be developed by Maxol and the second of its kind in Northern Ireland - has opened. The facility features four high-powered 200kw ultra-rapid chargers powered by renewable electricity, as part of the company's sustainability strategy.

"This is our second EV Charging Hub designed to offer the latest technology and fastest speed of charging available for our customers along with the continued rollout of our sustainable forecourt design. This investment reinforces our continued commitment to being a more sustainable forecourt convenience retailer offering the highest quality of facilities and products," said Brian Donaldson, Chief Executive Officer of The Maxol Group.

In addition, the redeveloped site offers the latest Spar concept with a new store of 246 sq. meters. Customers can now shop for everyday grocery essentials including a greater choice of fresh, locally sourced fruit & vegetables, a wide range of dairy and chilled produce and a huge selection of frozen foods.

Two self-checkouts have also been installed to give customers even more choice, efficiency and convenience. Non-food items available include a comprehensive range of Maxol own-brand engine oil, adblue and car care products.

## Virgin Atlantic makes first transatlantic flight with sustainable aviation fuel

The world's first transatlantic flight using 100 per cent sustainable aviation fuel touched down in New York after departing from London Heathrow Airport.

Part-funded by the UK Department for Transport, Flight100 - a Virgin Atlantic Boeing 787-9 powered by Rolls Royce Trent 1000 engines - represents a successful collaboration between the airline and project partners that include Sheffield University, Imperial College London, Boeing, Rolls-Royce and BP.

Virgin Atlantic said that Flight100 proves Sustainable Aviation Fuel (SAF) is a safe drop-in replacement for fossil derived jet fuel and the only mid-term viable solution for decarbonising long-haul aviation.

"You can consider this a type of Moonshot flight," said Professor Mohamed Pourkashanian, managing director at Sheffield University's Translational Energy Research Centre and Sustainable Aviation Fuels Innovation Centre (SAF-IC). "The overall aim is to show that it is possible to use SAF in existing engines."

The SAF used on Flight100 was made up of 88 per cent HEFA (Hydroprocessed Esters and Fatty Acids) supplied by AirBP and 12 per cent SAK (Synthetic Aromatic Kerosene) supplied by Virent, a subsidiary of Marathon Petroleum Corporation. The HEFA is made from waste fats while the SAK is made from plant sugars.

According to Virgin Atlantic, SAF delivers CO2 lifecycle emissions savings of up to 70 per cent whilst performing like the traditional jet fuel it replaces. SAF, however, currently represents under 0.1

per cent of global jet fuel volumes and fuel standards allow for a 50 per cent SAF blend in commercial jet engines. In a statement, Shai Weiss, CEO, Virgin Atlantic said: "There's simply not enough SAF and it's clear that in order to reach production at scale, we need to see significantly more investment. This will only happen when regulatory certainty and price support mechanisms, backed by government, are in place. Flight100 proves that if you make it, we'll fly it."

As well as reducing CO2 emission, the use of SAF is claimed to lessen the impact of particulate matter in contrails, which are thought to contribute to the climate impact of flying - particularly at night - by trapping heat and causing a greenhouse effect in the atmosphere.

According to team member Dr Marc Stettler, from Imperial's Department of Civil and Environmental Engineering, in the right conditions, water forms droplets on particulate matter emitted by the engine that freeze and become a contrail. Prof Pourkashanian confirmed that there is significant reduction in particulate emissions from SAF at high-altitude.

"[SAF-IC] has an auxiliary power unit on site, looking at the effect of fuels on different components," he said. "We have Tier 1 and Tier 2 pre-screening facilities to test whether this fuel is good enough for an aircraft engine."

Prof Pourkashanian continued: "It was great to bring together the resources of two leading energy research universities and take another step towards decarbonising aviation."



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## Underground petroleum storage tank violations result in fines for several businesses

In four separate enforcement agreements, the US Environmental Protection Agency has taken action against several corporate entities operating in New Jersey, New York and the US Virgin Islands to address alleged violations of federal laws regarding the maintenance and operation of underground petroleum storage tank systems. In separate settlements, the companies have agreed to comply and pay penalties.

"EPA's requirements are designed to ensure proper maintenance of underground storage tanks. When these tanks are not properly maintained, they can leak and put people and the environment at risk," said EPA Regional Administrator Lisa F. Garcia. "EPA takes these requirements very seriously and owners will face penalties if they do not comply."

When not properly operated and maintained, underground storage tanks (USTs) can leak petroleum and other hazardous substances, threatening soil and water quality. These regulations prevent and detect fuel releases that could contaminate groundwater and pose risks to people's health and the environment.

In New Jersey, ADPP Enterprises, Inc., and APM Management, Inc., operators of 13 petrol stations in New Jersey, settled a case with the EPA for violating federal rules on USTs storing gasoline or diesel fuel. The EPA discovered that the petrol stations failed to comply with spill prevention, leak detection, inspection, and record keeping requirements for USTs between 2018 and 2020. The owners have agreed to pay a \$175,000 (£141,000) penalty and certify their compliance with the UST rules at their facilities.

Wawa, Inc., a New Jersey-based company that operates petrol stations and convenience stores, has settled with the EPA for violating federal regulations on USTs containing gasoline or diesel fuel. Following inspections at nine Wawa facilities in February and March of 2022, EPA determined the company had failed to meet operator training, record keeping, and leak detection requirements for USTs. Wawa has agreed to pay a civil penalty of \$26,500 (£21,000) and certify its compliance with UST regulations at its facilities.

In New York, EPA found Dutchess Terminals, Inc., ANK Realty Inc., and Fair Oak, Inc., three companies that own and operate underground storage tanks storing gasoline or diesel fuel at 11 facilities across New York State, in violation of federal rules on financial responsibility, leak detection, spill prevention, and UST inspection requirements between November 2017 and April 2019. The companies have agreed to pay a \$150,000 (£121,000) penalty and certify their compliance with the UST rules at their facilities.

