



**WLPGA**



WORLD LPG ASSOCIATION

# ANNUAL REPORT 2018



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# 2018 KEY ACTIVITIES

The core activities of the WLPGA are covered in four key goals



**1**

Demonstrating the benefits of LPG and informing, educating and influencing a variety of stakeholders.



**2**

Supporting the development of LPG markets.



**3**

Promoting compliance with standards, good business and safety practices.



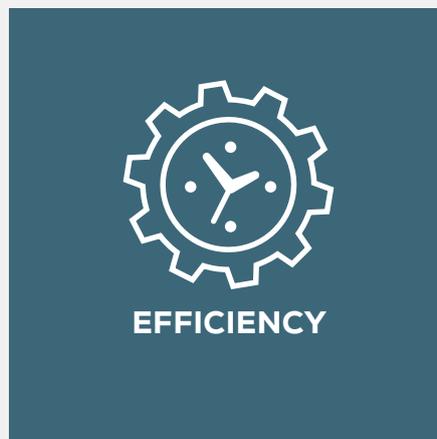
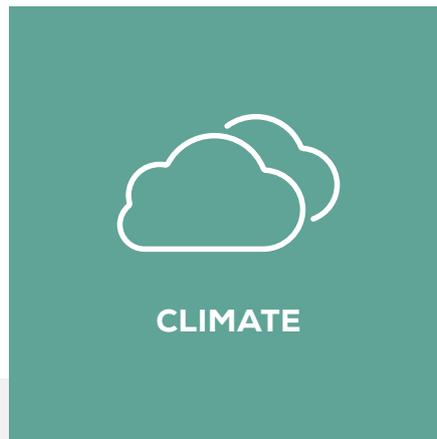
**4**

Identifying innovation and facilitating knowledge transfer.



## The Six Pillars of The Charter of Benefits

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# FOREWORD

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# FROM THE

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# PRESIDENT

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*The LPG industry risks becoming collateral damage in the shift away from fossil fuels if we are unable to effectively articulate the unique and vital role that LPG has to play in the future energy mix, not just as a transition fuel, but also as a destination fuel.*

This is my second year as President of WLPGA and it is my honour to introduce our 2018 Annual Report. In the last twelve months the future of energy has come under scrutiny as never before, with the focus of the world on sustainability, decarbonisation of energy, and improvement of air quality. Many governments across the world now have policy in place to phase out fossil fuel use in transport and heating and there is a growing sense that “electrification of everything” is the solution to all of our challenges. These policy developments, if handled well, represent huge potential opportunity for the LPG sector. Conversely, the LPG industry risks becoming collateral damage in the shift away from fossil fuels if we are unable to effectively articulate the unique and vital role that LPG has to play in the future energy mix, not just as a transition fuel, but also as a destination fuel. The WLPGA has a critical role to play in this.

Part of the challenge our industry faces is lack of awareness: Lack of awareness of the unique benefits that LPG has – that, if correctly harnessed,

can bring improved quality of life to billions of people, while contributing to the goal of long-term decarbonisation; Lack of awareness of the limited role of electricity – that it is not always available at the intensity required, that it depends on non-renewable sources of generation and that the supply chain for battery production and disposal is often far from sustainable. We counteract lack of awareness with credible, independent data, communicated in a way that is easily understandable to a world that increasingly makes decisions based on brief soundbites on social media. The WLPGA is meeting this challenge. As the unique global body that represents the LPG sector we have a responsibility to educate, to inform and to influence all stakeholders, and I am proud that our activities in 2018 have been doing just that.

In this final year of my presidency, the WLPGA will complete its three-year strategic plan, continuing to develop new projects and policy recommendations that will expand applications for LPG and increase quality of life globally.

We will increase the membership of our organisation to over 300 organisations across the world and we will grow our Industry Council to 40 leading LPG companies. We will also look forward to the future with the preparation of our 2020 – 2022 strategic plan that will respond to the ongoing changes that we see in the dynamic global energy environment.

Once again I would like to thank all WLPGA members, committees and working groups, as well as the hard-working management and staff of the association for rising up to the challenges of 2018 with enthusiasm and resolute commitment to making sure that WLPGA, and the global industry that it represents, continue to prosper and flourish.

**Pedro Jorge**  
President, WLPGA

# MAJOR TRENDS



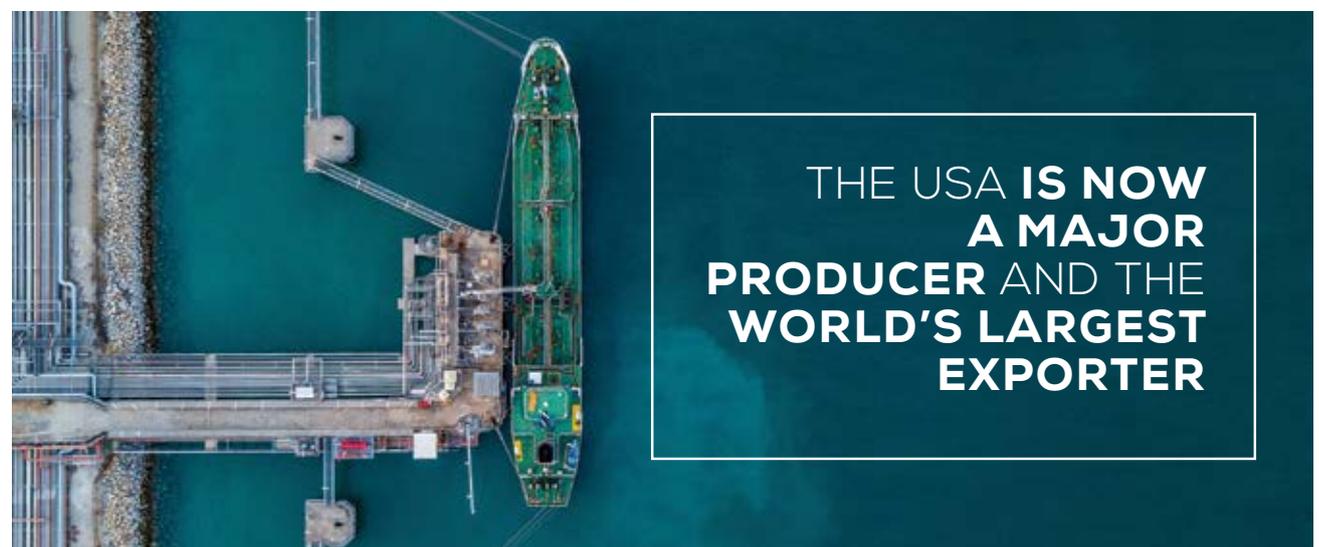
**NEW APPLICATIONS INCLUDING USE AS A**



**MARINE FUEL & POWER GENERATION**



**27,136,125**  
**AUTOGAS VEHICLES**  
(+600,000 VEHICLES)



# 2018 MANAGING DIRECTOR'S REPORT



*Many national governments now have active policy in place to limit the use of fossil fuels in heating and transport applications and more than ever before, the LPG industry needs to work with partners to make the case for LPG in the future energy mix.*

2018 was an excellent year for WLPGA. It was the second year of our current three-year strategic plan whose title is “growing influence, increasing impact” and activities and successes have very much been focused on this overall objective. Thanks to several recent years of good financial performance, the WLPGA was able to more than double its investments in projects in 2018 compared to 2017. Our activities remained structured around the four principle goals of: Communications; Market Development; Standards; and Technology & Innovation, WLPGA met or exceeded all of its targets for the year. In addition, we have grown our global membership by a record amount, bringing in 48 new representatives representing a growth of over 17% and we are well on the way to reaching our target of 300 members by the end of 2019.

During 2018 we have seen demand for LPG in the domestic sector continue to grow as a result of household conversions to LPG from biomass and liquid fuels in India and Bangladesh,

amongst other countries. But domestic demand is only part of the picture. In 2018, WLPGA activities have also focused on the emerging marine segment where its intrinsically clean qualities, low cost of storage and established technical solutions makes it a very attractive fuel to meet the growing demand for cleaner marine emissions. Our activities around LPG for power generation continued through 2018 with a focus on increasing the awareness of stakeholders on the LPG options. Autogas growth has continued in new markets in Eastern Europe and Central Asia while decreasing in some established markets. All of our activities in 2018 have been strongly supported with a deep focus on communications. This year we launched The Story of LPG Documentary– a detailed film on our industry which will help us to better educate and influence our stakeholders.

At the end of 2018 the LPG industry continues to do very well. We see continuing growth in global LPG production, matched by an increase in consumption across a range of sectors.

As we look to the future, the role of energy in long term-sustainable development is receiving a huge focus. Many national governments now have active policy in place to limit the use of fossil fuels in heating and transport applications and more than ever before, the LPG industry needs to work with partners to make the case for LPG in the future energy mix. The role of the WLPGA in addressing this in the coming years will be vital. WLPGA is the global voice of the LPG industry and we deliver significant value to our customers and the LPG sector more broadly. Whatever your business, if you are not already a member then join us and contribute and benefit from the leading global LPG network that is the WLPGA.

**James Rockall**

CEO and Managing Director, WLPGA

[jrockall@wlpga.org](mailto:jrockall@wlpga.org)

[@james\\_rockall](https://twitter.com/james_rockall)

# THE INDUSTRY IN 2017

## PRODUCTION



PRODUCTION  
STILL GROWING

ROBUST GROWTH  
WITH AN ANNUAL RATE OF

 **1.4** %

INCREASE OF MORE THAN

 **50** MILLION  
TONNES



SINCE THE BEGINNING OF THE DECADE

GLOBAL  
PRODUCTION



**309**  
MILLION  
TONNES

CHINESE PRODUCTION  
& CONSUMPTION GREW  
BY MORE THAN

**+20%**



IN A  
SINGLE YEAR

## CONSUMPTION



GROWTH OF  
**1.7%**



**+1.5**  
MILLION TONNES  
IN INDIA

SLIGHT DECREASE IN GLOBAL  
**AUTOGAS**  
CONSUMPTION



**+5%**  
GROWTH IN ASIA



**+300**  
MILLION TONNES  
FOR THE FIRST TIME

## THE WLPGA MISSION

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# ABOUT THE WLPGA

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## Support

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The development of LPG markets.

## VISION & MISSION

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The WLPGA is the authoritative voice of the global LPG industry representing the full LPG value chain. The primary aim of the association is to add value to the sector through driving premium demand for LPG, while also promoting compliance to good business and safety practices.

