

RESUME

AJEY CHANDRA, P.E.



Education: B.S. Chemical Engineering – May 1986; Texas A&M University
M.B.A. Finance – December 1991, University of Houston
Harvard Business School-Executive Education, 2008

Industry Experience:

Muse, Stancil & Co. Position: Managing Director, Houston	2014-Present
NextEra Energy Resources Position: Vice President – Midstream	2012 - 2014
Hess Corporation Positions: Senior Commercial Representative (Houston, Texas) Manager- Operational Excellence (Kuala Lumpur, Malaysia) Manager – Gas Plants (Houston, Texas)	2006 - 2012
Purvin & Gertz, Inc. Position: Senior Principal	1998 - 2006
Amoco Corporation Positions: Deputy Pipeline Operations Manager (Amoco Trinidad) Terminal Manager (Bacton, UK) Business Development Representative (Houston, Texas) Operations Engineer (Brownfield and Houston, Texas)	1986 - 1998

Professional Organizations: Registered Professional Engineer (Texas #75566)
GPA Midstream Association
Chair-Nat. Convention Program Committee (2009)
Program Committee (2000-2016)
Board of Directors (2006-2009)
Chairman-Houston Chapter (2002-3 and 2018-19)
Vice Chair (2001-02;2017-18)
Board of Directors-Houston Chapter (2000-2002; 2016- current)
American Institute of Chemical Engineers
Society of Petroleum Engineers
Texas A&M University- Chemical Eng. Advisory Council
Association of International Petroleum Negotiators
Institute for Energy Law – Advisory Board
Gas to Liquids Technology Forum – Advisory Board
GasPro Americas Conference – Advisory Board

Summary of Experience:

- Consultant with over 30 years' experience in multiple facets of the international energy industry, including: business development; operations; engineering; strategic planning; strategy implementation; mergers and acquisitions; project financing; project development; market analysis; financial analysis; commercial negotiations; and legal issues.
- Demonstrated ability to improve operations of processing facilities, as demonstrated by best-in-class ratings in benchmarking studies in both operations and safety performance.
- Significant experience in teaching technical gas processing skills to engineers and leadership skills to both profit and non-profit organizations.

REPRESENTATIVE MAJOR PROJECT EXPERIENCE:

Commercial Development

1. Commercial analysis of selling LPG in Indonesia for a joint venture consortium planning several new gas processing facilities in the country.
2. Feasibility study for a new LPG import terminal in India.
3. Project feasibility study for a new LPG import terminal in Croatia.
4. Feasibility study for potential propane export facilities in U.S. PADD 1.
5. Technology evaluation of GTL processes and application to gas flaring issues in North America.
6. Market assessment of a new syn-gas technology for use in GTL plant.
7. Commercial feasibility of ethane pipeline in North America.
8. Commercial feasibility of a greenfield gas processing gathering system in North Dakota for a private equity backed Midstream project developer.
9. Development of a commercial proposal for gas and water gathering in the Eagle Ford shale.
10. Feasibility study for a spent catalyst recycling facility.
11. Feasibility study for a GTL project in sub-Saharan Africa.
12. Pre-feasibility study for a spent petroleum catalyst facility in the Middle East.
13. Field Development Plan for the Belud Field (Malaysia).
14. Field Development Plan for Kamelia Field (Malaysia).

15. Primary author of the Lifting and Allocation documents regarding an oil and gas field in Southeast Asia.
16. Development of the gas allocations agreements for a wet gas pipeline in Trinidad, including a quality bank mechanism for the various quality gas streams.
17. Commercial feasibility study for a Renewable Diesel facility in Bakersfield, California.
18. Feasibility study for a renewable diesel facility in Permian Basin.

Due Diligence

1. Due diligence on the acquisition of 19 gas plants from Union Pacific Resources.
2. Due diligence on the acquisition of two gas plants in West Texas.
3. Due diligence for the acquisition of additional interest in Colonial Pipeline.
4. Due diligence for the acquisition of interest in U.S. propane pipelines.
5. Acquisition of two gas plants and gathering system in East Texas for a private equity buyer.
6. Due diligence for buyer of a privatized crude oil pipeline in Slovakia.
7. Valuation assistance for banks in the construction of three new gas plants in Bolivia, including contractual analysis of 20-year supply contracts for the Bolivia to Brazil pipeline.
8. Due diligence for a consortium of banks for the financing of three gas fields in Bolivia.
9. Due diligence associated with a major crude oil pipeline system in the UK sector of the North Sea.
10. Due diligence on water distribution, gas and oil gatherings systems in the Eagleford shale for a private equity investor.
11. Technical due diligence on multiple salt dome storage assets in Michigan, including the development of additional caverns through the washing process.
12. Due diligence associated with private equity purchase of a gas gathering and processing company in the Permian Basin composed of three existing and five planned gas processing plants, compressor stations, and gas gathering assets.
13. Due diligence for the purchaser of upstream properties in East Texas. Muse evaluated the midstream operations of the operator, including all aspects of operations and maintenance to give purchaser comfort in buying into the assets.