AT&T Transoceanic Comm. LLC, which owns and operates underground tanks storing fuel for emergency power generators at 28 facilities in New York, New Jersey, and the U.S. Virgin Islands, violated federal rules on spill prevention, inspections, and operator training at three of its facilities in the U.S. Virgin Islands, which EPA inspected in 2022. The company has agreed to pay a \$40,000 (£32,000) penalty and conduct a comprehensive audit of its compliance with all UST rules at its New York and New Jersey facilities.

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## BP, Henderson roll out EV fast-charging network for Northern Ireland

Over 40 charge points are already available to EV drivers at over 20 Henderson Retail sites, with the goal of equipping approximately 100 locations.

Henderson Group and BP pulse have signed an agreement to work together to install up to 200 electric vehicle (EV) charge points at around 100 Henderson Retail sites across Northern Ireland.

BP pulse charge points are already live and charging EVs at 17 BP SPAR sites across Northern Ireland as well as at another four Henderson Retail Spar sites. The full roll-out is planned to be finished by the end of 2025.

"We are making considered, positive steps in line with consumer behaviour and working with BP pulse to install ultra-fast chargers at our sites which will give EV drivers the opportunity to charge at

a location that is convenient to their journey," said Ron Whitten, Chief Financial Officer at Henderson Group.

With this roll-out BP pulse aspires to create one of the region's largest networks of ultra-fast and rapid EV charging, aiming to add up to 15,000 kW of charging capacity.

"Fast, reliable charging in convenient locations is essential to give drivers the confidence to switch to electric vehicles," added Akira Kirton CEO, BP pulse UK.

BP pulse is installing charging units with an integrated battery storage system and with a connection to a standard voltage power grid. This overcomes a significant barrier to the roll-out of EV charging infrastructure and removes the need for construction of a dedicated high-voltage substation.





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## TotalEnergies sells minority stake in Natref refinery to the Prax Group

Natref refinery has a capacity of 108,500 barrels of oil per day and supplies the main South African inland market.

TotalEnergies has signed an agreement to divest the 36.36% minority stake, held by TotalEnergies Marketing South Africa, in National Petroleum Refiners of South Africa (Natref) to the Prax Group.

Located at Sasolburg (Free State, South Africa), Natref refinery has a capacity of 108,500 barrels of oil per day, supplies the main South African inland market of Johannesburg area and is operated by a

JV between Sasol (63,64%) and TotalEnergies Marketing South Africa. "The transaction is in line with the Company strategy to focus on its large integrated fuels & petrochemicals platforms and to divest its non-core assets" commented Jean-Pierre Sbraire, Chief Financial Officer of TotalEnergies.

TotalEnergies has been present in South Africa for nearly seventy years, produces and markets a wide range of energies from fuels, biofuels, natural gas and green gases, renewables and electricity and remains committed to its operations in the country.

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## Shell converts historic station into EV charging site

The company has repurposed one of its most traditional locations in Germany to offer electric charging capabilities exclusively through four Shell Recharge ultra-fast charging stations.

Shell has repurposed one of its historic service stations in Germany to cater to electric vehicles (EV). The bold and futuristic 1960s architecture of Erlenstegenstrasse's petrol station in Nuremberg has been given a second life thanks to the Recharge brand.

Drivers can now charge their EVs under the curved, listed prestressed concrete roof from 1958. As a national industrial monument and the only one of its kind in the whole of Bavaria, the site will no longer offer petrol or diesel. It will now focus exclusively on new mobility.

A total of four Shell Recharge ultra-fast charging stations with 8

charging points offer a maximum output of up to 300 kW and up to 150 kW for simultaneous charging. Two of these are located directly under the historic roof.

In a small store under the roof, coffee and drinks vending machines will be installed to make the charging time more pleasant.

The service station itself was originally built in 1958 by the California-Texas Oil Company Caltex, with a design that dates back to 1956 by the Frankfurt architect Willy H. Weisensee.

Caltex originally planned to build 4,000 filling stations of this type but by the end of the 1960s, there were only over 800 Caltex sites in operation throughout Germany. The filling station was taken over by DEA and later reflagged to Shell.

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## Mabanaft takes over WESTFA Energy to expand across Northwest Europe

WESTFA's position in the downstream LPG market in Germany, the Netherlands, Belgium, France, and Luxembourg will complement Mabanaft's existing business.

German integrated energy company Mabanaft has announced the acquisition of 100% of the shares in WESTFA Energy. The deal includes all its subsidiaries and shareholdings, from Adeleon Familienholding, formerly WESTFA Holding. This strategic acquisition is set to strengthen the company's position in the energy market and expand its product portfolio.

Founded in 1946, WESTFA is a liquid gas distribution company based in Hagen, Germany, active in purchasing, logistics and distribution of LPG for heating and mobility purposes. WESTFA's position in the downstream LPG market in Germany, the

Netherlands, Belgium, France, and Luxembourg will complement Mabanaft's existing business.

"WESTFA is a well-positioned business with great access to end customers. Our focus, together with the WESTFA team, will be to continue serving the loyal customers and building on the existing relationships that WESTFA has developed over the years," said Jon Perkins, CEO of Mabanaft.

Mabanaft is proactively engaged in the energy transition, offering both conventional and low carbon fuel solutions. The primary focus is on growing the end-customer business, especially in hard-to-electrify sectors, by leveraging its core strengths of sourcing, storing, handling and distributing liquid fuels.





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## ADNOC opens UAE's first high-speed green hydrogen station

The new 'H2GO' pilot station is located in Masdar City to support the Emirate's National Hydrogen Strategy and the decarbonisation of its transport sector.

