

# Petrochemicals: a driver of global LPG demand growth

**Argus LPG 2024**  
**Valentin Kotlomin**  
**October 18, 2024**

# | Argus Media group notices

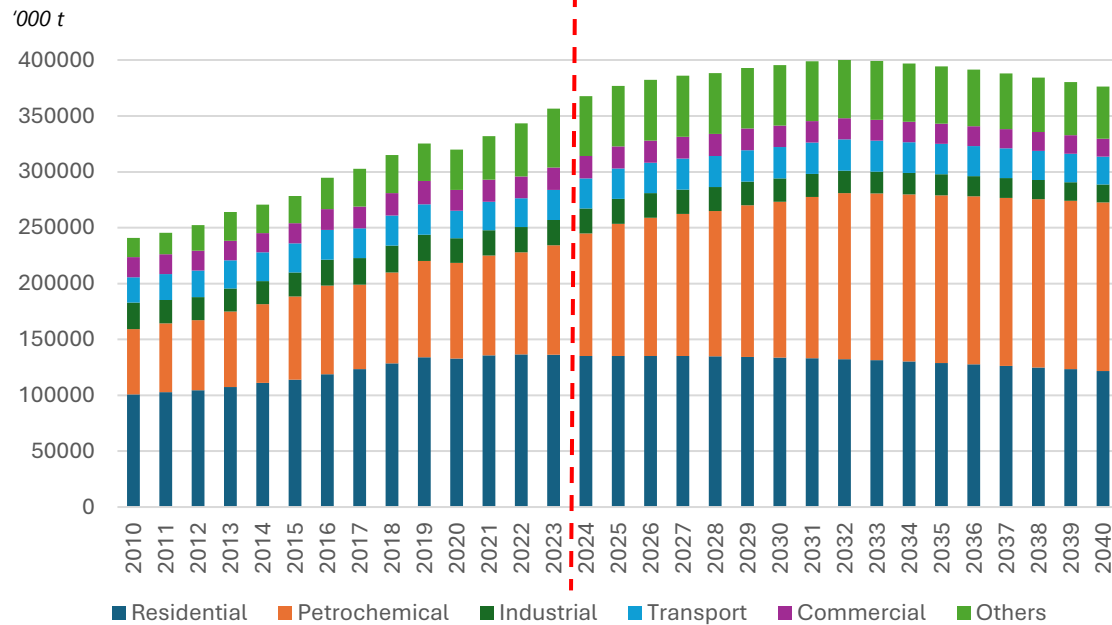
- The Argus Media group (referred to herein as “Argus”) makes no representations or warranties or other assurance, express or implied, about the accuracy or suitability of any information in this presentation and related materials (such as handouts, other presentation documents and recordings and any other materials or information distributed at or in connection with this presentation).
- The information or opinions contained in this presentation are provided on an “as is” basis without any warranty, condition or other representation as to its accuracy, completeness, or suitability for any particular purpose and shall not confer rights or remedies upon the recipients of this presentation or any other person. Data and information contained in the presentation come from a variety of sources, some of which are third parties outside Argus’ control and some of which may not have been verified.
- All analysis and opinions, data, projections and forecasts provided may be based on assumptions that are not correct or which change, being dependent upon fundamentals and other factors and events subject to change and uncertainty; future results or values could be materially different from any forecast or estimates described in the presentation.
- To the maximum extent permitted by law, Argus expressly disclaims any and all liability for any direct, indirect or consequential loss or damage, claims, costs and expenses, whether arising in negligence or otherwise, in connection with access to, use or application of these materials or suffered by any person as a result of relying on any information included in, or omission from, this presentation and related materials or otherwise in connection therewith.
- The information contained in this presentation and related materials is provided for general information purposes only and should not be construed as legal, tax, accounting or investment advice or the rendering of legal, consulting, or other professional services of any kind. Users of these materials should not in any manner rely upon or construe the information or resource materials in these materials as legal, or other professional advice and should not act or fail to act based upon the information in these materials.
- Copyright notice: Copyright © 2024 Argus Media group. All rights reserved. All intellectual property rights in this presentation and the information herein are the exclusive property of Argus and and/or its licensors and may only be used under licence from Argus. Without limiting the foregoing, you will not copy or reproduce any part of its contents (including, but not limited to, single prices or any other individual items of data) in any form or for any purpose whatsoever without the prior written consent of Argus.
- Trademark notice: ARGUS, the ARGUS logo, Argus publication titles, the tagline “illuminating the markets®”, and Argus index names are trademarks of Argus Media Limited. For additional information, including details of our other trademarks, visit [argusmedia.com/trademarks](https://argusmedia.com/trademarks).