14. Due diligence for a potential purchaser of acreage, production, gathering systems, and compression and treating facilities in the Eagleford shale in Texas.
15. Technical due diligence on several facilities and gathering systems in the Texas Panhandle
16. Technical due diligence on multiple helium recovery and nitrogen rejection facilities in the US for a private equity fund to support financing of several acquisitions for an operating company.
17. Technical due diligence of a crude oil gathering system in the Permian Basin for a midstream MLP purchaser.
18. Due diligence associated with post sales investigation of outstanding technical issues. Muse was engaged by the seller after purchaser instigated claims that facilities were not up to standards as shown in transaction documents. Issue involved multiple gas storage facilities along the USGC.

Valuation

1. Valuation of several lines of business for Shell for potential divestiture.
2. Valuation of BP's North American chemical business for divestiture.
3. Valuation of Pogo Producing Company interest in Sea Robin Gas Plant for divestment.
4. Valuation of Roberts Ranch Gas Plant for possible sale.
5. Valuation of several gas plants for acquisition by West Texas Gas.
6. Valuation of LPG storage assets in Michigan for sale.
7. Valuation of North Sea crude oil pipeline system.
8. Business interruption analysis for a gas turbine explosion at a Gulf Coast chemical plants.
9. Valuation of a West Texas gas processing plant for the non-operating owner of the plant. Value was for use in negotiations with operator on the buyout price for the ownership stake.
10. Valuation of terminal and storage assets in the Caribbean as an ongoing business for a stock transaction between shareholders.

Litigation Support/Tax Valuation

1. Litigation assistance for a Cost Overrun Insurance policy associated with two gas plants and fractionators in Louisiana. This included analysis of Bond Guarantees, business interruption claims, and claims associated with bringing in another general contractor

after the bankruptcy of the original GC on the project.

2. Opinions regarding operating practices and worker training for a gas plant operator in support of litigation involving an explosion resulting in two fatalities.
3. Insurance analysis on the replacement cost of multiple gas processing and LNG facilities for a major insurance provider.
4. Business interruption analysis for a gas plant explosion in West Texas.
5. Business interruption analysis and rebuild cost validation for a Lo-Cat Sulfur Unit in East Texas.
6. Litigation support regarding an issue on the accuracy and acceptability of methodology related to measurement of LNG.
7. Litigation support for a take-or-pay contract associated with a Helium removal facility in the Hugoton Basin.
8. Litigation analysis associated with the Enron Corporation bankruptcy. This included the valuation of multiple assets that were sold by the bankruptcy trustee.
9. Litigation analysis regarding a gas processing contract and a dispute between gas producer and processor over the valuation of liquid products.
10. Assisted counsel with the valuation of a patent regarding technology for CO₂ removal from a natural gas stream. Analysis included a market analysis of typical licensing fees charged by patent owners in the hydrocarbon processing industry.
11. Litigation and business interruption claim involving chlor-alkali derivatives plant in Louisiana.
12. Litigation support for an E&P operator regarding valuation of plant products from a gas processing plant in the Marcellus shale play.
13. Litigation support for a group representing land owners with an interest in a gas processing plant. Case involved opinions regarding deductibility of costs that were being charged to plant owners.
14. Support for mediation and arbitration in a case involving gas allocation issues between working interest owners in a unitized field. Case was unusually complex due to multiple plants with different ownerships.

Market Analysis

1. Strategic analysis of the North American NGL business of BP. This included a strategic valuation of existing assets and a competitor analysis of several industry segments (gas processing, treating, gathering, fractionation, and export terminals).

