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REFINING REGULATION: THE OIL REFINERY REGULATORY FRAMEWORK AFTER THE ENERGY POLICY ACT OF 2005

Christopher J. Koschnitzky*

INTRODUCTION

The devastation of oil refinery infrastructure along the Gulf Coast caused by Hurricane Katrina in August 2005¹ and Hurricane Rita in September 2005² shut down 5.6 million barrels of domestic refinery capacity per day (mb/d), or almost one-third of the U.S.'s total capacity.³ As a result, the price of gasoline and other refined products spiked to reflect the tightened domestic supply. The national average price for gasoline increased \$1.04 to \$2.95 per gallon in September of 2005.⁴ High gasoline prices, however, did not dissipate once most of the refinery infrastructure came back online. By September 2006, one year after the Hurricanes⁵ hit, the national price for gasoline only fell \$0.34 from the post-Hurricane price spike to \$2.61.⁶ With the public's attention on the retail price of refined products after two years of sustained higher prices, coupled with media reports about the nation's refinery capacity,⁷

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¹ See Jeff D. Opdyke & Kris Hudson, *Hurricane Cuts Destructive Path Along Gulf Coast*, WALL ST. J., Aug. 30, 2005, at A1.

² See Simon Romero & Vikas Bajaj, *Refineries Escape Major Damage, but Gas Price May Still Rise*, N.Y. TIMES., Sept. 24, 2005, at 34; see also Chip Cummins & Bhushan Bahree, *Gulf Coast: Why the World is One Storm Away from an Energy Crisis*, WALL ST. J., Sept. 24, 2005, at A1.

³ LAWRENCE KUMINS & ROBERT BAMBERGER, CRS REPORT RL33124, OIL AND GAS DISRUPTION FROM HURRICANES KATRINA AND RITA 3 (2006), available at <http://www.ncseonline.org/NLE/CRSreports/06May/RL33124.pdf>.

⁴ ENERGY INFORMATION ADMINISTRATION ("EIA"), U.S. GASOLINE AND DIESEL RETAIL PRICES (2006), http://tonto.eia.doe.gov/dnav/pet/xls/pet_pri_gnd_dcus_nus_m.xls.

⁵ Hereinafter, "Hurricanes" refers collectively to Hurricane Katrina and Hurricane Rita.

⁶ EIA, *supra* note 4. 4.

⁷ See, e.g., Beth Heinsohn, *Refined Reasons*, WALL ST. J., Oct. 16, 2006, at R9 ("Many U.S. refiners were unable to meet demand without resorting to larger than usual imports after hurricanes Katrina and Rita in 2005. The storms temporarily shut down 24 Gulf

legislators hoping to capitalize on the media and public attention to the refinery capacity situation introduced a host of legislative proposals with the aim to increase domestic capacity.⁸ The proposed legislation would amend the “comprehensive” Energy Policy Act of 2005 (“EPAAct”) passed just weeks before the Hurricanes hit.⁹

The EPAAct is the most recent legislation enacted that addresses the nation’s refinery capacity.¹⁰ Based on the host of legislation proposed after the EPAAct was enacted that sought to encourage refinery expansion, legislators indicated that they viewed current domestic refinery capacity as inadequate despite measures in the EPAAct aimed to promote such capacity.

¹¹ Some proposals more limited in scope sought only to make federally owned land more accessible for refining infrastructure,¹² while other more dynamic legislation called for the “streamlining” of the overall regulatory permitting process for refineries.¹³

As this Note discusses, the effect of the regulatory framework is only one of several factors that affects the nation’s domestic refinery capacity. Still, the role of the regulatory framework is significant. If legislators hope to encourage increases in domestic refinery capacity, then a regulatory scheme that focuses on national objectives should be implemented. This can be accomplished by designating the Department of Energy (“DOE”) as the lead federal agency in charge of domestic refinery

Coast refineries, one-third of total U.S. oil-processing capacity . . . the disaster focused public attention on the longer-term capacity issue, and pushed the matter at the top of the political agenda.”); Mark Clayton, *A Push to Build New U.S. Refineries*, CHRISTIAN SCI. MONITOR, Sept. 21, 2005, at 11.

⁸ See discussion *infra* Part III.B.

⁹ Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (2005). The EPAAct was enacted on August 8, 2005.

¹⁰ See *id.* § 391, 119 Stat. 748 (codified at 42 U.S.C. § 15951) (2006)) (stating that (1) “it serves the national interest to increase petroleum refining capacity . . . (2) [U.S.] demand for refined petroleum products currently exceeds the country’s petroleum refining capacity to produce such products, [and] (3) this excess demand has been met with increased imports . . .”).

¹¹ See discussion *infra* Part III.B.

¹² See, e.g., Gasoline for America’s Security Act of 2005, H.R. 3893, 109th Cong. § 101(b)(1)(G) (2005).

¹³ See, e.g., Refinery Permit Process Schedule Act, H.R. 5254, 109th Cong. § 4, 7 (2005); Fuel Supply Improvement Act of 2005, H.R. 3836, 109th Cong. § 3 (proposing similar permitting provisions).

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capacity. Thus, when the other relevant factors that affect domestic refinery capacity (*e.g.*, the availability of capital and demand for refined products) favor capacity expansion, the unintended effects of disjointed regulation will not hinder the development for refinery capacity expansion. Recent legislative proposals that are limited in scope are unlikely to have a meaningful effect on refinery capacity growth, and will likely simply add to the complexity of the current decentralized regulatory scheme. In addition, the proposals that are limited in scope may simply be detrimental to other legislative goals, such as promoting a clean environment. To understand how the regulatory framework affects the industry, one must consider how domestic refinery capacity arrived at its current state, and how recent legislation attempts to address the refinery regulatory framework. The wide range of legislative proposals demonstrates a lack of consensus on what has caused the current refinery capacity situation, and how to properly address the situation. Bringing refinery construction and expansion under the DOE's authority is a modest step that will inject the national prerogative in having adequate infrastructure further other national goals, such as the implementation of a federal fuels program as a means to achieve environmental goals.

This Note will evaluate the current regulatory framework and how proposed legislation may affect that framework. Part I outlines a brief history of domestic refinery capacity to the present. In addition, Part I examines the likely future of domestic refinery capacity under the status quo. Part II addresses how the evolving legal framework of environmental and land acquisition requirements among the local, state, and national level has resulted in a patchwork system of regulations that do not represent a cohesive national regulatory scheme for the refinery industry. Part III explains and analyzes how the EPA and recent legislation attempt to address refinery capacity growth. Finally, Part IV proposes that the DOE should become the lead federal agency in charge of permitting and coordinating refinery expansion efforts so that the national interest in having adequate refinery capacity is properly weighed as an important consideration when private and public parties made decisions affecting refinery capacity.

I. RECENT REFINERY INDUSTRY HISTORY

A. *A Gradual Shift in Refining Capacity Utilization*

As of January 1, 2006, the United States had 142 operating oil refineries and seven idle refineries, with a total capacity of approximately 17.3 mb/d.¹⁴ Idle capacity of 1.1mb/d largely represented capacity taken offline by the Hurricanes that had not been restored by January 1, 2006.¹⁵ Approximately 8.2 of the 17.3 mb/d, a little less than half of the nation's capacity, is refined in the Petroleum Administration for Defense District ("PADD") III.¹⁶ PADD III includes the Gulf Coast states Alabama, Arkansas, Louisiana, Mississippi, New Mexico, and Texas.¹⁷ Because of the regional allocation of the nation's refineries, the Hurricanes posed a formidable threat to the U.S.'s overall refinery capacity.¹⁸ Domestic refineries were operating at ninety-seven percent of capacity on the eve of Hurricane Katrina, which is akin to recent utilization usage rates.¹⁹

¹⁴ EIA, REFINERY CAPACITY REPORT 2006 1 (2006), http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/refinery_capacity_data/current/refcap06.pdf.

¹⁵ *Id.* at 1 n.a.

¹⁶ *Id.* at 1. PADDs were delineated during World War II to facilitate regional oil allocation. EIA, OIL MARKET BASICS app.A (2004), http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/oil_market_basics/full_contents.htm. Often, national energy policy decisions are implemented on a regional basis by PADD district. *See, e.g.*, ENVIRONMENTAL PROTECTION AGENCY ("EPA"), FUEL WAIVER RESPONSES TO 2005 HURRICANES (2006), <http://www.epa.gov/compliance/katrina/waiver/index.html> (stating that the EPA issued fuel requirement waivers according to PADD district). For a discussion of fuel requirement waivers, see discussion *infra* Part II.E.

¹⁷ EIA, *supra* note 14, at 1.

¹⁸ *See* Alastair Walling, *Exposed Refineries, Price-Gouging, and the Gas Crisis that Never Was*, 20 NAT. RESOURCES & ENV'T 55, 55 (Spring 2006) ("Katrina's path threatened six of the nation's eleven largest refineries. In all, 8 million barrels of refining capacity, or 47 percent of U.S. production, lay at Katrina's mercy.").

¹⁹ PETROLEUM INDUSTRY RESEARCH FOUNDATION ("PIRINC"), LESSONS FROM THE HURRICANES 2 (2005), <http://www.eprinc.org/download/hurricanes.pdf>. "The Energy Policy Research Foundation, Inc. ("EPRINC"), formerly PIRINC . . . is a not-for-profit organization that studies energy economics with special emphasis on oil . . . EPRINC briefs government officials, including the State Department, the [DOE], and the Federal

Because the United States did not have excess refinery capacity outside of PADD III following the effects of the Hurricanes, unmet demand following the Hurricanes was met by imports.²⁰ Imports continue to offset unmet demand for refined products.²¹ The configuration of the nation's refinery infrastructure has not changed since before the Hurricanes hit, and there remains the possibility that any similar future disruption to Gulf Coast refinery capacity will leave the United States more dependant on foreign sources of refined products—foreign sources that may not be compatible with current U.S. refined product regulations.