# Contents

- 1. Historical and forecasted role of petrochemicals for LPG demand**
- 2. Current state and prospects of LPG for petrochemicals in Asia Pacific**
- 3. Consumption of LPG for petrochemicals in Europe, growing markets**

# By the end of 2020s, petrochemical industry will become the largest consumer of LPG

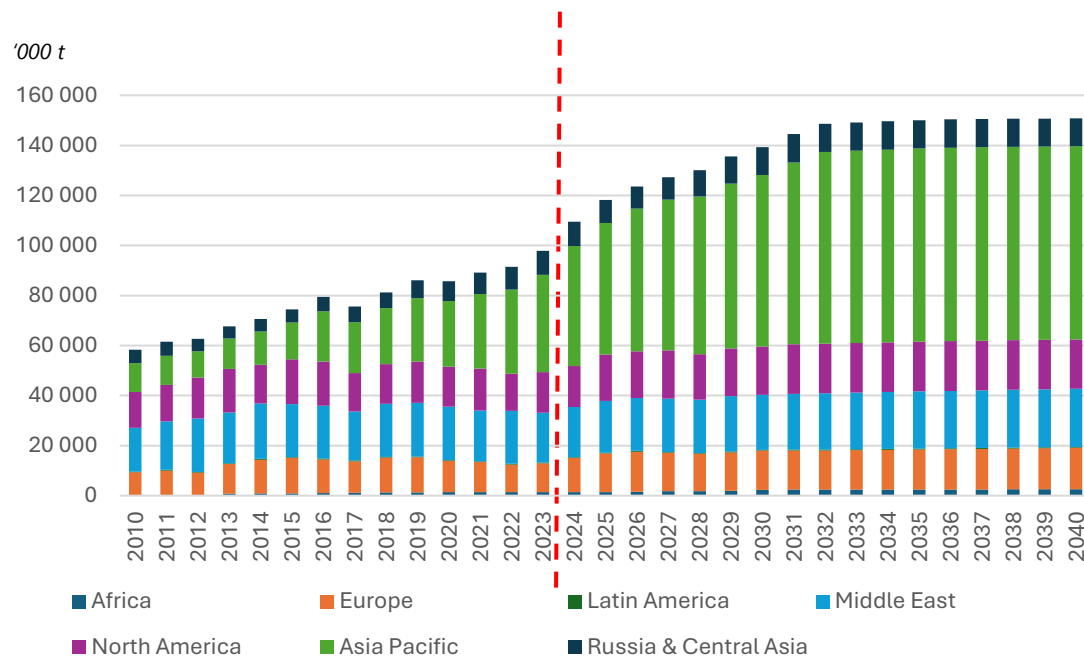
Global LPG consumption by application



- Since 2010, LPG consumption for petrochemicals has been demonstrating steady growth of over 4pc per year.
- This growth is facilitated by the following key factors:
  - Demand growth for petrochemical products, stimulating the development of the petrochemical industry,
  - Availability of LPG, easier transportation and shipping compared to ethane,
  - Better yields of target products (ethylene, propylene) at steam cracking compared to heavy feedstock (naphtha and gas oil), development of on-purpose processes (propane dehydrogenation).
- It is expected that LPG consumption for petrochemicals will continue to grow until 2040 and by the end of the forecast period it will be the only growing segment of LPG consumption.