It brings together private and public companies involved in one, several or all activities of the industry, it develops long-term partnerships with international organisations and implements projects on local and global scales. The association was established in 1987 and granted Special Consultative Status with the United Nations Economic and Social Council in 1989.

## Promote

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Compliance with standards, good business and safety practices.





## Identify

Innovation and facilitate knowledge transfer.

## THE WLPGA VISION

The WLPGA promotes the use of LPG to foster a safer, cleaner, healthier and more prosperous world.

***"Parami Energy joined WLPGA in 2018 and is the first WLPGA member from Myanmar, which is an important developing LPG market in S.E. Asia. Membership has not only give us unparalleled access to the global LPG community, but has also enabled us to learn quickly about many elements of the industry, including state-of-the-art LPG technologies. The support which we have received from WLPGA has been instrumental in helping us successfully launch some unique initiatives here in Myanmar, for example the Parami Community Kitchen in Shan State under the "Cooking For Life" campaign. WLPGA also coordinated a kick-off session for WINLPG (Women in LPG) greatly helping to promote gender balance across our emerging industry, a subject very close to my heart."***



Ken Tun  
CEO, Parami Energy

# 2018 MEMBERSHIP

## AFRICA

Africare, **Nigeria**  
Afriquia Gaz, **Morocco**  
Afrox, **South Africa**  
Caisse de Stabilisation des Prix des Hydrocarbures, **Cameroon**  
Department of Petroleum Resources Nigeria, **Nigeria**  
Gas to Health Initiative (GTHI), **Nigeria**  
Ghana Cylinder Manufacturing Company (GCMC), **Ghana**  
Ghana Oil Company Limited, **Ghana**  
Ghanaian Ministry of Petroleum, **Ghana**  
LP Gas Safety Association of South Africa (LPGSASA), **South Africa**  
Navgas Limited, **Nigeria**  
Nigeria LNG Limited, **Nigeria**  
Nigeria LP Gas Association (NLPGA), **Nigeria**  
Nigerian National Petroleum Corporation (NNPC), **Nigeria**  
Nokson Gases Co. Ltd., **Nigeria**  
OVH Energy Marketing, **Nigeria**  
Paygo Energy, **Kenya**  
Petrogas, S.A., **Mozambique**  
Petroleum Institute of East Africa (PIEA), **Kenya**  
Pilot International, **Uganda**  
Salam Gaz, **Morocco**  
SNDP, **Tunisia**  
Somas, **Morocco**  
Standards Organisation of Nigeria, **Nigeria**  
Techno Oil, **Nigeria**  
Thomas Aquinas Foundation, **Ghana**  
Tradex, **Cameroon**  
Ultimate Gas Ltd., **Nigeria**  
Vision in Energy, **South Africa**

## ASIA

2A Muhendislik San. Tic. A.S., **Turkey**  
Al Aman Gas Cylinders Manufacturing L.L.C., **United Arab Emirates**  
Altinboga Gas Equipments, **Turkey**  
Arhan Grup Talasli Imalat San. Ve Tic. Ltd. Sti. Orgaz, **Turkey**  
Astomos Energy Corporation, **Japan**  
Aygaz A.S., **Turkey**  
Bangladesh University of Engineering & Technology, **Bangladesh**  
Bashundhara LP Gas Limited, **Bangladesh**  
BB Energy Asia Pte Ltd., **Singapore**

Beximco Petroleum Ltd., **Bangladesh**  
Bharat Petroleum Co. Ltd., **India**  
Brothers Gas, **United Arab Emirates**  
BW LPG, **Singapore**  
Central Gas Ventures Inc, **Jordan**  
CIMC Enric Jingmen Hongtu Special Aircraft Manufacturing Co. Ltd., **China**  
Clean Air Asia, **Philippines**  
Dor Alon Gas Technologies Ltd., **Israel**  
Duruslan Makina LPG Celik, **Turkey**  
E.ON Masdar Integrated Carbon Ltd. (EMIC), **United Arab Emirates**  
E1 Corporation, **South Korea**  
Elpiji (M) SDN. BHD, **Malaysia**  
Emirates Gas LLC, **United Arab Emirates**  
Eneos Globe Corporation, **Japan**  
Energy Market Regulatory Authority of Turkey, **Turkey**  
Energypac Power Generation Ltd., **Bangladesh**  
Epic Gas Ltd., **Singapore**  
FIPI - Federation of Indian Petroleum Industry, **India**  
Gasco Saudia Arabia, **Saudi Arabia**  
Grassroot Trading Network for Women (GTNFW), **India**  
Gujarat University, **India**  
Gyxis, **Japan**  
Hangzhou Yuhang Zhangshan Steel Cylinder Co. Ltd., **China**  
High Pressure Gas Safety Institute, **Japan**  
Hindustan Petroleum Corporation Ltd., **India**  
Hong Kong & China Gas Co. Ltd., **China**  
Hubei Daly LPG Cylinder Manufacturer Co. Ltd., **China**  
Indian Auto LPG Coalition, **India**  
Indian Oil Corporation Limited, **India**  
Ipragaz A.S., **Turkey**  
Isla LPG Corporation, **Philippines**  
ITO Corporation, **Japan**  
Iwatani International Corp., **Japan**  
Jamuna Spacotech Joint Venture Limited, **Bangladesh**  
Japan LP Gas Association, **Japan**  
JOGMEC, **Japan**  
Jordan Petroleum Refinery, **Jordan**  
KCME Co for Gas Installation & Contracting, **Kuwait**  
Koagas Nihon Co. Ltd., **Japan**  
Korea Gas Safety Corporation, **South Korea**  
Korea LPG Association, **South Korea**

Kuwait Oil Tanker Co. K., **Kuwait**  
Laugfs Gas Plc, **Sri Lanka**  
Litro Gas Lanka Limited, **Sri Lanka**  
LP Gas Center of Japan (LPGC), **Japan**  
LPG Association of Singapore, **Singapore**  
LPG Operators Association of Bangladesh, **Bangladesh**  
Maldiva Gas Pvt Ltd., **Maldives**  
Mauria Udyog Limited, **India**  
Natgaz, **Lebanon**  
National Gas Company - SAOG, **Oman**  
New Cosmos Electric Co. Ltd., **Japan**  
Oil and Gas Regulatory Authority, **Pakistan**  
Oil Industry Safety Directorate - Government of India, **India**  
Omera Petroleum Limited, **Bangladesh**  
Parami Energy Services Co. Ltd., **Myanmar**  
Pazgas Ltd., **Israel**  
Pertamina, **Indonesia**  
Petredec Services (Asia) Ptd. Ltd., **Singapore**  
Philippines LPG Association, **Philippines**  
Plantation Human Development Trust, **Sri Lanka**  
Puma Energy, **Singapore**  
Rawafd International Co., **Saudi Arabia**  
Rinnai Corporation, **Japan**  
Sahamitr Pressure Container Public Co. Ltd., **Thailand**  
Saisan Co. Ltd., **Japan**  
Saudi Mas Trading, **Saudi Arabia**  
SCG (Thailand) Co. Ltd., **Thailand**  
Self Employed Women's Association (SEWA), **India**  
SK Gas, **South Korea**  
Sunrise LP Gas & Energy (Taiwan) Group, **China**  
The Green Flame Gas Co, **Kuwait**  
Tianlong, **China**  
Turkish LPG Association, **Turkey**  
Unigaz International Ltd., **Lebanon**  
Yilteks Enerji Isi Makina Imalat san.ve Dis Tic, **Turkey**

## OCEANIA

Compac Industries Ltd., **New Zealand**  
Elgas Limited, **Australia**  
Origin Energy, **Australia**  
Secretariat of the Pacific Community (SPC), **Fiji**  
Wesfarmers Kleenheat Gas Pty Ltd., **Australia**

## EUROPE

Aburi Composites, **United Kingdom**  
Alystech, **France**  
Amtrol-Alfa Metalomecanica, **Portugal**  
Antargaz, **France**  
Asociacion Espanola de Operadores de Gases Licuados del Petroleo (AOGLP), **Spain**  
Argus Media Limited, **United Kingdom**  
Assogasliquidi Federchimica, **Italy**  
AvantiGas Ltd., **United Kingdom**  
Calor, **United Kingdom**  
Carbon Clear, **United Kingdom**  
Cavagna Group, **Italy**  
Comite Francais du Butane et du Propane (CFBP), **France**  
Clesse Industries, **France**  
Coral Gas, **Greece**  
DCC LPG, **Ireland**  
DEC / Design Engineering & Consulting, **Belgium**  
DVFG, **Germany**  
Elaflex, **Germany**  
Elpigaz SP. Z.O.O., **Poland**  
Engie Global Energy Management, **France**  
Entrepreneurs du Monde, **France**  
Envo-Dan ApS, **Denmark**  
Equinor, **Norway**  
FAS Flussiggas-Anlagen GmbH, **Germany**  
Finngas GmbH, **Germany**  
Flaga GmbH, **Austria**  
Friedrich Scharr KG, **Germany**  
Gascan, **Portugal**  
GasStop Europe BV, **Netherlands**  
Gavedra, **Portugal**  
Gaz Transport & Technigaz, **France**  
General Electric, **United Kingdom**  
Geogas Trading SA, **Switzerland**  
GERES, **France**  
Gilbarco Veeder-Root, **United Kingdom**  
Gok Regler - Und Armaturen GmbH & Co. KG, **Germany**  
Greengear Global, **Italy**  
HEDON Household Energy Network, **United Kingdom**  
Hexagon Ragasco A.S., **Norway**  
Integrated Gas Technologies, **Denmark**  
International Chamber of Commerce, **France**  
International Fertilizer Industry Association (IFA), **France**  
International Gas Union, **Spain**  
ISA - Intelligent Sensing Anywhere, **Portugal**  
Liquid Gas Europe, **Belgium**  
Liquigas, **Italy**  
LoW8, **Netherlands**