Current capacity issues can be traced back over thirty years to 1976 when the Marathon Corporation built the last oil refinery in Garyville, Louisiana.²² During early 1982, the United States had 301 operable refineries, producing 17.9 mb/d.²³ Thus, although the United States currently has 152 less operable refineries than it did in 1982, it only has .5 mb/d less capacity than in 1982. Most of the refineries that closed were small, inland facilities without water transportation, and almost all had capacity under 100,000 barrels per day.²⁴ The refineries currently in operation are generally much larger, which reflects the current business model of refiners that contemplates taking advantage of economies of scale.²⁵

Reserve, and legislators" EPRINC, About Us, <http://www.eprinc.org/about.html> (last visited Mar. 4, 2007).

²⁰ KUMINS & BAMBERGER, *supra* note 3, at 5.

²¹ EPA & DOE, EPACT SECTION 1541(C) BOUTIQUE FUELS REPORT TO CONGRESS 17 (2006), available at <http://www.epa.gov/oms/boutique/420r06901.pdf>.

²² Marathon Oil Corp., *Marathon Announces Plans to Increase Garyville Refinery Capacity*, Oct. 27, 2005, available at http://www.marathon.com/content/includes/PF_News_Releases.asp?ReleaseID=774046.

²³ EIA, Number of Operatable Refineries (2006), http://tonto.eia.doe.gov/dnav/pet/xls/pet_pnp_cap1_dcu_nus_a.xls.

²⁴ LAWRENCE KUMINS, ET. AL, PIRINC, REFINING CAPACITY – CHALLENGES AND OPPORTUNITIES FACING THE U.S. INDUSTRY 5 (2004), available at <http://www.eprinc.org/download/RefiningCapacity.pdf>.

²⁵ *Id.* at 9.

Growth of refinery capacity at existing refineries is referred as “capacity creep.”²⁶ Capacity creep results when refineries invest in discovering and eliminating inefficient “bottlenecks” at existing refineries, or by investing in equipment that allows a refinery to “refine heavier grades of crude oil and to refine crude with higher levels of sulfur.”²⁷ The added capacity at existing refineries has helped to offset the lost capacity of smaller refineries that were “not economically feasible, and existed to collect a variety of government subsidies, mostly associated with oil price and allocation regulations, which disappeared in 1981.”²⁸

Despite the growth of existing refineries by capacity creep, refinery capacity utilization in the United States gradually tightened during the 1990s. The utilization rate, which was eighty-five percent in 1990s, increased to ninety-three percent in 1995, and to ninety-six percent in 2000.²⁹ There has been speculation that the refining industry colluded to shutter “excess capacity” during the 1990s to improve what the industry considered were “dismal” refining margins during the 1980s.³⁰ Evidence of such industry action indicates that during the early 1990s when capacity utilization was below ninety percent, the industry closed smaller, less efficient refineries with the goal of shuttering “overcapacity.”³¹ Indicative of the volatile nature of the industry, any attempt to reduce “overcapacity” was met with rising demand for refined products throughout the mid and late 1990s.³² As refining utilization approached capacity at the end of the

²⁶ EIA, OVERVIEW AND DOMESTIC AND INTERNATIONAL TRENDS FOR PETROLEUM REFINING ch. 4 (1997),

<http://www.eia.doe.gov/emeu/finance/usi&to/downstream/ch4.pdf>.

²⁷ *Id.*

²⁸ *Streamlining Refinery Permitting Process: Hearing on S. 1772 Before the S. Comm. Environment and Public Works*, 109th Cong. at *2 (2005) (statement of Brian Mannix, Associate Administrator of the Office of Policy, Economics and Innovation at the EPA).

²⁹ FEDERAL TRADE COMMISSION (“FTC”), MIDWEST GASOLINE PRICE INVESTIGATION (2001), <http://www.ftc.gov/os/2001/03/mwgasrpt.htm>.

³⁰ See SEN. RON RYDEN, THE OIL INDUSTRY, GAS SUPPLY AND REFINERY CAPACITY: MORE THAN MEETS THE EYE 1 (2001), available at http://wyden.senate.gov/leg_issues/reports/wyden_oil_report.pdf. (citing internal industry documents discussing that low refinery margins will remain absent an increase in demand or reduction in supply of refinery capacity).

³¹ *Id.*

³² See FTC *supra* note 29.

1990s, the Federal Trade Commission (“FTC”) warned in June 2000 that with continued increases in demand for refined products, price spikes for such products would likely occur in the near future.³³ Because tight refining capacity has now existed for almost a decade, there continues to be speculation that the industry is colluding to restrain capacity growth to retain higher refinery margins.

Speculation that the industry is to blame for tight refinery capacity has affected how some legislatures view the current refinery situation. For example, Senator Barbara Boxer of California called for an investigation of Shell Oil Company in November of 2003 when Shell announced that it was planning to close its Bakersfield, California, refining facility in 2004.³⁴ The FTC found that there was no manipulation.³⁵ Speculation that the current refinery capacity situation is one intended by the industry was again manifested following the Hurricanes when Congress requested the FTC investigate potential noncompetitive practices in the refining industry.³⁶ Specifically, the FTC investigated whether the industry had engaged in long-term collusion to intentionally under invest in refinery capacity.³⁷ The final FTC report following the Hurricanes reported that no uncompetitive behavior among refiners was clearly identifiable.³⁸ However, the FTC observed that “[c]onsumers . . . are frustrated to be told that no laws are being broken even as prices increase substantially.”³⁹ The FTC’s observation may explain the political impetus for legislators to call repeatedly for investigations of collusive behavior. Of course, the refinery industry does not always operate according to the best interests of refined

³³ See FTC *supra* note 29.

³⁴ Boxer Pleased FTC Investigating Closure Of Shell Oil Bakersfield Refinery, July 8, 2004, available at <http://boxer.senate.gov/news/releases/record.cfm?id=223692&&>.

³⁵ In Re: Shell Oil Co., FTC File No. 041-0087 (2005), available at <http://www.ftc.gov/os/caselist/0410087/050525stmnt0410087.pdf>. Ultimately, Shell sold the refinery to Big West, LLC, of California, a wholly owned subsidiary of Flying J, Inc. *Id.* As of January 1, 2006, the Bakersfield refinery was running at capacity, producing 66,000 barrels of refined product per day. EIA, *supra* note 14, at 5 tbl.3.

³⁶ FTC, INVESTIGATION OF GASOLINE PRICE MANIPULATION AND POST-KATRINA GASOLINE PRICE INCREASES i (2006), available at <http://www.ftc.gov/reports/060518PublicGasolinePricesInvestigationReportFinal.pdf>.

³⁷ *Id.* at 15-17, 20.

³⁸ *Id.* at 154.

³⁹ *Id.* at 198.

product consumers: The industry has been found to manipulate local markets for local refiners' advantages in at least two instances.⁴⁰ However, local refineries have only had the ability to exert regional market power because of the segmentation of markets for refined products that has resulted from a patchwork of gasoline and diesel regulation.⁴¹

Currently, the only bona fide attempt to build a domestic refinery is the Arizona Clean Fuels project ("ACF project") outside Yuma, Arizona. The ACF project is planned as a \$2.5 billion refinery complex with a projected output of 150,000 barrels of refined product per day.⁴² Planning for the facility started in 1989.⁴³ To date, the project has yet to break ground.⁴⁴ A necessary permit application for the ACF project was submitted to the Arizona Department of Environment Quality in 1999, and the Final Permit was issued in 2005.⁴⁵ However, the issue of the "Final Permit," only allows other permitting processes and administrative actions to move forward.⁴⁶ The ACF project still requires the issuance of a multitude of additional permits.⁴⁷ For better or worse, the turmoil and pitfalls of the ACF project is the only recent example that allows for an assessment of the efficiency and scope of the current regulatory climate on domestic refinery construction.

⁴⁰ See Richard J. Pierce, Jr., *Environmental Regulation, Energy, and Market Entry*, 15 DUKE ENVTL. L. & POL'Y F. 167, 171 (Spring 2005).

⁴¹ See *id.*

⁴² *New Refinery Project Permitting Considerations and Issues: Hearing on H.R. 5254 Before the S. Comm. Energy and Natural Resources*, 109th Cong. at *3 (2006) (statement of Glenn McGinnis, Chief Executive Officer, Arizona Clean Fuels Yuma LLC); see generally, The Arizona Clean Fuels Refinery, <http://www.arizonacleanfuels.com/refinery.htm> (last visited Feb. 2, 2007).

⁴³ Walling, *supra* note 18, at 56.

⁴⁴ *Id.*

⁴⁵ McGinnis, *supra* note 42.

⁴⁶ The permitting process and administrative approval process is still underway for the ACF project. Recently the U.S. Bureau of Reclamation has released a final environmental impact statement that was necessary for the ACF project to move forward. Joyce Lobeck, "Refinery Moves One Step Closer," THE YUMA SUN, Jan. 9, 2007, available at <http://www.yumasun.com/google/ysarchive25860.html>.

⁴⁷ McGinnis, *supra* note 42.

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The domestic de facto moratorium on new refinery construction does not reflect the international trend of refinery capacity expansion.⁴⁸ Following increasing foreign demand for refined products in favorable regulatory climates, the refinery industry has focused on building refineries abroad, such as in India.⁴⁹ However, even with increasing foreign capacity, the United States is still home to approximately one quarter of total global refining capacity.⁵⁰ Despite having a sizable share of global refining capacity, some legislators dissatisfied with the industry's response to the supply shock following the Hurricanes have called for different measures to facilitate the construction of additional domestic refinery capacity.

B. Post-Hurricane Political Climate

Although the flood of proposed legislation aimed to address refinery capacity indicated political support for such measures following the Hurricanes, there has been little consensus on what legislative solution will promote capacity growth.⁵¹ Some lawmakers continue to assert that the refinery industry has not sufficiently invested in capacity growth to incite tight capacity.⁵² These assertions continue despite the fact that refinery investment, "although down from its recent peak of 1991-1992, has remained at historically high levels."⁵³ In all, politicians of "all

⁴⁸ See, e.g., Steve Levine and Patrick Barta, *Giant New Oil Refinery in India Shows Forces Roiling Industry*, WALL ST. J., Aug. 29, 2006, at A1 (stating that the industry has "turned away from building new refineries in the U.S. because the numbers work better abroad, where costs and red tape are reduced and where expected demand growth is even higher than the U.S . . .").