2. Analysis of world LPG supply/demand to support expansion of U.S. Gulf Coast export terminal capacity.
3. Market evaluation of 12 countries in sub-Saharan Africa for the World Bank. The study was intended to help provide guidance for government regulations to increase the usage of LPG to help alleviate de-forestation activity in the region.
4. Pricing and supply/demand analysis for a potential LNG import facility in the Bahamas.
5. Analysis of the valuation of GTL products on the world markets as displacement for existing products.
6. Evaluation of gas processing facilities in Utica/Marcellus to support E&P development options.
7. Evaluation of replacing LPG with DME in East of Suez markets.
8. Commercial valuation of iso-butane and derivative chemical products in Malaysia.
9. Evaluation of U.S. LPG markets for a foreign chemical company interested in building a derivate plant in North America using normal butane as a feedstock. This included potential sites in several different states, along with analysis of desirability of locations (tax issues, workforce availability, ease of transportation into and out of plants, etc.).
10. Evaluation of the US market for gas processing equipment, focused on cryogenic gas plants. The evaluation was for a foreign engineering company interested in entering the US market. Evaluation included the number of plants built in the last five years in North America and criteria that owners used for choosing the equipment provider.

Strategy

1. Strategic plan for the development of the Energy Industry in Kazakhstan. This was done for a large international oil company that was interested in analyzing entry into the country. Analysis included: exploration; E&P; gas processing; refining; and chemical plant opportunities in the country.
2. Strategic plan for the worldwide NGL/LPG business for a major international oil company.
3. Assessment of divestment potential of the North American gas processing division for a major international oil company.
4. Worked for an Asian based chemical company interested in building a grassroots facility in the U.S. Work included site selection assistance, feedstocks contract, land lease agreement and other commercial aspects of new facility.
5. Operational assessment of a gas plant and gathering system in North Dakota. Private equity owner hired Muse to analyze ways to increase EBITDA from operations.

6. Provided independent assessment of new basin entry strategy for a Midstream company looking to expand into the Eagle Ford Shale in Texas.
7. Provided support of contract negotiations for a joint venture company negotiating with PEMEX for the marketing of crude oil from a newly licensed field onshore Mexico.

Independent Engineer

1. Independent engineering assistance to a consortium of banks for the multi-billion-dollar expansion of the Tengiz Chevroil facilities in Kazakhstan.
2. Useful life assessment for two LPG terminals and pipeline in Mexico.
3. Capital and operational cost assessment for a 30-inch gas pipeline to transport gas from the Oklahoma SCOOP/STACK areas to the U.S. Gulf Coast.
4. Technical due diligence of capital and operating costs for a private equity acquisition of several new and planned gas processing facilities in the Permian Basin.
5. Feasibility study for a spent catalyst recycling facility for the recovery of molybdenum, vanadium, cobalt, and nickel.
6. Independent Engineer in a dispute between plant co-owners as to the capacity of the facilities. Work included HYSIS simulation of the facility, developing and executing a plant capacity test, and post-test evaluation of the capacity, including de-bottlenecking and equipment refurbishment plans needed to get to nameplate capacity.

Workshops

1. Multiple workshops and seminars for clients to teach fundamentals of energy supply/demand, pricing, and market strategy.
2. Developed workshop on “Worldwide LPG Fundamentals” that was executed multiple times per year in conjunction with LPG seminars.
3. Have taught multiple classes on Gas Conditioning and Processing.
4. Developed a 5-day workshop for Gas Processors Association based on the Engineering Data Book.

Selected Expert Testimony

1. Private Arbitration: ***Gulf Liquids vs. Winterthur Insurance***. Provided expert witness testimony to arbitration panel as both a fact witness and expert witness regarding several insurance products. Fact witness testimony was based on being Independent Engineer on the project for the insurance providers and expert testimony was in relation to litigation after the claim was filed. (2001 through 2003)