Makeen Energy, **Denmark**  
MAN Energy Solutions, **Denmark**  
Montecarlo Engineering (Racing Team Techno), **Monaco**  
Orlen Paliwa Sp. z.o.o., **Poland**  
Oryx Energies, **Switzerland**  
OZDgal, **Portugal**  
Polish LP Gas Association (POGP), **Poland**  
Power to Educate AS, **Norway**  
Practical Action, **United Kingdom**  
Primagaz, **France**  
Prins Autogassystemen B.V., **Netherlands**  
REEEP, **Austria**  
Repsol, **Spain**  
Rochester Gauges International, **Belgium**  
Rubis Energie, **France**  
Sensile Technologies SA, **Switzerland**  
SHV Energy, **Netherlands**  
Sibur International GmbH, **Austria**  
Siemens Industrial Turbomachinery Ltd., **United Kingdom**  
The Partnering Initiative, **United Kingdom**  
Total, **France**  
Truma Geratetechnik GmbH & Co., **Germany**  
Tyczka Trading & Supply GmbH & Co. KG, **Germany**  
UK LPG Association (UKLPG), **United Kingdom**  
UNHCR, **Switzerland**  
Veroniki Holding, **Italy**  
Vivo Energy, **Netherlands**  
Wartsila Finland Oy, **Finland**  
World Alliance for Decentralized Energy (WADE), **United Kingdom**

## NORTH & SOUTH AMERICA

Abastible SA, **Chile**  
Asociacion Iberoamericana de Gas Licuado de Petroleo (AIGLP), **Brazil**  
Algas-SDI, **United States**  
AmeriGas, **United States**  
Blackmer, **United States**  
Blossman Gas Inc, **United States**  
Blue Star Gas, **United States**  
Camara Uruguaya de Gas Licuado, **Uruguay**  
Canadian Propane Association, **Canada**  
Clean Cooking Alliance, **United States**  
Copagaz Distribuidora de Gas Ltda, **Brazil**  
Corken Inc, **United States**  
CREG, **Colombia**  
Diamond Productions Ltd., **Canada**  
Dorian LPG, **United States**  
Egsa Do Brasil, **Brazil**  
Empresas Lipigas, **Chile**  
Energy Transportation Group Inc, **United States**

Envirofit International, **United States**  
ExtraGas, **Argentina**  
Ferrellgas, **United States**  
Fisher LP Gas Equipment, **United States**  
Gas Uno de Puebla, **Mexico**  
Gasco GLP, **Chile**  
Union de Eempresas Colombianas de Gas Propano (Gasnova), **Colombia**  
Global LPG Partnership, **United States**  
IHS Markit, **United States**  
International DME Association, **United States**  
Lehr Incorporated, **United States**  
Liquigas Distribuidora, **Brazil**  
Manchester Tank & Equipment, **United States**  
Mangels Industrial, **Brazil**  
Marshall Excelsior Co., **United States**  
M-TriGen, Inc., **United States**  
Nacional Gas Butano Distribuidora Ltda, **Brazil**  
National Propane Gas Association (NPGA), **United States**  
OPIS, **United States**  
Paraco Gas Corp., **United States**  
Propane Education & Research Council (PERC), **United States**  
Persistent Energy Partners LLC, **United States**  
Poten & Partners Inc, **United States**  
Red Seal, **United States**  
RegO Products, **United States**  
Sindigas, **Brazil**  
Stanford University, **United States**  
Switch SA, **Haiti**  
Targa Resources, **United States**  
Trinity Gas & Liquid Products, **United States**  
Trovan Ltd., **United States**  
UGI Corporation, **United States**  
Ultragaz, **Brazil**  
Unidad de Planificacion Minero Energetica, **Colombia**  
UNIPET, **Trinidad & Tobago**  
Weber-Stephen Products Company, **United States**  
Winrock International, **United States**  
World Central Kitchen, **United States**  
Worthington Cylinder Corporation, **United States**

# BENEFITS FOR MEMBERS

*The WLPGA is the global voice for the LPG industry, uniting the broad interests of the worldwide LPG industry into one strong independent organisation and we offer a wide range of membership benefits.*



## NETWORK

WLPGA is a constantly growing leadership network with over 250 members operating in over 125 countries. The WLPGA global network brings together leaders of organisations from the entire LPG value chain including observer members from academic bodies, inter-governmental organisations, NGOs and national governments.



*"The WLPGA is an excellent example of how a professional global industry association should operate. For us in GASNOVA, the Colombian national LPG Association, membership in WLPGA has been invaluable. We have made use of many of WLPGA's products and services to improve our effectiveness including, in-depth industry analysis, global statistics and best practices guidelines. I would also like to highlight WLPGA's strong support for the First International Congress held in Bogota in August of this year. The event was a resounding success thanks in part to the encouragement and support provided by WLPGA."*

Alejandro Martinez Villegas  
President, GASNOVA

## ACCESS

Members have access to the largest LPG network in the world which gives them a unique opportunity to present their position to the entire industry. Members are strategically placed around the world and by organising regular regional and global events, WLPGA membership offers a powerful platform for members to network.

## WLPGA MATRIX DAY

The Matrix Day is held three times a year and offers members a full day of discussion on specific topics under the four key goals which are Communication, Market Development, Standards and Technology & Innovation. The Matrix Day allows members the opportunity to share of ideas, processes and new technologies to ultimately enable the development of the entire LPG community.

## WOMEN IN LPG GLOBAL NETWORK (WINLPG)

The mission of WINLPG is to support and help empower women in the industry by leadership, coaching, mentoring and promoting role models. WINLPG holds regular Knowledge Exchange sessions around the world and currently has five national chapters in South Africa, Nigeria, United States, Colombia, and India.

## THE ANNUAL WORLD LPG FORUM

Arguably the most important event in the LPG calendar, the World LPG Forum regularly attracts hundreds of exhibitors and thousands of delegates each year. The event travels the globe allowing leading executives from the industry and beyond an exceptional opportunity to meet 'everyone you need to know' in the sector.

*"I think you all do a great job and the industry is better for it. I found that the more I put into the WLPGA the more I got out of it and this helped me enormously in my role."*

**Andrew Bills**  
Chief Executive Officer, Origin Energy



## INFORMATION

One of the key goals of the WLPGA is to inform and educate all stakeholders about the benefits of LPG. The WLPGA arranges regular interactive meetings and in-country workshops uniting technical experts, senior executives and other key stakeholders and is also able to foster extended influence by offering a highly credible source of information and data to enable members in their own outreach initiatives.

### **BUSINESS CONTACTS FOR MEMBERS**

The WLPGA maintains an up-to-date Members' Directory with full and exclusive contact details which is only available to members, giving immediate contact with fellow industry professionals.

### **MEMBER QUERIES**

The WLPGA provides members with a permanent query service covering fuel specification standards, equipment standards, consulting firms, engineering firms, safety rules, taxation policies, new business contacts and much more.

### **MEMBERS' ONLY EXTRANET**

This password protected portal has been completely upgraded to offer members even more data, reports and a free shareable photograph library.

### **EXCEPTIONAL ENERGY & CHARTER OF BENEFITS TOOLKIT**

'Exceptional Energy' is the brand developed by the WLPGA to raise awareness of the exceptional benefits of LPG. The WLPGA urges members to adopt the brand logo and quote the statistics given in the newly launched Charter of Benefits. A comprehensive toolkit is freely available online.

### **MEMBERS' ONLY REPORTS**

The WLPGA publishes certain reports for exclusive distribution to members.

### **GLOBAL LPG STATISTICS**

A major membership benefit is that each member receives one free copy of the Statistical Review of Global LPG, the highly referenced annual publication used throughout the industry providing LPG production and consumption data for over 100 countries.



## EDUCATION

Investing in knowledge building and sharing among members, and in educating key stakeholders is another important arm of the WLPGA's work.

### WORKSHOPS & TRAINING COURSES

The WLPGA regularly organises interactive workshops, training and train-the-trainer courses, covering safety, communications and Cooking For Life.

### SPECIAL PROJECTS FOR MEMBERS

The WLPGA coordinates specific custom-made projects for consortiums of at least three members.



## INFLUENCE

The WLPGA develops partnerships with influential international bodies which enables it to address major issues with policy-makers and key opinion leaders.

### ACCESS TO INTERNATIONAL INSTITUTIONS

Members have direct access to many NGOs and inter-governmental organisations. The WLPGA has Special Consultative Status with the United Nations and partnerships with major institutions such as the World Bank, the Asian Development Bank, The International Energy Agency and the Global Alliance for Clean Cookstoves.

### GLOBAL LEADERSHIP POSITION

The WLPGA enables broad industry representation with highly influential bodies where members benefit from a powerful leadership position that the association holds.



## CREDIBILITY

Since 1989, the WLPGA has had official Consultative Status with the United Nations Economic and Social Council (UN ECOSOC). It has also developed long standing partnerships with other international bodies and multi-lateral institutions such as various different departments in the United Nations including Sustainable Energy For All, the World Bank and Regional Development Banks, and a number of respected international NGOs such as the Clean Cooking Alliance. The geographical spread and diversity of the WLPGA's membership makes the association a representative, trusted and logical partner in international discussions.



*"Liquid Gas Europe has a long history of successful collaboration with WLPGA, particularly the now monthly opportunities to connect with fellow national and*

*regional associations, share best practices and leverage the power of our associations network. One of the key activities is the joint World LPG Forum and European LPG Congress. In 2019 we will again be jointly hosting our events in Amsterdam, for the first time we will be doing this under our new brand identity 'Liquid Gas Europe', and we are looking forward to reinforcing this partnership."*

Samuel Maubanc  
General Manager, Liquid Gas Europe

# FACTS

SEVERAL  
LPG POWERED  
VLGCs ON ORDER



THE PETROCHEMICAL SECTOR  
ADDED ANOTHER  
**10MN T/YR**  
OF DEMAND  
FOR LPG



STRONG GROWTH IN



POLAND

RUSSIA

UKRAINE



**+3 MILLION** VEHICLES  
IN 2017



THE RATE OF US LPG  
PRODUCTION GROWTH  
ON THE BACK OF SHALE  
GAS DEVELOPMENT  
SLOWED, WITH A **3.3%**  
**ANNUAL RISE**  
COMPARED WITH OVER  
**10%** YEAR-ON-YEAR  
GROWTH IN 2015

AUTOGAS MARKET  
CONTRACTION

SLOWED IN GERMANY  
BUT WAS SIZABLE IN

THE NETHERLANDS

JAPAN



AUSTRALIA

AUTOGAS GLOBAL  
LPG PRODUCTION  
**EXCEEDED THE**



**300MN T/YR**



**NEW MEMBERS**



**AIR QUALITY**  
IS EVER MORE  
CLEARLY  
DEFINED AS  
A LEADING CAUSE

OF **HEALTH ISSUES**,  
HIGHLIGHTING THE NEED FOR  
**CLEANER COOKING,**  
**HEATING TRANSPORT**  
AND **INDUSTRIAL ENERGY**  
**SOLUTIONS**

