

February 21, 2023











ADI Forum
OIL & GAS • ENERGY • CHEMICALS
February 22, 2023





ADI Analytics is a consulting and advisory firm specializing in oil & gas, energy, power, chemicals, and industrials.

Founded in 2009, ADI has completed over 600 projects for more than 300 clients including ExxonMobil, Shell, Chevron, ConocoPhillips, Aramco, SLB, Phillips 66, Reliance, BASF, Dow, GE, Honeywell, Siemens, KKR, Carlyle, Temasek, Microsoft, and U.S. Department of Energy.

In late 2017, ADI acquired the assets of Chemical Market Resources expanding its consulting, research, and advisory coverage to chemicals, petrochemicals, polymers, and plastics.

We help clients with market research, strategic planning, competitive benchmarking, and technology assessments along with many other consulting services. In addition, ADI offers several subscription-based research, intelligence, data, and analytics products, and hosts two conferences each year.

Our growing team includes chemical and petroleum engineers, economists, MBAs, and PhDs with extensive domain expertise in oil and gas, energy, power, and chemicals. We differentiate ourselves through deep, field-based industry expertise; proprietary analytics; and client-centric, flexible delivery models.

www.adi-analytics.com

www.adi-cmr.com



The past year has clarified the value proposition of natural gas, and, by extension, fossil fuels as Europe scrambled to secure energy supplies following the outbreak of the Russia-Ukraine conflict. The challenge of replacing the hydrocarbon economy built over more than 150 years also came into sharp relief last year when oil demand grew at a robust pace, and commodity prices touched heights unseen in recent years. Even so, energy transition found new impetus led primarily by policy and regulatory support such as the Inflation Reduction Act and RePowerEU. Investments in energy transition technologies, innovation, and capital projects also picked up pace even if skeptical voices grew louder.

Will oil demand growth persist or slow down as gas did suddenly in the past few weeks? How will commodity prices evolve and will it support new capital investment? What happens to LNG now? Where are the best applications for carbon capture and storage (CCS) and hydrogen? Which other energy transition technologies will find widespread adoption?

Facilitating a comprehensive, strategic understanding of these themes that permeate the energy dialogue today is why we host the ADI Forum. Two keynotes, five panel sessions, and ADI's Energy Outlook, featuring ~20 speakers will help you get current on oil and upstream, midstream and NGLs, natural gas and LNG, and Energy Transition with emphasis on CCS and hydrogen. More importantly, you will connect the dots across these segments for a strategic view of the oil and gas and Energy Transition value chains and how it impacts your business.

Each panel session will begin with context using insights from ADI's research and consulting work followed by an insightful dialogue with industry leaders. We welcome your active participation with questions and comments today.

Thank you for joining us!



Uday Turaga Forum Chair



**Faiza Tanvir** Forum Producer



Global chemical and petrochemical markets had a mixed year in 2022 led by surging and volatile energy and feedstock prices. Rising interest rates, inflation, supply chain woes, and the prospects of a slowing economy impacted several end-use markets, while others such as automotive faced their own disruptions. Regulatory pressures intensified with single-use plastic bans being the most prominent although capital investments grew in recycling and sustainability for a circular economy. Even so, the chemical and petrochemical landscape is rife with opportunities, innovation, and growth even if pursuing them is getting harder.

How will global economies and macrotrends evolve in 2023 and beyond, and what impact will they have on chemicals and petrochemicals? Where are energy and feedstock prices headed? Will the U.S. see a new wave of investments in ethylene crackers and plastics production? What opportunities will energy transition offer chemical companies? How will chemical and petrochemical companies source and scale new technologies and innovation?

These and other strategic themes will permeate the dialogue at FlexPO+. A keynote presentation followed by seven panel sessions featuring ~20 speakers will help you get current on chemical feedstocks, polyolefin and specialty polymers, sustainability and recycling, decarbonization, innovation, and investor perspectives. Our goal is to build a strategic, value chain-wide view of chemicals, petrochemicals, polymers, and plastics value chains and how it impacts your business.

Each panel will begin with context using insights from ADI Chemical Market Resources followed by a discussion. We welcome your active participation with questions and comments today.

Thank you for joining us!