ADNOC announced the opening of "H2GO", United Arab Emirates' (UAE) first high-speed green hydrogen refuelling station. This pilot project has been set up to test a fleet of zero-emission hydrogen-powered vehicles. The station, located on land provided by Masdar City and operated by ADNOC Distribution, will create green hydrogen from water using an electrolyser powered by clean grid electricity.

The hydrogen supplied at the pilot station will be certified as "green" from solar sources by the International REC Standard, an internationally recognised certification organisation. The pilot will be used to gather data to understand the long-term viability of hydrogen vehicles in the UAE.

"ADNOC continues to collaborate with local and international companies on innovative technologies and low-carbon solutions that can accelerate decarbonisation and support a responsible energy transition," said Musabbeh Al Kaabi, ADNOC Executive Director, Low Carbon Solutions and International Growth.

The pilot is supported by the Integrated Transport Center in Abu Dhabi, and the high-speed refueller was provided by Linde, a leading global industrial gasses and engineering company. Throughout the pilot, the fleet of hydrogen vehicles are being provided by Toyota, Al Futtaim Motors and BMW, and will be tested by taxi companies, including Tawasul.

ADNOC has allocated an initial \$15 billion to advance lower-carbon solutions and develop decarbonisation technologies to reduce its carbon intensity by 25% by 2030 and enable its Net Zero by 2045 ambition.

## Aramco acquires a 40% stake in Gas & Oil Pakistan

This is the company's first entry into the Pakistani fuel retail market as part of its plans to expand its downstream operations.

Aramco has signed definitive agreements to acquire a 40% equity stake in Gas & Oil Pakistan (GOL).

The company is a diversified downstream fuels, lubricants and convenience stores operator, one of the largest retail and storage companies in Pakistan. The transaction is subject to certain customary conditions, including regulatory approvals.

The planned acquisition is Aramco's first entry into the Pakistani fuels retail market, advancing the company's strategy to strengthen

its downstream value chain internationally.

"Our second planned retail acquisition this year aligns with Aramco's downstream expansion strategy, with a clear path ahead for growing an integrated refining, marketing, lubricants, trading and chemicals portfolio worldwide," said Mohammed Y. Al Qahtani, President of Aramco Downstream.

This transaction would enable Aramco to secure additional outlets for its refined products. In addition, it will further provide new market opportunities for Valvoline-branded lubricants, following the acquisition of the Valvoline global products business in February 2023.

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## ISTOBAL launches new subsidiary in Poland

The company plans to strengthen its position in the European region with a team strategically positioned throughout the Polish market.

Spain-based ISTOBAL is fortifying its global presence with the establishment of a new subsidiary in Europe. The company has opened a new commercial office in Poland to meet local demands from the market.

This strategic venture marks ISTOBAL's twelfth subsidiary worldwide, aligning with the imminent plans to inaugurate a new office in the South-West region of France.

The new team will focus on establishing a more direct relationship

with its customers and seeking to provide tailored products and services. Its plans are to align seamlessly with the diverse needs of the market across various sectors.

"I believe it is our best move to meet the demands of our customers with an unwavering commitment to excellence, while concurrently fortifying our position in a region with immense potential," said Marcel Szmagara, General Manager of ISTOBAL's Polish subsidiary. The office will be strategically based in Poznan, housing commercial offices and a comprehensive infrastructure.

ISTOBAL is a multinational group with over 70 years of experience located in Valencia, Spain, specialised in the design, manufacture and marketing of integral solutions for vehicle washing and care.

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## OnTurtle forays into Romania with over 30 service stations

The company has expanded its service network for professional transport by entering its eleventh country.

OnTurtle announced the addition of thirty service stations in Romania, expanding its international network for refuelling and parking services dedicated to professional transport.

The country promises to have an important strategic weight for European logistics due to its location and economy, becoming the eleventh in the company's international network. These locations join OnTurtle's network, which is already present in Spain, France, Belgium, Luxembourg, the Netherlands, Austria, Germany, Slovenia, Italy and Poland.

The new stations are operated by Smartdiesel, offering diesel and,

in most cases, AdBlue refuelling. They are strategically located on the territory, close to the Hungary, Serbia and Bulgaria borders. "The country's export strategy connects regions, cities and towns to expand the exporter base and create exports that meet the demand from new markets, especially the European Union," explains Marta Fàbregas, CEO of OnTurtle.

Apart from refuelling, the addition of Romania offers the brand's customers a new ESPORG-certified secure parking facility in the west of the country, in Pecica. In total, the company has more than twenty certified parking lots, and more than 200 with the minimum-security measures.

With these new openings, OnTurtle now has more than 1,700 service stations across its international network.



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## Hydrogen dispenser in polished steel at Dubai's COP28

A fancy hydrogen refuelling station? Philippe Starck gives a thumbs up by crafting one made of reflective polished steel, turning his collaborative creation with hydrogen mobility company HRS into a gleaming cabinet box of hydrogen.

The unveiling takes place at the opening of COP28 at Expo City Dubai, and visitors can test out the HRS hydrogen refuelling station between November 30th and December 12th, 2023. The first hydrogen dispensers will be installed from 2024 on, for both HRS14 (200 kilos per day) and HRS40 (1 tonne per day) stations.

For the polished steel hydrogen refuelling station, Philippe Starck drew his design cues from hydrogen itself. He sees it as a clean component, an association with clarity and nothingness. It was clear for him that HRS by STARCK would be a dematerialised hydrogen refuelling station, a smart-looking device that embodies no particular style or design and can mimic the essence of disappearance. In a way, it dissolves from the viewers' line of sight at first by the way the lucid surface mirrors the surroundings. Without the strip of sunset orange that peers inside the dispenser, visitors may think there is no dispenser at all.

