DOWNSTREAM STUDY SERIES
AND SUPPORT SERVICES
### East of the Rockies Downstream Business Analysis and Outlook Study

EAI, Inc.’s East of the Rockies Downstream Business Analysis & Outlook study combines its detailed outlook for the U.S. Central Corridor and Gulf Coast-Eastern Seaboard regions with its latest analysis of refining, logistics, consumption and economics for the Eastern Seaboard-Gulf Coast regions to provide the most detailed and insightful outlook available for this area.

Increasing supply of gasoline, declining demand and increasing ethanol supply are causing major shifts in transportation and incremental gasoline supply economics that are having dramatic impacts on both the domestic and international refining business. EAI, Inc. provides insightful analysis of and outlook for the Northeast—New York Harbor in competition with foreign offshore and U.S. Gulf Coast product.

The latest logistical shifts and transportation projects are analyzed as to how they will impact the new equilibrium in the Northeast downstream market. EAI, Inc. integrates its latest North American crude outlook and implications for crude supply and pricing in the Northeast and potential refinery margin outlook.

### Western Regions Downstream Business Analysis and Outlook Study

EAI, Inc.’s West Coast Downstream Business Study covers the trade area extending from Washington down through Southern California, east to cover both Nevada and Arizona, and west to cover the outlying states of Alaska and Hawaii. EAI, Inc.’s West Coast Crude study and Downstream Study are complimentary and provide a comprehensive continuum of coverage from specific crude production provinces through all key refining centers and into specific market areas.

The West Coast Downstream Business is undergoing a major transition as demand for light products moderates, external supply pushes into traditional West Coast markets, the use of ethanol expands and LCFS legislation increases the role of alternative fuels and penalizes production of high carbon intensity fuels.

### Downstream Business Deep Dive Studies

EAI, Inc.’s bottom-up approach to analyzing petroleum business from resources to refining and downstream terminal markets enables the EAI, Inc. study and/or project teams to carve out specialized geographies that envelop current and potential refinery distribution orbits, transportation corridors, terminal hub market orbits, etc. EAI, Inc. has developed a series of Deep Dive studies which give in depth in particular regions in context of the global, Western and East of the Rockies regions including:
EAI, Inc.’s Gulf Coast Downstream Deep Dive Business Analysis and Outlook study provides a comprehensive assessment of and outlook for the area extending from New Mexico-east to Mississippi and from North Texas-Arkansas south to the coast and inclusive of the Gulf of Mexico. EAI, Inc.’s Gulf Coast Downstream Deep Dive study provides detailed insights into the inner-workings across nine refinery hubs (47 refineries) and the internal Gulf Coast distribution network as well as current and future interactions with surrounding areas including the Southeast-NYH corridor via pipeline, northern inland markets, the eastern seaboard marine market, the Mexican market (via marine and land based transport) and other foreign markets via marine.

This study is a parallel study to EAI, Inc.’s Gulf Coast Crude Deep Dive study and EAI, Inc. has integrated information from the GC Crude DD with the Gulf Coast Downstream Deep Dive study.

U.S. Central Corridor Deep Dive
EAI, Inc.’s USCC Deep Dive drills down to dynamics in the Eastern Midwest, Western Midwest, Southern Midwest, Midcontinent, and Northern Tier regions in context of the overall East of the Rockies picture. This drill-down includes network balance forecasts integrating outlooks for consumption, logistics, company supply integration, and interactions with other regions.

The USCC Deep Dive study also analyzes the Chicago area market as it is a key barometer for the U.S. Central Corridor region as a whole. With Flint Hills likely retaining if not expanding its presence in Wisconsin and Milwaukee and Wood River/Robinson supply having to push north, Chicago supply optionality depends on saturating the local Chicago market, backing out Gulf Coast supply and continuing to push east into Western Michigan and Indiana.

These dynamics are detailed in EAI, Inc.’s U.S. Central Corridor Downstream Deep Dive study. As part of the Chicago area analysis, EAI provides separate outlooks for reformulated and conventional gasoline with attention given to the seasonal nature of reformulated gasoline supply and demand experiencing displacement from inland-northern markets, and an increasingly competitive global light product market. This situation is becoming even more challenging as both Gulf Coast and U.S. Central Corridor refiners have continued to expand.
U.S. Southeast Deep Dive

EAI, Inc.’s Southeast Seaboard (SES) region of the United States is a major market area representing light product demand. Light product demand in the SES region has recovered to pre-recession. The SES and the U.S. Northeast markets represent very important outlets for Gulf Coast refining which is experiencing displacement from inland-northern markets, and an increasingly competitive global light product market.

This situation is becoming even more challenging as both Gulf Coast and U.S. Central Corridor refiners have continued to expand. EAI, Inc. is completing its Southeast Downstream Deep Dive study in context of the overall East of the Rockies Downstream Business outlook and specific interrelationship with the Gulf Coast refining complex and the Northeast market.

