

Timeline and Important Reports

1984 – **Energy Security Analysis, Inc. (ESAI)** was formed to begin the study of how to use inventories to manage oil crises. ESAI was the first private company to develop a measure of global oil inventories held by both commercial companies and national governments. ESAI has been an advisor to the U.S., Japanese, and Indian governments, and has consulted with and presented before the International Energy Agency on the use of strategic crude oil stocks.

1986 – **Sarah Emerson** joined ESAI when the petroleum consulting practice was launched in 1986. She is currently President of ESAI and Managing Principal of ESAI Energy, LLC, which conducts research and consulting on global petroleum and liquid fuels markets and is the successor to Energy Security Analysis, Inc.

1987 – ESAI published **SPRO-Watch, a Guide to Strategic Stock Drawdowns in the Persian Gulf Crisis of 1987**

1990-1995 – ESAI published a quarterly journal entitled **Petroleum Politics**, which analyzed any kind of political development which affected petroleum

1991 – ESAI published **The Crude Oil Market after the Iraq Crisis**, which provided a detailed analysis of the longer term implications of the Gulf War

1991-1993 – ESAI published a series of foundational reports on the refining industry to kick-off analysis in this area. **The Global Gasoline Market** (1991), **The Global Middle Distillate Market** (1992), and **The Global Residual Fuel Oil Market** (1993) were the first foray into our in-depth studies of global refining margins.

1992 – Our track record of providing insight into the former Soviet states dates back to perestroika and the collapse of the Soviet Union when ESAI was at the center of the effort to understand and project supply and demand in the countries of the former Soviet Union. In 1992, ESAI published **The Refining and Distribution System of the Republics of the Former Soviet Union**, the first time Soviet refining capacity data and demand data were made available outside of the country. This study was accompanied by the first-ever publication of very detailed Soviet-era energy maps.

1993 – Energy Security Analysis launched the **Hedge-Memo**. The idea of integrating physical and paper market analysis was described in detail in the book, **A Year on the (H)Edge: Integrating the Physical and Paper Fundamentals in the Oil Markets**. The successor to the **Hedge Memo**, the **Oil Energy Fundwatch**, was published for more than 10 years

1994 – ESAI published **China's Oil Industry and the Market: Emerging Asia Market Maker?**, envisioning and preceding the watershed event in the global oil markets - China's emergence as a net oil importer in 1995-1996

1995 – ESAI launched **China Watch** (in partnership with *China Statistical Information and Consulting*), a monthly analysis of supply/demand developments as well as detailed analysis of China's political, regulatory and foreign policy decisions rooted in a proprietary flow of data. Though the partnership has faded, the report continues today with analysis that includes petroleum, natural gas and other energy

sources such as coal and renewables and remains the industry standard for timely, thoughtful analysis and insight on the Chinese energy situation.

1995 – **Rebuilding Russia’s Refineries**

1996 – **Uncorking the Bottle: The Present and Future Status of Oil Export Pipelines and Terminals in the FSU**

1999 – ESAI remained engaged in the energy security debate, publishing **Energy Security Revisited: New Approaches for a Global Petroleum Market**

1999 and 2002 – ESAI published **Refining Margins after 2000**, and **Catching the Wave: Understanding the Factors Shaping US Refining Profitability through 2012**. These studies combined crude oil quality, fuel specifications, economic trends, environmental policies and industry deregulation into a coherent view on the future of refining.

2001 – ESAI Energy launched **Latin America Watch** - a monthly report focusing on upcoming changes in the region’s crude and product markets in the near, medium and long term. The report provides data and forecasts on supply, demand and balances in key Latin American countries and analytical insight into how these markets will evolve, and maintains a tight grip on the pulse of change in energy-related political affairs and policies.