⁴⁹ *Id.*

⁵⁰ EIA, *supra* note 16, at *Simple Distillation*.

⁵¹ See discussion *infra* Part III.B.

⁵² 152 CONG. REC. E73, 1106 (2006) (statement of Rep. Schakowsky) ("The oil industry is responsible for limiting refinery capacity. During the 1990s, the American Petroleum Institute encouraged the oil industry to limit refining capacity in order to boost profits. The industry followed instructions closing 176 refineries since 1980 and failing [*sic*] to fully utilize available capacity.").

⁵³ EIA, THE U.S. PETROLEUM REFINING AND MARKETING INDUSTRY (2004), <http://www.eia.doe.gov/emeu/finance/usi&to/downstream/ch4.html>.

stripes" have sponsored and voted on legislation that has reflected divergent views on what may have caused the current refinery capacity situation.⁵⁴ Accordingly, no refinery legislation passed both the House of Representatives and the Senate during the 109th Congress.

With the recent shift of political control from the Republicans to the Democrats in the 110th Congress, it is not any clearer how Congress will legislate concerning refinery capacity.⁵⁵ Irrespective of one's political party, legislators must recognize that unmet demand for refined products must be met by imports. This situation seems contrary to the stated aims of both Democrats and Republicans, who both profess that the United States "should rely less on foreign energy sources."⁵⁶ Thus, it appears that despite the inevitable political pressures that often results in energy policy gridlock, this may be a favorable environment that could lead to the enactment of legislation to address refinery capacity.

If Congressional votes on refinery legislation from the 109th Congress are an indication, any solution must be substantially different from past proposals that have mostly been strictly voted on a party line.⁵⁷

⁵⁴ Although another approach to address refinery capacity growth is to focus on demand-side issues, demand-side analysis is outside the scope of this Note. This Note presumes that "[e]ven with maximum feasible growth of petroleum alternatives and ardent conservation, oil and natural gas will dominate the energy market for many years." *Politics and Energy Choice*, OIL & GAS J., Aug. 14, 2006, at 17.

⁵⁵ See Nick Snow, *Elections Jostle the Outlook for U.S. Energy Issues*, OIL & GAS J., Nov. 20, 2006, at 24; see also *Petroleum Refineries: Will Record Profits Spur Investment in New Capacity?: Hearing Before the H. Subcomm. on Energy and Resources., Comm. on Government Reform*, 109th Cong. 44 (2005) (statement of Paul Sankey, lead oil stock analyst at Deutsche Bank) ("[T]he way that problems are addressed on the Republican side tends to be supply side solutions; which arguably, are going to make your problems worse The Democrat side . . . suggests over-complicated solutions that harken back to . . . the bad days of 1979–1980, when a complex series of regulations were imposed and only came into effect just as oil prices hit \$10 a barrel and were incredibly low.").

⁵⁶ See Levine, *supra* note 48 ("Politicians of all stripes say the U.S. should rely less on foreign energy sources. Instead, it has twin addictions—not only to imported crude to feed its refineries, but to imported gasoline to meet demand beyond what those refineries can make.").

⁵⁷ See, e.g., the vote for the Gasoline for America's Security Act of 2005, H.R. 3893, 109th Cong. (2005). Ninety-four percent of Republicans voted for the bill, while one

Any solution that has any remote chance of being politically viable must recognize the complexity of the regulatory environment that governs the refinery industry, and it must be sensitive to a wide range of interests that are invariably affected by the refinery industry. If a politically viable solution is proposed during the current environment when the public is concerned about the prices of refined products, and thus domestic refinery capacity, it may have a chance to affect positive changes to the refinery regulatory framework. This current situation provides a window of opportunity for change in how the refinery industry is regulated—albeit, a small window.⁵⁸

C. Future Refinery Capacity under the Status Quo Regulatory Environment

If the window of opportunity for regulatory change closes without any legislative action, then capacity creep advancements are unlikely to increase total refinery capacity anymore than ten to fifteen percent at existing facilities.⁵⁹ Regardless, it does not appear that the industry will be able to meet domestic demand solely by increasing capacity at existing facilities. Except for the unlikely event that the United States dramatically reduces its consumption of refined products in the next few years,⁶⁰ the current refinery capacity situation means that the trend of increasing fuel imports will continue. Since 2000, “U.S. gasoline imports have increased 71 percent or about 500,000 barrels/day, to average almost 1.1 mb/d in 2005.”⁶¹ Most imported gasoline supplies the East Coast, where imports account for approximately twenty five

hundred percent of Democrats voted in opposition.

<http://www.govtrack.us/congress/bill.xpd?bill=h109-3893> (last visited Mar. 5, 2007).

⁵⁸ See ROBERT BAMBERGER, CRS REPORT RL31720, ENERGY POLICY: CONCEPTUAL FRAMEWORK AND CONTINUING ISSUES 1, *available at*

<http://www.ncseonline.org/nle/crsreports/06jun/RL31720.pdf> (“Because prices are now expected by some analysts to remain high, the prospect for certain longer-range energy policies may now be more favorable.”).

⁵⁹ D.J. PETERSON & SERGI MAHNOVSKI, NEW FORCES AT WORK IN REFINING 39 (2003).

⁶⁰ See *Politics and Energy Choice*, *supra* note 54.

⁶¹ EPA & DOE, *supra* note 21, at 17.

percent of the regional market.⁶² It is uncertain if foreign refiners will be able to supply increased amounts refined products that meet the U.S.'s unique fuel requirements.⁶³ Thus, there is a strong likelihood that either U.S. fuel requirements will be relaxed to accommodate the specifications of fuel imports,⁶⁴ or there will be increased regional price volatility as supply for specific fuels becomes more erratic. While the government cannot control the industry's historic return on investment ("ROI") or other significant factors that may affect refinery capacity investment decisions, the government can reform the current regulatory framework so that regulations are implemented in a uniform, effective, and efficient manner. Without changes to the current refinery capacity situation, the U.S. will import more refined products. Capacity creep will continue, but to meet the nation's future demand for cleaner refined products, more domestic refinery capacity is needed.⁶⁵

II. REFINERY REGULATION

Because refineries and refined products are highly regulated, regulation is a key component of the "investment calculus" used to determine when it is prudent to increase refinery capacity. Although environmental and energy policies are interwoven, they often are "debated and decided" without consideration for each other.⁶⁶ The refinery industry

⁶² EPA & DOE, *supra* note 21, at 17.

⁶³ KUMMINS, *supra* note 24, at 3 ("Imported gasoline that meets U.S. specifications is not always available from foreign refineries in quantities desired.").

⁶⁴ See discussion *infra* Part III.D.

⁶⁵ PETERSON & MAHNOVSKI, *supra* note 59, at 38 ("Looking forward, the [EIA] projects demand to grow by 1.7 percent annually to 2025, slightly faster than the pace of growth in refinery capacity between 1995 and 2001. In contrast with conditions in the past, though, many refining executives with whom RAND (corporation) met maintained that the industry had entered a new era and would be less likely in the future to keep up with demand through either strategic investments or capacity creep.").

⁶⁶ *Impact of Environmental Regulations on Oil Refining: Hearing on the Environmental Regulatory Framework Affecting Oil Refining and Gasoline Policy Before the S. Comm. Environment and Public Works*, 108th Cong. 49 (2004) (statement of Bob Slaughter, President, National Petrochemical & Refiners Association and the American Petroleum Institute) ("There is a very close connection between Federal energy and environmental policies. Unfortunately, these policies are often debated and decided separately and thus

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is one such industry in which there is often tension between the industry and governmental objectives: “Refiners felt that increased regulatory uncertainty in recent years had added excessive and unnecessary risk to their investment calculus and had generated incentives for them to delay compliance as long as possible.”⁶⁷

A. Regulation and Refinery Investment

With record high prices on petroleum during the past five years, oil companies have recently reported record profits.⁶⁸ In particular, refiners have been leading the petroleum industry in terms of profitability, having the strongest financial balance sheet out of the entire industry in 2005.⁶⁹ Some predict that the financial climate is just becoming ripe for increased industry investment.⁷⁰ Time lags between earnings and increased investment activity are not uncommon in the oil industry.⁷¹ However, there is also speculation that even with the recent high profit margin in the industry, there is no guarantee that the industry will use such capital to increase refinery capacity. Historically, aspects of the oil business other than refining have had higher and more predictable profit margins.⁷²

Investment may remain stagnant if the industry believes that recent profitability levels reflect an unsustainable spike from the usual unpredictable and lackluster returns on refining. For example, while the net refining margin was \$2.06 per barrel during 2003, it was only \$0.19 per barrel in 2002.⁷³ For the period of 1996-2002, the average net refining margin was \$1.44 per barrel, which was exceptional compared to the

in a vacuum. As a result, positive impacts for one policy area sometimes conflict with or undermine goals and objectives in the other.”) [hereinafter *Hearing on the Environmental Regulatory Framework*].

⁶⁷ PETERSON & MAHNOVSKI, *supra* note 59, at 70.

⁶⁸ See Levine, *supra* note 48.

⁶⁹ ROBERT PIROG, CRS REPORT RL33021, OIL INDUSTRY PROFITS: ANALYSIS OF RECENT PERFORMANCE 12 (2005), available at <http://www.ncseonline.org/NLE/CRSreports/05aug/RL33021.pdf>.

⁷⁰ *Id.*

⁷¹ *Id.* at 6.

⁷² *Id.*

⁷³ *Id.* at 13.