# Asia Pacific is the largest region of LPG consumption for petrochemicals, and it will dominate in the future

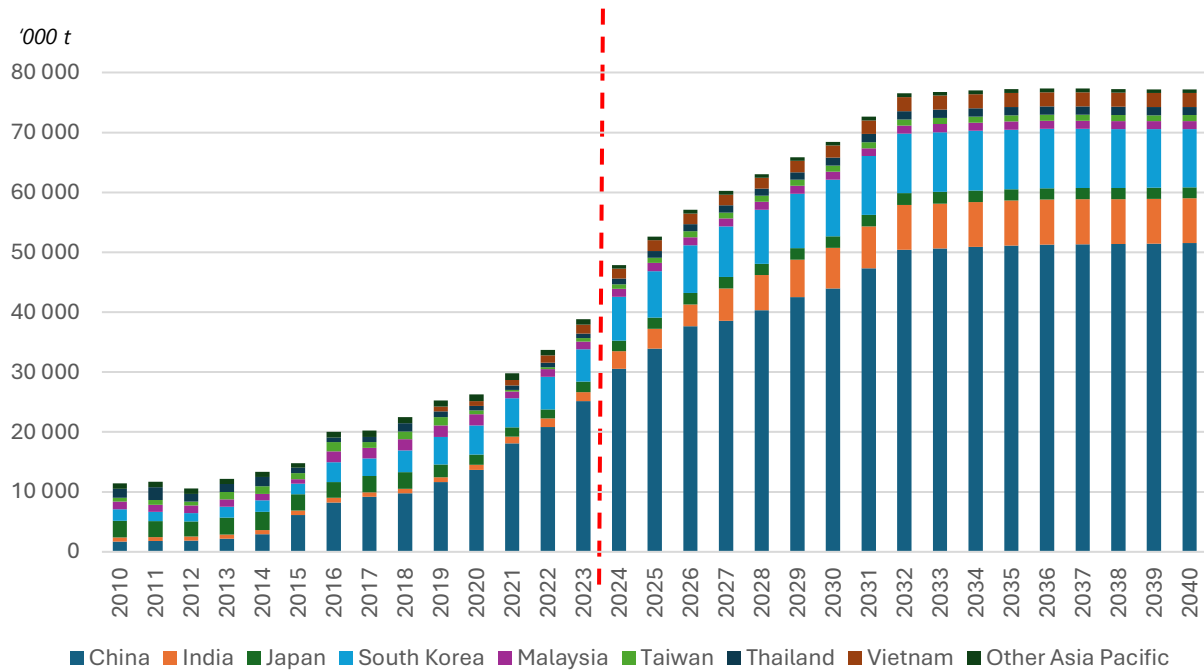
Global LPG consumption for petrochemicals by region



- The main growth in LPG consumption for petrochemicals was seen in Asia Pacific - in 2023, consumption in the region amounted to about 39mn tons compared to 11mn tons in 2010.
- It is expected that the growth in demand for LPG for petrochemicals in the region will continue at a rate of more than 4pc per year, reaching more than 77mn t/yr by the end of the forecast period.
- In other regions, LPG consumption for petrochemicals is also expected to grow, but at a significantly slower rate, on average by less than 2pc per year.
- As a result, by the end of the forecast period, Asia Pacific will increase its share in LPG consumption for petrochemicals from 40pc now to more than 50pc.

# Since 2010, China's LPG consumption for petrochemicals increased by over 20pc per year

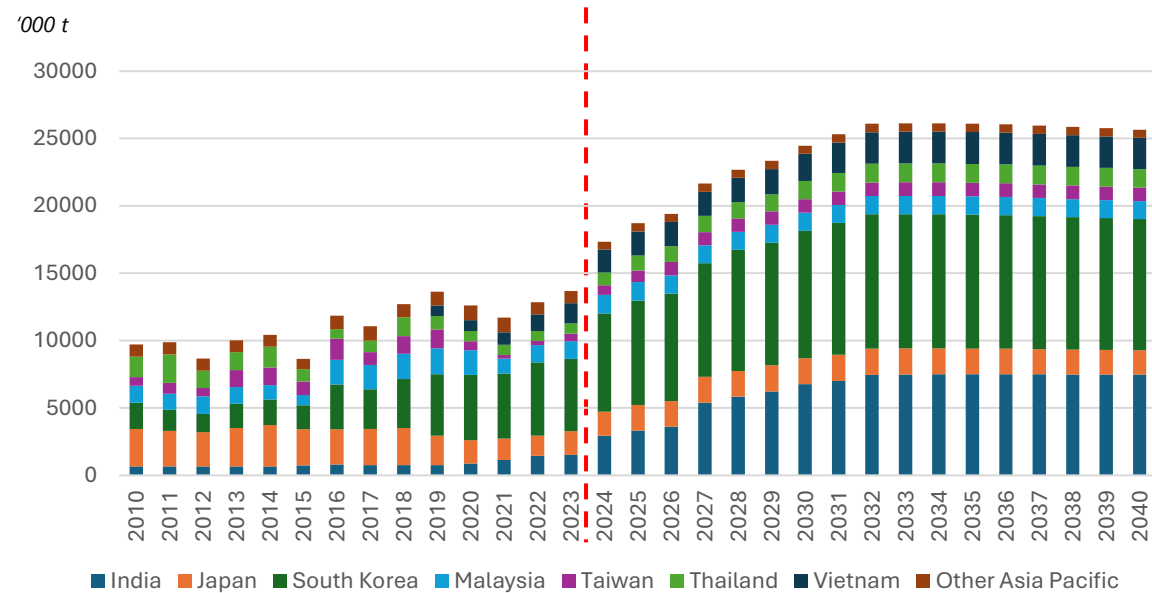
Asia Pacific - LPG consumption for petrochemicals by country