**1.4%**



GLOBAL LPG  
PRODUCTION  
**GREW BY**  
**1.4%**

DOMESTIC USE REPRESENTS



**44%**

OF **GLOBAL LPG USE**

INDIAN DEMAND OF LPG  
GREW BY MORE THAN

**+8%**



DRIVEN BY  
THE **SWITCH**  
FROM POLLUTING  
COOKING FUELS  
TO **CLEAN**  
**COOKING**

IN BRAZIL **95%**



OF HOUSEHOLDS USE  
**LPG AS COOKING FUEL**

# COMMUNICATIONS

**Demonstrate the benefits of LPG and inform, educate and influence all stakeholders.**





*"As Chair of the Communications Goal, I am committed to supporting all the communications activities of the association. Following the 'back-to-basics' approach launched in 2017, this year has seen a significant increase in overall communications activity. From a completely upgraded digital media programme to exciting new tools, such as the LPG documentary and a social media toolkit, WLPGA has now teed up a comprehensive set of tools for all members to adopt. The challenge now is for members to leverage this investment, use these materials, and help the industry speak with one united voice."*

**Henry Cubbon**  
 Managing Director of DCC LPG  
 Chair WLPGA Communications Goal

## EXTERNAL COMMUNICATIONS

### COMMUNICATIONS FOR THE GLOBAL LPG COMMUNITY

External communications are a critical area of WLPGA activities. A key pillar in the association's goal sectors, and under the Chair of Henry Cubbon of DCC Energy, communications activity ultimately influences all of the outreach work undertaken by the association.

WLPGA continues to produce a suite of world class collateral for the global LPG community including a bi-monthly newsletter, an extensive library of video and print case studies, focused awareness campaigns and of course specific reports on various aspects of the industry.

In 2018, the communications team have also continued their outreach to international media and developed a strategy around a re-launched social media campaign which embraces multiple social media platforms.

### COMMUNICATIONS FOR WLPGA MEMBERS

Members benefit from a wider range of communications such as the monthly Insider newsletter, a members' only website which houses a wealth of exclusive data such as a shareable photo library, privilege discount offers to industry events and targeted industry reports and data.

WLPGA memberships also comprises some thirty fellow LPG trade associations, both national and regional. This global network of LPG associations is a powerful entity enabling the LPG community to deepen relations, strengthen communications, discuss key issues, and share best practices and content. An annual face-to-face meeting takes place during the World LPG Forum, and in Houston some ten associations were represented. WLPGA has capitalised on this with a monthly call which focuses on one specific topic to enable a highly targeted exchange on a regular basis. WLPGA strongly encourages all member associations to join these calls and benefit from this unique intelligence exchange.

## SOCIAL MEDIA

Get connected - follow us on our various social media channels:



**@ExceptionalNRG**  
**@LPGapps**  
**@WorldLPGForum**  
**@WINLPG**



**Exceptional Energy**

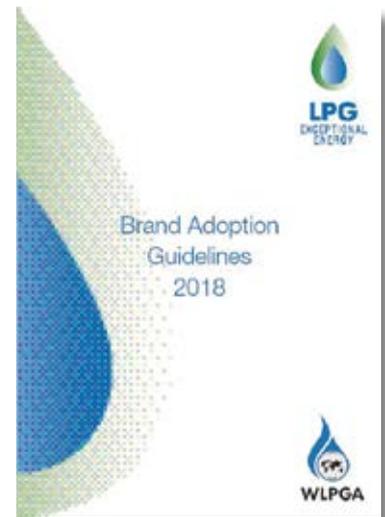


**www.youtube.com/user/WorldLPGas**

## BUILDING ON THE EXCEPTIONAL ENERGY BRAND

WLPGA has developed the Exceptional Energy Brand to unite the industry under one single powerful master brand. Exceptional Energy enables our fragmented industry to speak with one clear voice as we work to raise awareness of the exceptional benefits of LPG. Exceptional Energy is the master brand under which all WLPGA campaigns and events sit ensuring all communications have a

consistent message. Members are strongly encouraged to get creative and weave the brand into their own communications initiatives. The brand is supplier neutral, allowing the entire industry to adopt it and promote LPG in a united fashion and WLPGA has developed a complete toolkit to enable this. In 2018 WLPGA launched Brand Adoption Guidelines notebook which explains simply how to adopt the brand and this document is available from the WLPGA website.

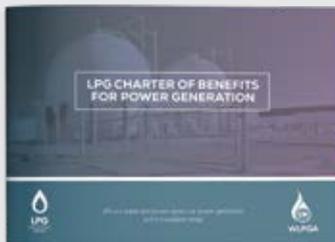


## CHARTER OF BENEFITS TOOLKIT

In 2017 WLPGA produced the LPG Charter of Benefits as a central element of the 'back to basics' communications outreach. This document outlines the common

industry messaging under six themes: health, climate, economic growth & social progress, resource efficiency, energy future and efficiency. The Charter of Benefits toolkit was significantly developed in 2018 with

a set of six short videos, one for each key benefit and independent Charter of Benefit documents for Autogas, Cooking For Life, Marine and Power Generation. All documents are available on the WLPGA website.



## THE LPG DOCUMENTARY

WLPGA launched a major communications tool in 2018 – The LPG Documentary. Recognising the need for an intelligent but basic introduction to LPG, WLPGA produced an eight minute documentary which covers four chapters from introducing LPG and its origins, to its uses and also addresses the future for the product. The documentary is available as one single film and also

each of the four chapters is also available as a single short film. The industry is strongly encouraged to view and show this film as widely as possible.



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Communications Director  
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 @AlisonAbbott6  
 @ExceptionalNRG



WLPGA thanks members who contributed footage and content for this stunning film.

# AUTOGAS COMMUNICATIONS

## COMMUNICATION TOOLS

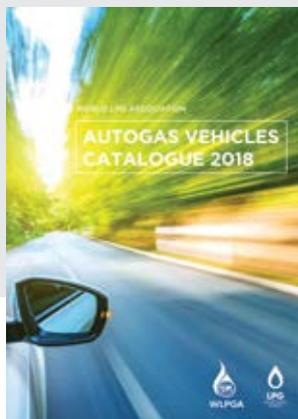
Communications on Autogas benefits, including addressing misperceptions, were a clear focus of WLPGA activities in 2018. Starting with the development of an overview of perceptions in key markets to ensure that our messages are properly tailored. These key messages were then summarised in a dedicated

Charter of Benefits document for Autogas. WLPGA produced four videos and two paper case studies highlighting the benefits of Autogas based on users' experience in Japan, Chile, Canada, India and Italy, and for the first time published a catalogue listing all LPG OEM vehicles available around the world. All these materials are freely available online.



***"We at Gasco Chile appreciate the effort and resources that WLPGA is putting into developing and promoting LPG as a road transport fuel. We are strong believers in Autogas as an innovate way of making transportation more efficient and sustainable. Besides, the role of WLPGA in helping all Autogas promoters to share best practices and experiences from other regions, are invaluable for our own advocacy activities."***

**Julio Bertrand**  
General Manager, Gasco



## THE AUTOGAS VISION

The purpose of this new project is to develop a coherent vision for the future outlining long term objectives for Autogas growth, quantifying associated benefits, and uniting the industry behind this goal. WLPGA developed a growth scenario based on projections and insider knowledge: reaching a target of 80 million Autogas vehicles by 2040. Thanks to the phase-out of

diesel in favour of LPG and gasoline, and higher taxes on gasoline reducing the payback period for LPG, WLPGA expects to see more LPG vehicles, both new and retrofitted, on roads, including LPG hybrids, vans, buses and trucks powered by LPG.

In partnership with Liquid Gas Europe and experts from Transport and Mobility Leuven (part of the Catholic University

of Leuven), WLPGA commissioned a roadmap to quantify the benefits of reaching this objective in terms of air quality and climate change mitigation. The roadmap will serve as a communication and lobbying tool, and key findings will be further disseminated over 2019.

**31<sup>ST</sup> WORLD  
LPG FORUM**  
2-4 OCTOBER 2018  
**HOUSTON**



**1,400**  
PARTICIPANTS



FROM  
**76**  
COUNTRIES



**88**  
EXHIBITING  
COMPANIES



***"For ISA, the 31<sup>st</sup> World LPG Forum was by far one of the best events attended in the last few years. This year's Forum proved once again why it's considered the best global LPG industry event. It gathered an impressive number of key decision makers from all over the world discussing the state of our industry. Thank you WLPGA."***

**André Pimentel**  
Head of Sales & Marketing,  
ISA – Intelligent Sensing Anywhere

The WLPGA, supported by AIGLP, hosted the 31<sup>st</sup> World LPG Forum in October 2018 in Houston, USA. This marks the fifth time the World LPG Forum has taken place in the USA.

Under the theme 'Tomorrow's Energy Today', the World LPG Forum debated the key role that LPG has in the future energy mix and, in particular, how LPG can contribute to the low carbon energy transition. The panel, which featured senior representatives from the US and Europe, noted that the industry faces major opportunities but also challenges and threats, including the "electrification of everything, everywhere". The panel concluded with an upbeat outlook for the US market with an ambition to grow LPG consumption by four billion gallons (11 million tonnes) over the next five

years. This is an issue that resonates across the globe in whatever market a company operates in, and this discussion will no doubt continue over the coming years.

The WLPGA was honoured to welcome Mr Glenn Hegar, Comptroller of the State of Texas, who delivered a keynote on the first day.

Other key themes discussed during the event included 'Prospects for Propane' with a focus on the positive outlook for the LPG industry; a session entitled 'Communications: Evolution or Revolution?' demonstrating how communications remains at the heart of the industry and leads the way to extend influence and grow business; 'A time of Transition in the Americas' which focused on the growth potential

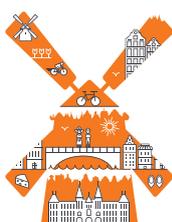
in different markets and sectors in the Americas; and finally, the 'Secrets of Success' which gave an insight and analysis into some of the world's most exciting Exceptional Energy projects and uncovered the secrets behind the best practice stories that will drive the future of the LPG Industry.