Uday Turaga FlexPO+ Chair



Faiza Tanvir FlexPO+ Producer

### **ADI Forum Agenda**

07:30 am **Registration and Breakfast** 

Morning Keynote: LNG

08:15 am

Welcome

08:30 am

09:15 am

**Energy Outlook in 2023** 



Jeff Hammad Golden Pass LNG, CCO



Uday Turaga ADI Analytics, CEO

10:00 am Panel 1: LNG & Natural Gas



Dan McGinnis Commonwealth LNG CCO



Amy C. Davis Energy Transfer, VP, Lake Charles LNG



Blake Littauer Puget LNG, President

10:50 am **Break and Networking** 

11:10 am Panel 2: Upstream Oil & Gas



Maryam Schellstede University Lands, SVP, Planning & Development



Allie Thurmond Equinor, Asset Manager, US GoM, Exploration



Pramod Jain Computer Modeling Group, **CEO** 

12:20 pm Lunch

01:20 pm Panel 3: Midstream & Natural Gas Liquids



Diaco Aviki, Crestwood Midstream Partners EVP & COO



Joseph Gentry GTC Vorro VP, Licensing

02:10 pm Afternoon Keynote: Renewable Fuels



Heath DePriest Phillips 66, VP, Renewable Fuels

03:00 pm **Break** 

Panel 4: Decarbonizing Oil & Gas / CCUS 03:20 pm



**Brandon Schwertner** Priority Power Management CEO



Chris Fraughton MAN ES, Director, CCS & Heat Pumps - Americas



KC Littlefield Chevron New **Energies** GM, Tech. Commercialization **CCUS** 

04:10 pm Panel 5: Energy Transition / Hydrogen



Markus Digruber Hoerbiger, EVP, Head of Innovation & Business Dev.



Anthony Borski Nel Hydrogen Director Program Mgmt. Office

05:00 pm **Adjourn** 

### FlexPO+ Agenda

7:30 am Registration and Breakfast 8:00 am Welcome
8:15 am Keynote 9:00 am Chemicals Outlook in 2023



**Bob Maughon** SABIC, EVP, CTO, and CSO



**Uday Turaga** ADI Chemical Market Resources, CEO

09:45 am Break and Networking
10:05 am Panel 1: Feedstocks Review



Joseph Gentry GTC Vorro VP, Licensing



Panuswee Dwivedi ADI Chemical Market Resources, Project Manager

10:45 am Panel 2: Polyolefins Markets



**Thomas Marthinsen** Borealis, Head of North America Alliance Office



Nathan Wiker
Nexeo Plastics, GM & VP,
Commodities and Packaging

11:30 am Lunch
12:30 pm Panel 3: Specialty Polymers



**Srini Godavarthy**PTT GC, VP, Strategic Planning,
Portfolio Mgmt & Finance



Jose M. S. Sanchez Mathiesen USA, Business Director, Plastics & Polymers

1:15 pm Panel 4: Sustainability and Recycling



**Richard Shaw** Americas Styrenics, Director, Circular Economy & Sust.



**Carlo Badiola** Encina, SVP, Engineering & Technology

2:00 pm Break and Networking
2:20 pm Panel 5: Decarbonizing Chemicals



Carlos Villa Dow Chemical R&D Fellow



Matthew Seabaugh Nexceris LLC VP, Product Launch

3:05 pm Panel 6: Investors



Katy Boettcher Ara Partners, Principal



John Griffin The Sterling Group, Director

3:50 pm Break and Networking 4:10 pm Panel 7: Innovation



Jason Gislason Chevron Phillips Chemical Company Chief Digital Officer



Vikram Gopal Ascend Performance Materials, SVP, CTO



Steve Brown Chemstations, Inc, CEO & COO

5:00 pm Adjourn

### **Speakers**



**Diaco Aviki** is the EVP and COO at Crestwood Midstream Partners. Prior to this role, he was the SVP, Business Development and Commercial Operations for the Gathering and Processing Division. Aviki began his career with Exxon in 1995, where he held various positions in their downstream, chemicals, and gas marketing business units. Aviki lead the gas marketing team involved with the commissioning of the ExxonMobil Golden Pass LNG Terminal where it set a global record for re-gassified LNG send-out prior to joining BHP Billiton. At BHP Billiton, Aviki initially served as the Atlantic Basin Marketing Manager. Prior to joining Crestwood, Aviki served as the President of various midstream assets at BHP and led their commercial efforts. Aviki has a B.S. in Chemical Engineering from Auburn University and has an MBA in Finance from the University of Texas.



Carlo Badiola is the SVP of Technology and Engineering for Encina Development Group. He previously served as a technical expert for the ExxonMobil Corporation with a focus on pyrolysis steam cracking, field operations, and product optimization. His experience includes detailed reactor design, operations and maintenance, technology implementation, and continuous asset value improvement. Badiola achievements include successful design of a commissioned pyrolysis asset, economic improvements in asset optimization, yields, safety, and reliability in various United States and Singapore facilities. He provided leadership to commercialize novel technology concepts into ExxonMobil's pyrolysis steam cracking fleet.



**Katy Boettcher** is a Principal at Ara Partners and is involved with all aspects of the firm's investment process. Prior to joining Ara, Boettcher served as a VP at White Deer, a private equity firm focused on industrials and infrastructure, where she was responsible for origination, structuring, due diligence, execution and monitoring of investments. Prior to White Deer, she was an Associate in Evercore's investment banking group. Boettcher holds a Bachelor of Arts from Princeton University, where she graduated magna cum laude. She received an MBA from the Wharton School of the University of Pennsylvania.