## BP gets green light to enter Japan's power retail market

The company has received approval from the industry ministry to operate as a retail electricity provider amidst its strategy to expand investments in renewable energy and electricity.

BP will enter Japan's power market after the industry minister approved the company to operate as a retail electricity provider. According to Reuters, this is part of the firm's efforts to transform its businesses into an integrated energy company.

The oil major has been present in Japan for over 60 years as a supplier of liquefied natural gas (LNG), oil, petroleum products and

lubricants. Now, its transformative process includes expanding investments in various growth areas, including renewable energy and electricity.

With this move, BP is aligning its ambition to expand into the low-carbon sector for the coming years, as it seeks to future-proof its business.

BP Energy Japan is part of BP's trading and shipping division, and will now operate the new business, according to an official statement.

# Press Releases

## Ticking all the boxes – STA Technical launches new offset fuel chamber platform

Continuing its mission to mitigate petrol forecourt hassle factors, STA Technical has redesigned its fuel safety platform.

Predominantly used in underground offset fuel chambers, STA's recently evolved platform is now meeting the needs of both installers and tanker drivers, whilst making access and maintenance a whole lot easier, and safer.

Managing director of STA Technical, Warren Peters says: "Our

reputation is built on innovative engineering and evolving products to fulfil the needs of 21st century forecourts; our new platform is a helpful addition to this hassle busting product range."

Benefits and characteristics of the platform include:

- Constructed in hardwearing and durable GRP panelling, complete with abrasive anti-slip surface, and load bearing characteristics



- Designed to fit bespoke requirements – a saw is also provided to undertake any finetuning required during installation
- Newly designed slotted leg system ensures platform meets precise height requirements
- End return fitted to all legs ensures load spreading
- The platform's corner leg brackets can be moved to accommodate incoming pipework or other obstacles
- All steel components painted in specialist DTM paint to assist with longevity and anti-rust

- Supplied with yellow grid and yellow steelwork to aid visibility
- Lightweight to assist with portability
- Flatpack system ensures easy and cost-effective shipping

Warren concludes, "Along with our tank and test rigs, fuel calibration trolleys, cone holders, and the bollards and crash barriers we now offer, STA is known as a one-stop shop for innovation, thinking outside the box and engineering-out inherent issues. One of a kind in the industry, this is a reputation we're committed to maintaining and growing."  
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# Titan Cloud acquires Leighton O'Brien to lead the global fuel software Industry

Software leaders united by shared Fuel Asset Optimization strategy to deliver enhanced customer value and fast ROI.

NASHVILLE, Tenn., September 26, 2023 -- Titan Cloud, a leading Fuel Asset Optimization software platform, today announced its acquisition of global fuel analytics software and field technologies provider Leighton O'Brien, in a move that positions Titan Cloud as a global leader in the downstream fuel software market.

The acquisition sees Titan Cloud and Leighton O'Brien combining their expertise in environmental compliance, site maintenance and fuel management solutions. Through the acquisition, Titan Cloud will accelerate its global growth and expand its footprint into six continents and 43 countries, adding 20,000 sites to its fuel monitoring capabilities to deliver faster ROI and streamlined experiences at over 85,000 gasoline stations worldwide.

"Titan Cloud is committed to connecting people, equipment, and facilities to maximize operational efficiency and reduce the environmental impact of every fuelling facility on the planet. With this acquisition, we will accelerate our global growth, extend our product portfolio, and expedite our Fuel Asset Optimization roadmap," said David Freese, CEO and Chief Product Officer of Titan Cloud. "Moreover, customers will benefit from the industry's best and most complete Fuel Asset Optimization platform for operational scale, performance, and ROI."

Together, the two companies will extend their Fuel Asset Optimization strategy to deliver:

- Most comprehensive product offering in compliance, maintenance, and fuel management, backed by Titan Cloud's proven, resilient, and scalable platform, which is trusted by the biggest brands in fuel and convenience.



- Enterprise software to automate, create efficiencies, and take proactive measures across fuel systems.
- Accelerated product roadmap that will integrate, enhance, and drive better products and user experience.
- Greater depth of expertise to better serve the current and future needs of their customers.

Chris Cooper, CEO of Leighton O'Brien, joins Titan Cloud as the new President of International to lead global expansion serving fuel retailers, fleet operators, and service providers across both established and emerging markets.

"We're excited to unlock the next stage of growth by leveraging our complementary strengths to deliver the best solutions on the market – creating more value for our customers and opportunities for our employees," said Mr. Cooper. "Titan's deep product portfolio, robust platform, and financial backing, combined with our global footprint, rich wetstock IP, and decades of experience, strengthen our collective position and provide the operating scale needed to serve our growing international customer base."

"The combination of Titan and Leighton O'Brien marks a strategic milestone in Titan Cloud's path toward building a world-leading Fuel Asset Optimization platform," added Mayur Desai, Managing Director at Charlesbank Capital Partners. "We are incredibly excited about the potential of this partnership and look forward to supporting Titan in its next phase of growth."

# Dover Fueling Solutions Supplies LIQAL BTU System to LC3 Trasporti in Italy

AUSTIN, TEXAS – November 2, 2023 – Dover Fueling Solutions (DFS), a part of Dover Corporation and a leading global provider of advanced customer-focused technologies, services and solutions in the fuel and convenience retail industry, is proud to announce the successful installation of the LIQAL Boil-off Gas Treatment Unit (BTU) system for LC3 Trasporti – the first refuelling station in Italy that combines both Liquefied Natural Gas (LNG) and Nitrogen and the first to be able to provide 100% Bio-LNG, not in blended form.