2. Provided expert report and deposition testimony in ***Praxair vs. Enron Bushton Gas Processing***. Case involved contractual dispute between a helium extraction facility and the purchaser of the helium product. Helium purchaser had a long-term supply contract and gas processor shut down their facility. (2005-2006)
3. Provided interrogatories and direct testimony before the ***Federal Energy Regulatory Commission*** regarding the quality of LNG being considered for import into the Cove Point, Maryland, facility and how this would affect the pipeline gas quality specifications. Hearings held in Washington, D.C., in December 2005.
4. Provided expert report and deposition testimony in ***Axiall Corporation vs. Matheson Tri-Gas, Inc.*** (19th Judicial District Court, Parish of East Baton Rouge, Louisiana) in August 2015.
5. Provided expert report and deposition testimony in arbitration: ***Stone Energy Corporation vs. Williams Ohio Valley Midstream, LLC*** in July 2016.
6. Provided expert report and rebuttal report in ***Paula Meadows, et al. v. DCP Midstream, LP.*** District Court, Denver, Colorado. Provided live testimony in jury trial in January/February 2017.
7. Provided expert report, rebuttal report, and live testimony in ***Gas Utilities Docket No. 10555*** before the Railroad Commission of Texas. Provided live testimony in August/September 2017. The Commission's ruling provided a favorable outcome for the client.
8. Provided expert report and deposition in ***Reagan vs. Koch Midstream Services***, et al, (82nd Judicial District, Robertson County, Texas). Issue was settled prior to trial, with a favorable outcome for client.
9. Retained as an expert in a lawsuit brought by a landowner in West Texas against an operating company regarding the use and valuation of produced water used for enhanced oil recovery on the leased property. Issue is currently under litigation.
10. Retained as an expert witness in a lawsuit involving Force Majeure on a crude oil pipeline in California. Litigation set for trial in Harris County (Texas) in October, 2020.
11. Retained as an expert witness in multiple interrelated trials involving unapproved use of corporate funds intended for oil and gas investments, but allegedly used for non-authorized purposes. Expected to go to jury trial in New York State Court in July, 2020.
12. Retained as an expert in an International Arbitration (London Court of Arbitration – UNCITRAL rules) related to the market value of shares in a joint company. Expert report submitted to the Tribunal in September, 2019. Arbitration hearings scheduled for May 2020.
13. Retained as an expert witness in a breach of warranty claim involving CO2 separation equipment sold by a manufacturer to an operating company. This is still in the discovery phase, but is expected to go to a jury trial in 2020.

14. Retained as an expert witness in a lawsuit regarding royalty interest payments and the appropriate deductions of gas gathering and processing charges. Expected to go to jury trial in 2021.

Selected Publications

1. "LPG Supply Growth Outstripping Demand, Infrastructure", **Oil & Gas Journal**, April 6, 2020 (pages 50-55). By Ken Chow, Ajey Chandra and S. Craig Whitley.
2. Contributor to "**Fundamentals of Natural Gas Processing**" Third Edition, by Arthur Kidnay, William Parrish, and Daniel McCartney. Contributions to Chapter 19: Capital Costs of Gas Processing Facilities, based on work done in conjunction with Carter Tannehill.
3. "Export Potential and Challenges for North American LNG from Unconventional Gas", **Gas Processing and LNG**, April, 2019. By Ajey Chandra and Ramin Lakani.
4. "The Midstream Investment Cycle's Effect on Propane Markets", **Oil & Gas Journal**, November 2018. By Ken Chow and Ajey Chandra
5. "Challenges Facing GTL Projects", **Gas Processing Magazine**, August 2018. By Ramin Lakani, Tim Bennett, and Ajey Chandra
6. "Budget Estimate Capital Cost Curves for Gas Conditioning and Processing", April 2018, presented to the GPA Midstream Facility Design and Operations Committee. Co-Author with Carter Tannehill.
7. "Shale Revolution Changes Everything in Northeast" **Butane Propane News**, May 2017, article coverage based on industry presentation.
8. "Market Development is the Key to Success for small-scale LNG", **Gas Processing Magazine**, August 2016. By Ajey Chandra and Simon Bonini.
9. "The Changing Landscape of Gas Infrastructure in the U.S.", **Pipeline and Gas Journal**, May 2016, Volume 243, No. 5. By Ajey Chandra and Simon Bonini.
10. "How Technology is opening up new markets for Shale Gas and GTL" **Gas Processing Magazine**, June 1, 2015.
11. "World LPG Production poised to surge", **Oil and Gas Journal**, June 27, 2005 (pg. 52).
12. "Growth in World's LPG trade threatened by high prices" **Oil and Gas Journal**, June 28, 2004.

Selected Industry Presentations

1. ARGUS Natural Gas Conference, Houston, May 14, 2019.
2. GPA Midstream Conference, Moderator for Executive Forum, April 15, 2019
3. SPE London Conference, October 23, 2018

4. ARGUS Canada LPG Conference, Calgary, May 3, 2018.
5. ARGUS Americas LPG Conference, January 18, 2018.
6. ARGUS North American Natural Gas Conference, May 10, 2017.
7. ARGUS Canada LPG Conference, Calgary, May 3, 2017.
8. GPA Midstream Annual Convention, International Breakfast Speaker, April 10, 2017.
9. Pennwell Pipeline Expo, Tulsa Oklahoma, April 5, 2017.
10. Minnesota Propane Association Annual Convention, Luncheon Keynote Speaker, January 25, 2017.
11. ARGUS Americas LPG Conference, January 18, 2017.
12. ARGUS Americas LPG Conference, February 2016.
13. ARGUS Americas LPG Conference, February 2015.
14. GTL Conference, August 2014.