Anthony Borski is the Director of the Project Management Office at the Nel Hydrogen PEM division. His current role oversees the tendering, purchasing, manufacturing, delivery, and installation of the Megawatt projects. Before joining Nel, Borski spent 14 years in oil and gas. Beginning in 2008, Borski worked in Project Management roles at Cameron Subsea in Leeds, England, and Houston; then moving to a Project Engineering role in Newcastle, England and La Rochelle, France. Finally, Borski moved to management and commercial roles for Schlumberger Deepwater Drilling (post Cameron acquisition). Borski studied Technology Development at Texas A&M University and holds an MS in Finance from the University of Houston.



**Steve Brown** is currently President of Chemstations, Inc, a Datacor company, a worldwide leader in process simulation software. Chemstations offers CHEMCAD, an integrated suite of intuitive chemical process engineering software. He helped define and grow the business as a privately held entity and continues to lead the division after the 2021 acquisition by Datacor where he has had roles in technical support, sales, marketing, and management. For 29 years, he has devoted his career to chemical process simulation software and promoting the impact of chemical engineers and chemical engineering on a variety of humanity's

challenges. Steve received a BS in Chemical Engineering from the University of Houston and an MBA from the University of Texas at Austin.



Amy Chen Davis is VP of LNG in Energy Transfer. Davis leads the marketing effort for Lake Charles LNG. Prior to joining Energy Transfer, she spent seven years marketing Mozambique LNG, the biggest project finance project in Africa. Davis started her LNG career working for RasGas (now part of Qatargas) in Doha, Qatar. Prior to LNG, she worked in US gas trading and structuring for a number of years. Davis has an MBA degree from University of Texas Mccombs School of Business and a finance undergraduate degree from University of Houston.



Heath DePriest is the VP, Emerging Energy for Phillips 66. He has nearly 30 years of experience in the oil and gas industry. Prior roles include GM, Corporate Strategy, Managing Director, Terminals Business Development, and Manager of the Midstream Growth Program. DePriest started his career with Koch Industries at the Pine Bend Refinery in Minnesota before joining Conoco in 1997 as a refinery engineer at the Lake Charles Refinery. He served in various roles in Refining. He worked on the strategic integration team during the formation of ConocoPhillips in 2002 and then later in 2012 was on the corporate strategy team responsible for leading the spin-off of Phillips 66 from ConocoPhillips. DePriest holds a BS in chemical engineering from Oklahoma State University.



Markus Digruber holds a Master's degree and PhD in mechanical engineering from Vienna University of Technology. For 25 years, Digruber has been with the HOERBIGER group, holding various vice president positions in regional operations and both regional and global service management for our Compression Division. Digruber was recently EVP of the OEM Division, and since 2001 is leading the Innovation and Business Development team of HOERBIGER Compression. In this capacity, HOERBIRGER is focusing on technologies for Hydrogen Compression, Digital Service offerings, and technology to reduce greenhouse gas emissions from oil & gas equipment.



Chris Fraughton is the Director of Carbon Capture and Heat Pumps across the Americas for MAN Energy Solutions. He has been instrumental in the strategy and rollout of MAN ES solutions to help customers decarbonize their operations in the region. Chris uses more than ten years of diverse industrial experience to move impactful decarbonization projects to the finish line. He has previously worked in site construction management, engineering, and sales. He has a Bachelor of Science in Mechanical Engineering from Texas A&M University—Corpus Christi.



Joseph Gentry is currently Vice President of the Technology Division of GTC Vorro Technology LLC. Gentry was one of the original founders of GTC Technology, which was the first global process licensing firm to be established in many years. He has 40 years of experience in the industry as a specialist in aromatics processing, advanced distillation, clean fuels, and sulfur removal from natural gas streams. He is a registered professional engineer in the state of Texas, USA. Gentry earned a BS Chemical Engineering from Auburn University and MBA from University of Houston.



Jason Gislason is Chief Digital Officer at Chevron Phillips Chemical Company. He has over three decades of experience spanning the Energy, Chemicals, Technology, and Aviation industries in both Fortune 50 companies and start-ups. He applies innovation to expand opportunities for large manufacturing companies and harnesses new technologies to meet industrial needs leading to hundreds of millions of dollars in margin, annually. Gislason holds a BS in Aerospace Engineering from Auburn University, an MBA from Oklahoma State University, a MS in Strategic Intelligence from the American Military University, and a PhD in Computational Physical Chemistry from South Dakota State University.