1988-1995 period.⁷⁴ In terms of ROI, the profitability of U.S. refining “plunged from a peak of 15 percent in 1988 to an average of only 2 percent in the 1992 to 1995 period.”⁷⁵ Because of the high volatility in returns, “the industry might question whether the current increases in profitability are the beginning of a new era of profitability, or an upward aberration that will be reversed with the next market correction.”⁷⁶

Still, refining has currently been a profitable business, and the industry has the capital available to fund investment in refining capacity expansion. How the industry uses that capital in terms of refinery siting depends on (1) the overall project economics, (2) technology choices available, (3) public acceptance of a new refinery, and (4) permitting processes that are required to get a new refinery up and running.⁷⁷ Although legislation cannot likely address all of the major factors that determine refinery investment, it can affect how regulation affects investment decisions. By focusing on the factor that legislation can address, political momentum concerning refinery regulation will not be needlessly expended. The inability to affect all aspects of the refinery investment calculus is not sufficient justification to maintain a regulatory scheme that does not promote a national interest in refinery capacity expansion. Notably, any inhibition in refinery capacity is not an intended goal of the regulations. In fact, it appears that any suppression of refinery capacity could ultimately dampen the effectiveness of other national objectives, such as the effectiveness of environmental regulations.⁷⁸

B. Environmental Regulation of Refinery Infrastructure

When considering the affects of regulation on the refining industry, the most cognizable set of regulations affect refinery infrastructure. What may be some of the most sophisticated regulations affecting the refining

⁷⁴ *Id.*

⁷⁵ EIA, THE IMPACT OF ENVIRONMENTAL COMPLIANCE COSTS ON U.S. REFINING PROFITABILITY 1995-2001 2 (2003), *available at* http://www.eia.doe.gov/emeu/perfpro/ref_pi2/refpi2.pdf.

⁷⁶ ROBERT PIROG, CRS REPORT RL33373, OIL INDUSTRY PROFIT REVIEW 2005 16 (2006), *available at* <http://www.ncseonline.org/NLE/CRSreports/06May/RL33373.pdf>.

⁷⁷ McGinnis, *supra* note 42.

⁷⁸ See discussion *infra* Part II.D.

industry, the 1990 Clean Air Act (“CAA”) Amendments, required a significant amount of investment.⁷⁹ Compliance with the CAA,⁸⁰ however, is just one set of many complex regulations that govern refineries. Since the mid 1970s, refineries have all been affected by a host of regulations under the Clean Water Act,⁸¹ the Oil Pollution Act,⁸² the Resource Conservation and Recovery Act,⁸³ the Safe Drinking Water Act,⁸⁴ the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (“Superfund”),⁸⁵ and the Toxic Substances Control Act.⁸⁶ In addition, new refineries will likely face other regulations with a multitude of local and state controlling agencies such as that currently affecting the ACF project.⁸⁷ There are also proposals to phase in additional requirements including a change to New Source Review (“NSR”)⁸⁸ requirements. NSR is a series of regulations implemented under the CAA that apply whenever a refinery will expand or will undergo “any physical change . . . which increases the amount of any air pollutant

⁷⁹ EIA, *supra* note 75, at 1.

⁸⁰ Provisions of the CAA, 42 U.S.C. § 7401 (2006), *et seq.*, that affect oil refineries, as listed in *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 55, 60 app.A, include 40 C.F.R. Parts 9, 51-52, 60-61, 63, 70, 72-73, 75-80, and 82.

⁸¹ *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Clean Water Act that affect oil refineries); *see also* 40 C.F.R. Pt. 9, 110, 112, 116-17, 121-25, 129, 131-32, 401, 403, and 419.

⁸² *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Oil Pollution Act that affect oil refineries); *see also* 40 C.F.R. Pt. 9, 112, 150, and 154.

⁸³ *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Resource Conservation and Recovery Act that affect oil refineries); *see also* 40 C.F.R. Pt. 144, 148, 256-57, 260-62, 264-66, 268, 270-71, 279-90.

⁸⁴ *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Safe Drinking Water Act that affect oil refineries); *see also* 40 C.F.R. Pt. 144 and 146.

⁸⁵ *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 that affect oil refineries); *see also* 40 C.F.R. Pt. 11, 302, 355, 370, and 372.

⁸⁶ *Hearing on the Environmental Regulatory Framework*, *supra* note 66, at 57 (citing provisions of the Toxic Substances Control Act that affect oil refineries); *see also* 40 C.F.R. Pt. 702, 704, 710, 712, 716, 720-21, 749, 761, and 763.

⁸⁷ *See discussion infra* Part II.C.

⁸⁸ *See* EPA, *New Source Review* (“NSR”), <http://www.epa.gov/nsr/info.html> (last visited Mar. 5, 2007) (explaining the types and purposes of NSR permits).

emitted by such source.”⁸⁹ In sum, whenever a refinery is going to upgrade or change its configuration during the refinery process, it may be subject to NSR requirements. A cursory overview of the names of the acts gives indication that the acts likely promote the general welfare by promoting a cleaner, healthier environment; to refiners, the regulations have meant a web of permitting requirements.

The affect of environmental regulation on refinery returns on investment has been notable. Arguably, the 1990 CAA Amendments were successful in partially internalizing some pollution costs by requiring refineries to invest in pollution control technologies. Illustratively, the 1990 CAA Amendments required refiners to infuse capital into equipment to meet environmental standards, which resulted in significant decreases on refiners' ROI.⁹⁰ The Energy Information Administration (“EIA”) of the DOE has reported, “ROI in the refining industry was reduced by 42% from 1996 to 2001 as a result of [environmental] mandated investment expenditures.”⁹¹ The environmental costs for 1996-2001 actually had less of an impact than during 1991-1995 during which time ROI decreased sixty nine percent.⁹² Even though the cost of complying with environmental regulations has been notable, those costs are not necessarily mutually exclusive of refinery productivity.

Although “environmental regulation is commonly thought to reduce productivity,” in the case of refineries, environmental regulations of refinery infrastructure may have contributed to capacity creep.⁹³ In a study of the effects of environmental regulations on the productivity of refineries in Southern California, there was no evidence that the implementation of stringent air pollution regulations during the 1980s had “more than a transitory effect on the productivity” of the refineries.”⁹⁴ Such information raises the question: Why have all refineries not adopted cleaner technologies if such technologies would increase refinery

⁸⁹ CAA § 111, 42 U.S.C. § 7411(a)(3) (2006).

⁹⁰ EIA, *supra* note 75, at 1.

⁹¹ PIROG, *supra* note 48, at 15 (citing EIA, *supra* note 75, at 1-10).

⁹² EIA, *supra* note 75, at 1.

⁹³ See Eli Berman & Linda T.M. Bui, *Environmental Regulation and Productivity: Evidence from Oil Refineries*, 83(3) THE REVIEW OF ECONOMICS AND STATISTICS 498, 498 (Aug. 2001).

⁹⁴ See *id.*

productivity? One theory to explain such behavior is the “real options” theory of investment under uncertainty.⁹⁵ According to the “real options” theory, refinery investors may defer investment if they face uncertainty about the “costs and efficacy of untested abatement technology and about the requirements of future regulations.”⁹⁶ Thus, although environmental regulations could have led to increased refinery capacity in the past, the overall uncertainty about future regulations diminishes expectations that additional upgrades will enhance productivity in the future. Although refinery capacity expansion has not been held hostage to environmental regulation, there is some indication that the uncertainty of future environmental regulations can affect investment decisions that could be environmental beneficial. Regulatory uncertainty may stem from another area of regulation that has been far less predictable—the regulation of gasoline and diesel fuels. Altogether, regulations of the refineries and refined products may have a cumulative effect that has been a factor inhibiting domestic capacity expansion.

C. Environmental Regulation of Refined Products

In addition to the regulations that directly affect refinery infrastructure, there is significant regulation on the products refiners produce—specifically, gasoline and diesel fuels. As of November 2003, there were eighteen different gasoline formulation mandates for specific regions of the country.⁹⁷ The use of different fuel types stems from the 1990 CAA Amendments, which require the “use of special fuels in areas that are in nonattainment of the National Ambient Air Quality Standards (“NAAQS”) for ozone or carbon monoxide.”⁹⁸ To meet pollution standards, states are responsible for developing state implementation plans (“SIP”).⁹⁹ The EPA must approve SIPs.¹⁰⁰ One tool that states use for

⁹⁵ *Id.* at 509.

⁹⁶ *Id.*

⁹⁷ EXXONMOBIL, U.S. GASOLINE REQUIREMENTS (2004), <http://www.ftc.gov/os/2004/04/gaspricesappb.pdf>.

⁹⁸ BRENT YACOBUCCI, CRS REPORT RL31361, “BOUTIQUE FUELS” AND REFORMULATED GASOLINE: HARMONIZATION OF FUEL STANDARDS 4 (2006), *available at* <http://www.ncesonline.org/NLE/CRS/06jun/RL31361.pdf>.

⁹⁹ Berman, *supra* note 93, at 501.

SIPs include mandating specific formulation of gasoline known as “boutique fuels.”¹⁰¹

Prior to the 1990 CAA Amendments, gasoline was sold in the standard regular, mid-grade, and premium variety, and there were gasoline volatility distinctions between those sold in the northern United States from the southern United States.¹⁰² In addition, a gasoline’s “tendency to evaporate, as measured by Reid Vapor Pressure (“RVP”), shifted between summer and winter seasons for drivability and control over evaporative emissions that lead to ozone pollution.”¹⁰³ In brief, based on a variety of environmental considerations, the federally mandated formulations of gasoline went from simple to complex after the 1990 CAA amendments.

As states mandated unique formulations for gasolines as part of their SIPs, they invariably added another layer of regulation onto refiners. States mandated different formulations of gasolines to attain the same goal: Cleaner air. However, how each state saw it best fit to achieve the goal of cleaner air varied widely. Some states mandate limitations on the use of certain fuel additives (MTBE),¹⁰⁴ others require certain additives (ethanol),¹⁰⁵ and some states mandate certain fuel sulfur content.¹⁰⁶ Because each unique fuel is formulated to certain specifications, the different blends cannot be produced or distributed through similar

¹⁰⁰ Berman, *supra* note 93, at 501.

¹⁰¹ EIA, GASOLINE TYPE PROLIFERATION AND PRICE VOLATILITY (2002), tonto.eia.doe.gov/FTPROOT/service/question8.pdf

¹⁰² *Id.*

¹⁰³ *Id.* at 2.