The social events offered excellent networking opportunities to all participants and the 'Texan Night Out' at the George Ranch was an outstanding and memorable event.



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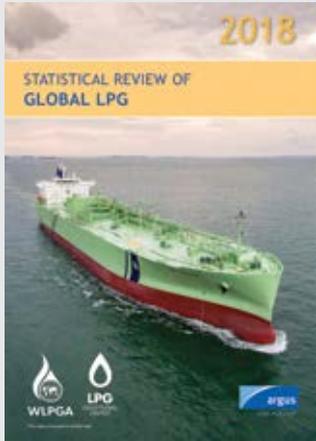
 @WorldLPGForum



**32<sup>nd</sup> World  
LPG Forum  
& European  
Congress**  
24-26 September 2019

**ENERGY IN TRANSITION  
AMSTERDAM**  
[www.worldlpgforum-aegpi2019.com](http://www.worldlpgforum-aegpi2019.com)

## 2018 WLPGA GLOBAL STATISTICAL REVIEW



The latest global statistical review was published by Argus Media and contains comprehensive 2017 supply and demand data from over 120 countries.

The review confirmed LPG demand in 2017 exceeded 300 million tonnes for the first time, an increase of 3%. A feature of this year's publication is the front cover which shows a very large gas carrier (VLGC) carrying LPG. Very soon some of these vessels will be powered by LPG, displacing marine bunker fuel to comply with the new IMO 2020 emission regulations.

This has the potential to add four million tonnes a year of LPG to world demand making it an exciting sector to watch as the clean burning characteristics of LPG contributes to keeping the worlds' shipping lanes free from harmful emissions.

In 2019 the report will be published and distributed to members in PDF format through the Argus analytics platform using a password.



Nikos Xydas chairing a session at the World Gas Conference in Washington DC

## COOPERATION WITH THE IGU

WLPGA was well represented in the three-year World Gas Conference that took place in Washington DC from 25<sup>th</sup> – 29<sup>th</sup> June. James Rockall and Nikos Xydas attended the event which brought together an estimated 12,000 attendees under the theme "Fuelling the Future". The discussions focused on the future role of natural gas in the energy mix and the important

contribution that gas can make to sustainable development – issues that are also very relevant to the LPG industry. LPG was mentioned in several instances during the week – in particular during the key-note session on Energy for All as well as during three dedicated LPG sessions chaired by Nikos and James.





## REGIONAL SUMMITS

Since launching the concept in 2009, WLPGA has held twelve Regional Summits in venues as varied as Cartagena, Kuala Lumpur and Nairobi. These one-day events are designed to bring global visibility to regional

issues while highlighting opportunities in these markets. In 2018 WLPGA, along with Lebanese member Unigaz held the First WLPGA Middle East Regional Summit in the enchanting city of Beirut. The event held on 26<sup>th</sup> April

attracted over 350 delegates from 25 countries and underscored the vast opportunities that exist for the LPG industry throughout the Middle East.

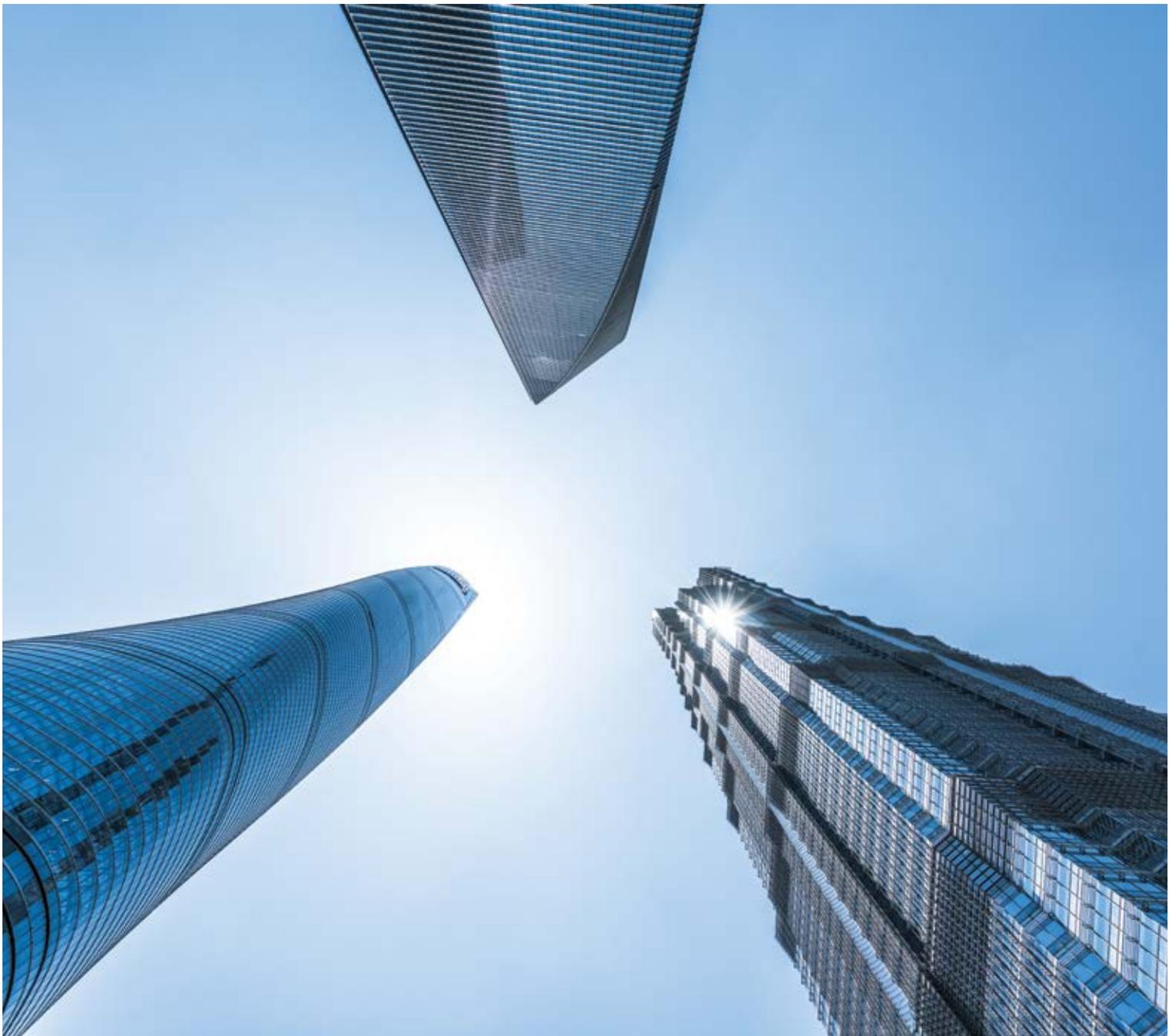


***“Co-hosting the First WLPGA Middle East Regional Summit in Beirut was one of the highlights of 2018 for Unigaz. The event brought together renowned LPG leaders from around the region and the world to showcase the vibrant markets of Middle East and to highlight the opportunities for growth. We are proud to have held such a successful and prestigious event here in our home city of Beirut, and were able to deliver recommendations to the public and private sector to hand-in-hand boost the LPG industry in the region. As always, we look forward to continued cooperation with WLPGA.”***

**Khaldoum Dib**  
CEO, Unigaz International

# MARKET DEVELOPMENT

Support the developments of LPG markets.





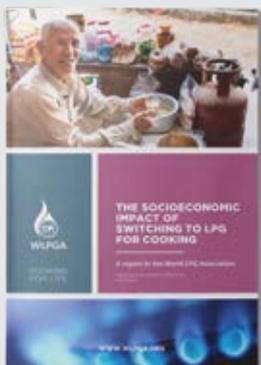
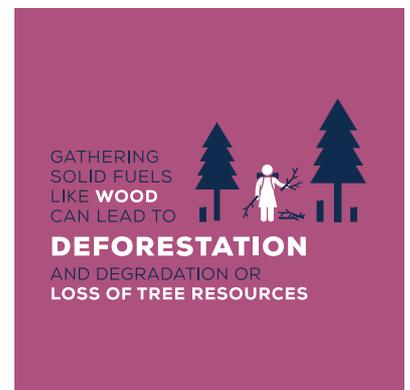
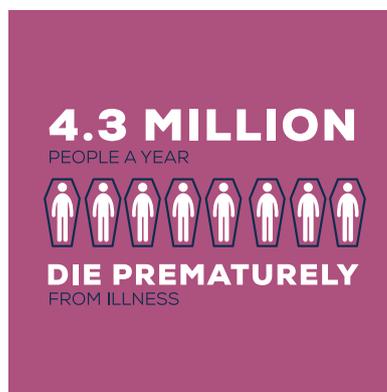
*"Autogas, heavy duty engines, power generation, clean cooking with LPG: many applications, but one goal: developing and growing LPG markets across the world. WPGA's role is critical to ensuring the convergence of initiatives and projects, and I am proud to represent Aygaz and work with the team at WPGA as Chair of the Market Development Goal."*

**Gokhan Tezel**  
CEO, AYGAZ  
Chair Market Development Goal

## COOKING FOR LIFE

The focus for Cooking For Life in 2018 was on communicating the benefits of switching populations from cooking with biomass and other dirty and dangerous fuels to LPG. The initiative refreshed and updated five key studies and reports while creating a number of video case studies and social media friendly infographics on crucial issues.

Cooking For Life held two successful workshops in Dhaka and Yangon and participated in numerous public events in venues as varied as Bogota and Abuja. The focus of all these events was on providing good industry practices and policy tools for growing the industry in a safe and sustainable manner.



# POWER GENERATION

The working group on power generation continued to focus on raising awareness of the potential for this technology. A new charter of benefits and animation were produced, along

with a number of case studies. The working group also held two workshops exploring the opportunities for LPG and power generation. The first was held in Yangon in March and the second in

Sydney in June. Both were supported by local industry and attracted a mix of stakeholders.