LC3 had to address various challenges including high pressure

inside the LNG tank, due to boil-off gas (BOG), and inefficient refuelling of LNG trucks. The installation of the LIQAL BTU system – which is situated on a private site supporting up to 160 trucks – eradicates such issues, enabling LC3 to provide a unified LNG and bio-LNG refuelling experience at its Piacenza station. The new LIQAL BTU system, installed and commissioned by SGIG, ensures that tank pressure is under control and stable so truck drivers can refuel their LNG vehicle smoothly and consistently.

Michele Ambrogio, President of LC3 Trasporti, stated: "We have eliminated the potential risk of direct methane emissions into the





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atmosphere through this groundbreaking solution implemented at our LNG and Bio-LNG refuelling station in Piacenza. With the LIQAL BTU system, we've addressed the inefficiencies that we had previously encountered and that were exacerbated over time by climate change, significantly improving our refuelling capacity and the dispensing quality of the facility. With a fleet of LNG and Bio-LNG-powered vehicles covering over 15,000,000 kilometers annually, enhancing refuelling performance has always been a top priority for us, along with maximising the use of biomethane and the related reduction of any potential environmental impact resulting from our operations. In this specific case as well, LC3 has set a new precedent, reaffirming our position as pioneers in decarbonisation in the heavy transport sector in Italy."

The LIQAL BTU system provides a perfectly conditioned environment for the storage of LNG, meaning it can be safely stored for an unlimited amount of time. As a modular and fully stand-alone unit, the LIQAL BTU system removes the need for any active management of storage pressure, eliminating the need for LIN consumption and logistics, while maximising the LNG storage capacity for optimal delivery of LNG fuel to the Piacenza station. In addition, the LIQAL BTU system protects the environment by preventing the venting of BOG into the atmosphere.

Joost Jansen, Business Development Manager LIQAL I DFS, added, "LC3 is the first Italian company gaining experience with our automated and TCO-effective BTU system, a system that re-liquefies the boil-off gas (BOG) at its LNG refuelling station. I am very pleased this client has given us positive feedback on the deployment of the LIQAL BTU solution, as it ensures unlimited holding time of the LNG inside the storage tank. This solution also helps significantly improve LNG fuel performance and 100% Bio-LNG can now be delivered to the trucks."

For more information, visit: [www.liqal.com/fueling-solutions/liquefaction/](http://www.liqal.com/fueling-solutions/liquefaction/)

# Revolutionizing the Fuel Pipework Industry: SMARTFLEX 200mm by Nupi

In the ever-evolving world of industrial technology, innovation is the driving force behind progress. Nupi Industrie Italiane S.p.A., has once again pushed the boundaries of possibility by introducing the industry's largest High-Density Polyethylene (HDPE) fuel pipework. This breakthrough not only showcases Nupi's commitment to customer needs but also sets new standards for the fuel pipework sector.

The demand for large-diameter fuel pipework with a minimum internal diameter of 162.3mm became evident when a special Oil Gantry site required a staggering 2000 litres per minute. Traditional steel pipework seemed to be the only solution, albeit an expensive one, prone to corrosion and abrasion, and lacking longevity. It was in this scenario that a customer approached Nupi with a unique challenge.

The answer to this challenge was the birth of SMARTFLEX 200mm fuel pipework, along with a full range of fittings.

Since its establishment in 1972, Nupi has continually strived to grow alongside its customers' needs and lead the industry in product innovation, best practices, and standards.

Nupi's portfolio extends beyond fuel pipework, encompassing over 20 brands in various industries, including water, gas, heating, and air conditioning. SMARTFLEX, introduced in 1996, was specifically designed to cater to the needs of downstream industry pipework. It has since been installed in almost 150 countries worldwide, by certified installers working with both global and national oil companies.

The typical sizes of pipework at service stations ranged from 32mm (1") to 110mm (4") in single wall and 32/40mm - 110/125mm in double wall. In collaboration with project engineers, Nupi expanded its range over a decade ago, adding 160mm single wall pipework and double 160/225mm pipework. However, the need for even larger pipework, 200mm single wall (200/250mm double wall), emerged as applications for HDPE fuel pipe expanded into marinas, heliports, airports, and other environments where significant fuel volumes were required.

Nupi's 6" (160/225mm) double wall pipework found a home in prestigious marinas, airports, and heliports, filling mega yachts and more. But when a customer demanded even larger pipework to deliver a speed of 2000 litres per minute for a bottom loading skid,

Nupi was ready to meet the challenge. Extensive underground tanks were installed to supply fuel to the skid, and a specialist engineering company calculated the necessary pipe diameter based on various factors.

The result was a fuel pipework with a 200mm outside diameter and an internal diameter of 162.2mm – a perfect solution. The longer 11.6m lengths reduced the number of fittings and installation time, further enhancing the appeal of SMARTFLEX. As with other SMARTFLEX sizes, a complete range of fittings was developed, all working on a barcode system to reduce installation time and human error and boasting a 30-year warranty.

The impact of SMARTFLEX 200mm pipework on the project was profound, saving a substantial amount compared to traditional steel pipework. It also had a positive environmental impact, with a 30-year warranty and a 50-year design life, significantly outlasting steel alternatives. Moreover, it streamlined the installation process, saving both time and costs.

Nupi's ability to adapt and innovate is a testament to its commitment to the industry and its customers. This remarkable journey was made possible through collaborative efforts with various departments, including Quality, Technical, R&D, Testing, and Commercial, along with the invaluable partnership of Falcon Fuel, installation company & Taggart Design, project engineering company.

As Nupi continues to push the boundaries of what is possible in the industry, it eagerly looks forward to collaborating on more special projects and offering innovative solutions that will redefine the sector. SMARTFLEX 200mm is not just a breakthrough; it's a testament to Nupi's unwavering commitment to excellence and innovation. With a 30-year warranty, this is more than just pipework; it's the future of fuel delivery.

SMARTFLEX is available from multiple locations worldwide, including the UK warehouse in the Midlands, offering same day collections or next day deliveries in most cases.