**Srini Godavarthy** is the Vice President of Strategic Planning, Portfolio Management & Finance at PTT GC. Prior to joining PTT GC, Srini was the Global Business Director at W.R. Grace. He was also the Global Business Director at Albemarle Chemicals where he led their Lithium Specialties and Downstream Chemicals. Srini started his career at Huntsman International as an Engineer and over the course of 10 years moved from an individual contributor to business leadership in Operations, Asset Management, Sales & Marketing. Srini serves as a board observer on several portfolio companies held by PTT GC including allnex and Vencorex which are part of GC's coatings resin platform, as well as Emery Oleochemicals and Nature Works which are part of GC's Green/ Bio-degradable chemicals platform. He holds an MBA in Finance and Business Strategy from Colorado State University, a Ph.D. in Chemical Engineering from Oklahoma State University, and a B.E. in Chemical Engineering from Anna University, India.



**Vikram Gopal** has broad experience in the advanced materials industry with expertise in research and development, product development, process engineering, and applications development. Before joining Ascend in May 2015, he was Vice President of Technology at Invista Engineering Polymer Solutions. He is credentialed as a Six Sigma black belt.



**John Griffin** joined Sterling in 2018 from McKinsey & Company's Houston office where he was an Engagement Manager focused on strategy and operational initiatives for industrial and energy businesses. Previously, Griffin worked at Madison Dearborn Partners on investments in the Industrials, Business Services, and Financial Services sectors. Griffin received a B.S. in Systems Engineering and Mathematics from the University of Virginia, and an M.B.A. from the Kellogg School of Management and M.S. from the McCormick School of Engineering at Northwestern University.



Jeff Hammad is the Chief Commercial Officer for Golden Pass LNG. Hammad has broad responsibilities for managing the commercial group at Golden Pass. Prior to this role, Hammad joined Qatar Petroleum in Doha as Qatar was emerging into a global LNG powerhouse and managed the commercial development of a portfolio of international LNG receiving terminals. Hammad began his career in the energy industry with Enron as Financial Analyst. Asset development remained his primary focus for the next 20 years, where he held commercial managerial roles. Hammad received his Bachelor of Business Administration from the University of Houston following his enlistment in the United States Marine Corps.



**Pramod Jain** is a software executive and professional engineer with over 15 years of international leadership experience focused on corporate growth and innovation. Joining Computer Modeling Group Ltd. as CEO in 2022, he brings a strategic mind and proven track record of successfully building strong, customerfocused global B2B product organizations. Jain has a unique ability to calibrate technology corporations for growth through effective leadership, innovation, and communications. Jain holds a Master of Science Degree in Industrial Engineering from Mississippi State University, a Bachelor of Technology, Electrical and Electronics Engineering Degree from Kurukshetra University, in India and a diploma in Corporate Finance from INSEAD in France.



**Blake Littauer** is President of Puget LNG and is responsible for all business development activities for the company. Located in the Port of Tacoma, WA, Puget LNG is the first LNG bunkering terminal on the west coast of North America. Prior to Puget LNG, Littauer was the Director of Sales and Marketing for Clean Energy and was responsible for developing natural gas fueling partnerships with over the road transportation fleets as well as policy development and government relations to promote natural gas as a transportation fuel in the United States.



KC Littlefield is the GM of Technology Commercialization in Carbon Capture, Utilization, and Storage within the Chevron New Energies organization. Littlefield joined Chevron in 2008 and held various roles in Supply Chain across Environmental Management, Upstream, and Wells organizations. Littlefield has also held positions in Operations and Business Performance, and most recently was responsible for the Enterprise deployment of Chevron's Competitive Performance framework. Prior to joining Chevron, Littlefield was at Waste Management (WM) and had multiple roles of increasing responsibility in Operations and Supply Chain in including the management of fleet fueling and alternative fuels (CNG, biodiesel), and collaboration with the California Air Resource Board to reduce vehicle emissions through various fleet retrofit and replacement campaigns.



Thomas Marthinsen began his career at Borealis in 2003 as part of the shared services finance team in Belgium. Over his 18 year career with Borealis, he has held progressively more senior roles with the company, including Controller at Borealis' compounding plant in New Jersey, USA Manager in the Financial Planning and Analysis (FP&A) department in Vienna, Austria and Regional Controller for Asia North at Borouge, Borealis' joint venture with the Abu Dhabi National Oil Company, in Shanghai, China. Marthinsen currently serves as the Head of Borealis' Office in Houston, TX, and is a management team member of the Joint Venture and Growth Projects business group and a board member in the Baystar Joint Venture. Marthinsen has a degree in Economics from the University of Toronto, Canada and completed his MBA from Columbia University in New York.