- China is the dominant consumer of LPG for petrochemicals in Asia Pacific with a share of about 65%.
- Since 2010, the country has demonstrated phenomenal growth in demand for LPG for petrochemicals, averaging more than 20pc per year.
- This growth is expected to continue, but at a much more modest rate of about 4pc per year.
- But even despite the slowdown in growth rates, China will strengthen its leadership in the region - by 2040, LPG consumption for petrochemicals in China is expected to reach 52mn t/yr, which will account for more than 2/3 of the regional demand for LPG for petrochemicals in the region.

# India, South Korea, and Vietnam are the most prospective LPG consumers in Asia Pacific aside of China

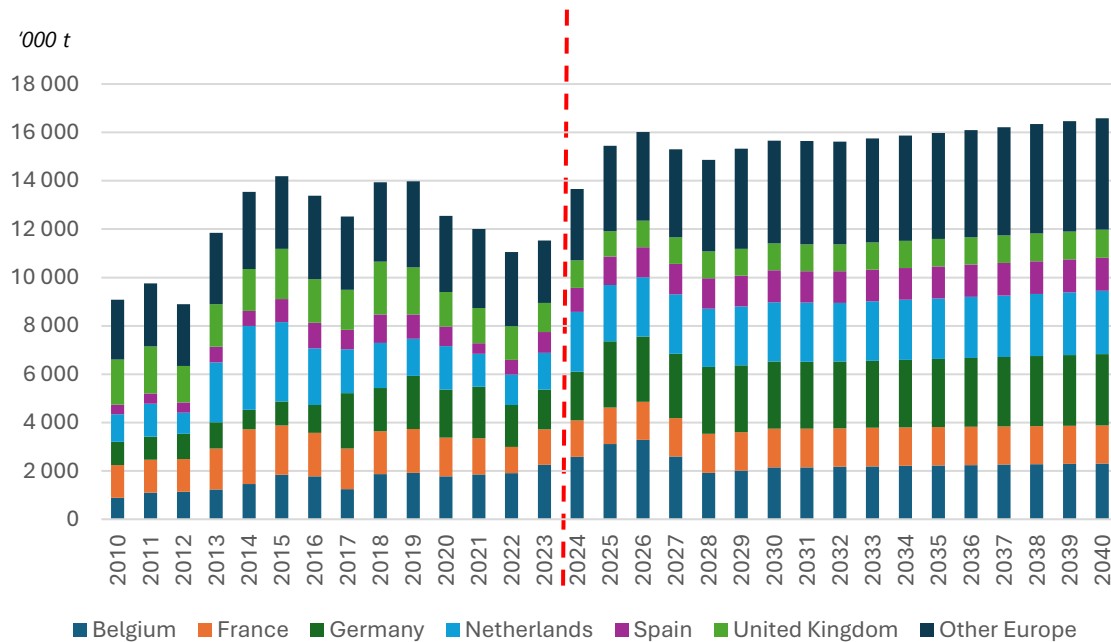
Asia Pacific excl. China - LPG consumption for petrochemicals by country



- India:
  - Increasing population and growing demand for petrochemicals will stimulate the development of Indian petrochemical industry. As result, LPG consumption for petrochemicals is expected to grow from 1.5mn t in 2023 to 7.5mn t in 2040.
- South Korea:
  - Having the highly-competitive petrochemical industry, the country will continue to increase LPG consumption for petrochemicals from 5.4mn t in 2023 to about 10mn t in 2040.
- Vietnam:
  - Before 2019, the country did not have petrochemical industry, but currently it consumes about 1.5mn t/yr of LPG for petrochemicals and, as expected, will increase its consumption up to 2.4mn t/yr by 2040.