To find out more contact:  
Maja Nedic, European Sales Manager  
Nupi Industrie Italiane S.p.A.,  
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- Fuel Testing & Cleaning
- Fuel Tank Bunds – Inspections and Repairs
- Fuel Pump Installation – Fuel Management Systems
- Flow Meter Calibration – Repairs – Maintenance
- CompEx Approved Hazardous Area Electrical Services
- Project Planning – Management of complete “ Turnkey ” Engineering Projects
- Emergency Spill Response Services



## Dover Fueling Solutions Collaborates with Click & Find in EMEA Region

AUSTIN, TEXAS – November 23, 2023 – Dover Fueling Solutions (DFS), a part of Dover Corporation and a leading global provider of advanced customer-focused technologies, services, and solutions in the fuel and convenience retail industry, is thrilled to announce a collaboration with Click & Find to deliver a cutting-edge fuel transportation volume monitoring and tracking solution across the European, Middle East and Africa (EMEA) Region.

The new collaboration between DFS and Click & Find will enable fuel retailers and fuel transportation companies to take full control of their fuel transport operations, mitigate risks and theft, and streamline operations with optional services.

The comprehensive fuel transportation volume monitoring and tracking solution, in conjunction with ProGauge® magnetostrictive probe technology, allows retailers to monitor loading and unloading transportation activities and ensure accurate fuel deliveries, while also receiving priority alarms if any abnormalities should occur in transit. In addition, this solution can help safeguard fuel assets by mitigating the risk of mistreatment and theft during the transportation phase. The integrated DFS and Click & Find solution will provide industry-leading security and reassurance to fuel retailers from the moment fuel is loaded into transport through to delivery at the designated service station.



The cutting-edge fuel transportation volume monitoring and tracking solution can also facilitate enhanced transport management by leveraging different software solutions and interfaces through quick integration with routing and dispatching software, automated synchronisation with Enterprise Resource Planning (ERP) systems, and instant reconciliation with DFS fuel station management solutions.

“Our tailored solutions have been specifically designed to match the

business needs for Europe, Middle-East and Africa customers,” said Kurt Dillen, DFS VP of Global Business Development. “With the ability to add transportation monitoring solutions to existing fuel stations, it will allow retailers to have a complete view of the fuel supply chain. It’s a solution that will give retailers absolute control over their fuel resources throughout the transportation process, while providing comprehensive visibility into every aspect of fuel movement until delivery to a fuel station, where other DFS solutions take over to complete the automation cycle.”

The fuel transportation volume monitoring and tracking solution will also help retailers automate the transfer of data to the ERP system on site. This increases efficiencies while maintaining compliance with various industry standards and regulations. Retailers can also customise the fuel management solution to align with specific business needs through optional software and service add-ons.

Furthermore, with the DFS and Click & Find solution, retailers will be able to:

- Maintain the integrity of your fuel's quality during transportation.
- Mitigate the risk of fuel contamination and associated losses.
- Respond promptly to emergencies or incidents during fuel transportation to minimise disruptions.

- Make informed decisions based on real-time data and insights into your fuel supply chain.
- Enhance your reputation for reliable fuel supply and distribution.
- Optimise fuel inventory management to minimise waste and maximise profits.
- Reduce operational costs associated with fuel transportation through optimised routes and schedules.
- Minimise the environmental footprint of your fuel transportation efforts.
- Respond promptly to emergencies or incidents during fuel transportation to minimise disruptions.

Nicola Zingirian, Click & Find Founder, added, “By utilising ProGauge magnetostrictive probes, the new DFS and Click & Find solution can ensure accurate fuel volume monitoring, meaning fuel retailers or site owners can achieve real-time reconciliation with fuel station management solutions to maintain accurate records all while protecting fuel resources—from the source to the final delivery destination—with robust security measures.”

For more information, visit: [doverfuelingsolutions.com/site-efficiency-click-and-find-monitoring-and-tracking-solution](https://doverfuelingsolutions.com/site-efficiency-click-and-find-monitoring-and-tracking-solution).

## We’ve been getting back to our best

To say it’s been a busy time at Hytek over the last few months would be an understatement. As we continue to get back to our best, we’ve been very much focused on making our service to our customers the best it has ever been. That means products on the shelf and ensuring our service is the best it can be.

### The Hytek Catalogue

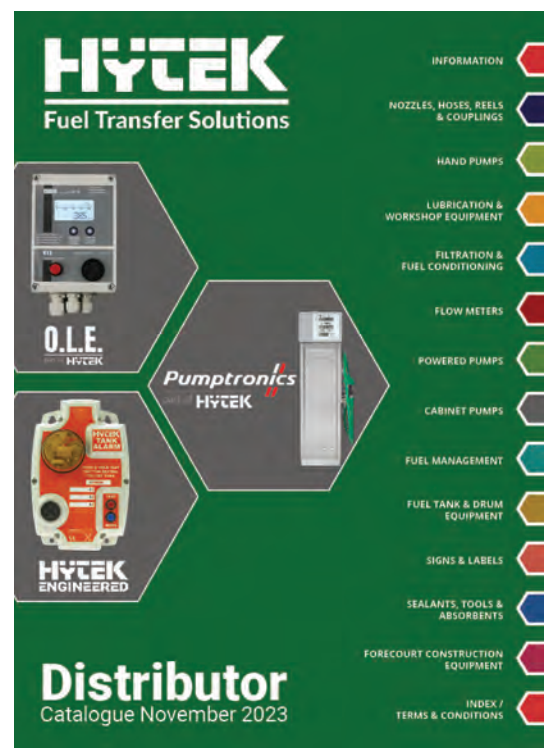
At the heart of our service for many years has been our industry renowned distributor catalogue. Other people have been kind enough to refer to it as the bible, but we are far too humble to make that statement ourselves. And we were delighted to launch the latest version at the end of 2023.