**Bob Maughon** is the EVP, Sustainability, Technology & Innovation and Chief Technology and Sustainability Officer at SABIC. He oversees a global organization with 21 research centers around the world and a talented team focused on driving process, product and application innovation to support SABIC's growth agenda. Additionally, Maughon has responsibility for Corporate Sustainability, Product Stewardship, Technology Licensing and Technology Ventures. Prior to joining SABIC in 2019, Maughon served the R&D vice president for Packaging & Specialty Plastics and Hydrocarbons at Dow. Maughon serves as a board member for the University of Michigan Engineering Leadership Advisory Board. He holds nine U.S. Patents and has numerous publications and presentations at external conferences. Maughon earned his BA degree in

chemistry from Rice University and his PhD in organic chemistry from the California Institute of Technology.



Dan McGinnis is currently Executive Vice President & Chief Commercial Officer for Commonwealth Projects, LLC. Commonwealth is developing an LNG export terminal in Cameron Parish, Louisiana. McGinnis is an industry executive with extensive background in the areas of strategy, business development, marketing & trading, government & regulatory issues and media relations. Before Commonwealth, he was SVP & Global Director for Worley Parsons (now Worley) for Unconventional Oil & Gas. Prior to this, he was an Officer at GDF SUEZ (now Engie), as VP in charge of LNG development in North America and all business development in Mexico. McGinnis also spent 18 years at Atlantic Richfield Company in various leadership roles. McGinnis holds a Bachelor's Degree in Political Science, and an MBA in Finance, both from the University of Northern Colorado.



Jose Manuel Sanchez Mendez is the Business Director of plastics and polymers at Mathiesen USA. His prior role was as Ethylene Acrylic Acid Copolymers and PVDC Global Business Director at SK Global Chemical Americas. Mendez has more than 20 years of experiences working in the Plastic Industry. He had various executive positions at Dow Chemical. After spending 14 years at Dow, in 2017 he successfully sold/divested the business to SK Global Chemicals. In about three years, he has reshaped SKGCA into an important supplier for the whole EAA Copolymers & PVDC market. Mr. Mendez has a degree in Chemical Engineer from Universidad Nacional Autonoma De Mexico. He has also an MBA degree from the University of Pittsburgh.



Maryam Schellstede started her career at ConocoPhillips as an operations and reservoir engineer. She then worked as a team lead responsible for the revitalization of a conventional Permian field. Prior to this role, Schellstede worked in the Unconventional Eagle Ford Reservoir Performance group. At University Lands, Schellstede and her team work closely with other technical, land and operational professionals to ensure the successful development of University Lands' oil, gas, and water resources. Schellstede in an active member of the Society of Petroleum Engineers, and a life member of Texas Exes, and volunteer for the Girl Scouts of America. She earned her Bachelor of Science degree in Petroleum Engineering from the University of Texas at Austin.



**Brandon Schwertner** is the CEO of Priority Power Management. Schwertner was the past co-founder of MP2 Energy, an industry-leading electricity and services platform company, sold to Shell Energy North America in 2017, and former Founder and Managing Partner for Teleios Commodities. He is a serial entrepreneur in the energy industry and has been responsible for the creation of two energy services businesses and two commodity trading hedge funds. Schwertner began his career as the former head of electricity trading at Credit Suisse and Sumitomo.



**Matthew M. Seabaugh** is the Vice President of New Product Launch, and founder of HeatPath Solutions. Seabaugh is responsible for providing new product launch activities, and marketing of Nexceris' HeatPath platform, a catalyst carrier technology demonstrated to enhance fixed bed reactor performance for reforming and synthesis processes. Seabaugh has led Nexceris work on the development of catalyst materials for compact reformers and internal reforming for solid oxide fuel cells for over 20 years. Seabaugh holds a Ph.D. in Materials

Science and Engineering at The Pennsylvania State University, and a B.S. in Ceramic Engineering from the Missouri University of Science and Technology.



**Richard Shaw** is the Director of circular economy & sustainability at Americas Styrenics LLC, he came to the company after wrapping up a 30-year career in the paper and packaging industry where he oversees the sustainability and circular economy targets for AmSty's polystyrene. Prior to joining AmSty, he served in the U.S. Coast Guard for four years, then he earned a bachelor's degree in forest management from Texas A&M and a master's degree in forest economics at the University of Georgia that prepared him for a position at International Paper in Arkansas in 1991 where he spent his early days managing forestland and helping to provide a sustainable supply of wood fiber to the company's manufacturing facilities. He develops and oversees recycling projects, and advocates on behalf of plastic circularity.



Allie Thurmond is the Asset Manager for US GoM Exploration in Equinor – an international energy company headquartered in Norway. During her 17-year career in Equinor, she has held roles such as VP for Exploration in the Gulf of Mexico and Exploration Manager for Mexico as well as numerous leadership roles in Research and Development in both the US and Norway. Prior to joining Equinor, she had a career working as a Senior Supervisory Statistician for the US Department of Commerce. Thurmond has a Ph.D. in Geosciences from the University of Texas at Dallas.