**LPG IS EASIER & LESS EXPENSIVE TO COMPRESS, SHIP, AND STORE THAN LNG**

**RELIABLE POWER**

LPG CAN BE STORED ON SITE THUS INCREASING UP-TIME



**POWER GENERATION FUELED BY LPG HAS A LOWER EMISSIONS PROFILE**

COMPARED TO HEAVY FUEL OIL AND DIESEL



**LOCAL POWER**

LPG POWER PLANTS CAN BE SET UP CLOSE TO WHERE ENERGY IS NEEDED, THUS AVOIDING ENERGY LOSS OVER POWER LINES. VIRTUALLY **EVERY KW/H PRODUCED IS A KW/H USED**

**A PARTNER FOR RENEWABLE POWER:**

AN LPG POWER PLANT CAN BE COMBINED WITH WIND, SOLAR, HYDRO OR OTHER RENEWABLE SOURCES



## HEAVY DUTY ENGINES

The working group on heavy duty engines was formed as part of a year long project to examine the market potential for LPG in this promising segment of the industry. Deliverables from this project included an overview of the global market opportunity, an analysis of the barriers and challenges as well as a series of recommendations to the industry to help this sector realise its potential.



# AUTOGAS

## ADVOCACY SUPPORT

In 2018, WLPGA dedicated specific support to Autogas advocacy in Chile. Autogas is currently restricted to commercial fleets in Chile, and low taxes on diesel make LPG hardly competitive. WLPGA supported the Chilean LPG Association at a meeting with the Vice-Minister for Transport,

to share the experience of successful Autogas markets. As a result, the Transport Ministry is now willing to sponsor research and follow up workshop to further explore the opportunity of lifting current restrictions on Autogas use, and recognises Autogas as an air quality solution.



## AUTOGAS INCENTIVE POLICIES REPORT

WLPGA, in cooperation with Liquid Gas Europe, also published a new edition of the Autogas Incentive Policies report, this edition covering 25 markets and providing key information on incentives for LPG and other alternative fuels. The evidence is incontrovertible: Autogas demand is plummeting in countries

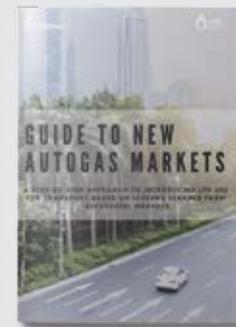
where Autogas has recently become uncompetitive, notably Australia and Japan, and stagnating or levelling off where the per-km cost savings are minimal. By contrast, the market continues to grow where there are significant cost savings to be made thanks to lower taxes, e.g. Poland and Italy.



## GUIDE TO NEW AUTOGAS MARKETS

This new WLPGA publication is a comprehensive step by step approach to developing Autogas markets, with the aim to answer key questions such as incentives, technology, safety, infrastructure development etc. The primary target are LPG industry players, policymakers and other stakeholders in new markets with

potential for developing Autogas. As a follow up, the findings of this report were presented in the Philippines, where the government is looking to launch a prototype, Autogas Jeepney, to tackle air quality issues, and in Colombia where the government is about to issue regulations to authorise the use of Autogas.



***"This WLPGA Guide to New Autogas Markets is a valuable document for countries who are looking at introducing Autogas as it outlines a comprehensive step by step approach to developing Autogas markets. The government of Nigeria fully endorses this Guide and will certainly be referring to it as we move towards introducing Autogas into our country."***

**Dayo Adeshina**  
Programme Manager, National LPG Expansion Plan,  
Advisor to the Vice-President of the Federal Republic of Nigeria

# STANDARDS

Promote compliance with standards, good business and safety practices.





*"Now that we are in the "new normal", there is an urgency for the Digital Energy Revolution to provide the agility and scale needed to win in this environment. It is more important than ever for the LPG industry to come together to develop solutions and expertise on how to introduce new products and services – not only for survival, but for growth – as they maintain process efficiencies, focusing in updated standards, good practices and people diversity in LPG businesses.*

*Time has come to take action to become an inclusive and digital energy industry or get left behind. IoT, (Internet of Things) is one of the tools we can hear directly from our peers at the WLPGA, as well as worldwide examples of how good practices are being leveraged to transform business models, processes, and ways of working.*

*We are developing practical next steps to safely navigate this journey by accessing the "state of the art" standards and to change the face of the Industry through the actions of the Women in LPG Global Network (WINLPG) to support and help to empower women and young talent in the LPG Industry.*

*At WLPGA's Standards Goal Committee, we are working to share these disruptive technologies in order to reach new levels of safety, cost control, agility and diversity in a challenging environment, while providing a bridge to success in the new, diversified and outcome-focused energy economy.*

**Mauricio Jarovsky**  
Development Consultant, Ultragas, Brazil  
Chair WLPGA Standards Goal



## HNS CONVENTION

WLPGA Director David Tyler and Osamu Uehira, Secretary General of the Japan LP-Gas Association, attended the London International Oil Pollution Compensation Funds (IOPCF) meetings in April and October. The WLPGA has been an official observer to these meetings since 2009 and successfully lobbied this year for this status to be extended for a further three years until 2021.

The introduction of the Hazardous and Noxious Substances (HNS) Convention becomes ever closer with the agreement

of four member states - Canada, Denmark, Norway, and Turkey - to ratify the convention to date. WLPGA also participated in a two-day HNS workshop in London in April where it was reported that several other countries are actively working towards ratification of the Convention. When enacted, the HNS Convention will provide an additional level of compensation cover to victims of major incidents involving HNS cargoes. LPG is one of those HNS substances that will have its own account, protecting the LPG industry from incidents involving other HNS products.

This engagement with the International Maritime Organisation (IMO), through the HNS Convention, creates an opportunity for the WLPGA to seek consultative status with the IMO which is part of the programme for 2019. Apart from the HNS Convention, which will impact the LPG industry once enacted, the role of LPG as a low emission bunker fuel will bring the two organisations much closer together. Engaging with international partners such as the IMO is one of the aims of the WLPGA as it seeks to further improve its external communications with global organisations.



## THE INTERNET OF THINGS (IOT)

IoT is having a tremendous impact on our everyday lives, and this year a WLPGA working group led by Director David Tyler and supported by André Pimentel of ISA – Intelligent Sensing Anywhere, Portugal, established a project to determine relevant current activities in the IoT space, and present observations, case studies and other ideas as to how IoT can help the LPG business become smarter, safer and more accessible to non-users of LPG.

To ensure maximum input, a one-hour session was held during the Houston Forum, where members and non-members had the opportunity to be involved in the project by addressing several questions relating to IoT and its impact on the LPG business.

In addition, webinars took place towards the end of the year to educate interested parties. Feedback from the Power Play session and webinars are included in the IoT report.



## GOOD INDUSTRY PRACTICES WORKSHOPS

Four Good Industry Practices (GIP) workshops were held during the year in Bangladesh, Myanmar, Nigeria and Sri Lanka, where the newly formed Sri Lankan LPG Association held a workshop to coincide with its inaugural meeting.

The topic of good industry practices was also included during the Philippines LPG Summit held in August. With global LPG demand growing at around 2% per year, tens of thousands of new personnel are entering the LPG industry for the first time. They all need training to ensure the industry continues to operate in a safe and sustainable manner.

The workshop topics included the critical aspects of cylinder management, bulk road transport and cylinder filling, as well as HSE

management systems, which is the subject of the latest Good Industry Practices guide. WLPGA also makes training material available for associations to use themselves.

This 'train the trainer' approach is supported not only by training materials and notes but also a four-minute video which was produced during the year.

The video explains the important physical properties and characteristics of LPG and how they impact on the safe storage, handling, distribution and use of the product. The video, with sub-titles, has been designed for both technical and non-technical audiences.



***"...The Sri Lankan LPG Association held its inaugural meeting in November and invited the WLPGA to run a two-day Good Industry Practices workshop where over 120 delegates attended. The delegates not only included participants from our two WLPGA member companies, Litro Gas and Laugfs Gas, but also other important stakeholders from the Sri Lankan government. It was a very successful event and demonstrated the commitment that the Sri Lankan LPG industry has in pursuing our vision for a safe and sustainable future based on the principles of the WLPGA's good industry practice s guidelines..."***

**Chaminda Ediriwickrama**  
Director Sales & Marketing Corporate  
Affairs, Litro Gas

**U K Ashan De Silva**  
Chief Executive Officer, Laugfs Gas



## UNHCR



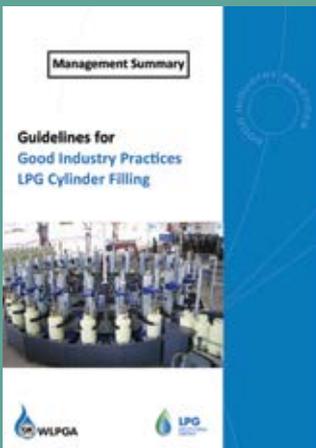
There are over 68 million refugees worldwide and many of them are reliant on traditional fuels, such as wood, as their primary energy source. WLPGA has held meetings with the United Nations Refugee Agency (UNHCR) to discuss the opportunity for LPG to displace traditional fuels in refugee camps around the world as governments in those countries seek to stop deforestation.

One of the WLPGA goals for 2018 was to work more closely with the UNHCR - and the International Organisation for Migration (IOM) - to ensure that the introduction of LPG into the refugee camps of Bangladesh, where nearly one million people are housed, is done in accordance with WLPGA Good Industry practices and the Cooking For Life objectives.

Following close cooperation with the WLPGA during the first half of 2018, the Bangladesh programme was officially launched in August when the first families received their stove and LPG cylinder.

The UNHCR agreed to become observer members of the WLPGA in July. The two organisations met in Geneva to discuss how they can work more closely together in a collaborative manner, not only in Asia but in other regions including Africa, the Middle East and South America, where refugee populations are high.

The UNHCR recognises the important role that LPG can play as a primary fuel to combat the harmful impact of wood being used in refugee camps for cooking and, after the success of Bangladesh, the WLPGA and UNHCR are now in discussions as to how LPG can be introduced into the refugee camps in Rwanda.



## WLPGA GUIDES

The WLPGA produced a Good Industry Practices Guide for Health, Safety and Environmental (HSE) Management Systems to add to the suite of guides that are now available on the WLPGA website. This latest Guide focuses on how the HSE issues of a business can be managed.

The Good Industry Practice Guide to HSE Management Systems, provides advice to stakeholders in how to set up an HSE management system. It also may be used as a check list for reviewing HSE management systems already in place.

The guides ensure that the principles used for the training programmes and good industry practices workshops, as part of the knowledge transfer mission, are delivered with consistent messages.

In order to promote the awareness and use of the guides short management summaries of all the guides that have been produced to date are now available in a convenient A5 leaflet.