# After hitting the bottom in 2022, Europe is expected to increase LPG consumption for petrochemicals: up to 16mn t/yr by 2040

Europe - LPG consumption for petrochemicals by country

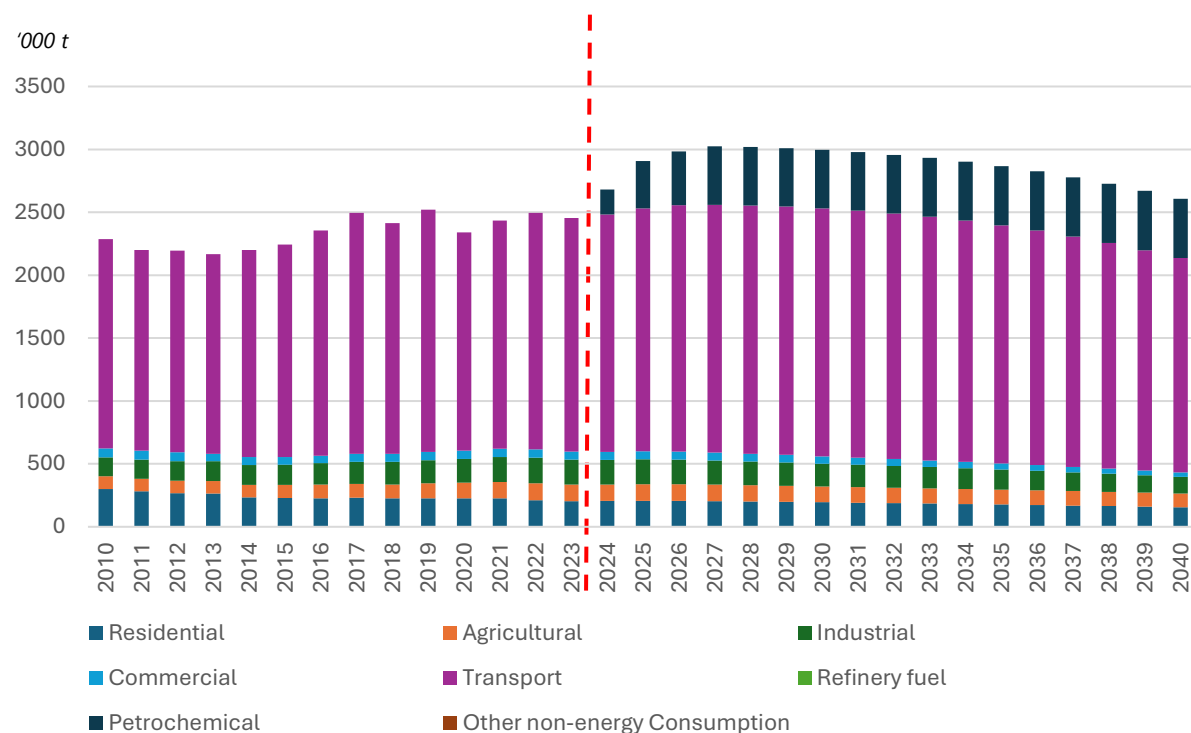


- While historically, the European petrochemical industry has been more focused on processing naphtha than LPG, till 2019 the region has been seeing a fairly stable trend towards increasing LPG consumption for petrochemicals. This allowed Europe to reach a consumption of about 14mn t/yr.
- However, in the following years, LPG consumption for petrochemicals has been declining steadily, reaching a minimum of 11mn t in 2022.
- In 2023, consumption bounced back, and growth is expected to continue, which will allow LPG consumption for petrochemicals in the region to exceed 16mn t/yr by 2040.
- Western Europe will still be the center of demand, yet points of growth are going to be elsewhere.