Carlos Villa is R&D Fellow at Dow Chemical. Villa began his Dow career in 2000, supporting the scale up of polymer manufacturing processes through a combination of modeling and experimental work. This work has focused primarily on two technologies: olefin polymerization and alkoxylation. Throughout his Dow career, he has collaborated with researchers at Carnegie Mellon University, Northwestern University, and Georgia Tech. Before joining Dow, Villa spent 12 years at the University of Wisconsin – Madison, first as a graduate student and later as a Research Associate. During this period, he developed his expertise in electrochemical engineering and in polymer reaction engineering, working under the guidance of Professors Thomas Chapman and Harmon Ray, respectively. He is currently exploring the potential use of more sustainable, electrochemical manufacturing technology at Dow.



Nathan Wiker currently serves as the North America General Manager and Vice President for Commodities and Packaging at Nexeo Plastics. In this role, he directs the strategy and manages the profit and loss for polyolefin and related product lines, as well as growing sales into the packaging market. Wiker began his career at Dow Chemical in 2004 in polyethylene research and development and then moved into several business management roles for polyethylene and specialty copolymers in both North America and Europe/Middle East/Africa, before returning to the US for roles in global marketing for health and hygiene, sustainability, and flexible packaging. Wiker returned to sales as a senior sales director at Dow before moving to Nexeo Plastics as Vice President of Sales for North America in 2021. Wiker graduated with a bachelor's degree in Chemical Engineering from Clemson University and an MBA from Northwood University.



**Uday Turaga** is the Founder & CEO of ADI Analytics. He brings 20+ years of industry experience gained at ConocoPhillips, ExxonMobil, Booz & Company, and ADI Analytics. Turaga received a PhD in fuel science from Penn State and an MBA from the University of Texas at Austin. He has published 100+ papers and holds two U.S. patents, and has been recognized by the U.S. National Academy of Engineering, Penn State, Colorado School of Mines, and University of Delhi. Turaga has been quoted in Wall Street Journal, Bloomberg, and NPR.



**Panuswee Dwivedi** is project manager at ADI Analytics and ADI Chemical Market Resources. She brings experience in the oil and gas upstream, midstream, and downstream sectors and in commodity and specialty polymers markets. She is a research professional who has used a mix of primary and secondary research to size segments, understand technology and economics, and assess competitive landscape of companies in the oil and gas, chemicals, and energy industries. She holds M.Sc. in petroleum engineering from University of Houston, and B.Tech. in petroleum engineering from Pandit Deendayal Energy University, India, with internship experience in production engineering from Oil and Natural Gas Corporation, India.



**Dustin Stolz** is a Senior Analyst with ADI Analytics. He holds a master's degree in geology from the University of Kansas and an MBA and bachelor's in geology from the University of Southern Indiana. Stolz brings experience in upstream oil and gas, having worked for independent oil producers in various basins across the US. He has experience evaluating and developing conventional and unconventional resources and is proficient in data analysis and economic evaluations.



**Victor Toffoli** is a Senior Analyst with ADI Analytics. He holds a master's degree in chemical engineering with business management from the University of Manchester. Toffoli brings experience in downstream oil and gas, having worked for a multinational refinery technologies licensor, implementing technologies internationally, both at refineries and offshore. He has a background in data analysis and data management, as well as knowledge of R&D and refinery procedures.



**Manuel Diaz** is a junior analyst who holds a bachelor's degree in chemical engineering from the University of Houston. He brings experience with research on alternative materials for automotive batteries and propulsion systems, while also competing with such systems against national and international universities. He also brings experience in data analysis by converting data into practical insights by predicting and modeling outcomes for greenfield projects.



**Danya Maree** is an Analyst at ADI Analytics. She holds a Master's degree in Chemical Engineering from the University of Pretoria, as well as post-graduate research at the University of Massachusetts Lowell, specializing in renewable fuel technology development. She brings experience in chemicals, oil and gas, offshore and onshore pipeline EPC projects. Her background also includes process and supply chain data modelling, analysis and optimization.

## **PriorityPower**

Priority Power Management, Inc. (PPM) is a leading, full-service energy solutions provider. Founded in 2001, PPM is one of the longest-tenured energy managers in the country. PPM offers a wide range of solutions related to power procurement, electrical transmission, energy infrastructure, and sustainable energy solutions. PPM implements solutions that meet economic and operational flexibility and reliability requirements, while acting as an independent and unbiased energy solutions advocate for its commercial and industrial customers.



MAN Energy Solutions SE, formerly MAN Diesel & Turbo SE, is the world's leading provider of large-bore diesel engines, gas engines and turbomachinery. Its product portfolio includes turbochargers, compressors, propellers, gas and steam turbines, and chemical reactors; and goods including marine propulsion systems, turbomachinery units for oil and gas, and process industries; and power plant solutions. MAN Energy also offers spares, technical expertise or qualified repair assistance; equipment and installation operation and maintenance; and technical services. It manufactures four-stroke engines; and builds two-stroke engines through licensees. The company operates as a subsidiary of MAN SE.