# STANDARDS HARMONISATION

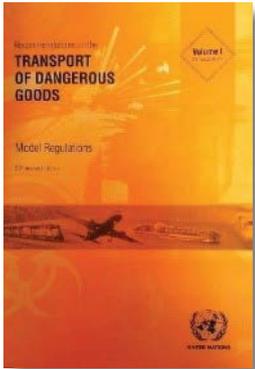
WLPGA continued its work on ISO standardisation and prepared its involvement with other internationally used standards including ANSI, ASME, DOT. This activity was undertaken with the involvement of external consultancy company, and WLPGA member, IHS Markit.

Initial examinations of the dedicated platform for managing international standards, the Engineering Workbench, were carried out, and the Engineering Workbench will be the subject of detailed testing in 2019.



The primary focus was, again, the work of the technical committee ISO TC 58 (Gas Cylinders), while involvement in another technical committee ISO TC22/SC41 on the standardisation of the Autogas filling connector, was continued, with additional follow-up on other subjects specific to this committee. Standardisation of DME, on its use as a vehicle fuel, was also monitored, this having a close relation to Autogas.

At UN level, WLPGA continued its strong involvement and contribution to the UN Model Regulations through the Sub-Committee of Experts on the Transport of Dangerous Goods and the related meetings in Geneva.



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@NikosXydas  
@LPGapps



***"I am very honoured to have been chosen as the inaugural Woman of the Year Award and would also like to congratulate all my fellow nominees. This is an excellent initiative which we at Origin Energy fully support and to have been selected as the very first winner means a great deal. We look forward to continuing to work with the WINLPG team."***

**Lesieli Taviri**  
CEO Origin Energy PNG

Winner 2018 Woman of the Year Award

## WOMEN IN LPG GLOBAL NETWORK (WINLPG)



WLPGA identified that there was a clear opportunity for the global LPG community to take medium and long term actions that can address the issue of attracting, retaining and developing women to the LPG industry. As the authoritative voice for the global LPG industry, WLPGA is uniquely positioned to develop and implement these actions.

WINLPG was launched in September 2015 and has three pillars of objectives: to support and retain women already in the industry through a network in which women can further their professional development and access colleagues and mentors; to promote the network via media, within the industry itself and at international events; and in the longer term to implement measures to educate and attract talent to the LPG industry.

2018 was an exceptionally successful year for WINLPG on many levels and saw the network develop significantly regarding all its goals. Perhaps the highlight for 2018 was the launch of the Woman of the Year Award.

The award process drew considerable interest from the global WINLPG community and many inspirational women were nominated. Ms Lesieli Taviri, General Manager, Origin LPG, Papua New Guinea won the award and Ms Jessica Alderman, Director of Communications, Envirofit International, USA was runner up. The Woman of the Year Award will be repeated in 2019.

WINLPG also encourages the launch of National Chapters, this enables the network to work in-country and address issues faced in a particular geography. In 2018 WINLPG welcomed the existing US Women in Propane network as a National Chapter and also saw the launch of the first Latin American Chapter in Colombia. This brings the total of national chapters to five and WINLPG welcomes suggestions for further national chapter locations.

WINLPG is managed by Alison Abbott, Communications Director, WLPGA.



Ms Amber Fennell (left), Origin Australia accepting the award on Ms Taviri's behalf and Ms Jessica Alderman (right) receiving her runner up certificate in Houston during the World LPG Forum



*"As Global Chair of WINLPG it has been a pleasure to see the network develop significantly this year. WINLPG consistently meets, and exceeds, its business objectives and it has been very rewarding to welcome two new chapters, a host of Ambassadors and role models, meet our members around the world, and of course launch the Woman of the Year Award this year. WINLPG is poised to develop further in 2019 and I look forward to steering the network towards even greater success."*

**Paige O'Dell**

WINLPG Global Chair and VP Operations, AmeriGas



## KEY SUCCESS FACTORS IN 2018



**1,788**  
MEMBERS

**5**  
NATIONAL CHAPTERS  
South Africa, Nigeria, India, Colombia, USA



**16**



HIGH LEVEL  
CORPORATE & INDIVIDUAL  
AMBASSADORS



**25**  
ROLE MODEL  
PROFILES ONLINE



**6**  
KNOWLEDGE EXCHANGE  
SESSIONS  
held around the world



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COMMUNITY  
(Women in LPG Global Network)

# INNOVATION & TECHNOLOGY

AT THE FOREFRONT OF FUTURE OPPORTUNITIES.





*"Our efforts in 2018 for innovation and technology were very successful. We exhibited at Mondial in Paris for Autogas, at EIMA2018 in Bologna for agriculture, at the World Gas Forum in Washington, DC and had standing room only for the Global Technology Forum in Houston. Perhaps the highlight of the year was in the marine market, with the industry seeing the benefits of LPG powered ships. Improvements in technology and innovation will continue to open new markets for LPG around the world in markets as varied as power generation, water heating, and transportation."*

**TUCKER PERKINS**

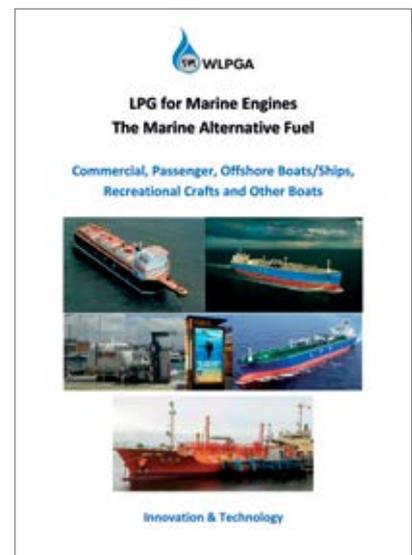
Chief Executive Officer, Propane Education & Research Council, USA  
Chair WLPGA Innovation & Technology Goal

## LPG FOR MARINE ENGINES, THE MARINE ALTERNATIVE FUEL

The 2017 WLPGA report "LPG for Marine Engines, The Marine Alternative Fuel" received significant publicity having been selected as a finalist in the the Green4Sea awards competition. The report formed the basis of a very successful stakeholder engagement programme, including participation in various marine events showcasing LPG for marine, and significant international media interest. It played a major role in the acceptance and recognition of LPG as a marine fuel, to position LPG as a credible solution for the IMO 2020 challenge and the new regulations.

This year saw also the first orders of LPG fuelled LPG carriers and a new flagship LPG engine from the WLPGA member MAN Energy entering the market. The marine programme is an excellent example of coordination between WLPGA members, and is arguably one of the most successful activities to open an almost entirely new market for LPG.

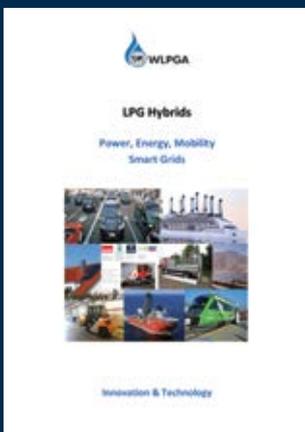
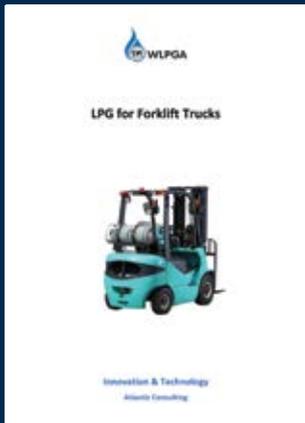
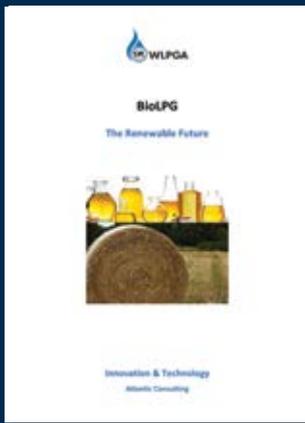
A new version of the "LPG for Marine Engines, The Marine Alternative Fuel" report was also issued at the end of the year to cover the numerous and significant developments that took place during 2018.



**EASY & QUICK BUNKERING**  
THE SPATIAL DISTRIBUTION OF LPG STORAGE FACILITIES FAVOURS LPG OVER LNG

**SAFETY MANAGEMENT & MAINTENANCE**  
ARE SIMPLER FOR LPG THAN FOR LNG

**RELIABLE SUPPLY**  
GLOBAL LPG PRODUCTION GREW 5.75% EXCEEDING 300 MN T/YEAR FIRST TIME EVER



### BIOLPG THE RENEWABLE FUTURE

There is an increasing interest on production of BioLPG (renewable LPG) both from a technology viewpoint but also as an opportunity for marketing and advocacy.

This report details everything that the LPG industry should be aware of, in terms of process, challenges and risks, and describes what needs to be done to leverage opportunities, such as exploring co-processing with refiners, protecting virgin bio-oils for biofuels, analysing/monitoring government plans, and promoting BioLPG-rich options.

In addition, further activities included work on an Information Exchange platform aimed to assist networking amongst the members on technical issues, support to market development on Heavy Duty LPG Engines and activities in Autogas

### LPG HYBRIDS

Hybrid technologies continue to gain space in the market, particularly those related to renewable energies and electric/battery operations, and LPG clearly has a role in these new opportunities.

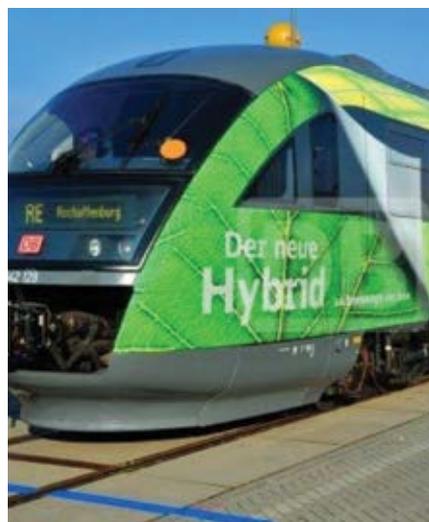
This new report was prepared to demonstrate the important role that

### LPG FOR FORK LIFT TRUCK (FLT)s

Whilst LPG as fuel for FLT's is not a new application, it needs to be repositioned in the market based on new technology, in order to take full advantage of the numerous benefits that LPG offers versus diesel and particularly electric/battery driven units.

The report highlights latest technologies, comparative advantages and propose actions to develop this market.

LPG can play in hybrid technology combinations and highlight the related opportunities to guide market development. It also provides recommendations for stakeholder engagement and details actions needed to drive the industry into the future of applications that combine LPG with renewables and electricity.