¹⁰⁴ EIA, ELIMINATING MTBE IN GASOLINE IN 2006 (2006),

<http://www.tonto.eia.doe.gov/FTPROOT/features/mtbe2006.pdf> (explaining refiners’ decision to eliminate MTBE because of state bans due to water contamination concerns, among other reasons). The EPA Act repealed the CAA requirement to use MTBE or other oxygenate, which increase the oxygen content of gasoline, and established a “renewable fuel standard (‘RFS’).” YACOBUCCI, *supra* note 98, at 8. A common RFS is ethanol. *Id.*

¹⁰⁵ Ethanol requirements have been mandated by on an ad-hoc state by state basis. As of December 2006, seven states have mandated the use of ethanol in their gasolines, while legislation requiring minimum ethanol contents were pending in ten states. EPA & DOE, *supra* note 21, at app.A. Such requirement was proposed by the Governor of Virginia and rejected by the Virginia legislature, and a proposal by the Colorado legislature was vetoed by the Governor of Colorado. *Id.*

¹⁰⁶ YACOBUCCI, *supra* note 98, at 8.

channels that may mix the fuel blends.¹⁰⁷ Despite the seemingly significant logistical problems that could arise under such a segregated and differentiated fuel market, the EPA and state authorities have found that in the past decade, boutique fuels “have provided significant, cost-effective air quality improvements.”¹⁰⁸ These findings support the continuing use of boutique fuels, which may explain why the number of gasolines boomed from three basic grades in 1990 to eighteen in 2005.

Although boutique fuels have contributed to cleaner air than conventional fuels, the implantation of the boutique fuel system as a whole is not the intended consequence of any coherent national energy or environmental policy. As the recent example indicates, the proliferation of fuel types has fragmented the retail market for gasoline: “[I]n the summer, fuel produced for the Charlotte, [North Carolina] area cannot be used in Norfolk, [Virginia] or Atlanta, [Georgia]. However, fuel from either Norfolk or Atlanta could be shipped to Charlotte.”¹⁰⁹ This patchwork system of fuel regulation will likely lead to disruption in regional markets when supplies for a specific boutique fuel tighten.

The fragmentation of fuel types was cited as a significant reason that led to price spikes in the Midwest in the summer of 2000.¹¹⁰ Five years later, the fragmentation of fuel types was again cited as a factor contributing to price spikes following the Hurricanes.¹¹¹ As the number of boutique fuels grow,¹¹² it will become increasingly difficult for refiners to justify significant capital expenditures to meet certain regional environmental requirements, only for those requirements to change before refiners recoup their investment capital. Boutique fuels often require sophisticated changes in the refining process through, specialized

¹⁰⁷ Pierce, *supra* note 40, at 169.

¹⁰⁸ EPA, REPORT TO THE PRESIDENT: TASK FORCE ON BOUTIQUE FUELS 3 (2006), available at <http://www.epa.gov/oms/boutique/resources/bftf62306finalreport.pdf>.

¹⁰⁹ YACOBUCCI, *supra* note 98, at 10.

¹¹⁰ YACOBUCCI, *supra* note 98, at 8.

¹¹¹ *Id.*

¹¹² EIA, *supra* note 101, at 3 (“Over the next few years, both existing and proposed regulations will likely increase the number of fuels.”); see also Pierce, *supra* note 40, at 169.

equipment.¹¹³ In addition to meeting the requirements for boutique fuels, the refining industry has had to invest in technology that would allow it expand its capability to produce low sulfur diesel fuels.¹¹⁴

Many states initially mandated what was thought to be the cheapest fuel that would lead to NAAQS compliance. For example, some states choose to mandate low-RVP type gasolines as part of their SIPS, as opposed to adopting the federal standard gasoline reformulated gasoline ("RFG").¹¹⁵ Generally, low-RVP gasoline is less costly to produce than RFG.¹¹⁶ The decision of states to mandate what has seemed to be the cheapest fuel to produce may reflect why the cost of producing boutique fuels is considered minimal. In fact, it has been calculated that boutique fuels only cost three cents per gallon more than conventional gasolines.¹¹⁷ However, this calculation only reflects the added cost of producing a boutique fuel. Accordingly, the low cost of three cents per gallon is of no comfort to those who must plan to keep boutique fuels segregated through the production and distribution stages of delivering the fuels to retail outlets. Three cents per gallon also does not reflect the retail differentiation of prices paid for each boutique fuel. Thus, prices for boutique fuels that "have become increasingly volatile since 2000"¹¹⁸ do not reflect a steady-state three cent per gallon premium to regular gasoline. While three cents per gallon is a small cost to pay for the benefits from these fuels, the proliferation of such fuels may have contributed to the reluctance of some refiners to make further expenditures in order to refine a new type of fuel, only to have a new fuel mandate additional refining requirements.

¹¹³ EIA, *supra* note 101, at 3 ("The two fuel types that have experienced the most volatility are California RFG ("CaRFG") and Chicago-Milwaukee's ethanol-blended RFG. These two fuels are unique and difficult to make. Not many refiners outside of those supplying these areas can regularly make these fuels.").

¹¹⁴ PIROG, *supra* note 76, at 15.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ EIA, *supra* note 101. Calculations for the cost of boutique fuels have ranged from .3 cents to 3 cents in other reports. See EPA, *supra* note 108, at 6. However, there is not always agreement on exactly what fuels qualify as "boutique" for the purpose of this calculation. *Id.* at 21.

¹¹⁸ Pierce, *supra* note 40, at 168 (citing EIA, *supra* note 101, at 4-7).

REFINING REGULATION

Because states likely only considered the effect of its sole fuel mandate on the national fuel production and distribution system, those states “inadvertently traded potential production cost savings for distribution system strain.”¹¹⁹ When a mandated boutique fuel is in short supply, “[r]egions with specialized gasolines cannot borrow from their neighbors if they run short without a special waiver, and with a limited number of suppliers for a specialized fuel, supply response may take several weeks.”¹²⁰ Such distribution system strain, which is premised on production system strain, leads to higher prices for consumers when a demand is not adequately met. Thus, the states’ actions in choosing the lowest cost fuel to produce sometimes leads to periods where consumers must pay significantly more for the fuel deemed the “lowest cost” in production terms.

In effect, when additional fuel types have been mandated by either federal or state regulations, there have been unintended consequences that may not be factored into the decisions to impose such requirements. Although one might expect a profit seeking firm to create market power by segmenting a national market for a fungible good into local markets, it seems contrary to the government’s mission to create such result. By creating such localized markets, the government has conferred market power onto regional and local refineries—which is precisely opposite of the government’s intention as indicated by the numerous requests of the FTC to investigate refinery anti-competitive behavior.¹²¹ In fact, in the only two cases in which the FTC found anticompetitive behavior by local refineries, the refineries’ actions were made possible by the fragmentization of fuel types.¹²² In one case, a refinery withheld capacity to increase prices.¹²³ Although this behavior does not violate any antitrust laws, it is not in the interest of consumers. In the second case, the FTC alleged that a firm “used false and misleading statements to induce a government body to issue regulatory standards that conferred market

¹¹⁹ EIA, *supra* note 101, at 4.

¹²⁰ *Id.*

¹²¹ See, e.g., *Boxer Pleaded FTC Investigating Closure of Shell Oil Bakersfield Refinery*, *supra* note 34.

¹²² See *Pierce*, *supra* note 40, at 171.

¹²³ *Id.*

power upon the firm.”¹²⁴ It was neither the intention of the 1990 CAA Amendments to confer market power on local refineries, nor to segment the market for a national fungible good into eighteen distinct markets. Simply, there has not been a national regulatory scheme to align environmental goals with the production and distribution capabilities of the refinery industry.

D. Siting and Permitting Requirements

Because the ACF project is the only currently planned domestic refinery, it is difficult to ascertain the extent of which siting and permitting requirements have factored into investment decisions and the industry's outlook on the construction of new refining facilities. To be sure, refineries will likely focus on continuing investment for “capacity creep” in the near term, which is usually more cost effective than would be the construction of a new refinery. The effects of capacity creep have been significant: The addition of 1.4 million barrels per day of refining capacity between 1996 and 2005 is equivalent to adding ten average sized refineries over that period.¹²⁵ Capacity creep is likely to continue because “capacity additions at existing facilities offer a more predictable method to provide greater supplies of transportation fuels in a reasonable time frame.”¹²⁶ The industry currently estimates that will add 1.8 million barrels per day by 2010, bringing total domestic capacity to 18.6 mb/d.¹²⁷ However, it is unlikely that the advances in capacity creep through efficiency enhancement—which arguably was spurred by environmental regulations—will be the sole solution in the future for matching domestic supply with demand.¹²⁸

¹²⁴ *Id.* (quoting In Re: Union Oil Co., FTC File No. 011 0214, at 1 (July 7, 2004)).

¹²⁵ *New Refinery Project Permitting Considerations and Issues: Hearing on H.R. 5254 Before the S. Comm. Energy and Natural Resources*, 109th Cong. at *3 (2006) (Statement of Bob Slaughter, President, National Petrochemical and Refineries Association).

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ See PETERSON & MAHNOVSKI, *supra* note 59, at 39 (quoting a “technology and services executive”) (“Yes, we can squeeze more capacity out of our existing refineries—perhaps 10 to 15 percent . . . There are still some improvements in reliability technologies

Parties interested in building a new refinery facility will likely consider the experience of the ACF project; after all, it is the only notable refinery project in the last three decades. The ACF project largely represents the modern notion of what is required to have a profitable refinery. Refiners learned from the inefficient and unprofitable ways of small refineries that were closed in the 1980s.¹²⁹ Thus, today refiners are “seeking larger sites, with valuable refinery assets, and water-transport access. . . .”¹³⁰ In addition, refiners seek a minimum capacity for economic scale of 100,000 barrel per day.¹³¹ If the ACF project is any indication of the challenges refiners will face when siting future projects, then any future siting plans must consider the possibility of derailment that could occur at the state and local level. Such derailment may occur either from the inability of a project to weave unilaterally between the complexities of regulation at the national, state, and local level, or because of the actions of local opposition groups that use the complexities of regulation to prevent refinery projects from moving forward. In addition, a future project would have to be able to consider the risks and delay inherent to the current permitting process that takes place at the national, state, and local level.