Founded in 1895, Hoerbiger is a Swiss-based international company operating in five divisions: compression technology, transmission technology, hydraulic systems, safety and engines. Its products include valves, cylinder heads, ignition, control and instrument systems, actuators, engine management systems, explosion protection solutions, as well as consulting and engineering and testing services, among others. The group is present in 127 locations in more than 40 countries around the world. The Hoerbiger Foundation is the majority shareholder of the group through Hoerbiger Tectum Holding AG.



GTC VORRO provides a one stop turn-key sour gas H2S removal process. Used for Upstream gas, Midstream gas gathering, Fuel Gas, and Biogas applications, GTC Vorro's SweetTreat<sup>SM</sup> process is environmentally friendly, Safe, Fast and Simple with equipment ready now.



CISTAR is the name of a newly funded National Science Foundation (NSF) Engineering Research Center (ERC). The acronym stands for Center for Innovative and Strategic Transformation of Alkane Resources. The ERC brings together researchers from five premier U.S. research universities and industrial collaborators from more than a dozen companies to focus on developing breakthrough solutions to more effective conversion of America's shale derived light hydrocarbon resources. The center will focus on developing novel modular technologies that more efficiently convert the light hydrocarbons to advanced fuels and petrochemicals. These technologies will provide a bridge to a sustainable future where renewables replace shale resources as the hydrocarbon resources.



Chemstations has served the chemical engineering community for 30 years, delivering adaptive process simulation technology called CHEMCAD. To this day, we remain committed to providing tools that help advance the field through a dynamic and novel approach.



Polymerupdate is the first polymer market intelligence company in the world to develop mobile applications for polymer news feeds, prices and reports with its services extensively available today.

### **ADI Services and Offerings**

ADI helps a wide range of clients in multiple ways led by our consulting services. We also offer subscription research, multi-client reports, proprietary data and analytics, and host two conferences annually. Connect with us at the ADI Forum or by visiting <a href="www.adi-analytics.com">www.adi-analytics.com</a>. You can reach us at info@adi-analytics.com or +1 (281) 506-8234.



### **ADI Consulting Services**

Our clients shape strategy, grow sales, refine costs, drive deals, and build competencies with ADI's broad range of market research and management consulting services.



### **ADI's Recent Consulting Engagements**



### **Upstream oil & gas**

- Artificial lift market assessment for an OFSE player
- Emissions reduction and sustainability strategy for E&P operator
- Offshore oil and wind portfolio strategy for an oil & gas super major



### Midstream & NGLs

- Haynesville gas and infrastructure study for private equity firm
- Methane emissions technology benchmarking for midstream player
- U.S. ethane demand and growth in petrochemicals for E&P major



### **Natural Gas & LNG**

- LNG's role in the energy transition for leading oil & gas major
- Price-demand elasticity of industrial gas demand for trader
- Global LNG market outlook for leading equipment manufacturer



### **Refining & Downstream**

- Refinery co-processing options from renewables for catalyst vendor
- Sustainable aviation fuel outlook for an oil & gas super major
- CAFE standards analysis and outlook for refining independent



### Hydrogen

- Due diligence on hydrogen diaphragm compressors for OEM
- Go-to market strategy for hydrogen start-up in shale plays
- Electrolyzer cost and market outlook for Asian private equity firm



### **Energy Transition**

- Electric vehicles and infrastructure outlook in U.S. for investor
- Carbon capture and monetization market for chemical major
- Global energy transition and digital transformation for tech major

### **ADI's Chemical Market Resources' Recent Consulting Engagements**



### **Chemical Feedstocks**

- Linear alpha olefins market assessment and growth strategy
- Ethane and NGL supply outlook for U.S. chemical major
- Bio-based feedstock assessment for global PLA producer



### **Polymers & Plastics**

- Due diligence for a new polypropylene plant in North America
- Cross-linked polyethylene market and competitive assessment
- Feasibility study for new polyolefin elastomer plant in Asia



### **Specialty Chemicals**

- Ionomers and ethylene copolymers market outlook
- Market and competitive landscape on solution and emulsion SBR
- Hot melt adhesives value chain analysis and entry strategy



### **Chemical Technology**

- Technology due diligence on specialty polyolefin catalyst vendor
- Hydrocarbon resin cost benchmarking for Japanese producer
- New market entry strategy for Japanese EPC in petrochemicals



### **Recycling & Sustainability**

- Global pyrolysis oil pricing intelligence
- Technology assessment for PET recycling plant in North America
- Surveyed European chemical regulations for Japanese major



### **Plastics Processing**

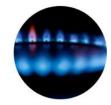
- Sales growth strategy for specialty polymer processor
- Tie-layer resins market and technology assessment
- Sustainability trends analysis for leading plastics company