Now, before we began this project, we spent some time talking to our customers about whether they felt, in the digital age, we still needed a good old fashioned printed catalogue, and the resounding feedback was that we did. And that was all we needed to hear.

As well as that high-level feedback, we also asked our customers if they would like to see any changes to the structure of the catalogue. The overwhelming feedback was for two distinct changes: increasing the font size of the text and returning to a more technical approach. So that is what we have done. Hopefully you have received your copy by now, but if you haven’t and you would like one, just get in touch and we will have one winging its way to you sharpish.

### Product Development

Product development has always been at the heart of Hytek. At the end of last year, we launched our latest remote tank monitoring liquid level sensor. And we think it’s a belter. It’s an ultra-rugged, robust remote liquid level sensor, that’s suitable for both mobile and static units, and it comes with a battery that lasts over 5 years. It’s also IP65 rated, ensuring it can withstand fine dust, water and oil spray.







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14 – 16 May 2024, Stuttgart, Germany



Forecourt Design by Klostermann Group

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### Looking to the future

As we continue to develop our business, we always value honest conversations with our clients. So, if there's anything you feel we could be doing better, then please do get in touch.

[www.hytekgb.com](http://www.hytekgb.com)

## Adapting to the green revolution: What can forecourt retailers do?

Sustainability is here to stay, it demands increasing attention and the fuel retail market is adapting to meet the challenge. Whether this is through looking at measures around water and energy conservation, food waste, Electric Vehicle charging or carbon reduction.

One of the challenges for forecourt retailers is that a good proportion of the businesses' carbon emissions arise from the products being sold, such as petrol and diesel, which is driven by market demand. There are, however, things that can be done to contribute to net-zero, or sustainability targets.

Firstly, owners can ensure that they are meeting the growing demand for greener mobility energy solutions, such as EV chargers and biofuel and/or hydrogen dispensers. This not only attracts the ever-increasing green-conscious consumer, but also helps raise awareness of the greener options available.

It is no secret that range and charge anxiety are significant psychological hurdles for the swift adoption of EV vehicles<sup>1</sup>. (National Grid, 2022) The forecourt network is well placed to help expand the EV charging network. This means that forecourt retailers CAN continue to support drivers of Internal Combustion Engine (ICE) vehicles for the next 30 or so years, as needed, but the time is now to invest in substitute mobility energy solutions. Not to do so risks a missed opportunity. The market will be served somehow, whether this be by the traditional forecourt network, or by new electric-only forecourts and other retail types, such as shopping complexes, supermarkets or food outlets.

Another option for forecourt retailers is the investment in solar photovoltaics and Battery Energy Storage Solutions (BESS). With rising input costs, caused by the recent energy crisis, and the increasing pressure on businesses to show their green credentials there is no better time to look to mitigate these pressures. On-site energy costs can represent a significant expense for forecourt retailers and in this climate of energy market volatility, independence from the grid helps to shield businesses from these shocks. Solar PV can also be supported by BESS.

Solar PV is a long-term, low maintenance and low-risk investment with a 25-30-year lifespan. The principle of viewing solar as an investment is simple – once the initial outlay of the installation has been made, the price of the electricity generated will be very little. The only cost will be the small cost of maintaining the system. As a general rule, the higher the energy tariff, the shorter the payback. This means that, depending on system size, cost and consumption demand the system will have paid for itself within a few years. This is the case whether funded direct from capital or asset finance. There is also the tax-saving potential of solar installations via capital allowances.

For example, on a 35p per kWh energy tariff, with self-consumption of solar-generated electricity of 65%, it is to be expected that the system will pay back in under 5 years when capital funded<sup>2</sup>. Once the system has paid for itself, the bill reduction caused by the solar, frees up money for investment in other projects.

Due to its dependence on the sun, solar electricity - while fantastic - is intermittent. This means that there will be times when generation does not match demand. Excess electricity from solar generation can be stored with a battery system for use when needed by the site – such as when the solar is not generating enough – for example, during the night, or periods of peak demand. Alternatively, it can be sold back to the grid. There are battery systems that can monitor the site's consumption and make 'smart' decisions about whether to use electricity on-site demand, store it, or sell it back to the grid. This can maximise revenue potential. Battery storage can also be utilised to support the large grid supply requirements of EV chargers, where grid infrastructure is insufficient and cost-prohibitive to upgrade.

Solar PV is a wholly renewable energy resource. Therefore, notwithstanding the financial and future-proofing case, it is also fantastic to mitigate the carbon footprint and show green credentials.

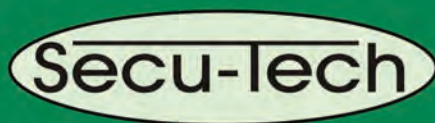
If considering an EV charging or solar PV installation, it is important for businesses to use trusted installers that can work to recognised standards and understand the specific electrical safety needs on forecourts. It is further beneficial that they can manage the project as much or as little as is desirable.

For example, Ingeni Renewables is an MCS-accredited nationwide installation company that specialises in commercial and industrial solar PV, EV Charging and BESS. Because it has roots in a commercial electrical company with over 60 years experience on forecourts, and works in close collaboration with a highly experienced civils and groundworks main contractor that specialises in petrol station re-developments, it is in a good position to understand the needs of the forecourt industry. It has a wealth of experience with forecourt installations and it can deliver a complete package of services, including, if desired, groundworks, ancillary electrical work, roof-work, tree-work, and structural and planning matters.