# EXCEPTIONAL ENERGY IN ACTION (EEIA) – THE ONLINE LPG APPLICATIONS DIRECTORY

EEIA continued to be enhanced with new application pages and materials. Monthly visits in 2018 attained the highest recorded for the site, and the Twitter account saw a 50% increase in followers. Several new promotional videos were produced, including “Talented LPG”, “Exceptional Craftmanship”, “The Perfect Roast” and also, jointly with Autogas, “LPG on Track”.

For the first time, EEIA also showcased LPG applications at major ‘external’ events. This included the Paris Motor Show, where in conjunction with Liquid Gas Europe and Tecno Montecarlo Automobile, WLPGA demonstrated a high tech LPG Autogas application, the GT V8 LPG Tecno Montecarlo – Alfa Romeo/Maserati 503hp 300+ km/hr supercar.

EEIA also exhibited at the EIMA agricultural and gardening exhibition in Bologna jointly with Cavagna/Greengear.

The WLPGA Corporate D membership scheme, aimed at encouraging LPG appliance manufacturers to join WLPGA, attracted many new members in 2018.

Companies wishing to become members under this scheme, which includes free membership for the first year, are invited to contact WLPGA.

Visit Exceptional Energy in Action at [www.lpg-apps.org](http://www.lpg-apps.org) and follow us on  @LPGapps



## EXCEPTIONAL ENERGY IN ACTION VIDEO CASE STUDIES



# 2018 GLOBAL TECHNOLOGY CONFERENCE



Each year, the LPG industry is invited to submit abstracts showcasing some of the most innovative and promising technology. GTC is key in identifying innovation and new technologies to shape the future.

This year the Global Technology Conference (GTC2018) in Houston saw a record attendance with over 200 delegates who gathered to hear the latest technology being applied to the LPG industry. Topics included the development of a Heavy-Duty, high-output, low-emission LPG engines, LPG cogeneration boilers providing low-cost electricity and backup power for residential and light-commercial applications, Solar Hybrid applications, LPG near zero emission systems for Forklifts, in-use emissions and performance testing of propane-fuelled

engines, new Relief Valves for propane bulk storage tanks, a highly accurate ultrasonic meter, and others. A total of eleven papers were presented. Paygo Energy won the WLPGA 2018 Innovation award with the digitally controlled cylinder smart meter fitted to domestic LPG cylinders which lowers the entry barrier for low income households and deters illegal fillers.

All presentations were selected by the GTC steering committee based on the list of agreed criteria, including degree of technical innovation, safety improvement potential, operational efficiency, commercial, marketing potential. WLPGA CEO, James Rockall, presented the innovation award to Fausto Marcigot who represented Paygo Energy.

### THE GTC2018 HOUSTON AWARD WINNER:

- Paygo Energy represented by Fausto Marcigot (centre) for the paper “Digital Transformation of LPG distribution: A case study on the use of IoT to accelerate market adoption and combat illegal practices”.

### RUNNERS-UP:

- Enviropower LLC, represented by Dan Nadav (left) (award received by Greg Kerr of PERC)
- Zenith Power Products, for the “Development of a heavy duty, high output, low emission LPG engine” represented by Steve King (right)



## 2018 EVENTS OVERVIEW

The WLPGA organised, or supported, the following industry events around the world during 2018 :

JANUARY	<p><b>Argus Americas LPG Summit</b> - Houston, USA  <b>5<sup>th</sup> Asia LPG Summit</b> - Dhaka, Bangladesh  <b>Cooking For Life /Good Industry Practices Workshops</b> - Dhaka, Bangladesh</p>
FEBRUARY	<p><b>WLPGA Board, Industry Council &amp; Matrix Day</b> - Santa Barbara, USA  <b>LPG: Catalyst of Social Change II</b> - Ranchi, India  <b>Green4Sea</b> - Athens, Greece</p>
MARCH	<p><b>WLPGA Myanmar Summit</b> - Yangon, Myanmar  <b>Cooking For Life /Good Industry Practices Workshops</b> - Yangon, Myanmar  <b>International LP Gas Seminar</b> - Tokyo, Japan  <b>22<sup>nd</sup> China LPG Conference</b> - Chengdu, China  <b>Argus Africa LPG</b> - Cape Town, South Africa  <b>33<sup>rd</sup> AIGLP Congress</b> - Rio de Janeiro, Brazil</p>
APRIL	<p><b>IHS International LPG Seminar</b> - Houston, USA  <b>NPGA South Eastern Convention</b> - Atlanta, USA  <b>IOPCF HNS Meetings</b> - London, UK  <b>Argus LPG Moscow</b> - Moscow, Russia  <b>3<sup>rd</sup> Argus Iran LPG &amp; Petrochemicals Conference</b> - Tehran, Iran  <b>1<sup>st</sup> Middle East WLPGA Regional Summit</b> - Beirut, Lebanon</p>
MAY	<p><b>LPGSASA Vision in Energy LPG Event</b> - Johannesburg, South Africa  <b>The Sustainable Energy for All Forum</b> - Lisbon, Portugal  <b>PIEA-WLPGA East Africa LPG Summit &amp; Training Workshop</b> - Nairobi, Kenya  <b>UKLPG Annual Conference</b> - Leeds, UK</p>
JUNE	<p><b>DVFG Annual Conference</b> - Berlin, Germany  <b>LPG Myanmar Conference &amp; Exhibition</b> - Yangon, Myanmar  <b>WLPGA Good Industry Practices Workshop</b> - Lagos, Nigeria  <b>WLPGA Board, Industry Council &amp; Matrix Day</b> - Monaco  <b>AEGPL Annual Congress</b> - Monaco  <b>World Gas Conference</b> - Washington DC, USA  <b>WLPGA LPG for Power Generation Workshop</b> - Sydney, Australia  <b>IHS 22<sup>nd</sup> Asia LPG Seminar</b> - Singapore</p>
AUGUST	<p><b>1<sup>st</sup> Congreso Internacional de GLP</b> - Bogota, Colombia  <b>LPG Summit Philippines</b> - Manila, Philippines</p>
SEPTEMBER	<p><b>LPG Vietnam 2018</b> - Ho Chi Minh City, Vietnam</p>
OCTOBER	<p><b>WLPGA Board, Industry Council &amp; Matrix Day</b> - Houston, USA  <b>31<sup>st</sup> World LPG Forum</b> - Houston, USA  <b>2018 Paris Motor Show</b> - Paris, France  <b>IOPCF HNS Meetings</b> - London, UK</p>
NOVEMBER	<p><b>Gaz NZ Industry Forum</b> - Wellington, New Zealand  <b>COP 24 UN Framework Convention on Climate Change</b> - Katowice, Poland  <b>EIMA</b> - Bologna, Italy  <b>Parami Community Kitchens Launch</b> - Shan State, Myanmar  <b>LPG Cambodia 2018</b> - Phnom Penh, Cambodia  <b>IHS Latin American Seminar</b> - Mexico City, Mexico  <b>WLPGA Good Industry Practices Workshops</b> - Colombo, Sri Lanka</p>
DECEMBER	<p><b>Argus European Markets</b> - London, UK  <b>Nigeria LPG Association Annual Conference</b> - Abuja, Nigeria</p>

# WLPGA

# ORGANISATION

## BOARD OF DIRECTORS

The WLPGA team is supported and assisted by the Board of Directors and the Industry Council. This ensures that members are fully represented in the activities and strategies of the association whilst also ensuring that the WLPGA can truly speak as a unified and coherent voice of the industry.

The WLPGA Board is composed of a President, a First Vice-President, a Treasurer, three Vice-Presidents and up to five other Board members. The current Board was elected at the Annual General Assembly of October 2018 in Houston, United States. The Board composition is representative of the business activities and geographic diversity of members.

The Board meets three times a year to agree the budget and approve the accounts for ratification by the General Assembly. The Board has an overall governance role for the association as defined under French law.



**Pedro Jorge Filho**  
President  
Ultragas (Brazil)



**Henry Cubbon**  
First Vice-President  
DCC LPG (Ireland)



**David Cavagna**  
Vice-President  
Cavagna Group (Italy)



**Blaise Edja**  
Vice-President  
Oryx Energies SA (Switzerland)



**Sanjiv Singh**  
Vice-President  
Indian Oil Corporation (India)



**Martin Ackermann**  
Board Member  
BW LPG (Singapore)



**Bram Gräber**  
Board Member  
SHV Energy (The Netherlands)



**Roger Perreault**  
Board Member & Treasurer  
UGI International  
(USA)



**David Rodriguez**  
Board Member  
Total (France)



**Gökhan Tezel**  
Board Member  
Aygaz (Turkey)



**Sakae Yoshida**  
Board Member  
Japan LP Gas Association  
(Japan)

# INDUSTRY COUNCIL

The WLPGA Industry Council was inaugurated in 1996 and is composed of leading companies in the LPG business. The Industry Council directs the association's actions by identifying issues, developing strategies, and formulating projects. The Industry Council also makes recommendations to the WLPGA Board of Directors.

Actions launched by the Industry Council aim at enhancing the positive image of LPG worldwide and promoting LPG use to satisfy the growing need for an all-purpose, efficient and environmentally friendly fuel. Whether focused on specific market segments or the LPG industry in general, the Industry Council's actions are designed to increase the worldwide use of LPG.

In 2018 the Industry Council group was enlarged to include more companies, with a new cap set at 40 companies. The Industry Council welcomed seven new members, making a total of 36 Industry Council members.



# THE WLPGA

## TEAM



**James Rockall**  
CEO & Managing Director



**Michael Kelly**  
Deputy Managing Director  
& Director of Market Development



**Nikos Xydas**  
Technical Director



**Alison Abbott**  
Marketing & Communications  
Director



**Esther Assous**  
Events Director



**Nadia Lalout-Landemaine**  
Office Manager &  
Member Relations Manager



**Cécile Nourigat**  
Autogas Manager



**Camille Pieron**  
Digital Communications  
Manager



**Myriam Brasseur**  
Communications Assistant



# 32<sup>nd</sup> World LPG Forum & European Congress

24<sup>th</sup>-26<sup>th</sup> September 2019 ♡

## AMSTERDAM

**SAVE  
THE  
DATE**



Liquid  
Gas  
Europe





**WLPGA**



**LPG**  
EXCEPTIONAL  
ENERGY



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RIJOLEERING