### **ADI Subscription Research**

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Downstream Market Advisory Monthly intel, oil prices, fuels supply & demand, capex, margins, downstream and refining insights



Gas Monetization Advisory Review of natural gas to power, LNG, fuels (GTL), and chemicals costs, economics, and markets



LNG project benchmarking tool; global and NA small-scale LNG studies; and global LNG database



Energy Transition Advisory Monthly energy transition deep dives, e.g., biofuels, hydrogen, low-carbon, CCS, flaring, biomaterials



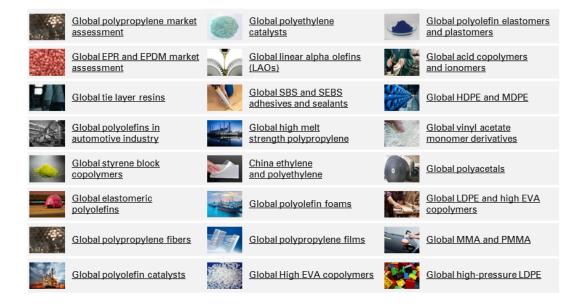
Global CapEx Outlook Quarterly forecast and analysis of global capital spending in E&P, midstream, refining, LNG, petchem



Global OpEx Outlook Quarterly forecast and analysis of operating expenses in upstream, midstream, downstream, and LNG

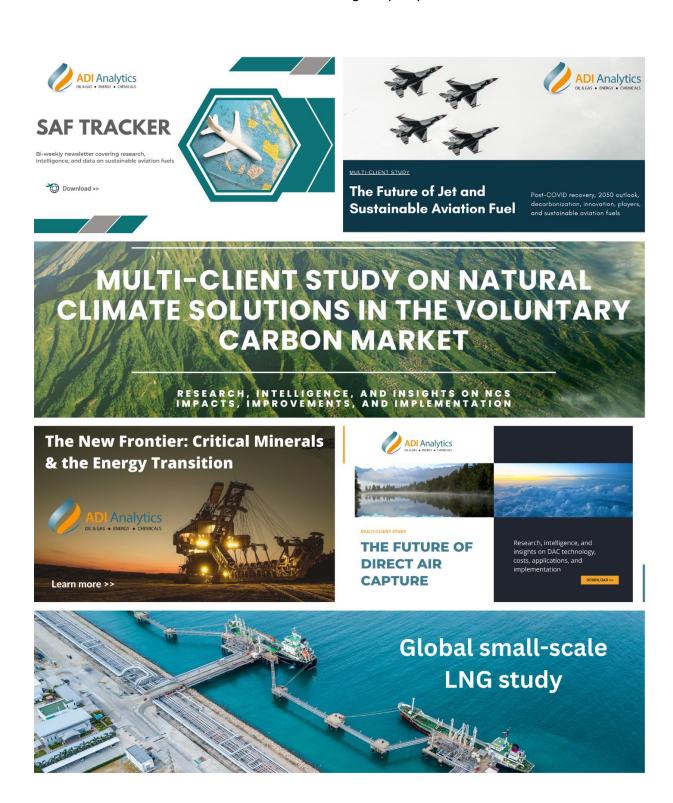
### **ADI Chemical Market Resources' Multi-Client Reports**

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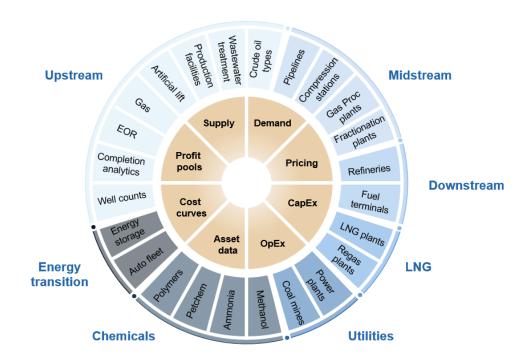
### **ADI Multi-Client Reports and Studies**

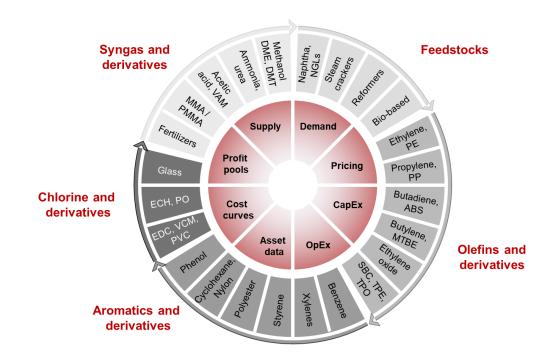
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# **Notes**

# Save the date!



Wednesday, February 7, 2024

# CHEM • PETCHEM • PLASTICS • POLYMERS

Thursday, February 8, 2024

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