When siting a proposed refinery, the site must comply with multiple layers of regulation. For example, the ACF project has to ensure compliance with the National Environmental Policy Act,¹³² various land use permits from controlling agencies and jurisdictions, the National Historic Preservation Act,¹³³ which allows for review by a state or certain Native American tribes, potential access permits from the Bureau of Land Management, the U.S. Army Corps of Engineers, State Land Commissions and private land owners.¹³⁴ If military facilities are involved, there is another added layer of regulatory authority that must be

that will provide higher production with current refinery configurations However, all of these are on the margin.”).

¹²⁹ See Mannix, *supra* note 28.

¹³⁰ KUMINS, ET. AL., *supra* note 24, at 5, 9.

¹³¹ KUMINS, ET. AL., *supra* note 24, at 9.

¹³² 42 U.S.C. §§ 4331-4344 (2006).

¹³³ 16 U.S.C. § 470 (2006), *et seq.*

¹³⁴ McGinnis, *supra* note 42.

involved in the siting process.¹³⁵ Similar to other industrial projects, many issues and agencies must be consulted when a new refinery is planned. How those agencies cooperate (or choose not to cooperate) can decide the fate of a refinery.

The largest concentration of the nation's refinery infrastructure is located on the Gulf Coast.¹³⁶ While the Gulf Coast is a good strategic location for a refinery—with access to shipping channels—it is also a location that has welcomed the industry in the past.¹³⁷ If the ACF project is any indication, there is a significant lack of any “welcoming attitude” toward new refinery projects. However, the current energy climate indicates that local opposition groups may have less influence as the public becomes more concerned about the needs for regional and national energy needs.¹³⁸

Clearly, environmental regulation and siting issues are interwoven. Even though the ACF project could be the “cleanest” refinery ever built,¹³⁹ local opposition to the project can be skeptical of such a claim.¹⁴⁰ The refinery would produce California's own boutique fuel (California RFG), thus supplying one of the nation's “tight” markets.¹⁴¹ A refinery built with more than thirty years of technological advancement over the last refinery will surely have the benefit of new, more productive, and environmentally sound technologies. If the ACF project is built, environmentalists and the industry will scrutinize the actual effect of the plant on the environment. Thus, it is in the industry's best interest to build

¹³⁵ *Id.*

¹³⁶ See KUMINS & BAMBERGER, *supra* note 3, at 3.

¹³⁷ PIRINC, *supra* note 19, at 1-2 (“To a certain extent, the concentration of refining and natural gas processing and import capability is a natural result of the region's historic role as the country's most important oil and gas producing area. But concentration also reflects the opposition facing any company attempting to build facilities.”).

¹³⁸ BAMBERGER, *supra* note 58, at 5 (“Local opposition to new . . . refineries . . . is often most effective during periods of price and supply stability, but sometimes eases only after shortages have actually occurred.”).

¹³⁹ See Tammy Krikorian, *EPA: No Objection to Refinery Permit*, THE YUMA SUN, Mar. 22, 2005, at *1.

¹⁴⁰ See Refinery Reform Campaign,

http://www.refineryreform.org/spotlight_yuma_az.html (last visited Mar. 6, 2007).

¹⁴¹ PIROG, *supra* note 76, at 16.

the “cleanest” refinery—anything less will only ensure that the ACF project will become the “last” refinery built for decades to come.

However, as the public becomes more concerned about regional and national energy needs, it is more likely that the public will look to the “solutions” of local opposition with a more skeptical eye. The ACF project faced “stiff opposition from a local environmental group, which argued that the first proposed location for the refinery was too close to an urban area, while the second, a rural site, was too far. When queried about an ideal location for the proposed oil refinery, the environmental group’s founder suggested Mexico.”¹⁴² The local environment group, the Refinery Reform Campaign, states that it is a “national campaign seeking to clean up America’s oil refineries and reduce our dependence on foreign oil.”¹⁴³

While reducing the nation’s dependence is often cited as a bipartisan goal, the effect of not having sufficient refinery capacity is that the United States must import foreign refined products. Thus, preventing the building of a domestic refinery will not advance the goal of reducing dependence on foreign oil unless the underlying goal is to make gasoline more expensive, thus curbing demand. However, when gasoline is imported to make up for a lack of domestic capacity, the effect of limiting domestic refinery capacity to increase prices for refined products is muted. In addition, while building a refinery in Mexico is not necessarily contrary to the goal of cleaning up America’s oil refineries, that goal is not advanced by having refineries built in foreign locations under the auspice of foreign regulations. Considering that pollution knows no national boundaries, the refinery capacity solution is not simply solved by shifting refinery capacity south of the border in hopes that any pollution will not affect the environment north of the border.

E. Increased Imports of Refined Products is Not Compatible with the Nation’s Energy Policy

¹⁴² Walling, *supra* note 18 (citing John J. Fialka, *Hurricanes May Energize Refinery Plan*, WALL ST. J., Sept. 23, 2005, at A4).

¹⁴³ Refinery Reform Campaign, <http://www.refineryreform.org> (last visited May 23, 2007).

Following the Hurricanes, EPA Administrator Stephen Johnson invoked authority granted by Section 1541 of the EPA Act,¹⁴⁴ to issue a series of limited fuel waivers for specific gasoline and diesel quality standards because of supply concerns.¹⁴⁵ The waiver facilitated the transport of fuels domestically, as all U.S. gasoline markets were then authorized to use European gasoline imports. In response to the domestic situation, the International Energy Administration coordinated the release of two million barrels per day of gasoline from Europe to the United States for fifteen days.¹⁴⁶ While the availability of European imports helped to minimize the effect of a short-term supply shock, any long-term response to domestic capacity issues requiring substantial imports would

¹⁴⁴ See Letter from Stephen L. Johnson, Administrator, EPA, to Robert Riley, Governor of Alabama (Aug. 31, 2005), *available at* <http://www.epa.gov/compliance/resources/policies/civil/caa/mobile/katrina50statewaiver.pdf>; *see also* EPA Act § 1541, 119 Stat. 594 (2005) (codified at 42 U.S.C. § 7545(c)(4)(C)(ii) (2006)).

¹⁴⁵ *Id.* § 1541(c)(4)(C)(ii) provides that the EPA Administrator, in consultation with the DOE, may waive the requirements for boutique fuels if:

- (I) extreme and unusual fuel or fuel additive supply circumstances exist in a State or region of the Nation which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers;
- (II) such extreme and unusual fuel and fuel additive supply circumstances are the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure, or another event that could not reasonably have been foreseen or prevented and not the lack of prudent planning on the part of the suppliers of the fuel or fuel additive to such State or region; and
- (III) it is in the public interest to grant the waiver (for example, when a waiver is necessary to meet projected temporary shortfalls in the supply of the fuel or fuel additive in a State or region of the Nation which cannot otherwise be compensated for).

If the EPA administrator and DOE concur on the need to waive boutique fuel standards, a waiver will be permitted only if: (1) It applies to the “smallest geographical area” necessary to address the circumstances, (2) it is effective for no more than twenty calendar days, (3) it permits a “transitional period” after the “termination of the temporary waiver to permit wholesalers and retailer to blend down their wholesale and retail inventory, (4) the waiver applies to all persons in the fuel distribution system and (5) the EPA Administrator has given public notice to all parties in the fuel distribution system and local and state regulators, in the state or region covered by the waiver. *Id.*

¹⁴⁶ KUMINS & BAMBERGER, *supra* note 3, at 5.

require foreign refiners to either invest in technologies to bring their refineries up to U.S. specifications, or for continued waivers of U.S. specifications. Without such investment, the EPA Administrator will likely be politically pressured to waive requirements if the volatility in prices from certain shortfalls in specific boutique blends continues so that the U.S. can meet its demand with imports. Some members of the industry have argued that when waivers are granted as a politically expedient means of satisfying the public, the waiver “penalizes” all companies that have invested in technologies to meet mandated requirements.¹⁴⁷ Thus, such waivers that are likely to occur during times of tightened supply are likely to penalize the companies that have made investments that would prevent the negative effects of an overly tight supply market.

Waivers may become increasingly necessary if foreign gasolines are not produced in strict conformance to U.S. requirements. “[A]s U.S. fuel quality specifications have become more stringent, some sources of imported product have chosen not to invest to comply.”¹⁴⁸ For example, gasoline from Brazil has “declined significantly in recent years.”¹⁴⁹ Although the “situation could reverse in the future,” one must consider that the cost of imported boutique fuels will likely increase to compensate for the additional transportation expenses. However, as shown by Europe’s response to the Hurricanes, Western Europe has been able to supply growing volumes of fuels.¹⁵⁰ European Union fuels are generally higher quality, and thus similar to U.S. specifications.¹⁵¹ Similar, however, does not mean that the fuels meet each region’s mandate for specific boutique fuels.

The need for waivers would most likely occur when demand for refined products is at its peak—the summer. In fact, standards were again relaxed in the spring of 2006 “in an effort to improve gasoline production and ease distribution problems.”¹⁵² Thus, in two recent summers of high demand for gasoline, the standards for boutique fuels have been relaxed

¹⁴⁷ PETERSON & MAHNOVSKI, *supra* note 59, at 72.

¹⁴⁸ EPA & DOE, *supra* note 21, at 17.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ EPA & DOE, *supra* note 21, at 17.

¹⁵² BAMBERGER, *supra* note 58, at 10.

out of production and distribution concerns. If this “politically expedient” practice continues, then a trend may develop in which boutique fuel standards are relaxed during the season in which they are designed specifically to reduce air pollution. While it is sometimes the “politically expedient” solution to relax boutique fuel standards during a supply crunch, the long-term solution is to develop a system that is more compatible with the national refinery and distribution network.

III. REGULATION AND LEGISLATION

Refinery capacity was one aspect of energy policy addressed in the EAct.¹⁵³ Despite the provisions in the EAct, more comprehensive legislation was advanced to promote refinery expansion almost as soon as the EAct was enacted into law. Similar to the status quo consideration of how regulations affect the refinery inspection, the proposed legislation was as haphazard as the current boutique fuel system.