# Operations of Grupa Azoty's petrochemical complex will add over 460 kt/yr of propane to Poland's LPG consumption

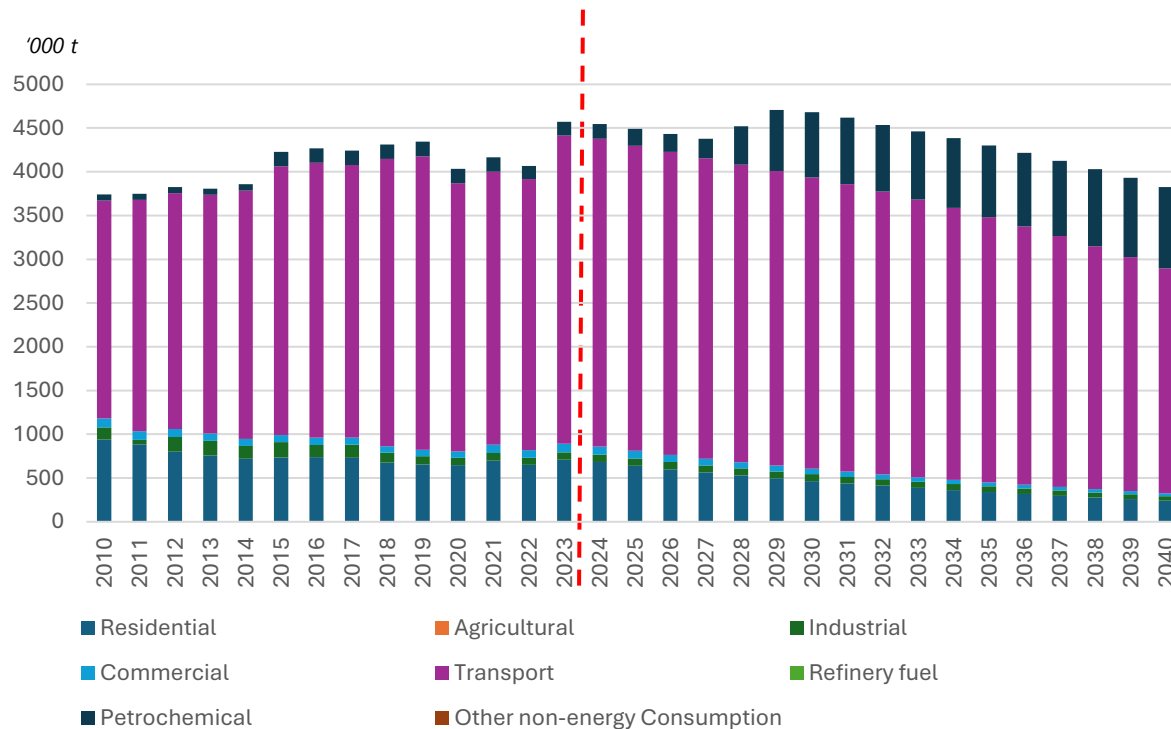
Poland - LPG consumption by application



- Poland has never used LPG in the petrochemical industry until 2024, when Grupa Azoty launched its petrochemical complex in Police.
- The complex uses propane dehydrogenation technology to convert propane to propylene and then produces polypropylene as end product.
- The complex capacity is 430 kt/yr of propylene and 440 kt/yr of polypropylene.
- As expected, the complex will reach its maximum throughput by 2027, consuming over 460 kt/yr of propane.
- When operated at full capacity, Grupa Azoty's petrochemical complex will allow Poland to reach over 3mn t of total LPG consumption by the end of 2020s.

# Several PDH projects are being considered; their development may result in 0.9mn t/yr consumption of LPG for petrochemicals

Türkiye - LPG consumption by application



- The only consumer of LPG for petrochemicals in Turkey is Petkim, a petrochemical complex located in Aliaga, Izmir. However, the dominant feedstock for the complex is naphtha, and LPG consumption has historically not exceeded 165 kt/yr.
- Turkey is a large and rapidly growing market for petrochemical products. Currently, the market is experiencing a huge deficit of products, and it is an incentive for the construction of new petrochemical plants.
- In recent years, several world-scale projects have been announced (SASA Polyester Sanayi A.Ş., Sonatrach/Ronesans Holding) based on propane processing technology.
- In our forecast, we assume the launch of the announced projects will happen by the end of 2020s, which will contribute to the growth of LPG consumption for petrochemicals in the country to over 900 kt/yr by 2040.

# Conclusions

- Petrochemicals is an intensively growing segment of LPG consumption in the long-term; by the end of 2020s, petrochemical industry will become the largest LPG consumer.
- Asia Pacific is the key growing demand center, and China is the dominant market; however, besides China, such countries as India, South Korea and Vietnam can be considered as prospective consumers.
- After hitting the bottom in 2022, European consumption of LPG for petrochemicals is recovering. Notably, this recovery will be mainly related to new projects in Central and Eastern Europe, and Türkiye.

# Thank you for your attention!

**Valentin Kotlomin**  
**Consulting Manager – Petrochemicals – Middle East, Central Asia**  
**and Asia Pacific**

[valentin.kotlomin@argusmedia.com](mailto:valentin.kotlomin@argusmedia.com)

+971 54 52 84 351

Dubai, UAE