2003 – ESAI published **After Saddam: Stability in the Persian Gulf**

2005 – ESAI’s **Russiawatch** and **Caspianwatch** were combined into the new monthly **CIS Watch** report, which continues today

2006 – ESAI President, Sarah Emerson, published **When Should We Use Strategic Stocks?** In the journal, *Energy Policy*

2007 – ESAI published a white paper entitled **Financial Energy Markets and the Bubble in Prices: Does the Increase in Energy Trading by Index and Hedge Funds Affect Energy Prices?**

2009 – **ESAI Energy, LLC** is formed to focus on crude oil and natural gas supply and refined products markets. The work of ESAI Energy builds on the legacy of *Energy Security Analysis, Inc.*

2009 – ESAI Energy completed its hallmark study, **Scatter Shot Reform**, with integrated analysis of new fuel and engine technologies, quantifying their impact on transport fuel demand through 2025

2009 – ESAI Energy published a white paper entitled **Pursuing Global Influence: Oil, Gas and Russia’s New Foreign Policy of Confrontation**, continuing our tradition of analysis and insight into the Russian and Caspian region’s energy industries

2010 – The next iteration in ESAI’s paper market analysis is started that takes into account stock market indicators, but focuses on oil market activity. The **One Week Outlook on Crude Oil Prices** provides a quick outlook that weights technical signals, crude and product fundamentals, and macroeconomic news.

2012 – ESAI Energy published the multi-client study **One-Two Punch: East Coast Spurns Europe, Gulf Coast Targets Latin America**, which focused on changes in U.S. product markets and addressed the expansion of USGC exports to Latin America and the Caribbean

2013 – ESAI's monthly **Latin America Watch** details the expected impacts of Mexico's landmark energy reform six months before its approval by the Mexican Congress.

2013 – The shale gas boom completely changed the outlook for natural gas liquids (NGL) supply in North America. Natural gas supply growth in other parts of the world produced commensurate growth in liquids supply, and the global petrochemical industry drove increasing demand for NGLs as a feedstock. Rising NGL supply and rising petrochemical demand converged and ESAI Energy published **A Perfect Storm: Global Natural Gas Liquids Market Analysis 2013-2023**, which measured the magnitude and geography of the growth of each component of NGL supply and demand.

2014 – ESAI Energy begins publication of the **Global NGL Outlook** to address the needs of this growing market and continue the analysis begun with **A Perfect Storm**

2014 – ESAI Energy published **From Russia without Sulfur: Russian Oil Tax Reform Upends Global Petroleum Product Markets**, a unique refinery-by-refinery analysis of the consequences of Russia's oil tax reform for Russia's refining sector with a forecast of refining investment and closures, throughput, and product supply to 2020

2014 – ESAI Energy published **Tipping the Scale: Latin America Refined Product Markets and their Impact on the Americas, the Atlantic Basin, and East of Suez to 2020**, a multi-client study that presented a detailed outlook on the region's refining investment, its supply and demand of refined products, and how its product deficits and surpluses will impact pricing and trading in the Western Hemisphere and beyond

2015 – ESAI Energy published **Balancing Act: China's Oil Demand and Energy Mix to 2030**, a detailed study and forecast of Chinese oil demand and China's net trade position to 2030 for the following: Gasoline, LPG, Diesel, Jet Fuel/Kerosene, Fuel Oil, Naphtha, Lubricant, Asphalt, Petroleum Coke, Ethanol, Biodiesel and, Coal-to-liquids.

2016 – ESAI Energy published **Naphtha Nexus: The Interaction of Global Gasoline, Naphtha and Petrochemical Markets to 2025**, which tied together gasoline blending, petrochemical demand, refining and splitting investment and global condensate trade flows to provide a holistic understanding of these critical markets. Leveraging several ESAI Energy proprietary databases, the study provides detailed country level data for thirty-two countries and seven regions.

2016 – ESAI Energy posits in this new study, **Face-off: U.S. and Middle East Compete for the Asian LPG Market** that the era of "easy growth" for U.S. exports to Asia will come to an end. The study includes our global forecasts and analysis, with projected supply-demand balances to 2020 for all major regions, discussion of key trade flows, and a comparison of expected U.S. and Middle East market share in China, Japan, and South Korea.