A. Energy Policy Act of 2005

In August of 2005, Congress attempted to provide the nation with a “strategic” energy plan: the EAct.¹⁵⁴ The EAct, which began in 2001, “is the first omnibus energy legislation enacted by Congress in thirteen years. In terms of scope and impact, the 1700 page bill is the most ambitious legislation since a package of bills passed during the administration of President Carter.”¹⁵⁵ Prior to the EAct, the last explicit energy bill was passed in 1992 immediately following the first Gulf War.¹⁵⁶

¹⁵³ Energy Policy Act of 2005, Pub. L. 109-58, title III, subtitle H, 119 Stat. 594 (2005) (codified at 42 U.S.C. §§ 15951-52 (2006)).

¹⁵⁴ Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (2005).

¹⁵⁵ Report, *Legislation Committee*, ENERGY L.J. 349, 349 (2006) (footnote omitted); see BAMBERGER, *supra* note 58, at 1 (stating that the “passage of the EAct had its roots in an unexpected jump in oil prices that began in the late spring of 1999, following a production cut by the Organization of Petroleum Exporting Countries”).

¹⁵⁶ PIRINC, ENERGY POLICY: A FEW STEPS FORWARD 1 (2005), available at <http://www.eprinc.org/download/energypolicy.pdf>.

In terms of refinery capacity, the EAct subscribed Title III, Subtitle H, “Refinery Revitalization,” to address refinery capacity.¹⁵⁷ Subtitle H provided the groundwork for federal-state coordination for permitting requirements: “At the request of the Governor of a State, the Administrator [of the EPA] may enter into a refinery permitting cooperative agreement with the State, under which each party to the agreement identifies steps, including timelines, that it will take to streamline the consideration of Federal and State environmental permits for a new refinery.”¹⁵⁸

In addressing the proliferation of boutique fuels, the EAct contains three key provisions.¹⁵⁹ First, the EAct eliminated an oxygenate standard for RFG.¹⁶⁰ Second, the EAct eliminated the distinction between summertime RFG in the northern and southern United States.¹⁶¹ Third, the EAct also required the “EPA to publish a boutique fuels list based on fuels in the market as of September 1, 2004.”¹⁶² On June 6, 2006, the EPA published a draft listing of boutique fuels.¹⁶³ After publishing the list, “states seeking approval of new fuel programs generally would be limited to fuel types already in existence within the PADD in which the state is located.”¹⁶⁴

Because of changes implemented in the EAct, the EPA may only approve a new state fuel program if (1) the fuel is already approved in a SIP for a state in its respective PADD, (2) “the approval does not increase the total number of state fuels on EPA’s list of fuels,” and (3) if a “new fuel is added to the list, EPA with DOE consultation must find no adverse impact on supply and distribution.”¹⁶⁵ In addition, Section 1509 of the EAct requires the EPA and the DOE to prepare a report by June 1, 2008,

¹⁵⁷ Energy Policy Act of 2005, Pub. L. 109-58, title III, subtitle H, 119 Stat. 594 (codified at 42 U.S.C. §§ 15951-52 (2006)).

¹⁵⁸ *Id.*

¹⁵⁹ YACOBUCCI, *supra* note 98, at 12.

¹⁶⁰ Energy Policy Act of 2005, Pub. L. 109-58 § 1504(a), 119 Stat. 1076 (codified at 42 U.S.C. § 7545 (2006)).

¹⁶¹ *Id.* § 1504(c).

¹⁶² EPA, *supra* note 108, at 12.

¹⁶³ Draft Boutique Fuels List Under Section 1541(b) of the Energy Policy Act, 71 Fed. Reg. 32, 532-02 (June 6, 2006).

¹⁶⁴ EPA & DOE, *supra* note 21, at 14.

¹⁶⁵ EPA, *supra* note 108, at 12-13.

called the "Fuel System Requirements Harmonization Study," to study and account for "recent and anticipated changes in the U.S. gasoline and fuels supply and distribution market."¹⁶⁶ Section 1541 grants the EPA Administrator broader authority to grant waivers for federally enforceable fuel regulations.¹⁶⁷ Authority under Section 1541 allowed the EPA to waive fuel standards following the Hurricanes and during the spring months of 2006.¹⁶⁸

The EPAct's provisions for refinery revitalization are small steps in the right direction for regulating refineries within a national energy policy dynamic. With a variety of fuels with different properties, states can still choose to mandate a fuel to further a state's environmental goals in accordance with national standards. However, instead of simply considering the effects of a state's mandate on the state itself, the EPAct forces states to pick from a list that will control the national proliferation of fuels. This measure thus adds more certainty to refiners, who now will better understand the breadth and potential expansion of certain boutique fuel markets. Refiners who were less likely to invest in technologies to make a certain boutique fuel blend are now reassured that the market for such fuels will not become further fragmented by any additional mandates.

Concerning the federal-state coordination provisions, the EPAct recognizes that the complexities of federal, state, and local regulations require increased cooperation among all levels of regulatory agencies. However, the EPAct requires a backwards approach to increase coordination. Under the EPAct, investors interested in siting a new refinery must first consider a site and then contact someone in the Governor's office of a state where the proposed refinery is located. Similar to how states were unlikely to consider the benefits and costs of mandating an additional boutique fuel within a national energy framework, a state's Governor's office is unlikely to consider the national benefits and costs of a proposed refiner's plan. Thus, again state and local interests will override national energy needs. In addition, even if a Governor was interested in entering into an agreement with the EPA Administrator to create an arrangement to streamline the permitting of a

¹⁶⁶ EPA, *supra* note 108, at 13.

¹⁶⁷ Energy Policy Act of 2005, Pub. L. 109-58 § 1541, 119 Stat. 1107 (2005).

¹⁶⁸ See BAMBERGER, *supra* note 58, at 10.

refinery, there is an increased possibility that the weight of local opposition groups could derail such a plan. The refinery situation is one of national concern, and greater federal control is needed to address the situation than is provided in the EPAct.

B. Post-Katrina Legislative Proposals

The Hurricanes put additional pressure on domestic markets for refined products after the immediate enactment of the EPAct,¹⁶⁹ which prompted some legislators to propose more dynamic legislation to address the refinery capacity situation. The proposed legislation demonstrated a lack of satisfaction over the provisions of the EPAct regarding refinery capacity. However, none of the proposals passed both the House and the Senate because of partisan disagreement on what would be the most effective means to address the refinery capacity situation.

1. Federal Agency Control

Some legislators advocated for more federal control over the refinery permitting process.

The Refinery Permit Process Schedule Act (“RPPSA”) “[d]irects the President to appoint a Federal coordinator to manage the multi-agency permitting process,” gives the EPA priority in scheduling coordination, and repeals the federal-state cooperation program set forth in the “Refinery Revitalization” subtitle of the EPAct, among other provisions.¹⁷⁰ Advocates of the bill stated that it “includes measures to simplify and expedite the refinery permitting processes while maintaining strong environmental standards,”¹⁷¹ while opponents of the bill stated that

¹⁶⁹ BAMBERGER, *supra* note 58, at 1.

¹⁷⁰ Refinery Permit Process Schedule Act, H.R. 5254, 109th Cong. § 4, 7 (2005); *see also* Fuel Supply Improvement Act of 2005, H.R. 3836, 109th Cong. § 3 (2005) (listing similar permitting provisions).

¹⁷¹ *Refinery Permit Process: Hearing on H.R. 5254 Before the S. Comm. Energy and Natural Resources*, 109th Cong (2006) (statement of Bob Meyers, Associate Assistant Administrator, Air and Radiation, Environmental Protection Agency)

any such "streamlining" measure failed to recognize that the lack of refinery capacity growth was solely because of oil companies' "own economic projections."¹⁷² In a similar proposal, the "Gasoline for America's Security Act of 2005,"¹⁷³ proposed that the DOE should be designated as the lead federal agency in charge of managing the multi-agency permitting process for refineries.

Because refinery capacity is an integral part of the nation's future energy policy, it should be controlled by a Federal agency, as was proposed in RPPSA. Specifically, the DOE is the appropriate Federal agency that has the expertise to coordinate permitting and regulations for refineries. A federal agency can alleviate the problems inherent to state control over a national problem: States only consider the in-state costs and benefits of regulation.¹⁷⁴ As demonstrated by the cooperation of the DOE and the EPA in promulgating a report detailing the interwoven environmental and energy supply effects of boutique fuels,¹⁷⁵ these two agencies need to consult in the future so that the federal needs of a clean environment are considered on par with the nation's energy needs. The DOE has demonstrated its competence and ability to work with agencies such as the EPA to achieve mutual goals. By designating a federal agency to control the refinery permit process, the regulatory framework will reflect that domestic refinery capacity is a significant issue of national concern, and that it is necessary to continue the national boutique fuels program. This idea is nothing new. The Nuclear Regulatory Commission ("NRC")¹⁷⁶ and the Federal Energy Regulatory Commission ("FERC")¹⁷⁷

¹⁷² *Id.* (statement of Rep. Betty McCollum).

¹⁷³ H.R. 3893, 109th Cong. § 102(b) (2005).

¹⁷⁴ Pierce, *supra* note 40, at 184.

¹⁷⁵ See EPA & DOE, *supra* note 21.

¹⁷⁶ "The U.S. Nuclear Regulatory Commission is an independent agency established by the Energy Reorganization Act of 1974 to regulate civilian use of nuclear materials."

About NRC, <http://www.nrc.gov/about-nrc.html> (last visited Mar. 6, 2007).

¹⁷⁷ FERC is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas terminals and interstate natural gas pipelines as well as licensing hydropower projects. What FERC Does, <http://www.ferc.gov/about/ferc-does.asp> (last visited Mar. 6, 2007).

have both been able to exert federal control over energy related industries.¹⁷⁸

Although national coordination of the permitting processes is not a cure-all solution that can address all of the many factors that affect refinery capacity decisions, it is something that the legislature can affect and can make for a more efficient process. As shown by the ACF project, strung out permitting can have a material affect on whether a refinery can be built in a reasonable amount of time. Further, national coordination does not mean that any type of regulation is “relaxed.” Simply, if one agency is able to determine that a standard is met, there is no added benefit to have a requirement that another agency expend resources to make a similar determination. As a lead agency to balance and coordinate national, state, and local interests, the DOE will be able to better control and make appropriate recommendations regarding the use of boutique fuels and refinery siting concerns in cooperation with the EPA.