U.S. West Texas—New Mexico Deep Dive

The map shown to the left represents EAI, Inc.’s West Texas-New Mexico area and extension to EAI, Inc.’s Phoenix terminal micro-market which has been the focal point of numerous studies over the years for refiners, pipeline companies, marketers and trading operations.

EAI, Inc. has updated its West Texas—New Mexico Downstream Business Analysis in context of both the East of the Rockies and Western Regions as well as global regions such as Mexico which are becoming ever important market outlets for refiners such as those in the West Texas—New Mexico region which currently supply portions of Northern Mexico.

Global Integration and Insights

EAI, Inc. has applied its processes to the overall global market including but not limited to the following:

- EAI, Inc.’s East of the Rockies study contains an assessment of the Greater Atlantic Basin Downstream business outlook and implications for supply, demand and refinery rationalization
- EAI, Inc., as conducted a Latin America Deep Dive Downstream Business study including one focused on Mexico as described below
- EAI, Inc. has conducted a Distillate Market Strategy study that addressed North America and other major global distillate markets to assess the overall market and identify opportunities for a major distillate producer.
Mexico Deep Dive Downstream Business

Built from EAI, Inc.’s Deep Dive look at supply-demand, logistics, and markets for Mexico’s five major sub-regions in context of Mexico’s energy reform outlook and its potential impact on the downstream sector including the light product market, refining, logistics and trade with foreign supply sources especially U.S. refining sources.

Mexico has also been significant outlet for U.S. West Coast and Gulf Coast light product exports and will likely become an even bigger opportunity as Mexico’s Energy Reform transition occurs and their market is opened to increasing investment and asset interests on the part of foreign entities.

Analytical Tools, Data Access and PSMDS/LDM Modeling Back Bone

Micro-Market/Terminal Hub and Refinery/Supply Hub Analysis: EAI, Inc. has developed and applies proprietary data bases and analytical tools to define light product consumption at the county and entity level of detail (such as airport level jet demand) and tracks/conducts analysis of supply hubs that consist of refineries, import facility hubs, biofuels plants and major distribution hubs.

Petroleum Supply-Market Decision System (PSMDS) and Local Distribution Model (LDM): EAI, Inc. has developed a petroleum modeling system that integrates in-depth information describing physical, operations and business attributes of the petroleum business ranging from refining through the supply chain and into terminal facilities and out to specific wholesale market sites.

EAI, Inc.’s Local Distribution Model (LDM) draws on this information, appropriate information resources and its IBM-CPLEX optimization engine to optimize competition between supply moving through terminals and competing for the wholesale gasoline market.

Custom Consulting & Value-Added Services

EAI, Inc. has a evolved a truly unique and integrated approach and supporting process to bridge EAI, Inc.’s in-depth information and leading edge analytics to client specific needs. These capabilities have bee applied to a number of client specific initiatives including but not limited to:

- Acquisition and asset value assessment including product terminals, product pipelines and refinery assets.
- Project feasibility including expansion and grass root refinery, pipeline and terminal projects
- Integrated market strategy addressing market options, competition, supply chain options and other market factors to optimize netback revenue
- Regulatory and policy analysis and support including RINS, oxygenated fuels, LCFS, etc. and implications for business performance and appropriate investment decisions.

EAI, Inc. draws on its integrated information base, analytics and forecasts spanning resources, transportation, manufacturing, markets, economics and regulations and to support these client
About EAI, Inc.

EAI, Inc. (Energy Analysts International) is a consulting and product development firm founded in 1982 with a mission to provide strategic consulting, products and valued added services built upon thorough information resources, advanced analytics and a clear vision of customer and product objectives. EAI, Inc.’s specialty is providing very regionalized and integrated analysis of the business components that comprise the petroleum business to address key industry topics or company specific strategies. The products summarized here draw on EAI, Inc.’s knowledge and experience in evaluating all aspects of the crude oil business including refining, transportation, pricing and economics and resource development.

To support this mission, EAI, Inc. has evolved:

- Proprietary information resources
- Application tools/software
- Series of leading edge products
- Web based valued added information delivery

EAI, Inc. applies its information, analytics and business/objective formulation process across the energy commodity business spectrum:

- **Business Components**: resources, logistics, manufacturing, distribution and markets
- **Range of Commodities**: refined products (gasoline, distillates, jet fuel), biofuels, crude oil (heavy crude, medium sour, light) condensate, natural gas and natural gas liquids (butane, propane, ethane), alternative energy
- **Business Functions**: planning, strategy, business development, projects, acquisitions & divestitures, financial, operations
- **Geographies/Entities**: Resource, asset and company footprints to distribution hubs, markets transportation corridors and their interactions (regional and global)

Together, these unique capabilities support EAI, Inc.’s standardized and process oriented approach to:

- **Consulting**
- **Industry products**
- **Valued added services**