1 National Grid (2022) What Is EV Charging Anxiety?. Available at: <https://www.nationalgrid.com/stories/energy-explained/ev-charging-anxiety-and-range-anxiety>

2 Based on a 4% predicted rise in energy tariff.





## Downstream Efficiency

Forecourt & safety devices at fuel stations

⊕ Crossfill Prevention and Overfill Prevention



As important as it is to avoid product mix and overfill into tank truck compartments and fuel stations, it is also very important to make sure that the amount and quality of fuel stays the same from the time it has been loaded until it arrives at the fuel station.

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# Branches

## Irish

The Irish Branch held an APEA Branch meeting at the Pillo Hotel, Ashbourne, County Meath on Thursday 09th November 2023. The meeting was well attended by members from the North and South of Ireland. The meeting was opened by the Chairman, Tom Daly, and he welcomed all present. The incoming officers and committee for 2024 were duly elected.

There were several topics presented on the day. Brian Connolly, senior fuels manager from Circle K, presented an excellent outline of the planned industry changes in respect of future fuels. He presented a background of the expected changes to transport in Ireland. This included various types of fuel, including Biodiesel, Electric, Ethanol, Hydrogen, Nat Gas, and Propane. The presentation also included the new hydrogen roadmap to 2030 and RFNBO – Renewable Fuels of Non-Biological Origins.

It was noted that the uptake of Bio Methane is small but growing. There are currently up to 21% biofuels, in fuels, sold throughout

Ireland. The use of HVO – Hydrogenated Vegetable Oil, is growing and can be used as a direct replacement to road diesel in engines. There is a biofuels obligation target of up to 30% by 2030.

Demand is high for EVs, however supply is somewhat constrained by the limited by-production and the number of right-hand drive countries in Europe. The grid capacity in Ireland is still an issue for supply of electricity for charging EVs. The original target of one million EVs by 2030 now includes BEVs.

Dan Gibson from Suresite provided a very informative presentation in relation to wet stock management and leak detection systems. He provided some background to the company and wet stock management systems. He outlined the purpose of wet stock management and provided some excellent information in relation to the different types available and the advantages and disadvantages of each. He also outlined what statistical inventory reconciliation (SIR) is and how it works, giving an insight into real

time data collection in relation to wet stock management.

Kieran Bradbury from Petrotec gave a presentation in relation to EV charging. Hellonext is an EV charging brand within Petrotec. He outlined growth in EV sales in Ireland went from 0.4% in 2016, to 16.6% in 2022. He predicted that it would grow rapidly in the future.

Kieran provided some background to EV charging infrastructure along with an overview of different charger types and charging times associated with each type. He outlined examples of typical EV charger installations found on forecourts. It was noted that

there are some challenges at some locations in relation to grid capacity and cost of infrastructure.

Tom Daly, APEA Irish Branch Chairman, presented an update in relation to the flammable fuel regulations and associated fees. He provided some background to the regulations and outlined proposed amendments currently under consideration including changing the definition of petroleum spirit to flammable liquid in the Dangerous Substance Act 1972.

Tom Daly  
Irish APEA Chairman and Branch Representative

# Training

## Training course dates and locations 2024

### 3 Day Combined Petrol Filling Stations - Construction, Audit and Inspection Course

9 - 11 April	Manchester Airport
11 - 13 June	Solihull
3 - 5 September	Stansted Airport

### 2 day Electrical Installations - An Awareness

9 - 10 April	Manchester Airport
3 - 4 September	Swindon

### Explosives and Fireworks

4 October	Stansted Airport
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Please contact the APEA office for a quotation for a bespoke course we can run at your offices, for any of the courses listed below, at [admin@apea.org.uk](mailto:admin@apea.org.uk), with an approximate number of delegates and preferred dates.

### Wetstock Management

Dates TBC

### DSEAR

19 April	Manchester Airport
11 September	Stansted Airport

### Petroleum (Consolidation) Regulations 2014

18 March	Manchester Airport
6 September	Stansted Airport

### Petrol Filling Station courses on request

Vapour Recovery Installations  
Leak Investigation  
Enforcement Procedures  
Safe Installation and Use of LPG

## Course Fees

	APEA Member	Non member
3 day course with accommodation	£1020.00	£1120.00
3 day, day delegate rate	£810.00	£910.00
2 day course with accommodation	£650.00	£750.00
2 day, day delegate rate	£550.00	£650.00
1 day course	£260.00	£310.00

Prices excluding VAT.

More information and booking details on the "Training" page at [www.apea.org.uk](http://www.apea.org.uk).

Anyone booking a training course that is not an APEA member will automatically receive complimentary "Individual" membership to the APEA for one year.



Courses will be designed around the (4th edition) Blue Book Guidance for the Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations (May 2018).

A hard copy and a pdf version of the 4th Edition is available from the Publications page of the APEA website at [www.apea.org.uk](http://www.apea.org.uk)

The hardcopy is £75.00 to APEA Members and £150.00 to non APEA members. There is no VAT charged on the hardcopy or pdf formats. The pdf version can be purchased with a licence for individual use and cannot be shared or printed. It is strongly recommended that attendees have access to this document during courses.

For details of this and any other training enquiry, please contact:

Jane Mardell - APEA Business Manager  
 email: [admin@apea.org.uk](mailto:admin@apea.org.uk)  
 Tel: + 44 (0) 345 603 5507

or

Thomas Daly (Training Committee Chairman)  
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## Online Training courses

To book go to the Training page on the APEA website at [www.apea.org.uk](http://www.apea.org.uk) for the link or to <https://apea.org.uk/pages/training> or <https://apea.mykademy.com/>

- Key Areas of a Filling Station £50
- The Future of Fuels £50
- Drainage, Vapour Recovery and Leak Detection £50
- Road Tanker Delivery and Consignor Requirements £50
- Petroleum (Consolidation) Regulation 2014 £50
- Dangerous Substances and Explosive Atmospheres Regulations 2002 £50
- Inspection Preparation Online Training £50
- The Red Guide £50

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