2. Boutique Fuels

The EPCA greatly curbed the ability of states to continue the proliferation of boutique fuels. Over the long term, it may be in the interest of a national fuel program to “harmonize” the number of boutique fuels,¹⁷⁹ as was proposed in the “Gasoline for America’s Security Act of 2005.”¹⁸⁰ However, any effort to harmonize fuels in the short term could have the same effect on refinery production and distribution as the proliferation of fuels as refiners modified their facilities to meet the new “harmonized” standard.¹⁸¹ However, in the long run, the harmonization of fuel standards will lead to long term regulatory stability in the refinery industry, and could encourage capital expenditures on increased refinery capacity expansion, as opposed to using capital to comply with ever changing fuel requirements. Further, with a harmonized fuels list, the industry will be more likely to increase capacity because of

¹⁷⁸ See Gasoline for America’s Security Act of 2005, H.R. 3893, 109th Cong. § 2(9), (2005) (listing comparisons to NRC and FERC).

¹⁷⁹ YACOBUCCI, *supra* note 98, at 1.

¹⁸⁰ Gasoline for America’s Security Act of 2005, H.R. 3893, 109th Cong. § 108 (2005).

¹⁸¹ YACOBUCCI, *supra* note 98, at 10.

the increased fungibility of harmonized fuels. With broader markets, there will be greater incentive to supply the larger market with more capacity.

It is in the environmental interest to develop a boutique fuel program that is compatible with domestic refinery capabilities. As demonstrated by the EPA Administrator's response to the Hurricanes, when a supply shock leads to a sharp shock in prices for gasoline, often an "outraged" Congress calls for government intervention¹⁸². After the Hurricanes, one way the executive responded was by suspending the EPA requirements for boutique fuels.¹⁸³ Again, standards were suspended in the spring of 2006.¹⁸⁴ This led to greater mobility of fuels from all refiners across the country, and the ability of the United States to import European gasoline that may not otherwise have met the boutique fuel requirements. It is likely that the public would call for a similar response to any future supply shock. There is a possibility that the boutique fuel system will be unable to achieve its goals of sustaining lower pollution levels if there is a call for a suspension of the requirements whenever a supply shock shifts the public and government's perception of the tradeoff between perceived environmental benefits and that of higher energy prices.

3. *Siting Proposals*

Some legislation has suggested that the federal government can address problems associated with local opposition groups and the not-in-my-backyard ("NIMBY") syndrome¹⁸⁵ by simply making largely unused federal lands available for oil refinery construction. Several bills call for

¹⁸² See, e.g., Steven Mufson & Shailagh Murray, *Profits, Prices Spur Oil Outrage*, WASH. POST, Apr. 28, 2006, at A01 (stating that after ExxonMobil reported a first quarter profit of \$8.4 billion for the 2006 fiscal year, "members of Congress outraged over high gasoline prices hastened to propose measures that would boost taxes on oil firms, open new areas to drilling and provide rebates to taxpayers but would not necessarily alter prices at the pumps.").

¹⁸³ KUMINS & BAMBERGER, *supra* note 3, at 7.

¹⁸⁴ BAMBERGER, *supra* note 58, at 10.

¹⁸⁵ See, e.g., Walling, *supra* note 142.

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the federal designation of closed military bases¹⁸⁶ for refinery construction, while others call for the Secretary of Energy to facilitate the construction of a "Refinery Strategic Reserve."¹⁸⁷

While both proposals recognize that siting considerations are an integral factor that will influence refinery construction, they are both flawed in their own ways. Regarding the use of closed military installations, the refinery industry is not looking for *anywhere* to build a refinery; the industry is looking for an economically suitable location to build a refinery. Economically suitable locations have access to shipping channels.¹⁸⁸ If a refinery is built in a location that does not provide channels for shipping crude oil to the refinery or gasoline to retail destinations, then capital-intensive infrastructure, such as pipelines, must also be built. Considering that refineries already require intensive capital investment, it is unlikely that it would be feasible for the industry to make an investment decision to build a refinery and for a new pipeline. Thus, the plan to build refineries on federal lands will not materially help the industry.

The proposal to build a Refinery Strategic Reserve would contribute to the already difficult siting problems that plague the construction of a refinery. If NIMBY opponents do not desire a nearby refinery, it is unlikely that such groups would desire a massive land intensive structure of oil tanks and its accompanying infrastructure. Further, with eighteen gasoline formulations, it is questionable that any type of reserve would be remotely compatible with the nationwide system of boutique fuels. Thus, any use of a Refinery Strategic Reserve would occur after the waiver of EPA fuel requirements. In effect, the Refinery Strategic Reserve would only substitute for imports of refined products. The Refinery Strategic Reserve solution is not viable as a means to solve the nation's disjointed refinery policy. In summation, the siting proposals recognize that additional refineries require land, but they do not recognize

¹⁸⁶ Gasoline for America's Security Act of 2005, H.R. 3893, 109th Cong. § 101(b)(1)(G) (2005); see generally Randall S. Beach, *Swords to Plowshares: Recycling Cold War Installations*, 15 PROB. & PROP. 58 (2001) (detailing history and processes of the Base Realignment and Closure Commission, which is responsible for closing military installations).

¹⁸⁷ H.R. 5365, 109th Cong. (2005); S. 1979, 109th Cong. (2005).

¹⁸⁸ PIRINC, *supra* note 19, at 1-2.

that refineries will not be built where they *could* be built, but rather, where they *should* be built.

Although legislators have proposed creative "solutions" to the nation's tightened refinery capacity, no one solution is likely to have a significant effect on increasing refinery capacity. The industry is complex, and there are a host of factors that enter into the investment calculus of whether to increase domestic capacity. What legislators need to consider is that the national prerogative in the nation's refinery infrastructure is not currently being represented in the host of regulatory proposals that ultimately affect the industry.

IV. THE NEED FOR LEGISLATIVE COHERENCE AND A LEAD FEDERAL AGENCY

The current refinery situation is not the result of any comprehensive plan by the industry, the government, or the public. Instead, the current situation follows from a lack of planning and a lack of consideration on how many individual regulations have in the aggregate created a situation that has helped form a de facto moratorium on refinery construction. This result is partly caused by the de facto designation of the EPA as the lead agency in handling refinery capacity by means of the EPA's authority over the boutique fuel program. However, the EPA is not charged with handling the national concerns of the nation's energy capacity. It is not in the interest of the nation, consumers, or environmentalists for the current situation to remain at the status quo.

The current national problem needs to be addressed with leadership at the national level. Thus, it is prudent designate the DOE as the lead federal agency to coordinate industry regulation. The DOE would (1) become a point of contact between the industry and the government, (2) would provide a unified government voice that could voice its concerns over proposed regulation that may adversely affect the industry, and (3) would offer a different voice aside from the industry to educate communities about the costs and benefits of refineries. The DOE is better equipped to work with the industry to ensure that capacity expansions can feasibly occur in locations that are economically suitable for refinery expansion. The current situation is unsustainable: either environmental regulations will be relaxed de jure because of the incapability of the

current system in a future of rising demand for refined products, or de facto when regulations are relaxed as a politically expedient measure to satisfy short term supply disruptions. The designation of the DOE as a lead agency to handle the permitting and siting of refineries is a modest step to improve one critical factor that determines refinery capacity. While such a measure will not lead to instantaneous capacity expansion, it will clear one hurdle that would otherwise prohibit expansion even when the other factors that are critical for refinery expansion are favorable.

Under the control of the DOE, federal energy and environmental policy can be considered synonymously. If such action was taken in the past, the nation would unlikely have eighteen different fuel types. Accordingly, under DOE leadership, the moratorium on the proliferation of fuel types as set forth in the EPA Act needs to continue. A federal fuels list maintained by the DOE would give greater assurance to investors that they could invest in technologies to make current blends. In addition, the DOE as a lead federal agency could help bring about a regionalized fuel system that would be more compatible with a federal fuel program.¹⁸⁹ The designation of the DOE as a lead federal agency to handle refinery capacity concerns may not have an immediate or dramatic effect on the industry, which is inherently an industry of uncertainty that must consider future product demand and technology. However, it will help alleviate the burden of the current situation that does not adequately serve national or local government, the public, or environmental concerns.

V. CONCLUSION

The legislature, agencies of the executive branch, industry, and the public have voiced concern over the nation's refinery capacity. However, there was no politically practical solution proposed during the 109th Congress. Robert Pirog of the Congressional Research Service concluded in a report analyzing oil industry profits that "[h]istorically volatile prices and profit levels coupled with a tight regulatory environment contribute to industry uncertainty."¹⁹⁰ While uncertainty may help Wall Street "insiders" earn profits, uncertainty when tying up billions of dollars of

¹⁸⁹ EPA, *supra* note 108, at 19.

¹⁹⁰ PIROG, *supra* note 76, at 18.

capital in a refinery simply stifles investment. If the U.S. fails to have adequate refining infrastructure as demand increases in the near future, the U.S. will have to import more refined products. Imports are unlikely to meet the requirements for all of the U.S.'s unique fuel mandates. While the government has only indirect effect on oil and gasoline prices, it controls the industry regulatory framework. Regulations do not necessarily have to be "loosened" to create a more comprehensive environmental and energy policy that affects refineries, but a more systematic approach to the regulatory environment of the refining industry may quell some of roadblocks regulation poses for refinery capacity expansion. The designation of the DOE as a lead federal agency to handle domestic refinery capacity is a simple, yet essential first step to configure domestic refinery capacity within national energy and environmental policies. Even a slightly more certain regulatory environmental policy has the possibility of encouraging the oil industry, which currently has investment capital, to invest in domestic refining infrastructure.